

**21<sup>st</sup> World Congress of Soil Science**

***Soil Science: beyond food and fuel***

12<sup>nd</sup> – 17<sup>th</sup> August 2018

Windsor Convention & Expo Center

Rio de Janeiro Brasil

---

# Congress Program



## INDEX

<b>WELCOME</b> .....	4
<b>ORGANIZATION</b> .....	5
<b>GENERAL INFORMATION</b> .....	6
<b>TRANSPORTATION</b> .....	9
<b>GUIDELINES</b> .....	11
<b>MEET 21WCSS</b> .....	12
<b>MEDAL &amp; AWARD</b> .....	14
<b>CONFERENCES, SYMPOSIA &amp; POSTER</b> .....	16
<b>Conferences</b> .....	16
<b>Interdivisional Symposia</b> .....	17
Monday, 13 August.....	17
Tuesday, 14 August.....	17
Thursday, 16 August.....	18
Friday, 17 August.....	18
<b>Technical &amp; Innovation Symposia</b> .....	19
Monday, 13 August.....	19
Tuesday, 14 August.....	19
Thursday (August 16).....	19
Friday, 17 August.....	19
<b>Divisional Symposia – Oral presentations</b> .....	20
Monday, 13 August.....	20
Division 1: Soil in Space and Time.....	20
Division 2: Soil properties and processes.....	23
Division 3: Soil Use and Management.....	27
Division 4: The Role of Soils in Sustaining Society and the Environment.....	35

Tuesday, 14 August .....	39
Division 1: Soil in Space and Time .....	39
Division 2: Soil properties and processes .....	43
Division 3: Soil Use and Management.....	47
Division 4: The Role of Soils in Sustaining Society and the Environment.....	55
Thursday, 16 August .....	59
Division 1: Soil in Space and Time .....	59
Division 2: Soil properties and processes .....	61
Division 3: Soil Use and Management.....	65
Division 4: The Role of Soils in Sustaining Society and the Environment.....	72
Friday, 17 August .....	75
Division 1: Soil in Space and Time .....	75
Division 2: Soil properties and processes .....	78
Division 3: Soil Use and Management.....	80
Division 4: The Role of Soils in Sustaining Society and the Environment.....	88
<b>Working groups (Oral presentations).....</b>	<b>91</b>
Monday, 13 August .....	91
Tuesday, 14 August .....	93
Thursday, 16 August .....	94
Friday, 17 August.....	98
<b>Poster Sessions (13:30 – 15:00 / Room: Europa) .....</b>	<b>103</b>
Monday, 13 August .....	103
Division 1: Soil in Space and Time .....	103
Division 2: Soil properties and processes .....	113
Division 3: Soil Use and Management.....	130
Division 4: The Role of Soils in Sustaining Society and the Environment.....	153
Tuesday, 14 August .....	159
Division 1: Soil in Space and Time .....	159
Division 2: Soil properties and processes .....	167
Division 3: Soil Use and Management.....	184

Division 4: The Role of Soils in Sustaining Society and the Environment.....	207
Thursday, 16 August .....	212
Division 1: Soil in Space and Time .....	212
Division 2: Soil properties and processes.....	220
Division 3: Soil Use and Management.....	237
Division 4: The Role of Soils in Sustaining Society and the Environment.....	261
<b>Satellite Symposia .....</b>	<b>266</b>
<b>PARALLEL ACTIVITIES.....</b>	<b>267</b>
<b>Soil &amp; Art .....</b>	<b>267</b>
<b>ExpoSoil .....</b>	<b>267</b>
<b>Soil Cinema .....</b>	<b>268</b>
<b>SOCIAL ACTIVITIES .....</b>	<b>269</b>
<b>SPONSORS .....</b>	<b>270</b>
<b>EXHIBITION.....</b>	<b>271</b>
<b>WHERE ARE THE ROOMS?.....</b>	<b>272</b>
<b>FLOOR PLANS.....</b>	<b>273</b>
<b>GENERAL PROGRAM .....</b>	<b>276</b>
<b>OUR MASCOT .....</b>	<b>2767</b>

## WELCOME

---



**Rattal Lal**  
(IUSS President)



**Flavio Camargo**  
(21WCSS Chairman)

Dear colleagues,

On behalf of the International Union of Soil Sciences (IUSS), the Brazilian Soil Science Society (SBCS) and the Latin American Soil Science Society (SLCS), it is our pleasure to welcome you to Rio de Janeiro, Brazil, and to the 21st World Congress of Soil Science. This will be an excellent learning experience, an opportunity for exchanging ideas toward technological advances, as well as a business opportunity for companies dealing in areas related to Soil Science.

The Congress theme “Soil Science: Beyond food and fuel” is an invitation to answer questions like - How to feed a hungry planet? How to produce fuel for an energy-hungry planet? How to quench a thirsty population of our planet? How to clean up the pollution of our planet? How to reach a balance to allow for protection of biodiversity with sustainable land management for agriculture production? These, among many other questions, are subjects related to the multiple functions of soil that will be discussed in the 21st WCSS.

As the most expressive meeting in the area of Soil Science, this edition had 3,000 registered scientists from 101 different countries around the world. With a diverse and rich program, the event features more than 120 oral sessions and 1,800-poster presentation. Our eight keynote speakers will talk about their experience and scientific knowledge of up-to-date issues related to the meeting theme.

The City of Rio de Janeiro is a cosmopolitan metropolis, known worldwide for its scenic beauty, natural resources and the hospitality with which all visitors are received. We look forward to share the many attractions of this marvelous city with you.

We would like to express our deep appreciation and acknowledgment to everyone involved in the organization and to all active participants committed to the excellence and success of the meeting.

Thank you for joining the 21st World Congress of Soil Science. We wish you all an enjoyable and uplifting week.

## **ORGANIZATION**

---

### **Executive Committee**

Flavio A.O. Camargo (Chair)  
Leandro S. Silva (Co-chair)  
Igor Assis and Reinaldo B. Cantarutti (Treasurer)  
Raphael Fernandes (Executive Secretary & Excursions)  
Lea Medeiros (Publicity & Marketing)  
José Carlos Polidoro (Sponsorship & Fundraising)  
Ademir Almeida (Sponsorship & Organizer)  
Fatima Moreira (SBCS President)  
Gonçalo S. Farias and Victor Hugo A. Venegas (Executive Consulting)  
Fabrício Pedron (3rd Inter. Soil Judging Contest Coordinator)

### **Scientific Committee**

Leandro S. Silva (Chair)  
Erika Michéli  
Lúcia Helena C. dos Anjos  
Ademir Fontana  
Kazuyuki Inubushi  
Bal Ram Singh  
Dalvan José Reinert  
Valdomiro Souza Junior  
Fátima Moreira  
Takashi Kosaki  
Heitor Cantarella  
Christian Feller  
Cristine Carole Muggler  
Cassio H. Abreu Junior

## GENERAL INFORMATION

---

### **Location and conference address**

The 21st WCSS is held at the Windsor Convention & Expo Center in Barra da Tijuca, Rio de Janeiro, from 12-17 August 2018. The congress is open to the scientists all over the world.

WC&EC R. Martinho de Mesquita, 129 Bloco 2 - Barra da Tijuca, Rio de Janeiro - RJ, Brazil CEP 22620-220 Phone: +55 21 2195-9950

### **Official language**

The official language of the 21<sup>st</sup> WCSS is English. Simultaneous translation is not provided. It is expected that authors are able to present their research more or less fluently in the English language.

### **Program**

The scientific program of the 21<sup>st</sup> WCSS includes 8 conferences (keynote speakers), 16 Interdivisional Symposium (48 leader speakers), Technical & Innovation Symposium (16 presenters), 73 Divisional symposia (more than 600 oral presentations), 16 Working Groups (more than 120 oral presentations) and 1,680 poster presentations. The up-to-date program of each event is posted in front of the respective lecture room or in the respective poster area.

### **Support**

*Media desk*

Room: Ibiza I

*VIP Room*

Keynote speakers and leader speakers

Room: Ibiza II

### **Internet (Wi-Fi)**

Wi-Fi free unsecured wireless internet is available throughout the Convention Center.

### **Coffee and lunch break**

*Coffee break*

10:00 – 10:30 / Room: America & Europa

15:10 - 15:30 / Room: America & Europa

*Lunch*

12:30 – 13:30 / Room: America & Europa

### **Exhibition**

Expo Center (2nd Lower Level) - Total Area: 2,064 m<sup>2</sup>, Capacity: 3,000 person.

### **21WCSS app**

The 21<sup>st</sup> WCSS applicative, available for Android and iOS platforms, will be the official tool for publicizing the program (conferences, symposium, meetings, etc), speakers, poster, sponsors, exhibitors and other information about the WCSS and the Convention Center. Moreover, you can use the app to set a personal agenda. To install it, go to the link (<http://moblee.app.link/?slug=SJp8vK3Pz>) or use QRCode. After installation of the app, it is important to create an in-app login, to allow interaction among participants of the WCSS.



### **Health**

The Brazilian Ministry of Health recommends the inoculation against yellow fever. The vaccine should be taken at least ten days before travel and it provides immunity for at least 10 years.

### **Medical Services**

Emergency medical assistance will be provided during the meeting to the registered participants (Room: Bora-Bora V; second floor).

### **Communications**

Direct dial and collect calls can be placed from most telephones. The International Direct Dial (IDD) code for Brazil is 55 and the city code for Rio de Janeiro 21.

### **Foreign Exchange**

The Brazilian monetary unit is the Real (R\$). The exchange rate available to visitors is published daily in newspapers along with the commercial dollar rate of the day used in official international business transactions. Cash and traveler checks, especially US Dollars, can be exchanged at most banks or exchange stores as well as the major hotels. All major credit cards are accepted in Brazil and some stores may even accept foreign currency.

### **Rio Tourist Police**

One battalion of the Rio de Janeiro State Military Police (BPTUR) is specialized in ostensive patrolling of the city for the protection of tourists. They are properly trained and equipped to attend to cases involving tourists. They patrol popular tourist areas, such as the beaches and vicinity of the hotels.



### **Electric Current**

The electric current in Rio is 110 or 120 volts, 60 cycles, alternating current. Many hotels and apartment blocks do, however, have some 220 volt outlets.

### **Language**

The language spoken in Brazil is Portuguese. English is the predominant foreign language taught in schools, and Spanish, if spoken slowly, is understood by a good percentage of the population.

### **Cultural**

Rio de Janeiro has more than 200 locations for movies, theater, musical and artistic exhibitions, 82 museums and 76 libraries. Besides traditional museums, the city is home to museums dedicated to trains, planes, trolley-cars, jewelry and gemstones, sports, the native indigenous, primitive Brazilian art, and to Carmem Miranda, among others.

## TRANSPORTATION

### Airport transfer

Participants are responsible for their own travel to Rio. International travelers can fly into Rio de Janeiro International Airport (Galeão–GIG) or Santos Dumont Airport (SDU). Travel distance from Galeão-GIG to the Convention center is approximately 37 km (49min) by the yellow line (linha amarela) and 34 km by the downtown. The congress organization will have an information desk to attend all participants who can use our shuttle service or the transportation service available below.

### Shuttle Service

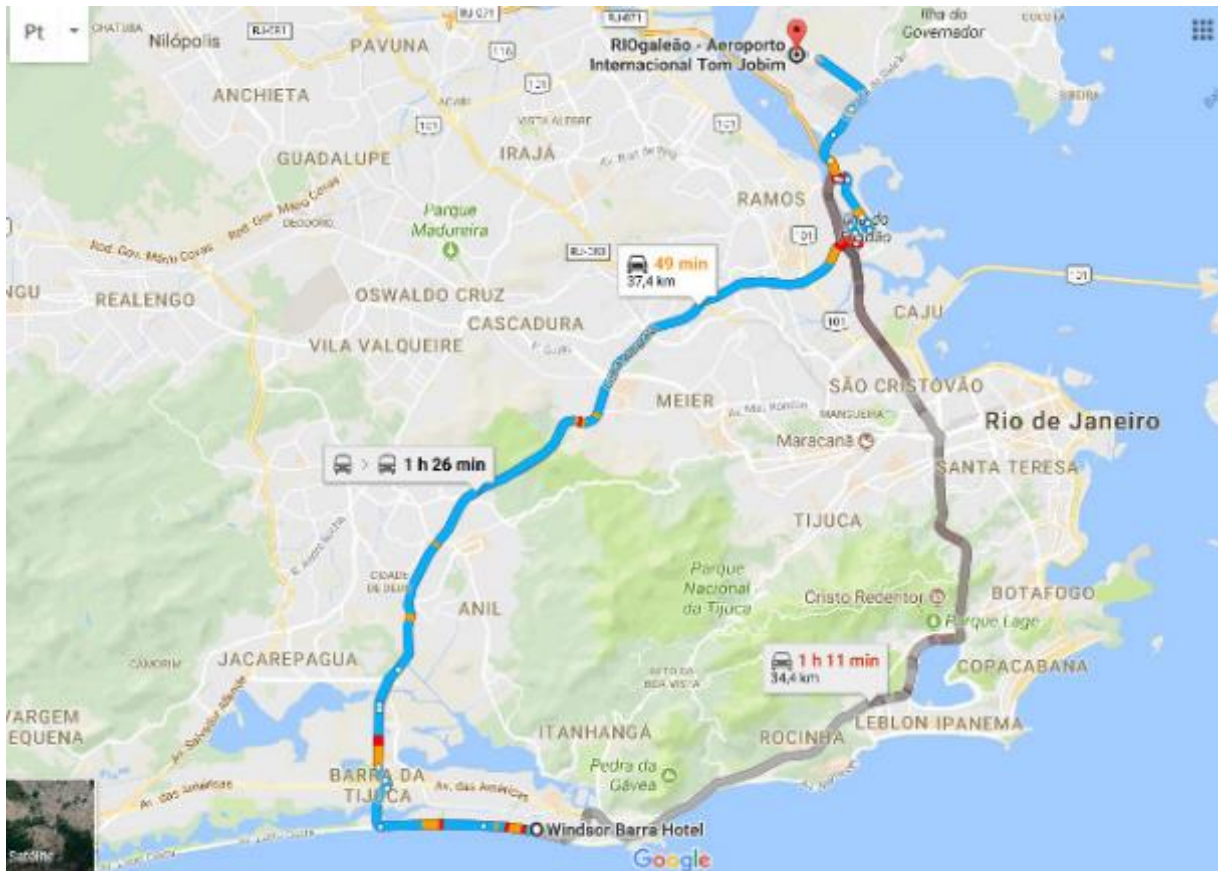
- Shuttle - Barra Hotels > International Airport (GIG) (60 BRL)
  - Shuttle - International Airport (GIG) > Barra Hotels (our staff will wait for you with a sign outside arrival hall) (Price: 60 BRL)
  - Transfer Hotel - Airport with bilingual Driver Guide - Price per Vehicle Sedan 1-3 passengers (Price: 330 BRL)
  - Transfer - Airport International (GIG) - Barra da Tijuca Hotels - Bilingual Driver (Price: 220 BRL)
- To book shuttle services go to: <https://prt.rezdy.com/catalog/190208/shuttle?lang=en>

### Transportation service

Vehicle	Destination
BUS	RIOgaleão-Tom Jobim Intern. Airp. (GIG)/ Alvorada Term. express
Real number 2018 Price: 16 BRL	Depart GIG: after 05h30 e 0h at each 30 minutes (Saturday, Sunday and Holiday last at 23h40). Depart Alvorada Terminal: from 05:40 to 22h35
Real number 2918 Price: 16 BRL	Depart GIG: from 05h30 to 23h30 Depart Alvorada Terminal: from 05h30 to 23h00 Frequency: each 1h every week day
BUS	Santos Dumont Airport / Alvorada Terminal express
Real number 2020 Price: 14 BRL	Depart: from 05h50 to 21h00 Frequency: each 20 min Monday to friday
BRT	RIOgaleão-Tom Jobim Intern. Airp. (GIG)/ Alvorada Term. express
Price: 3.80 BRL	Depart Galeão – Estação Tom Jobim2 Arrival Terminal Alvorada Frequency: Todos os dias 24h
METRO	Santos Dumont Airport / Jardim Oceânico station
Price: 4.30 BRL	Nearest station: Cinelândia Nearest station: Jardim Oceânico

Vehicle	Destination
TAXI	
Transcoopass or Transcootur	RIOgaleão – Internat. Airp. (GIG) / Windsor Barra hotel: 160.00 BRL Santos Dumont Airport/Windsor Barra hotel: 145.00 BRL
UBER	
	RIOgaleão – Internat. Airp. (GIG) / Windsor Barra hotel: 68.00 BRL Santos Dumont Airport/Windsor Barra hotel: 45.00 BRL Alvorada Terminal/ Windsor Barra hotel: 19.00 BRL Jardim Oceânico Station/ Windsor Barra hotel: 10.00 BRL

Alvorada Terminal in Barra da Tijuca is 5.6 km from the Windsor Convention & Expo Center  
 Jardim Oceanico station (metro) is 20 minutes walking distance to the Windsor Convention & Expo Center



## **GUIDELINES**

---

### **Oral**

Authors must upload their presentations directly in the respective lecture room within 30 minutes preceding the actual time block of the session. The presentation should be prepared using Microsoft PowerPoint format (PPT, PPTX) or, if another software is used, the final product must be a Portable Document Format (PDF) file. Presentations file should use the 16:9 format.

Message to the authors: please bring your presentation in a USB flash drive device (thumb drive, pen drive, flash stick, memory stick) or in external HD (the oral presentation does not be upload in the 21WCSS website).

The oral presentation will be performed in 10 minutes followed by 5 minutes of discussion with the audience.

For instructions and templates to the oral presentation, please visit:  
<http://www.21wcsc.org/?secao=conteudo&id=112>

### **E-poster**

The presentations are set for e-poster (electronic poster), i.e., displayed on-site on a large LCD television screen. There will be no provision for paper posters. E-posters will be displayed in PDF format only. To prepare your e-poster, please use the PowerPoint (PPT, PPTX) or OpenDocument Format (ODF) (templates available on webpage), and then save the document as a PDF file. The poster must be prepared in the portrait layout (vertical orientation) with dimensions of 70 cm wide and 120 cm high.

Presenters must be standing beside the LCD television screen while it is being displayed, according the stipulated date and hour.

All posters will be available for all participants during the event in the totem. Everybody in any time can go to the totems to see the posters. The slot time of 10 min is that time the authors must be in front of to the poster to answer questions about it.

## **MEET 21WCSS**

---

### **Sunday, 12 August**

*IUSS Executive Committee*

13:00 – 18:00 / Room: Capri VI

### **Monday, 13 August**

*IUSS Executive Committee*

12:30 – 14:30 / Room: Capri VI

*SBCS Council meeting*

14:30 – 14:30 / Room: Bora Bora IV

*Division 4 meeting*

12:30 – 15:20 / Room: Bora Bora II

*Commission 1.1 meeting*

14:30 – 15:20 / Room: Galápagos III

### **Tuesday, 14 August**

*IUSS Executive Committee*

12:30 – 14:30 / Room: Capri VIR

*SBCS Council meeting*

13:30 – 14:30 / Room: Bora Bora IV

*Division 2 meeting*

14:30 – 15:20 / Room: Ilha Bela I

*Division 3 meeting*

14:30 – 15:20 / Room: Ilha Bela IV

*Division 4 meeting*

12:30 – 15:20 / Room: Bora Bora II

### **Thursday, 16 August**

*IUSS Executive Committee*

12:30 – 14:30 / Room: Capri VI

*SBCS Council meeting*

13:30 – 14:30 / Room: Bora Bora IV

*Division 1 meeting*

14:30 – 15:20 / Room: Galapagos III

*Division 4 meeting*

12:30 – 15:20 / Room: Bora Bora II

*Commission 1.5 meeting*

14:30 -15:20 / Room: Galápagos III

**Friday, 17 August**

*IUSS Executive Committee*

12:30 – 15:00 / Room: Capri VI

*Commission 1.5 meeting*

12:30 -13:30 / Room: Galápagos III

## **MEDAL & AWARD**

---

### **IUSS Medals**

*IUSS Dokuchaev Basic Soil Science Award*

Johan Bouma (WU/NE)

*IUSS Liebig Applied Soil Science Award*

Dr. John Ryan (ICARDA/IR)

*IUSS Jeju Award*

John McLean Bennett (UQ/AU)

19:30 – 21:30 / Room: Gala dinner (Thursday, 16 August)

### **Division/Commission medals**

*Dan H. Yaalon Young Scientist Medal*

Bradley A. Miller (ISU/USA)

Fei Yang (CAS/CH)

12:15 – 12:35 / Room: Oceania VI a X (Monday, 13 August)

*Kubiena medal*

Maria Gerasimova (LU/RU)

14:30 – 15:20 / Room: Galápagos III (Monday, 13 August)

*Guy Smith Medal 2018*

Dick Arnold (USDA/USA)

15:30-18:15 / Room: Capri IV (Monday, 13 August)

*Richard Webster Medal 2018*

To be defined

### **IUSS Honorary members**

Roger Swift (Australia)

Martin H. Gerzabek (Austria)

Josef Kozak (Czech Republic)

Tengiz F. Urushadze (Georgia)

Karl Stahr (Germany)

I. P. Abrol (India)

Marcello Pagliai (Italy)

Jae Yang (Korea)

Piotr Sklodowski (Poland)

Maria Gerasimova (Russia)

Jaume Bech (Spain)

Stephen Nortcliff (United Kingdom)

Mary Beth Kirkham (USA)

19:30 – 21:30 / Room: Gala dinner (Thursday, 16 August)

**IUSS Executive Committee - Thanks to retiring members**

Kazuyuki Inubushi (Chair of Division 2)

Christian Feller (Chair of Division 4)

Mary Beth Kirkham (Chair of Committee on Awards and Prizes)

Don Sparks (Chair of Committee on Statutes and Structure)

Flavio Camargo (Vice President Congress)

Rattan Lal (President, end of 2018)

Roger Swift (Chair of Committee on Presidential Elections)

19:30 – 21:30 / Room: Gala dinner (Thursday, 16 August)

**Soil judging award**

After Opening Ceremony / Room: Asia (Sunday, 12 August)

**21WCSS Award – Medal Dr. Alvaro Barcellos Fagundes**

In recognition the relevant services provided by a person or institutions to the achievement of the 21<sup>st</sup> WCSS.

19:30 – 21:30 / Room: Gala dinner (Thursday, 16 August)



## CONFERENCES, SYMPOSIA & POSTER

---

### Conferences

---

#### **Monday, 13 August**

*Beyond food and fuel: global issues and the power of soil*

Rattan Lal (OSU/USA)

08:30 – 09:10 / Room: Third floor – Great hall

*Brazilian Agriculture: Beyond food and fuel*

Maurício A. Lopes (EMBRAPA/BR)

09:10 – 09:45 / Room: Third floor – Great hall

*PronaSolos: Brazil's National Soils Program*

Maurício A. Lopes (EMBRAPA/BR) and Lucia Anjos (UFRRJ/BR)

09:45 – 10:30 / Room: Third floor – Great hall

#### **Tuesday, 14 August**

*Soils of the world: how to reconcile the needs for food, fuel, water quality and biodiversity*

Pedro Sanchez (UF/USA)

08:30 – 09:15 / Room: Third floor – Great hall

*Soils and biodiversity: providing global scale benefits*

Diana Wall (CSU/USA)

09:15 – 10:00 / Room: Third floor – Great hall

#### **Thursday, 16 August**

*Collective design of farming systems that conserve and promote soil functions*

Pablo Adrian Tittone

08:30 – 09:15 / Room: Third floor – Great hall

*Brazilian Soils: food, fuel and beyond*

Lucia Helena Cunha dos Anjos

09:15 – 10:00 / Room: Third floor – Great hall

#### **Friday, 17 August**

*Integrated soil-crop system management for food security and sustainability*

Fusuo Zhang

08:30 – 09:15 / Room: Third floor – Great hall

*Soils as a key factor in the mitigation and adaptation measures in climate change*

Thelma Krug

09:15 – 10:00 / Room: Third floor – Great hall

## Interdivisional Symposia

---

### Monday, 13 August

**IS1.1** Advances in observation, classification and mapping of soils

Conveners: Lucia Anjos (UFRRJ/BR)

Co-conveners: Jacqueline Hannam (Cranfield University/UK)

10:30-12:30 / Room: Oceania VI a X

**IS2.1** Microbial and nonmicrobial products for multi-use (agriculture, urban, industries, etc)

Conveners: Fátima Souza Moreira (UFLA/BR)

Co-conveners: Jerri Zilli (EMBRAPA/BR)

10:30-12:30 / Room: Asia I,II e III

**IS3.1** Soil fertility management and the African Green Revolution

Conveners: Bernard Vanlauwe (IITA/KE)

Co-conveners: Rebbie Harawa (AGRA/KE)

10:30-12:30 / Room: Asia IV,V e VI

**IS4.1** Soil organic matter to secure food and water and the 4 per 1000 initiative

Convener: Beata Madari (EMBRAPA/BR)

10:30-12:30 / Room: Oceania I a V

### Tuesday, 14 August

**IS1.2** Soil data and information for smarter land management

Conveners: Peter Wilson (CSIRO/AU)

Co-conveners: Noel Schoknecht (SSA/AU)

10:30-12:30 / Room: Oceania VI a X

**IS2.2** Interactions between physical, biological and chemical processes in soil

Convener: Stephan Peth (UK/DE)

10:30-12:30 / Room: Asia I,II e III

**IS3.2** Sustainable soil management

Conveners: Pedro Luiz de Freitas (EMBRAPA/BR)

Co-conveners: Julian Dumanski (WB/CA)

10:30-12:30 / Room: Asia IV,V e VI

**IS4.2** Soil Education and public awareness

Conveners: Eric Brevik (US)

Co-conveners: Fabiane Vezzani (UFPR/BR)

10:30-12:30 / Room: Oceania I a V

## **Thursday, 16 August**

### **IS1.3** Pedodiversity and biodiversity

Convener: Budiman Minasny (The University of Sydney/AU)

Co-convener: Ellen Kandeler (UH/DE)

10:30-12:30 / Room: Oceania VI a X

### **IS2.3** to be defined

Convener: to be defined

10:30-12:30 / Room: Asia I,II e III

### **IS3.3** Sustainable P fertilizer use in tropical soils

Conveners: Paul Withers (Bangor University/UK)

Co-convener: Vinicius de Melo Benites (Embrapa Soils/BR)

10:30-12:30 / Room: Asia IV,V e VI

### **IS4.3** Paradigm change in soil science: utopia or reality?

Conveners: Guilherme Sobrinho (Lapsiafro/UFRRJ/BR)

Co-convener: Alexandra Toland (DE)

10:30-12:30 / Room: Oceania I a V

## **Friday, 17 August**

### **IS1.4** Functional land management: managing soils from ped to planet

Conveners: Rogier Schulte (Wageningen University/NE)

Co-convener: Erika Micheli (Szent Istvan University/HU)

10:30-12:30 / Room: Oceania VI a X

### **IS2.4** Advanced techniques in soil mineralogy and biological process in mineral formation

Convener: Valdormiro Souza-Junior (UFRPE/BR)

10:30-12:30 / Room: Asia I,II e III

### **IS3.4** Agricultural management for soil health to support a growing population

Conveners: Tom Bruulsema (IPNI/USA)

Co-convener: Luis Ignácio Prochnow (IPNI/BR)

10:30-12:30 / Room: Asia IV,V e VI

### **IS4.4** Soils, Society and Culture: people's connections to soil.

Conveners: Nikola Patzel (IUSS/DE)

Co-convener: Cristine Muggler (UFV/BR)

10:30-12:30 / Room: Oceania I a V

## **Technical & Innovation Symposia**

---

### **Monday, 13 August**

**TI 1** IHSS Symposium: “Fresh and Humified Organic Matter: a key factor in the soil processes and sustainability

Conveners: Etelvino H. Novotny (EMBRAPA/BR) and Deborah P. Dick (UFRGS/BR)

10:30-12:30 / Room: Europa III e IV

### **Tuesday, 14 August**

**TI 2** SSSA Symposium: Soil Health: The Nexus of Human Health and Well Being

Convener: Richard Dick (SSSA/OSU/USA)

10:30-12:30 / Room: Europa III e IV

**T13** Global Soil Partnership, promoting sustainable soil management

Conveners: Ronald Vargas (GSP/FAO) and Eduardo Mansur (FAO)

14:00 -18:00 / Room: El Pardo I

### **Thursday (August 16)**

**TI 4** 21WCSS Applied Symposium

Convener: Flávio Camargo (UFRGS/BR)

10:30-12:30 / Room: Europa III e IV

### **Friday, 17 August**

**TI 5** Soil information, a prerequisite for sustainable soil management

Conveners: Ronald Vargas (GSP/FAO) and Eduardo Mansur (FAO)

10:30-12:30 / Room: Europa III e IV

## Divisional Symposia – Oral presentations

**Monday, 13 August**

**Division 1: Soil in Space and Time**

Monday (Aug, 13)		Room “Galápagos III”	
<b>C1.1.1</b> <b>C1.1.2</b>		<b>Using soil morphology and micromorphology indicators of soil health</b>	
		<b>Structural indicators of soil quality using X-ray computed tomography</b>	
		<b>Convener:</b> Rosa M Poch, Universitat de Lleida, Lleida, Catalunya, Spain Richard Heck, University of Guelph, Canada <b>Co-Convener:</b> Carlos Schaefer, UFV, Viçosa, Brazil Lars J. Munkholm, Aarhus University, Denmark	
Schedule	ID	Title	Presenter
15:30 – 15:40		Opening	Conveners
15:40 – 15:55	1767	Effects of land use in physical properties in Andean volcanic ashes soils	Melissa Lis-Gutiérrez
15:55 – 16:10	1058	Using micromorphology to assess the physical contamination of topsoil amended with a mixed waste organic output	Stephen Cattle
16:10 – 16:25	1260	Micromorphology of soils under sugar cane in the Cauca Valley, Colombia	Raul Madriñan
16:25 – 16:40	1191	Application of an indicator package for soil structural analysis based on X-ray computed tomography	Tseng Chien Ling
16:40 – 16:55	2717	Assessing long-term effects of zero-till on the porosity of Brazilian soils using X-ray computed tomography	Marcelo Valadares Galdos
16:55 – 17:10	3096	Quantifying the effect of crop rotation on topsoil structure dynamics using X-ray computed tomography	Richard J Heck
17:10 – 17:25	197	Computed tomography-measured pore parameters influenced by cover crops and biofuel management	Stephen H. Anderson
17:25 – 17:40	1831	Linking 3D pore structure to organic carbon contents of Andisols under organic and integrated kiwifruit orchards	Karin Müller
17:40 – 17:55	2440	Quantification of 3D-structures in soil microaggregates	Stephan Peth
17:55 – 18:10	--	Closing	Conveners

Monday (Aug, 13)		Room "Aruba II"	
<b>C1.3.2 WG01</b>		<b>Soil pedogenesis and diversity in extreme environments</b>	
		<b>WG01 - Cryosols: Progress in understanding the dynamic soils of colder regions</b>	
		<b>Convener:</b> Sergey V. Goryachkin, Russian Academy of Sciences, Russia Megan Balks, Soil and Environmental Sciences. University of Waikato, Hamilton, New Zealand  <b>Co-Convener:</b> Carlos Schaefer, Soils Department, UFV, Viçosa, MG, Brazil Dimitry Konyushkov, Dokuchaev Soil Science Institute, Moscow, Russia	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	1149	Deserts - Pedogenesis and Life in Areas with Little Water	Farhad Khormali
15:55 – 16:10	470	Characterization and classification of soils in a topossequence under sandstone in Manicoré, South Amazon	Elilson Gomes de Brito Filho
16:10 – 16:25	933	Differential soil genesis and geochemical composition in a serpentinite outcrop under tropical humid climate in Minas Gerais, Brazil	Emerson Ferreira Vilela
16:25 – 16:40	721	Extreme soils of humid high mountains, caused by different factors	Marek Drewnik
16:40 – 16:55	1453	Human-induced soils of european Russia in extremely rich and extremely uncomfortable conditions	Andrey Dolgikh
16:55 – 17:10	1244	Patches of life in the Atacama Desert - heterogeneity analyses of soil organic carbon	Mörchen, R.
17:10 – 17:25	1473	Pedogenesis in extreme environments: implications for understanding soil covers of the present and the past	Nikita Mergelov
17:25 – 17:40		<b>Close C1.3.2 / Opening WG01</b>	<b>Conveners</b>
17:40 – 17:55	507	Emission of greenhouse gases from natural and human-affected cold soils of Eurasia: controls of spatial variability	Dmitry Karelin
17:55 – 18:10	431	Sulfur and phosphorus speciation in soils on James Ross Island, Antarctic Peninsula, as assessed by XANES spectroscopy	Prietzl Jörg
18:10 - 18:15	--	Closing	Conveners

Monday (Aug, 13)		Room “Capri IV”	
<b>C1.4.1</b>		<b>Soil systems and soil classification - their links and feedbacks</b>	
		<b>Convener:</b> Monger, Curtis, National Soil Survey Center; USDA-Natural Resources Conservation Service, Lincoln, NE, US	
		<b>Co-Convener:</b> Ademir Fontana, Embrapa Soils, RJ, Brazil	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	2387	Brazilian Soil Classification System (SiBCS) reached 20 years - results and advances	Humberto Gonçalves dos Santos
15:55 – 16:10	853	Object of natural soil classification: Is it a system or an element of a system?	Aleksandra A. Nikiforova
16:10 – 16:25	1610	Development of an expert system for classification of Brazilian soil profiles	Luís de França da Silva Neto
16:25 – 16:40	2165	Are geographic information systems and remote sensing technologies enough tools for improving landuse planning? A case study of Arnaha VDC of Saptari District, Nepal	Keshav Raj Adhikari
16:40 – 16:55	1273	Modification of Paleustults at subgroup level: a case of tropical sandstone and siltstone-derived soils	Somchai Anusontpornperm
16:55 – 17:10	1879	Spodosols of Pantanal region: characterization, genesis and classification	Andressa Rosas de Menezes
17:10 – 17:25	1254	Evaluation of a national crop productivity index: revision for Kansas, USA	Erin L. Bush
17:25 – 17:40	219	A Study of Soil Taxonomy of Artificial Soils Containing Artifacts Typical of China-Discussion on Soil Reconstruction and Soil Taxonomic Classification in Land Engineering	Kening Wu
17:40 – 17:55	1496	Preliminary thoughts about a new HAHT soil order for Soil Taxonomy	John M. Galbraith
17:55 - 18:00	--	Closing	Conveners

## Division 2: Soil properties and processes

### Monday, 13 August

Monday (Aug, 13)		Room "Asia I, II e III"	
<b>C2.1.1</b>		<b>Soil structure dynamics – I - Assesment and evolution</b>	
		<b>Convener:</b> Dr. José Miguel Reichert, UFSM, Santa Maria, RS, Brazil.	
		<b>Co-Conveners:</b> Dr. Stephan Peth, Kassel University, Witzenhausen, Germany. Dr. Thomas Keller, Agroscope, Zürich, Switzerland. Dr Mathieu Lamandé, Aarhus University, Tjele, Denmark.	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	2315	Assessing continental-scale influences of exogenous and endogenous controls on soil structural development	Daniel R. Hirmas
15:55 – 16:10	419	An assessment scheme for soil degradation processes caused by forestry machinery	Rainer Horn
16:10 – 16:25	2032	Agricultural management type influence on soil microbial biomass and physical properties	Gheorghe Stegarescu
16:25 – 16:40	962	The role of soil structure conservation on physical properties of a volcanic ash soil subjected to different pasture improvement managements	José Dörner
16:40 – 16:55	336	Agricultural management practices effect on soil structural stability	Endla Reintam
16:55 – 17:10	1529	Intercorrelation in Mechanisms of Soil Aggregate Formation and Carbon Stabilization in Midwest Soils, USA	Ekrem Ozlu
17:10 – 17:25	1216	Neoformation of soil aggregates after a volcano eruption in meadows of Northern Patagonia, Argentina.	Enriquez, Andrea Soledad
17:25 – 17:40	334	Rare earth oxides as tracers for studying aggregate turnover: bridging soil physical and biological processes	Xinhua Peng
17:40 – 17:55	1139	Physico-chemical parametrization of biopore walls: A very special soil volume for soil fertility and exchange processes	Christoph Haas
17:55 – 18:10	612	Soil compaction reduction by earthworms activity in a very clayey soil	Maria Eliza Turek
18:10 – 18:15	--	Closing	Conveners



Monday (Aug, 13)		Room "Capri I"	
<b>C2.2.2</b>		Life on the interphase: interactions between soil geochemical and biological traits	
		<b>Convener:</b> Dr Karen Vancampenhout, Cluster for Bioscience Engineering Technology, Geel, Belgium.	
		<b>Co-Convener:</b> Dr. Beat Frey, Swiss Federal Research Institute WSL, Birmensdorf, Switzerland.	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	Invited	<i>Soil organic matter characteristics in relation to geochemical and biological factors</i>	Georg Guggenberger
15:55 – 16:10			
16:10 – 16:25	575	Soil faunal impact on litter decomposition and soil in cover crop system: effect of beetle larvae ( <i>Gametis jucunda</i> ) assessed by physical fractionation, micromorphology, and biochemical assay	Hiroko Nakatsuka
16:25 – 16:40	2286	Response of P-cycling microbial communities during soil genesis and ecosystem development along a 6500 year chronosequence under lowland temperate rainforest in New Zealand	Kari Dunfield
16:40 – 16:55	2459	The activity of acid phosphatase as a proxy of the interaction between soil microbial diversity and arbuscular mycorrhizal fungi	Bruna Arruda
16:55 – 17:10	760	Soil-vegetation relationships and patterns of species distribution on Dry Forests at Carajás, islands from Brazilian Eastern Amazonia	Jaquelina Alves Nunes Faria
17:10 – 17:25	1056	Evaluation of direct application of Spent Coffee Grounds as soil improvers in short term growth studies	Temma Carruthers-Taylor
17:25 – 17:40	925	Influence of cattle grazing on soybean rhizosphere on its levels of soluble and exchangeable potassium in the soil	Tauana Ferreira de Almeida
17:40 – 17:55	2143	Natural concentration of barium in soils and Brazilian nuts from Amazon region	Ediu Carlos da Silva Júnior
17:55 – 18:10	--	Closing	Conveners

Monday (Aug, 13)		Room "Oceania IX e X"	
<b>C2.3.3</b>		<b>Rhizosphere mineral dynamics: soil-plant-microorganism</b>	
		<b>Convener:</b> Dr. Maria Catarina Megumi Kasuya, Federal University of Viçosa, Viçosa, Brazil.	
		<b>Co-Convener:</b> Dr. Keitaro Tawarayama, Faculty of Agriculture, Tsuruoka, Yamagata, Japan.	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	494	Bacterial traits and quality contribute to the diet choice and survival of bacterial-feeding nematodes	Ting Liu
15:55 – 16:10	1120	Denitrification is lower in Bradyrhizobium japonicum than in B. diazoefficiens due to impaired nitrate reductase activity.	Arthur Fernandes Siqueira
16:10 – 16:25	1803	Diversity of bacterial community in the iron plaque of Typha latifolia growing in mine tailing wetland	Shizhong Wang
16:25 – 16:40	717	Effect of planting density on microbial activity and SOM decomposition in an arable topsoil and subsoil	Sebastian Loeppmann
16:40 – 16:55	447	Funneliformis mosseae alters soil fungal community dynamics and composition during litter decomposition	Heng Gui
16:55 – 17:10	1698	Fungal communities in Eucalyptus grandis and Acacia mangium rhizosphere in different planting systems	Elke Jurandy Bran Nogueira Cardoso
17:10 – 17:25	1844	The use of inoculant arbuscular mycorrhizal fungi and phosphate solubilizing microorganisms on growth of maize and soil phosphorus status	Irnanda Aiko Fifi Djuuna
17:25 – 17:40	--	Closing	Conveners

Monday (Aug, 13)		Room “Bora Bora I”	
<b>C2.5.2</b>		<b>Advances in techniques to investigate soil interfaces to understand interfacial reactions</b>	
		<b>Convener:</b> Dr Ladislau Martin-Neto, Embrapa Instrumentação, São Carlos, Brazil.	
		<b>Co-Convener:</b> Dr Siobhán Staunton, INRA, Montpellier, France.	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	Invited	<i>Laser-induced Breakdown Spectroscopy-LIBS: novel methods for soil analysis</i>	Débora Milori
15:55 – 16:10			
16:10 – 16:25	226	Interaction of organic molecules with reactive soil interfaces - molecular modeling and simulation	Martin H. Gerzabek
16:25 – 16:40	744	Long-term continuous phosphate fertilization on phosphorus speciation in an Oxisol under no-till evaluated by P-XANES	Joao Arthur Antonangelo
16:40 – 16:55	2187	Soil Chip-XPS integrated technique to study formation of soil biogeochemical interfaces	Jinshui Wu
16:55 – 17:10	2474	Synchrotron-Based Techniques for Determining Phosphorus Speciation in Soils	Audrey Gamble
17:10 – 17:25	1156	Travelling across scales - application of hyperspectral imaging and NanoSIMS to investigate nutrient distribution in soil	Eleanor Hobley
17:25 – 17:40	1313	Nanoscale distribution and speciation of organic carbon in temperate and permafrost soils	William E. Dubbin
17:40 – 17:55	274	Enhanced Hydroxyl Radical Formation Induced by Smectite Clays and Polyphenols Interactions	Juan Gao
17:55 – 18:10	260	Assessing impact of near-surface wind speed conditions on horizontal pore gas velocity profiles in wind-exposed porous media	Tjalfe Poulsen
18:10 – 18:15	--	Closing	Conveners

## Division 3: Soil Use and Management

Monday, 13 August

Monday (Aug, 13)		Room "Capri III"	
<b>C3.1.1</b>		<b>Recent advances in terroir zoning, functioning and sustainability - I</b>	
		<b>Convener:</b> Edoardo Costantini - Consiglio per la Ricerca in Agricoltura e l'Analisi dell'Economia Agraria – Agrobiology and Pedology Research Centre, Florence, Italy, E-mail: edoardo.costantini@crea.gov.it	
		<b>Co-Convener:</b>	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	1887	Modeling soil organic carbon stock after 10 years of cover crops in Mediterranean vineyards: improving ANN prediction by digital terrain analysis	Giuseppe Lo Papa
15:55 – 16:10	315	A new dynamic viticulture zoning approach to explore the resilience of terroir concept under climate change: the case study of Aglianico grapevine in southern Italy.	A. Bonfante
16:10 – 16:25	395	Effects of soil erosion on agro-ecosystem services: a multidisciplinary study in nineteen organically farmed European and Turkish vineyards	Edoardo Costantini
16:25 – 16:40	2089	Influence of soil characteristics on the composition of winter wines (Syrah cv.) from commercial vineyards of southeastern Brazil	Mariana Gabriele Marcolino Gonçalves
16:40 – 16:55	1697	Evaluation of the effect of the incorporation of two types of plastics (biodegradable and conventional) and the activity of earthworms in sandy soils in wheat ( <i>Triticum aestivum</i> L.)	Amalia Mejía Peláez
16:55 – 17:10	348	Effect of long-term application of inorganic fertilizers and organic manure on yield and soil organic carbon dynamics in a crop rotation system	Jidong Wang
17:10 – 17:25	1655	Fertilizer sources and application methods of zinc in citrus orchard	Rodrigo Marcelli Boaretto
17:25 – 17:40	2585	Zoning of productive areas for the establishment of plantations of acacia in Colombia	Silvia Marcela Caguasango Eraso
17:40 – 17:55	--	Closing	Conveners

Monday (Aug, 13)		Room "Galápagos I"	
<b>C3.2.3</b> <b>C3.2.4</b>		<b>Artificial drainage systems: maintaining soil functions and protecting water resources</b>	
		<b>Nutrient and contaminant transport in drained soils</b>	
		<b>Convener:</b> Bernd Lennartz, Agricultural and Environmental Sciences, University of Rostock, D-18055 Rostock, Germany, E-mail: bernd.lennartz@uni-rostok.de	
		<b>Co-Convener:</b>	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	1013	Efficiency of surface drainage systems in the reduction of water erosion on graveled forest roads	Helen Michels Dacoregio
15:55 – 16:10	1052	Effect of organic matter amendments on nitrate leaching losses from livestock urine	Brendon Malcolm
16:10 – 16:25	1213	The impact of water erosion on the organic carbon export from agricultural soil	Manninen Noora
16:25 – 16:40	1415	Phosphorus runoff losses from two land uses in the Santa Lucia River Basin, Uruguay.	Verónica Piñeiro
16:40 – 16:55	1569	Evaluation of total and soluble phosphorus concentrations in the Arroio Lajeado Ferreira catchment during a rainfall event	Tauris Santos Rangel
16:55 – 17:10	1642	Typical degradation parameters of base-flow water quality	Franciele de Bastos
17:10 – 17:25	1748	Increase of land slope or pig slurry rate rises phosphorus losses by runoff	Daniel João Dall Orsoletta
17:25 – 17:40	2057	Solid Cattle Manure Less Prone to Phosphorus Loss in Tile Drainage Water	Tiequan Zhang
17:40 – 17:55	--	Closing	Conveners

Monday (Aug, 13)		Room “Europa”	
<b>C3.3.1</b>		<b>Nitrogen use efficiency (NUE) in tropical soils - I</b>	
		<b>Convener:</b> Juliano Calonego, Faculty of Agronomic Sciences –São Paulo State University - FCA/UNESP. Botucatu, SP, Brazil, E-mail: juliano@fca.unesp.br	
		<b>Co-Convener:</b> Marcelo Valadares Galdos, University of Leeds, Leeds, UK. E-mail: M.Galdos@leeds.ac.uk	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	Invited 633	NUCLEUS (Nitrogen Use efficiency via an integrated Soil-plant systems approach for the UK & Brazil)	Sacha Mooney
15:55 – 16:10			
16:10 – 16:25	1384	Microorganisms affecting soil N under maize-forage grass rotations	Ciro Antonio Rosolem
16:25 – 16:40	1360	Ammonia and greenhouse gas emissions from maize-grass rotation systems	Eduardo Mariano
16:40 – 16:55	301	Distribution and chemical speciation of nitrogen and inhibitors from banded enhanced efficiency fertilizers	Chelsea Stroppiana
16:55 – 17:10	1410	Fate of 15N fertilizer in maize-forage grasses cropping systems	Camila da Silva Grassmann
17:10 – 17:25	1371	Nitrogen use efficiency and physiological response of maize to improved physical condition of structurally fragile tropical soil.	Emanoel Moura
17:25 – 17:40	2955	Reduction in ammonia emissions from the application of concentrated vinasse combined with nitrogen fertilizers and urease inhibitor in sugarcane	Nadia Valério Possignolo-Vitti
17:40 – 17:55	2422	Total CO <sub>2</sub> emission is not affected by liming in an integrated cropping system	Jéssica Pigatto de Queiroz Barcelos
17:55 – 18:10	3160	Impact of the N fertilizer application, concentrated vinasse and nitrification inhibitor on N <sub>2</sub> O emissions and NH <sub>3</sub> volatilization in sugarcane field in Brazil	Bruna Gonçalves de Oliveira
18:10 – 18:15	--	Closing	Conveners

Monday (Aug, 13)		Room "Capri II"	
<b>C3.3.3</b>		<b>Advancement of plant nutrition studies for sustainable agriculture - I</b>	
		<b>Convener:</b> Toru Fujiwara, atorufu@mail.ecc.u-tokyo.ac.jp	
		<b>Co-Convener:</b> Rodrigo Marcelli Boaretto, Agronomic Institute of Campinas (IAC), Citrus Research Center, Cordeiropolis, Brazil. E-mail rmboaretto@gmail.com; boaretto@centrodecitricultura.br	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	2607	Genotypic variation in tolerance to low pH and Aluminium toxicity in chickpea and wild Cicer	Wendy H Vance
15:55 – 16:10	2104	Canola Root System Architecture Response to Urea, Urea Ammonium Nitrate, and Ammonium Sulfate.	Isaac Madsen
16:10 – 16:25	2454	Efficiency sulfur sources for the corn crop	Estêvão Vicari Mellis
16:25 – 16:40	2536	Enhancement of site-specific nutrient management (SSNM) approach for rainfed rice: Framework and Advantages.	Sheetal Sharma
16:40 – 16:55	2605	The importance of soil-applied Cu at sowing for canopy photosynthesis and pod yield of peanut grown on low Cu sand	Thinh Nguyen Thai
16:55 – 17:10	335	Improving nitrogen use efficiency through balanced N and S supply for optimal canola production	Bao-Luo Ma
17:10 – 17:25	359	Polyhalite efficiency as source of sulfur for soybean and cotton in Brazil	Fabio Vale
17:25 – 17:40	2058	The chemical properties and fungal community composition in vermicompost as endproduct with different co-composting techniques	Shanskiy ,Merrit
17:40 – 17:55	1905	Potassium nutrition and coffee quality	Gustavo Nogueira Guedes Pereira Rosa
17:55 – 18:10	--	Closing	Conveners

Monday (Aug, 13)		Room "Asia IV, V e VI"	
<b>C3.3.4</b>		<b>Greenhouse gases emissions associated with fertilizer use</b>	
		<b>Convener:</b> Bruno J. Rodrigues Alves, Embrapa Agrobiologia, Seropédica, Brazil. E-mail: bruno.alves@embrapa.br	
		<b>Co-Convener:</b> Robert Boddey, Embrapa Agrobiologia, Seropédica, Brazil. E-mail: bob@embrapa.br	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	532	Soil nitrification, denitrification, N <sub>2</sub> O emission and associated microbial community and abundances as impacted by long-term fertilization strategies	Yongchao Liang
15:55 – 16:10	585	Significant contribution of soil inorganic carbon in atmospheric CO <sub>2</sub> following nitrogen fertilization: a global assessment	Kazem Zamanian
16:10 – 16:25	2129	Dynamics of Greenhouse gas emissions regulated by the strategies of straw return and N fertilization	Xin Ye
16:25 – 16:40	2179	Implication of straw removal for bioenergy production on soil N <sub>2</sub> O emissions in sugarcane fields in Brazil	João Luís Nunes Carvalho
16:40 – 16:55	808	Determining the mechanisms of N <sub>2</sub> O emission using <sup>15</sup> N tracer in paddy soil planting with WDR variety under different water management	Sheng Zhou
16:55 – 17:10	1912	Soil greenhouse gas fluxes from vinasse and N application in sugarcane areas with straw removal for bioenergy production	Ana Luisa Soares Vasconcelos
17:10 – 17:25	331	Responses of soil organic carbon turnover to nitrogen enrichment depended on nitrogen addition rates: derived from soil <sup>14</sup> C evidences	Qiqi Tan
17:25 – 17:40	1342	Greenhouse gases emissions during pasture intensification	Camila Bolfarini Bento
17:40 – 17:55	245	Treated domestic sewage irrigation significantly decreased the CH <sub>4</sub> , N <sub>2</sub> O and NH <sub>3</sub> emissions from paddy fields with straw incorporation	Lihong Xue
17:55 – 18:10	--	Closing	Conveners



Monday (Aug, 13)		Room "Oceania IV e V"	
<b>C3.3.7</b>		<b>Contribution of zero tillage (no-till) to sustainable use and management of soils - I</b>	
		<b>Convener:</b> Pedro Luiz de Freitas. Embrapa Soils, Rio de Janeiro, RJ, Brazil, E-mail: pedro.freitas@embrapa.br	
		<b>Co-Convener:</b> John N. Landers, International Zero Tillage Consultant, O.B.E., Brasilia-DF, Brazil, E-mail: john.landiers@uol.com.br	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	622	Do short-term conservation agriculture practices affecting stratification of soil labile carbon in Trans-Gangetic plains of India?	Ajay Kumar Mishra
15:55 – 16:10	655	Multiple rolling/crimping effects on rye cover crop termination, soil moisture, and strength in a no-till system	Ted Kornecki
16:10 – 16:25	822	A half-century of no-tillage and crop residue retention on a Vertisol in north-eastern Australia: lessons learnt	Yash Dang
16:25 – 16:40	1282	Soil microbial community control the response of soil CO <sub>2</sub> emission and crop yield to drought under no-tillage	Shuxia Jia
16:40 – 16:55	3167	Earthworm populations and the IQP index in sites under no-tillage system in south Brazil	Marie Luise Carolina Bartz
16:55 – 17:10	880	Conservation agriculture adoption and soil physical properties dynamics. Outcomes from Northeast Italy silty soils coupling on-site 3D geophysical survey and classical methods	Ilaria Piccoli
17:10 – 17:25	1419	Tillage management effects on soil physical properties in sugarcane fields	Leandro Carneiro Barbosa
17:25 – 17:40	1636	Impact of zero-till on soil properties and function in subtropical Texas, USA	Paul B. DeLaune
17:40 – 17:55	--	Closing	Conveners

Monday (Aug, 13)		Room "Galápagos II"	
<b>C3.3.11</b>		<b>Biochar for soil fertility management</b>	
		<b>Convener:</b> Scott Chang, Department of Renewable Resources, University of Alberta, Edmonton, Alberta, Canada. E-mail: sxchang@ualberta.ca	
		<b>Co-Convener:</b>	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	364	Ameliorating effects of designer biochars in a hard-setting subsoil layer: soil fertility and plant biomass	Gilbert C. Sigua
15:55 – 16:10	374	Nano biochar: formation processes, carbon stability, and colloidal behavior	Baoshan Xing
16:10 – 16:25	531	Biochar for long-term food security in smallholder farms in Kenya	Thomas Kätterer
16:25 – 16:40	590	Biochar and bacterial manure additions promote nitrogen uptake efficiency by decreasing fertilizer nitrogen loss and increasing soil bacterial abundance and diversity	Linzhang Yang
16:40 – 16:55	729	Opportunities for biochar use in low-input agricultural systems	Vimala D Nair
16:55 – 17:10	1019	Anthropogenic charcoal-rich soils of the xix century reveal that biochar leads to enhanced fertility and fodder quality of alpine grasslands	Cristina Martinez
17:10 – 17:25	1445	Biochar impregnated with magnesium increases phosphorus adsorption with potential to be used as fertilizer	Leônidas Carrijo Azevedo Melo
17:25 – 17:40	2388	Effect of biochar and nitrogen on wheat yield and soil quality	Ishaq Ahmad Mian
17:40 – 17:55	1210	Micron-scale pore structure of willow biochar modify soil moisture characteristics	Kimmo Rasa
17:55 – 18:10	1545	Eucalyptus biochar soil fertility and corn yield on a long-term field experiment	Isabella Menuzzo Lucon
18:10 – 18:15	--	Closing	Conveners

Monday (Aug, 13)		Room "Aruba I"	
<b>C3.6.1</b> <b>C3.6.2</b> <b>C.3.6.3</b> <b>C.3.6.4</b>	<b>Oasis soils: can our wisdom and experience survive in Anthropocene</b> <b>Salinity mapping and modelling salinization processes</b> <b>Salinity management and remediation of salt-affected soils</b> <b>Impact of land use change on soil and the environment in dry regions</b>		
	<b>Convener:</b> Jingsong Yang, Institute of Soil Science, Chinese Academy of Sciences, Nanjing, China, E-mail: jsyang@issas.ac.cn Donald Suarez, USDA ARS Salinity Laboratory, Riverside, USA. E-mail: Donald.suarez@ars.usda.gov		
	<b>Co-Convener:</b> Tibor Toth, Institute for Soil Sciences, Hungarian Academy of Sciences, Budapest, Hungary, E-mail: tibor@rissac.hu		
	<b>Schedule</b>	<b>ID</b>	<b>Title</b>
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	382	Saline water impact in hydrogel conditioned soil hydric retention	André Luis da Silva Parente Nogueira
15:55 – 16:10	1769	Scenario Simulation of Field Soil Water and Salt Balances Using SAHYSMOD for Salinity Management in a Coastal Salt-affected Agroecosystem	Rongjiang Yao
16:10 – 16:25	2589	Use of EM-38 Soil Surveys in Forage Fields at a Saline Drainage Water Reuse Site to Calibrate a Hydro-salinity Model for Decision Support	Sharon E. Benes
16:25 – 16:40	1394	The modern state of irrigated sodic soils in the south of Russia (Svetloyarsk irrigation system, Volgograd oblast)	Kristina Prokopeva
16:40 – 16:55	1336	Soil salinization in Patagonian meadows with different grassland condition	María Victoria Cremona
16:55 – 17:10	1173	Satellite and UAV thermography for soil salinity assessment	Konstantin Ivushkin
17:10 – 17:25	1118	Spatial Variability of Simulated Crop Yield with EPIC model in relation to Soil Salinity Predicted by Remote Sensing in Tarim River Basin/China	Hussein Othmanli
17:25 – 17:40	1540	Effects of chemical amendments for sodic soil reclamation strategies in Puerto Rico	David Sotomayor-Ramírez
17:40 – 17:55	2278	Using image processing technics to map soil salinity in semi-arid region	Artênio Cabral Barreto
17:55 – 18:10	--	Closing	Conveners

## Division 4: The Role of Soils in Sustaining Society and the Environment

### Monday, 13 August

Monday (Aug, 13)		Room "Oceania I e II"	
<b>C4.1.2</b>		<b>Climate change and adaptation of soil functions</b>	
		<b>Convener:</b> Masamichi Takahashi, Japan International Forestry Promotion & Cooperation Center (JIFPRO), Japan	
		<b>Co-Convener:</b> <a href="#">Beata Madari</a> , Brazilian Agricultural Research Corporation (Embrapa), National Research Center for Rice and Beans, Santo Antônio de Goiás, GO, Brazil	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	2109	A Decade of Nitrous Oxide Flux Measurements with Annual and Perennial Crop Rotations on the Canadian Prairies	Mario Tenuta
15:55 – 16:10	1878	How does zero valent metals and metal-sulfate materials affect N <sub>2</sub> O emission and abundance of denitrifying bacteria gene (narG, nirK, nirS, norB, and nosZ) in arable soil?	Hyun Ho Lee
16:10 – 16:25	2022	Investigation of the dry stress effect on the water consumption and the tree growth with the use of lysimeter	Jürgen Müller
16:25 – 16:40	809	Introduction of Impact Assessment and Adaptation with Crops on Climate Changes in Korea	Myung Chul Seo
16:40 – 16:55	1626	Impact of climate on the mighty manganese soils of Graskop	Matthew H.H. Fischel
16:55 – 17:10	2379	Near-infrared spectroscopy: an alternative tool to predict 13C abundance and to improve Soil organic carbon dynamics understanding.	Erick Zagal
17:10 – 17:25	584	Soil C-sequestration and CO <sub>2</sub> fluxes under maize-based conservation agriculture systems in the Eastern Cape, South Africa	Lindah Muzangwa
17:25 – 17:40	--	Closing	Conveners

Monday (Aug, 13)		Room "Bora-Bora III"	
<b>C4.3.2</b> <b>C4.1.4</b>		<b>Assessment and inventory of land use change under the SDG's perspective</b>	
		<b>Soil as natural capital: Economic and legal dimensions of ecosystem services</b>	
		<b>Convener:</b> Johan Bouma, Wageningen University, Wageningen, The Netherlands.	
		<b>Co-Convener:</b> Gonçalo Farias, Brazilian Soil Science Society, Brazil.	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	2845	SDG's as a guide for the development of relations between soil science & society	Johan Bouma
15:55 – 16:10	3054	Addressing the on-site costs of soil erosion: Modelling the economic aspects of our natural capital	Panos Panagos
16:10 – 16:25	591	Learning from past land use changes to achieve SDG 2 and SDG 12	Sandra Teuber
16:25 – 16:40	218	Assessing impacts of rural livelihood transition on non-point source pollution under different scenarios at the scale of small catchment: a case study in the Dongting Lake region	Jinwei Ye
16:40 – 16:55	552	Effect of Nefzaoua oasis degradation in livelihood and food security: farmer's perception	Nissaf Karbout
16:55 – 17:10	1369	European Soil Partnership: a Regional Cooperation to Develop Soil Policies and Achieve the SDGs in Europe and Central Asia	Hakki Emrah Erdogan
17:10 – 17:25	1185	Mainstreaming gender into adaptation and mitigation strategies to combat climate change and its impacts to achieve sustainable development goals (SDGs)	Ifeoma Goodluck Anyanwu
17:25 – 17:40	--	Closing	Conveners

Monday (Aug, 13)		Room “Ilha Bela II”	
<b>C4.2.1</b>		<b>Soil and Human Health - I</b>	
		<b>Convener:</b> Eric Brevik, Department of Natural Sciences, Dickinson State University Dickinson, USA	
		<b>Co-Convener:</b> <a href="#">Lily Pereg</a> , School of Science and Technology, University of New England, Armidale, Australia	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	478	A New Index for the Determination of Soil Health	Ian Pepper
15:55 – 16:10	2072	Arsenic and Cadmium in Rice: Interactions Between Soil Management and Human Health	Angelia L. Seyfferth
16:10 – 16:25	386	Assessment of potential health risk due to consumption of vegetables grown near a copper smelter in central Chile	Alexander Neaman
16:25 – 16:40	377	Bio-fortification of crops with micro- minerals for human and animal health	Bal Ram Singh
16:40 – 16:55	1806	Chromium contamination and potential health risk implications at abandoned and in-service tanning sludge storage sites	Yongqiang Yuan
16:55 – 17:10	2012	Soil biodiversity, Human health and Climate change: applying knowledge to address sustainability challenges	Diana H. Wall
17:10 – 17:25	2317	Respiratory bioaccessibility of potentially harmful elements in Brazilian urban soils	Alexys Giorgia Friol Boim
17:25 – 17:40	3026	Selenium in soils of Serbia in relation to animal and human health	Maja Manojlović
17:40 – 17:55	2541	Biofortified Lentil on poor fertility soils: An inexpensive source of Zn nutrition for developing countries	Muhammad Aamer Maqsood
	--	Closing	Conveners

Monday (Aug, 13)		Room "Capri V"	
<b>C4.4.1</b>		<b>Soil science education in the 21st century</b>	
		<b>Convener:</b> Damien Field, <a href="#">School of Life &amp; Environmental Sciences</a> <a href="#">Sydney Institute of Agriculture</a> , The University of Sydney, Australia	
		<b>Co-Convener:</b> David Lindbo, Soil Science Division, USDA-Natural Resources Conservation Service, Washington DC, USA	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	1621	A digital soil mapping training course tailored for land use planners	Ricardo Simão Diniz Dalmolin
15:55 – 16:10	1301	A global network for a virtual world soils exhibition: a new approach to education and advocacy on soils	Stephan Mantel
16:10 – 16:25	1976	An app for teaching soil taxonomy. A first experience with agronomy students	M. Alejandro Becerra
16:25 – 16:40	2836	Interdisciplinary and participatory methodologies for education in soil science	Heitor Mancini Teixeira
16:40 – 16:55	2608	Serving Society Through Soil Science: A Case Study of the "What's In Your Soil?" Project in Chicago, IL, USA.	James Montgomery
16:55 – 17:10	2087	Teaching soil science to engineering undergraduate students: introducing flipped instruction alongside institutional-regulated traditional methods.	Carmem Sueze Silva Miranda
17:10 – 17:25	2550	These are the soils of my country! An educational project based on the methodology network	Federico Gerardo Fritz
17:25 – 17:40	1727	Virtual Reality at the Rio Grande do Sul Soil Museum	Ricardo Bergamo Schenato
17:40 – 17:55	2511	What do the undergraduate degrees students earn to pursue careers in soil science say about the place of soil science in different countries?	Eric Brevik
17:55 – 18:10	--	Closing	Conveners

**Tuesday, 14 August**  
**Division 1: Soil in Space and Time**

Tuesday (Aug, 14)		Room "Capri IV"	
<b>C1.1.3</b> <b>C1.6.1</b>		<b>How to use micromorphology to understand palaeosols and polygenetic soils</b> <b>Human-environment interactions recorded in soils and palaeosols</b>	
		<b>Convener:</b> Sergey Sedov, UNAM, Mexico City, Mexico Elizabeth Solleiro, UNAM, Mexico City, Mexico	
		<b>Co-Convener:</b> Dr. Maria Bronnikova, Russian Academy of Sciences, Moscow, Russia Francisco Sergio Bernardes Ladeira; UNICAMP, Campinas, SP, Brazil	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	2592	A practical approach to studying iron-rich duricrusts using SEM image analysis	Danilo de Lima Camêlo
15:55 – 16:10	540	Micromorphology of red palaeosols in Mediterranean loess sequences in the Ebro valley	Rosa M. Poch
16:10 – 16:25	1616	Pedogenesis and paleoenvironmental reconstruction in a sequence of Spodosols in forest-savanna transition area in Roraima	Anna Bárbara De Souza Cruz
16:25 – 16:40	950	Synlithogenic pedogenesis in calcareous archaeological landforms of Israel	Danny Itkin
16:40 – 16:55		Close C1.1.3 / Opening C1.6.1	Conveners
16:55 – 17:10	2750	Main patterns of human-environment interaction during the Holocene recorded in soils of the Kuiavia region (central Poland)	Michal Jankowski
17:10 – 17:25	1633	Micromorphology as a tool for diagnostics of former human environmental interactions within medieval settling areas in different environmental backgrounds	Maria Bronnikova
17:25 – 17:40	1237	Potential application of <sup>239+240</sup> Pu in Austria as a soil erosion rates proxy	Raquel Falcao
17:40 – 17:55	1368	Proxies of degraded Acrisols under sloped pastures in the State of Rio de Janeiro (Brazil)	Roman Seliger
17:55 – 18:10	1195	Spatiotemporal landscape changes under human influence recorded in an agrarian kettle hole	W.M. van der Meij
18:10 - 18:15	--	Closing	Conveners



Tuesday (Aug, 14)		Room "Oceania VI e VI"	
<b>C1.2.2</b>		<b>Remote Sensing Applied to Soil Science</b>	
		<b>Convener:</b> José Alexandre M. Demattê, College of Agriculture Luiz de Queiroz, University of São Paulo ESALQ/USP	
		<b>Co-Convener:</b> Marcos Rafael Nanni, Department of Agronomy, State University of Maringá, Maringá, PR, Brazil	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	<i>The first Symposia of Remote Sensing (an integrative powerful science) in the 21th World Congress of Soil Science</i>	Conveners
15:40 – 16:40	Invited	<i>Soil remote sensing in the era of 4th industrial revolution</i>	Eyal Ben-Dor
	Invited	<i>Promoting remote sensing applications for optimizing soil and water management supporting climate smart agriculture in the Balkan region</i>	George Zalidis
	Invited	<i>Remote sensing as a tool to study soils and their impact on the Earth's climate</i>	Jerzy Cierniewski
16:40 – 16:55	2857	Soil water balance for South America as a tool for farmers: comparison of the effects of different soil databases with remote sensing data	Andyara Oliveira Callegare
16:55 – 17:10	390	Data mining of the Landsat time series to build predictors for digital soil mapping	José Lucas Safanelli
17:10 – 17:25	1619	Sentinel-2 for soil organic carbon retrieving and mapping in central Europe	Asa Gholizadeh
17:25 – 17:40	2639	The use of aerial gamma-ray spectrometry to determine soil physical and soil chemical properties for soil mapping	Jasper Dreyer
17:40 – 17:55	2304	Global soil mapping and monitoring from hyperspectral imagery: Science developments in support to upcoming EnMAP satellite mission	Sabine Chabrilat
17:55 – 18:10	2220	Assessing remote sensing data with spatial statistics in precision agriculture field experiments	Thorsten Knappenberger
18:10 - 18:15	--	Closing	Conveners

Tuesday (Aug, 14)		Room “Galápagos III”	
<b>C1.3.3</b>		<b>Anthrosols - the human constructed soils</b>	
		<b>Convener:</b> Wenceslau Geraldtes Teixeira, Embrapa Soils, RJ, Brazil	
		<b>Co-Convener:</b> Luise Gianni, University of Oldenburg, Germany	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	Invited	<i>Anthrosols: the relevance of understanding the formation of man-made soils</i>	Wenceslau Teixeira
15:55 – 16:10	935 Invited	Plaggen Soils - Europe’s counterpart of Terras Pretas	Luise Giani
16:10 – 16:25	860	Anthrosols and Technosols in the Slovak soil classification system in relation to their genesis and mapping in cities (pedo-urban complexes)	Jaroslava Sobocká
16:25 – 16:40	1137	Anthrosols of ancient agricultural terraces in mountainous Dagestan (Eastern Caucasus, Russia)	Elena Chernysheva
16:40 – 16:55	1639	Caatinga dark earths	José João Lelis Leal de Souza
16:55 – 17:10	1162	Phosphorus (P) availability and P transformation rates in Amazonian Dark Earth determined by 33P isotopic dilution	Klaus Jarosch
17:10 – 17:25	2901	Properties and functioning of agricultural raised fields in seasonally inundated tropical wetlands	Leonor Rodrigues
17:25 – 17:40	2235	Soil animals in Amazonian Dark Earths: biodiversity and role in soil functioning and formation	George Brown
17:40 – 17:55	2704	Impact of the pre-Columbian activities on soil-transformation and pedogenic processes in Anthrosols from French Guiana	Jeanne Brancier
17:55 – 18:10	--	Closing	Conveners

Tuesday (Aug, 14)		Room "Aruba II"	
<b>C1.5.3</b>		<b>Reconciling pedometrics and pedology</b>	
		<b>Convener:</b> Budiman Minasny, The University of Sydney, Australia	
		<b>Co-Convener:</b> Erika Micheli, Szent Istvan University, Gödöllő, Hungary	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	3068	Bringing together Brazilian soil scientists to share soil data	Alessandro Samuel-Rosa
15:55 – 16:10	413	Digital Soil Mapping: a critical analysis	Amaury de Carvalho Filho
16:10 – 16:25	2416	Probabilistic and information assessment of contemporary soil processes	Irina Mikheeva
16:25 – 16:40	2504	Protocol for use data legacy in the soil body delineations in the São Paulo west plateau	Nélida Elizabet Quiñonez Silvero
16:40 – 16:55	608	SISINTA: the Argentinian soil information system	Marcos E. Angelini
16:55 – 17:10	2059	Soil quality mapping to characterize agricultural areas benefiting from the use of biochar in Ethiopia	Tegbaru Bellete
17:10 – 17:25	2828	Soil-landscape relationships and digital soil mapping in Maranhão State, Brazil	M.L. Mendonça-Santos
17:25 – 17:40	2960	Soils in the Anthropocene - revisiting SCORPAN covariates for DSM in cities	Jacqueline Hannam
17:40 – 17:55	1003	Pedometric techniques for soil horizon delineation	Yakun Zhang
17:55 – 16:10	--	Closing	Conveners

## Division 2: Soil properties and processes

Tuesday, 14 August

Tuesday (Aug, 14)		Room "Asia I, II e III"	
<b>C2.1.1</b>		<b>Soil structure dynamics – II - Modeling and fluxes</b>	
		<b>Convener:</b> Dr. José Miguel Reichert, UFSM, Santa Maria, RS, Brazil.	
		<b>Co-Conveners:</b> Dr. Stephan Peth, Kassel University, Witzenhausen, Germany. Dr. Thomas Keller, Agroscope, Zürich, Switzerland. Dr Mathieu Lamandé, Aarhus University, Tjele, Denmark.	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	1164	Inverse modeling and X-ray computed microtomography highlight scale-dependent soil structure properties	Nicola Dal Ferro
15:55 – 16:10	1194	Scenario modelling of carbon mineralization in 3D soil structure: comparison between a geometrical model and a model based on lattice Boltzmann approach	Patricia Garnier
16:10 – 16:25	1061	Slakes: A soil aggregate stability android application	Mario Fajardo
16:25 – 16:40	945	Influence of sodicity on the reversibility of the saturated hydraulic conductivity in low saline environment	Yacine Louadj
16:40 – 16:55	929	The Gardner dual model: An extension of the exponential Gardner equation to calculate the relative hydraulic conductivity curve	Theophilo B. Ottoni Filho
16:55 – 17:10	1978	Effects of saline irrigation and biochar application on soil salt crust formation on sandy loam	Jianguo Zhang
17:10 – 17:25	2039	Effect of Transient Soil Density on Near-Surface Water and Energy Flow Dynamics	Josh Heitman
17:25 – 17:40	1657	Effect of soil variability and soil water model complexity on water movement and nitrogen losses	Iris Vogeler
17:40 – 17:55	2236	Quantifying the persistence of macroaggregates following crop residue addition to a clay soil	T. Tian
17:55 – 18:10	279	Drying and rewetting cycles influence the particulate fraction distribution of new organic matter in soils, a <sup>13</sup> C-lignocellulose essay.	Francisco Najera
18:10 – 18:15	--	Closing	Conveners

Tuesday (Aug, 14)		Room "Oceania IX e X"	
<b>C2.2.3</b>		<b>Soil and water pollution: dynamics and evaluation - I</b>	
		<b>Convener:</b> Dr. Leônidas Carrijo Azevedo Melo, Universidade Federal de Lavras, Lavras, Brazil	
		<b>Co-Convener:</b> Dr. Clístenes Williams Araujo do Nascimento, Universidade Federal Rural de Pernambuco, Recife, Brazil Luís Reynaldo Ferracciú Alleoni, USP - Escola Superior de Agricultura Luiz de Queiroz, Piracicaba, Brazil	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	2308	A multi-scale approach for soil contamination assessment	Paola Adamo
15:55 – 16:10	3083	The Role of Soil Chemical Processes and Properties in Impacting Chromium Cycling in Highly Contaminated Soils	Jason Fischel
16:10 – 16:25	1089	Contribution of Soil Active Components to the Control of Heavy Metal Speciation	Wenfeng Tan
16:25 – 16:40	252	Studies on Redox behaviors between dissolved sulfide and manganese oxide minerals assisted by in-situ electrochemical technique	Guohong Qiu
16:40 – 16:55	2363	Evaluation of the content of trace elements in the soils of the river basin affected by flood events	Mirosław Kobierski
16:55 – 17:10	1413	Wastewater treatment and recovery of uranium by iron and aluminium (hydr)oxides	Vanessa de Paula Ferreira
17:10 – 17:25	1403	Phosphorus Release in Pyrogenic Organic Matter and Gypsum Amended Soils under Simulated Seasonal Flooding Conditions	Darshani Kumaragamage
17:25 – 17:40	1338	Copper sorption in technosols made with organic matter, carbonates and bentonite	Francisco Ruiz
17:40 – 17:55	2372	Sea level rise induced arsenic release from historically contaminated coastal soils	Joshua J. LeMonte
17:55 – 18:10	--	Closing	Conveners

Tuesday (Aug, 14)		Room "Bora-Bora I"	
<b>C2.3.2</b>		<b>Molecular techniques as a useful tool to reveal soil biodiversity and biotechnological potential of microbial genomes</b>	
		<b>Convener:</b> Dr. Emanuel M Souza, Universidade Federal do Paraná, Curitiba, Brazil.	
		<b>Co-Convener:</b> Dr. Fátima Maria S. Moreira, Universidade Federal de Lavras, Lavras, Brazil.	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	541 Invited	Transition in land colonization reflects a multi-trait switch in soil microbial genomes	Joana Falcao Salles
15:55 – 16:10			
16:10 – 16:25			
16:25 – 16:40	1104	Innovative tools to diagnose the impact of land use practices on soil microbial communities	Terrat S.
16:40 – 16:55	2484	The stability of soil fertility and soil microbial communities influenced by long term fertilization	Wei Wenxue
16:55 – 17:10	1092	Sympatric differentiation of active ammonia oxidizing archaea and bacteria in a neutral soil	Zhihui Wang
17:10 – 17:25	3113	Whole Genome Sequencing of Fusarium avenaceum strain F.a.1: A Fungal Strain Showing Biocontrol Potential for Wild Oat	Ricky W. Lewis
17:25 – 17:40	660	Soil conditions comparison in Gros Michel banana plantations infected with Fusarium oxysporum f. sp. Cubense RACE 1.	Katherine Sánchez Zúñiga
17:40 – 17:55	--	Closing	Conveners

Tuesday (Aug, 14)		Room "Capri I"	
<b>C2.4.1</b>		<b>Dynamic minerals: shifts in soil mineral composition as a result of soil use and management over the human time scale</b>	
		<b>Convener:</b> Dr Aaron Thompson, University of Georgia, Athens, GA, USA	
		<b>Co-Convener:</b> Balwant Singh / Australia.	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	2879	Can a remineralizer from Greenland improve the fertility in Brazilian tropical soil?	Rafael Cipriano da Silva
15:55 – 16:10	1547	Fe(II) interaction with natural clay minerals: role of structural Fe and aluminosilicates on Fe(II)-layered double hydroxide (LDH) formation	Aaron R. Betts
16:10 – 16:25	2515	Key role of 2:1 clay minerals in fertility of subtropical soils of Rio Grande do Sul in south Brazil and impact of land use	Caner
16:25 – 16:40	2810	Magnetite and maghemite as weatherable minerals in tropical and subtropical soils	Antonio Carlos Saraiva da Costa
16:40 – 16:55	2401	Physical and Mineralogical Identification of an Ultisol in Coastal Lowered in the State of Rio de Janeiro - Brazil	Amaury da Motta Figuera
16:55 – 17:10	1777	Short-range-ordered (SRO) iron minerals are dynamic, emergent representations of recent environmental conditions in soils	Aaron Thompson
17:10 – 17:25	2498	The transformation of clay minerals in the particle size fractions of two soils from different latitudes in China	Georges Martial Ndzana
17:25 – 17:40	404	Soil Mineralogy of Forest Island and adjacent Farmland in West Africa	Samuel A. Mesele
17:40 – 17:55	--	Closing	Conveners

## Division 3: Soil Use and Management

Tuesday, 14 August

Tuesday (Aug, 14)		Room "Capri III"	
<b>C3.1.1</b>		<b>Recent advances in terroir zoning, functioning and sustainability - II</b>	
		<b>Convener:</b> Edoardo Costantini - Consiglio per la Ricerca in Agricoltura e l'Analisi dell'Economia Agraria – Agrobiology and Pedology Research Centre, Florence, Italy, E-mail: edoardo.costantini@crea.gov.it	
		<b>Co-Convener:</b>	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	1845	Pedotechnique application in intensive viticulture: links between economic assessment and soil security	Carmelo DAZZI
15:55 – 16:10	1853	Potential areas identified for cocoa cultivation in Honduras	Gauggel Carlos
16:10 – 16:25	2384	Modeling hydrological processes for improved soil, water and land management for high quality wine production under Mediterranean semiarid climate conditions	Ildelfonso Pla Sentis
16:25 – 16:40	1576	Proximal Soil Sensing and Multispectral Imaging for Site-specific Nutrient Management in Tropical Soils	Johan S. Perret
16:40 – 16:55	2949	Land suitability of the Legal Amazon deforested areas	Enio Fraga da Silva
16:55 – 17:10	3200	The potential of Alfisols developed from different parent materials in two agro ecological zones for oil palm production	Fasina, Abayomi S.
17:10 – 17:25	852	Farm-scale soil mapping protocols for New Zealand	Gerard Grealish
17:25 – 17:40	--	Closing	Conveners



Tuesday (Aug, 14)		Room "Capri II"	
<b>C3.2.5</b>		<b>Soil erosion modelling: Global Alliance</b>	
		<b>Convener:</b> Pasquale Borrelli. University of Basel, Environmental Geosciences, Basel, Switzerland. E-mail: pasquale.borrelli@unibas.ch Panos Panagos. European Commission, Joint Research Center, Ispra, Italy. E-mail: panos.panagos@ec.europa.eu	
		<b>Co-Convener:</b> Jae E. Yang. Department of Biological Environment, Kangwon National University, Chunchon, Korea, E-mail: yangjay@kangwon.ac.kr	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	Invited 1135	Soil Erosion in Woodlands: Effects of Tree Species, Tree Diversity and Biological Soil Crusts after Forest Disturbances	Thomas Scholten
15:55 – 16:10			
16:10 – 16:25	995	The use of dendrogeomorphology as a tool for dating and reconstructing erosion dynamics in tropical regions.	Miguel Cooper
16:25 – 16:40	1134	Current and future assessments of water erosion on the Tibetan Plateau	Hongfen Teng
16:40 – 16:55	1151	Modeling structural and functional hydrological connectivity in a Mediterranean catchment by using a new aggregated index	Manuel López-Vicente
16:55 – 17:10	2218	Runoff and soil erosion process-based modeling in different land uses in the Brazilian Cerrado	Jamil Alexandre Ayach Anache
17:10 – 17:25	2407	Estimating fractional cover for hillslope erosion modeling using Landsat-8 images	Xihua Yang
17:25 – 17:40	3058	Potential of phosphorus fractions to trace sediment sources in a rural catchment of Southern Brazil: comparison with a conventional approach based on elemental geochemistry	Tales Tiecher
17:40 – 17:55	1272	Global impacts of 21st-century land use change on soil loss by water erosion	Pasquale Borrelli
17:55 – 18:10	--	Closing	Conveners

Tuesday (Aug, 14)		Room “Europa”	
<b>C3.3.1</b> <b>C3.3.8</b>		<b>Nitrogen use efficiency (NUE) in tropical soils - II</b> <b>International Nitrogen Initiative</b>	
		<b>Convener:</b> Juliano Calonego, Faculty of Agronomic Sciences –São Paulo State University - FCA/UNESP. Botucatu, SP, Brazil, E-mail: juliano@fca.unesp.br	
		<b>Co-Convener:</b> Marcelo Valadares Galdos, University of Leeds, Leeds, UK. E-mail: M.Galdos@leeds.ac.uk	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	1734	Volatilization of N-NH <sub>3</sub> from different nitrogen sources after lime application in no-tillage system	Evandro Antonio Minato
15:55 – 16:10	2258	<i>Brachiaria brizantha</i> may help to reduce N <sub>2</sub> O emissions	Lucas Pecci Canisares
16:10 – 16:25	1679	Forecasting the contribution of soil N mineralization for sweet corn production using a temperature-based prediction equation	Sullivan, Dan M.
16:25 – 16:40	2915	Nitrogen balance and use efficiency of Japanese paddy rice production: Improvement driven by consumer behavior	Sadao Eguchi
16:40 – 16:55	1596	Reducing ammonia and nitrous oxide emissions and increasing maize yields by using the 4R nutrient management strategy	Craig Drury
16:55 – 17:10	439	Leaching of dissolved organic nitrogen from irrigated maize fields in Mediterranean Central Chile	Osvaldo Salazar
17:10 – 17:25	2762	Impact of urease and nitrification inhibitors on ryegrass productivity in the high rainfall zone of southern Australia.	Oxana Belyaeva
17:25 – 17:40	900	Nitrogen in alpine ecosystems: adaptations to low N availability and reactions on additional N input	Makarov M.I.
17:40 – 17:55	2938	Effect of the use of a slow-release N fertilizer on the critical concentration of N in the biomass, production of aerial biomass and residual mineral N in an Andisol.	John Clunes Muñoz
17:55 – 18:10	1926	Benchmarking the reactive nitrogen loss for global agricultural products	Deli Chen
18:10 0 18:15	--	Closing	Conveners

Tuesday (Aug, 14)		Room "Galápagos I"	
<b>C3.3.5</b>		Johan Bouma <b>emission reduction and/or enhancing carbon sequestration - I</b>	
		<b>Convener:</b> Carlos E. Cerri. Luiz de Queiroz College of Agriculture. University of Sao Paulo. Piracicaba-SP, Brazil, E-mail: cepcerri@usp.br	
		<b>Co-Convener:</b> João Luis Carvalho. Brazilian Bioethanol Science and Technology Laboratory (CTBE). Campinas-SP, Brazil, E-mail: joao.carvalho@bioetanol.org.br	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	196	Mitigation of nitrous oxide emissions and nitrate leaching in grazed grassland in New Zealand.	Hong J. Di
15:55 – 16:10	454	Implementation of the 4 per 1000 initiative at the regional scale: A case study for Bavaria	Martin Wiesmeier
16:10 – 16:25	624	Pasture systems: an alternative for soil carbon storage in conditions of tropical dry climate in Santa Marta, Colombia	Sonia Esperanza Aguirre Forero
16:25 – 16:40	1046	Biological nitrification inhibition as a method to reduce nitrous oxide emissions from grazed pasture soils: a New Zealand perspective	Camilla Gardiner
16:40 – 16:55	1275	Tillage and cropping systems and nitrogen fertilization affected carbon accumulation in superficial and subsuperficial soil layer after 30 years in Southern Brazil	Cimélio Bayer
16:55 – 17:10	1484	Rate of C substitution in organic matter fractions by pasture-derived C in soil under integrated systems	Eduardo S. Matos
17:10 – 17:25	244	Forestry for climate smart agriculture, agro-biodiversity and ecosystem services	Arun Kumar Mishra
17:25 – 17:40	593	Long-term zero tillage minimizes radiative forcing	Hannah Cooper
17:40 – 17:55	2271	Estimation of soil C stocks in different scales in an intensively cropped region of Southern Brazil	Carlos Gustavo Tornquist
17:55 – 18:10	--	Closing	Conveners

Tuesday (Aug, 14)		Room "Oceania IV e V"	
<b>C3.3.7</b>		<b>Contribution of zero tillage (no-till) to sustainable use and management of soils - II</b>	
		<b>Convener:</b> Pedro Luiz de Freitas. Embrapa Soils, Rio de Janeiro, RJ, Brazil, E-mail: pedro.freitas@embrapa.br	
		<b>Co-Convener:</b> John N. Landers, International Zero Tillage Consultant, O.B.E., Brasilia-DF, Brazil, E-mail: john.landiers@uol.com.br	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	Invited 3237	The Economic Future of Agriculture in Mato Grosso	John Landers
15:55 – 16:10	2283	No-till versus no-tillage system in Brazilian tropical and subtropical regions	Pedro Luiz de Freitas
16:10 – 16:25	2352	Soil health assessment on a long-term soil tillage experiment from central Kansas	Charles W. Rice
16:25 – 16:40	2698	Agricultural Sector Burning: Hidden Impacts on Soils, Crop Yields, Human Health, Water and Climate	Juliana Albertengo
16:40 – 16:55	2714	Conservation agriculture principles applied for sugarcane crop propagated by pre-sprouted buds system in Brazil	Denizart Bolonhezi
16:55 – 17:10	1099	Evaluation of soil moisture analysis results in strip tillage	Karina Bianka Bodnár
17:10 – 17:25	2861	Sustainable weed management for conservation agriculture: Options for smallholder farmers	Sandra Corsi
17:25 – 17:40	--	Closing	Conveners

Tuesday (Aug, 14)		Room "Galápagos II"	
<b>C3.3.12</b> <b>C3.3.9</b>		<b>Sustainable land management in rural basins belonging to the south cone of Latin America</b> <b>Management of soils recently impacted by volcanic activity</b>	
		<b>Convener:</b> Celio Ignacio Chagas, Universidad de Buenos Aires, Argentina. E-mail: chagas@agro.uba.ar Jorge Dionisio Etchevers Barra, Soil Fertility Laboratory, Campus Montecillo, Colegio de Postgraduados, Chapingo/Montecillo, Mexico. E-mail: jetchev@colpos.mx	
		<b>Co-Convener:</b> José Manuel Febles González, Universidade de La Habana-Cuba, La Habana-Cuba, Email: febles@rect.uh.cu Floria Bertsch, Asociacion Costarricense de La Ciencia del Suelo, Presidente, San José, Costa Rica; E-mail: floriabh@gmail.com; presidencia@sueloscr.com	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners I e II
15:40 – 15:55	Invited	Good soils and virgin soils in extinction in watersheds in Latin America	José Manuel Febles González
15:55 – 16:10	1178	Multitemporal variability of land use and soil and its influence on surface temperature determined by remote sensing	Natasha Valadares dos Santos
16:10 – 16:25	1339	Impact of agricultural rotations on environmental indicators in different areas of the Argentine Republic	Federico Gerardo Fritz
16:25 – 16:40	2013	Monitoring of sediment yield and erosion modeling in a large no-till agricultural catchment in southern Brazil	Elizeu Jonas Didoné
16:40 – 16:55	1321	Land use change, soil degradation, and water erosion: converting grasslands to croplands in the Rolling Pampa (Argentina).	Celio Ignacio Chagas
16:55 – 17:10	--	Closing C3.3.12/ Opening C3.3.9	Conveners
17:10 – 17:25	1021	Analysis of research conducted on soils recently impacted by volcanic activities in Costa Rica	Floria Bertsch
17:25 – 17:40	2326	Volcanic soils of Ecuador: tillage management challenges	José Espinosa
17:40 – 17:55	--	Closing C3.3.9	Conveners

Tuesday (Aug, 14)		Room "Asia IV, V e VI"	
<b>C3.3.10</b>		<b>Beneficial management practices for sustaining soil fertility - I</b>	
		<b>Convener:</b> Scott Chang, Department of Renewable Resources, University of Alberta, Edmonton, Alberta, Canada. E-mail: sxchang@ualberta.ca	
		<b>Co-Convener:</b> Rafael Otto, ESALQ/USP, Piracicaba, Brazil. E-mail; rotto@usp.br	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	310	Forms of edaphic phosphorus and its relationship with granulometric fractions under different crop rotations in Argentine Pampean soils	Suñer Liliana
15:55 – 16:10	371	Can deep placement of lime and organic material increase soil pH and improve crop productivity on acidic soils at depths?	Guangdi Li
16:10 – 16:25	381	Zeolite use for a sustainable agriculture in Argentina: what we know and what we do not know yet?	Martin Torres Duggan
16:25 – 16:40	444	Effectiveness of organic amendments in ameliorating acidic cropping soils	Clayton Butterly
16:40 – 16:55	499	The effect of constructing fertile cultivated layer on soil physical properties and crop yield in black soil region in Northeast China	Xiaozeng Han
16:55 – 17:10	525	Research for twenty years on biosolids and its use in agricultural soils of northern Mexico.	Juan Pedro Flores Margez
17:10 – 17:25	604	Long-term effects of organic and mineral fertilizers on soil organic carbon, soil properties and crop yields.	Sokrat Sinaj
17:25 – 17:40	623	Agroecological approach to sustainable management of Chernozems in Moldova	Boris Boincean
17:40 – 17:55	498	The impact of tillage depth and straw incorporation on crop yield and soil water supply in arable black soil	Wenxiu Zou
17:55 – 18:10	885	Nutrient extraction by the biomass of Eucalypts dunnii Maiden grown on short rotation plantations for energy production	Luis Francisco Bentancor Bossio
18:10 – 18:15	--	Closing	Conveners

Tuesday (Aug, 14)		Room "Bora-Bora III"	
<b>C3.5.1</b> <b>C3.5.5</b> <b>C3.5.6</b>		<b>Behavior and regulation of radionuclides in soil-plant system: Long term countermeasure for the renovation of agriculture</b> <b>Radionuclides in soils: pollution sources and sustainable remediation approaches</b> <b>Biogeochemical fate of radiocesium in terrestrial environment: Advances after the Fukushima accident</b>	
		<b>Convener:</b> Takuro Shinano, Agricultural Radiation Research Center, TARC/NARO, Fukushima, Japan, E-mail: shinano@affrc.fo.jp ; Elena Korobova, Vernadsky Institute of Geochemistry and Analytical Chemistry, Russian Academy of Sciences (GEOKHI RAS), Geochemical Dept. Moscow, Russian Federation, E-mail: korobova@geokhi.ru; Jaume Bech, University of Barcelona, Barcelona, Spain, jaumebechborras@gmail.com	
		<b>Co-Convener:</b> Atsushi Nakao, Department of Life and Environmental Sciences, Kyoto Prefectural University, Kyoto, Japan, E-mail: na_4_ka_triplochiton@kpu.ac.jp Leonid Rikhvanov, Institute of Natural Resources, National Research Tomsk Polytechnic University. Moscow, Russian Federation. rikhvanov@tpu.ru	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	2725	Agricultural countermeasure against nuclear disaster	Takuro Shinano
15:55 – 16:10	1842	Assessment of transfer risk of radiocesium in decontaminated agricultural land in Tomioka town, Fukushima prefecture, Japan	Kohei Kurokawa
16:10 – 16:25	562	Radioactivity in soils of the state of Rio de Janeiro, Brazil: radiological characterization, correlation with environmental conditions and Quality Reference Values	Fernando Carlos Araujo Ribeiro
16:25 – 16:40	3224	Mica in Asian dust as a natural amendment to increase soil ability to retain radiocesium	Atsushi Nakao
16:40 – 16:55	823	A simple method using rice seedlings to predict <sup>137</sup> Cs concentration in brown rice and to estimate appropriate amounts of potassium fertilizer for each paddy field	Shigeto Fujimura
16:55 – 17:10	2838	Study on extraction and adsorption of cesium from contaminated soil in flexible container bag.	Keiichiro Shibata
17:10 – 17:25	1035	Mobility of radiocesium from specific sorption sites in agricultural soils in northeastern Japan	Takeda, A.
17:25 – 17:40	2262	Integrated Nutrient Management in Remediation of Crude Oil Polluted Soils in Forest Ecological Zone of Delta State	Aboh, S. I
17:40 – 17:55	3238	Thyroid diseases as a complex natural and technogenic geochemical problem and approaches towards their effective prevention and elimination	Elena Korobova
17:55 – 18:10	--	Closing	Conveners

## Division 4: The Role of Soils in Sustaining Society and the Environment

### Tuesday, 14 August

Tuesday (Aug, 14)		Room "Oceania I e II"	
<b>C4.1.5</b>		<b>Carbon sequestration potential of soils</b>	
		<b>Convener:</b> Claire Chenu, AgroParisTech, Paris, France	
		<b>Co-Convener:</b> Denis Angers, Agriculture and Agri-Food Canada, Québec, Canada	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	2987	Defining and Predicting the Organic Carbon Sequestration Potential of Soils	Mike Beare
15:55 – 16:10	2715	Land use change effects on soil carbon stock in Caatinga biome over time	Marcella Leal Santos
16:10 – 16:25	213	Methodological discrepancies in the IPCC-based assessments of organic carbon stock changes in agricultural soils and their offsetting potential	Mohammad Khalil
16:25 – 16:40	3210	Soil carbon stock change after land use change from forest to cropland in Japan	Yasuhito Shirato
16:40 – 16:55	1304	Soil carbon storage potential in tropical croplands: revisiting boundary lines and drivers	Kenji Fujisaki
16:55 – 17:10	1400	Soil Organic Carbon stocks assessment, an emergency for environmental and agricultural policies: a case study from Amazonia (French Guiana)	A. Courte
17:10 – 17:25	537	The 4 per 1000 goal and soil carbon storage under agroforestry and conservation agriculture systems in sub-Saharan Africa	Julien Demenois
17:25 – 17:40	--	Closing	Conveners



Tuesday (Aug, 14)		Room “Ilha Bela II”	
<b>C4.2.1</b>		<b>Soil and Human Health - II</b>	
		<b>Convener:</b> Eric Brevik, Department of Natural Sciences, Dickinson State University Dickinson, USA	
		<b>Co-Convener:</b> <a href="#">Lily Pereg</a> , School of Science and Technology, University of New England, Armidale, Australia	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	606	Soil and human health: A pursuit of patterns	Alan Franzluebbers
15:55 – 16:10	2542	Soil and the human microbiome	Winfried Blum
16:10 – 16:25	665	Soil carbon storage and climate change	Ram Dalal
16:25 – 16:40	223	Soil contamination with heavy metals in China and implications for human health	Fang-Jie Zhao
16:40 – 16:55	1502	Soil geochemistry, food systems and human health at a global and regional scales	Pavel Krasilnikov
16:55 – 17:10	2600	The Integral Soil Model to Address Local and Global Soil Health and Security	Sabine Grunwald
17:10 – 17:25	825	Transmission of antibiotic resistance genes from agricultural soils to vegetables	Yu-Jing Zhang
17:25 – 17:40	827	Diversity of herbaceous plants and bacterial communities regulates soil resistome across forest biomes	Hangwei Hu
17:40 – 17:55	--	Closing	Conveners

Tuesday (Aug, 14)		Room “Capri V”	
<b>C4.4.2</b>		<b>Soil education and public perception of soils</b>	
		<b>Convener:</b> Cristine Carole Muggler, Soil Department, Alexis Dorofeef Earth Sciences Museum, Federal University of Viçosa, Viçosa, Minas Gerais, Brazil	
		<b>Co-Convener:</b> Laura Bertha Reyes Sanchez, Facultad de Estudios Superiores Cuautitlán, Universidad Nacional Autónoma de México, (UNAM), México	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	1033	Celebrating Soil: exploring soils and landscapes from the Antarctic to the Arctic	Megan R. Balks
15:55 – 16:10	1267	Facilitating cooperation for soil awareness in Austria	Sigbert Huber
16:10 – 16:25	2514	Dig It! The Secrets of Soils: A Public, Educational Partnership	Ellen Bergfeld
16:25 – 16:40	1363	Environmental education with soil emphasis in public schools: from speech to practice	Franciane Araújo Silva
16:40 – 16:55	1125	Institutional and cultural constraints in promoting soil science: a perspective from Eurasia	Abdul Rashid
16:55 – 17:10	2873	Mainstreaming soil management competencies in Central American smallholder agriculture	Jose Angel Cruz
17:10 – 17:25	3198	Collaboration between International Union of Soil Sciences and national societies in promoting soil education and public awareness as a pillar of International Decade of Soils (IDS): A good practice of “Shiny Soil Balls” in Japan	Takashi Kosaki
17:25 – 17:40	--	Closing	Conveners

Tuesday (Aug, 14)		Room “Ilha Bela III”	
<b>C4.5.3</b>		<b>Field to Palette: Artistic Perspectives on Soil Functionality</b>	
		<b>Convener:</b> Alexandra Toland, Fakultät Kunst und Gestaltung, Bauhaus-Universität Weimar, Weimar, Germany	
		<b>Co-Convener:</b> Maxine Levin, Soil Science Society of America, USA	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	2916	Soil Functions as Boundary Objects for Sci-Art Dialogue	Alexandra Toland
15:55 – 16:10	802	The Science and Art of Soils Transforming the Earth (with contributions by Aviva Rahmani)	Ray Weil
16:10 – 16:25	Invited	Soil Genesis on Canvas: a conversation with Ulrike Arnold and Bettina Dornberg	Thomas Scholten
16:25 – 16:40	Invited	“Dirt Dialogues” on the similarities of soil science and soil art (in remembrance of Jackie Brookner)	Maxine Levin
16:40 – 16:55	Invited	Soil Culture: Revitalising our relationship with the soil	Clive Adams
16:55 – 17:10	Invited	Nematode State of Mind: On the Aesthetics of Soil Biology (with contributions by Daro Montag)	Diana Wall
17:10 – 17:25	Invited	Human-Soil Nutrient Cycles and the Future of Sustainable Sanitation (with contributions by Ayumi Matsuzaka and Valentina Karga)	Stephen Nortcliff
17:25 – 17:40	Invited	Soil Nescience: at the interface of pedometrics, pictures, and poetry (with contributions by Elvira Wersche)	Alex McBratney
17:40 – 17:55	--	Closing	Conveners

**Thursday, 16 August**  
**Division 1: Soil in Space and Time**

Thursday (Aug, 16)		Room "Aruba II"	
<b>C1.2.1</b>		<b>The geography of soils in a changing world</b>	
		<b>Convener:</b> Thomas Scholten, University of Tübingen, Tübingen, Germany	
		<b>Co-Convener:</b> Ricardo de Oliveira Dart, Embrapa Solos, Brazil	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	2210	Soil forming processes in recently desiccated lake sediments in the basin of Mexico	Christina Siebe
15:55 – 16:10	2795	Historical and present dust deposition and its impacts on typical soils of east Eurasia	Ganlin Zhang
16:10 – 16:25	490	Explaining high carbon stocks in strongly weathered tropical soils	Pedro Martinez
16:25 – 16:40	1188	Soil fertility and soil quality parameters on the different inhabited Galápagos Islands: natural variations and impacts of agricultural land use	Franz Zehetner
16:40 – 16:55	620	A global-scale assessment of soil geography and soil-landscape functioning for biomass production and carbon sequestration	V.L. Mulder
16:55 – 17:10	2182	LORICA: a soil-landscape model to study dynamics of spatial changes in soils	Arnaud J Temme
17:10 – 17:25	1883	Field scale soil variability mapping to support precision agriculture	Endre Dobos
17:25 – 17:40	2543	Legacy soil maps from Brazil: organizing and providing layers in an interactive WebGIS	Ricardo de Oliveira Dart
17:40 – 17:55	2046	Towards a Brazilian ground conductivity map for radiocommunication planning	Ronaldo P. de Oliveira
17:55 – 18:10	2564	Soil Geography of Polar Regions in Context of Global Soil Pattern	Sergey Goryachkin
18:10 – 18:15	--	Closing	Conveners

Thursday (Aug, 16)		Room "Capri IV"	
<b>C1.6.2</b>		<b>Soil memory: Proxies for deciphering records of past environmental conditions in soils and palaeosols</b>	
		<b>Convener:</b> Maria Bronnikova, Russian Academy of Sciences, Russia	
		<b>Co-Convener:</b> Michał Jankowski, Nicolaus Copernicus University. Toruń, Poland	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	1812 Invited	Relict paleosols in Mexico: their significance as environmental record of past landscapes	Elizabeth Solleiro-Rebolledo
15:55 – 16:10			
16:10 – 16:25	383	Diagenetic reddening of Early Eocene paleosols on King George Island, Antarctica	Diogo Noses Spinola
16:25 – 16:40	643	Natural trends of Holocene evolution of Chernozems and Luvisols: east European forest-steppe	Yury Chendev
16:40 – 16:55	2026	The morphological features and chemical composition of Fe-Mn nodules in a deep soil derived from loess at a stable upland in northeastern China and their significance	Qiu-Bing Wang
16:55 – 17:10	1389	The transition from interglacial to glaciation in the loess-paleo-soil memory as a model of the modern era	S. Sycheva
17:10 – 17:25	2294	Buried soils of the East European Plain as a proxy for Late Holocene spatio-temporal paleolandscape dynamics	Kurbanova Fatima
17:25 – 17:40	2169	Paleosols as indicators of Superior Pleistocene's climatic change in Southern Pantanal (Brazil)	Francisco Sérgio Bernardes Ladeira
17:40 – 17:55	--	Closing	Conveners

## Division 2: Soil properties and processes

### Thursday, 16 August

Thursday (Aug, 16)		Room “Bora-Bora I”	
<b>C2.1.2</b>		<b>The role of soil physics in water conservation and food security</b>	
		<b>Convener:</b> Dr. Stephan Peth, Kassel University, Witzenhausen, Germany.	
		<b>Co-Convener:</b> Dr. Quirijn de Jong van Lier, USP - Escola Superior de Agricultura Luiz de Queiroz, Piracicaba, Brazil.	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	1075	Long-term vs short-term variability: phenotypic response of wheat to variable water and nitrogen supply	Olivia Cousins
15:55 – 16:10	1687	Soil available water and grain yield for a rainfed maize crop in Brazilian Cerrado	Marina Luciana Abreu de Melo
16:10 – 16:25	2657	Benefits of soil water measurements for irrigation scheduling of shallow groundwater table cropping systems	Johannes Hendrikus Barnard
16:25 – 16:40	2685	Measurements of water uptake of maize roots: insights for breeders	Mutez Ali Ahmed
16:40 – 16:55	2757	Irrigation and tillage management to improve water use on shallow, low water holding soils	Steve Thomas
16:55 – 17:10	837	Facilitating strategic use of marginal quality saline-sodic irrigation water for food and fibre production	John McLean Bennett
17:10 – 17:25	--	Closing	Conveners

Thursday (Aug, 16)		Room "Oceania IX e X"	
<b>C2.2.3</b>		<b>Soil and water pollution: dynamics and evaluation - II</b>	
		<b>Convener:</b> Dr. Leônidas Carrijo Azevedo Melo, Universidade Federal de Lavras, Lavras, Brazil	
		<b>Co-Convener:</b> Dr. Clistenes Williams Araujo do Nascimento, Universidade Federal Rural de Pernambuco, Recife, Brazil Luís Reynaldo Ferracciú Alleoni, USP - Escola Superior de Agricultura Luiz de Queiroz, Piracicaba, Brazil	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	705	Nitrogen removal in shallow groundwater below three arable land systems in a high nitrogen loading region	Xiaoyuan Yan
15:55 – 16:10	2544	Derivation of soil thresholds for arsenic applying species sensitivity distribution	Changfeng Ding
16:10 – 16:25	3172	Determination of porosity in charcoal through relaxometry.	Dalila Araújo Lopes
16:25 – 16:40	1807	Lead pollution of an ephemeral waterway draining an arid-zone mining town in New South Wales, Australia	Karin Azzam
16:40 – 16:55	2556	Relative efficiency of <i>Typha latifolia</i> and <i>Brachiaria mutica</i> hydrophytes in engineered constructed wetland for treating domestic wastewater.	Manjunatha Hebbara
16:55 – 17:10	484	High temperature industrial biochar from industrial processes for mine soil remediation	Gustavo Gutiérrez-Fernández
17:10 – 17:25	2353	Metal accumulation in soils adjacent to Via Dutra, Rio de Janeiro	Cassiano Augusto Rolim Bernardino
17:25 – 17:40	1476	Impact of floating aquatic vegetation suppression on water quality and canal sediment properties in south Florida	Samira Daroub
17:40 – 17:55	1322	Pesticide load onto soils at a national scale using combination of remote sensing and coarse statistical data and its impact on groundwater quality	Vit Kodes
17:55 – 18:10	--	Closing	Conveners

Thursday (Aug, 16)		Room "Asia I, II e III"	
<b>C2.3.1</b>		<b>Soil microbiological processes and nutrient cycling under crop rotation</b>	
		<b>Convener:</b> Dr. Susumu Asakawa, Graduate School of Bioagricultural Sciences, Nagoya, Japan.	
		<b>Co-Convener:</b> Dr. Ralf Conrad, Max-Planck-Institut für terrestrische Mikrobiologie, Marburg, Germany.	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	Invited	<i>New approaches for measuring microbial ecosystem services in modern and sustainable agricultural cropping systems</i>	Siu Mui Tsai
15:55 – 16:10	414	Bacterial communities in century-old crop rotations	Newton Lupwayi
16:10 – 16:25	2424	Soil microbial community and enzyme activity in a subtropical Oxisol under long-term no-till and crop rotation	Carlos A. B. Pires
16:25 – 16:40	1015	Soil type affects biological phosphorus cycling more than crop rotation or pasture	Elke Noellemeyer
16:40 – 16:55	1023	Dynamics of AMF spore populations under crop-livestock integration or crop rotation and soybean grain productivity	Heloisa de Cesaro Krzyzanski
16:55 – 17:10	1286	Cover crop impacts on soil microbial populations and mycorrhizal speciation in dryland cotton	Terry Gentry
17:10 – 17:25	2634	Methane emission and dynamics of microbial communities in rice crop rotation systems	Ana Fernandez Scavino
17:25 – 17:40	588	Effect of paddy-upland rotation on methanogenic archaeal community structure in paddy field soil: evaluation by DNA- and mRNA-based analyses	Susumu Asakawa
17:40 – 17:55	2458	Methane production and methanogenic microbial communities in rice field soils as affected by crop rotation and other desiccation stress	Ralf Conrad
17:55 – 18:10	2062	Communities of methanogenic archaeas in different uses of Amazonian soils	Kelly Jaqueline Alves
18:10 – 18:15	--	Closing	Conveners



Thursday (Aug, 16)		Room “Capri I”	
<b>C2.4.2</b>		New techniques for advanced mineral studies	
		Convener: Dr. Sheila Furquin, UNIFESP, São Paulo, Brazil.	
		Co-Convener: Dr Balwant Singh, Australia	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	311	Advances in the Use of Small Spatial and Temporal Scale Synchrotron-Based Techniques to Elucidate Soil Mineral Reactivity	Donald L. Sparks
15:55 – 16:10	1737	Nano-scale secondary ion mass spectrometry (nano-SIMS) images can differentiate organo-mineral complexes and associated carbon preservation in a Chinese red soil	Xinhua He
16:10 – 16:25	599	Unraveling soil clay mineralogy with X-ray diffraction: Advances and perspectives	Bruno Lanson
16:25 – 16:40	560	Scanning Transmission Electron Microscopy (STEM) Analysis of Arsenic on Soil Particles	Dean Hesterberg
16:40 – 16:55	1578	Microfluidic Investigation of the Surface-Controlled Properties of Soil Constituents	Thomas C. Close
16:55 – 17:10	872	High-throughput full pattern fitting of soil X-ray powder diffraction data	Benjamin Butler
17:10 – 17:25	2183	Differential X-ray diffraction in traceability of Cannabaceae family plants.	Jessica Souza de Oliveira
17:25 – 17:40	1941	Transformations in mineralogy of alkaline-sodic soils in the Northern Pantanal	Jairo Calderari de Oliveira Junior
17:40 – 17:55	--	Closing	Conveners

## Division 3: Soil Use and Management

Thursday, 16 August

Thursday (Aug, 16)		Room “Capri III”	
<b>C3.1.2</b>		<b>Multi-scale and multi-domain approaches to develop smart farming</b>	
		<b>Convener:</b> Ivan Vasenev, Russian Timiryazev State Agricultural University, 49 Timiryazevskaya Str., Moscow, Russia, E-mail: vasenev@timacad.ru, ivvasenev@gmail.com	
		<b>Co-Convener:</b>	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	330	Mid-infrared Technologies Based Proximal Sensing of Selected Soil Properties: Diffuse Reflectance Spectroscopy, Attenuated Total Reflectance Spectroscopy and Photoacoustic Spectroscopy	Changwen Du
15:55 – 16:10	906	Development of a collaborative Soil Fertility and Crop Nutrition Management platform to formulate site-specific fertilizer recommendations in sub-Saharan Africa	H. van den Bosch
16:10 – 16:25	964	New frontiers in soil conservation and landscape management: Geospatial Cyberinfrastructure applied to Decision Support System	F. Terribile
16:25 – 16:40	1346	What key parameters should we access in agrosoil to increase crop productivity?	Mariia Pukalchik
16:40 – 16:55	1816	Review and update of the program AGROZAM digital platform v1.0 to capture information of agricultural land, Zamorano, Honduras	Juan Domingo León Guaycha
16:55 – 17:10	2181	Soil quality evaluation in the land-use agroecological monitoring systems for smart farming development at the Central Region of Russia	Ivan I. Vasenev
17:10 – 17:25	3120	Kinetica: web-based application for determining nutrient uptake kinect parameter values in plants	Webert Saturnino Pinto
17:25 – 17:40	--	Closing	Conveners

Thursday (Aug, 16)		Room “Europa”	
<b>C3.2.6</b>		<b>Agricultural management to protect soil resource to support a growing population - I</b>	
		<b>Convener:</b> Ciro Antonio Rosolem, Faculty of Agronomic Sciences –São Paulo State University - FCA/UNESP. Botucatu, SP, Brazil, E-mail: rosolem@fca.unesp.br	
		<b>Co-Convener:</b> Fernando Cesar Bachiega Zambrosi. Agronomic Institute of Campinas (IAC), Campinas, Brazil. E-mail: zambrosi@iac.sp.gov.br	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	221	Conservation agriculture for enhancing resource-use efficiency, carbon sequestration, soil health and crop productivity	U K Behera
15:55 – 16:10	232	Sustainable Management of Soil Fertility and Land Resources in Sub-Saharan Africa: A Holistic Approach	Boubié Vincent Bado
16:10 – 16:25	337	Plan of Responsible Soil Use and Management: 4 years after its implementation in URUGUAY.	Mariana Hill
16:25 – 16:40	479	Extending the Soil Lifespan: Positive Steps to Enhance the Long Term Sustainability of Soil Resources	Daniel Evans
16:40 – 16:55	730	Correlating Ecological Sites to Soil Surveys	Aaron J. Miller
16:55 – 17:10	847	Long-term fertilization improves soil water dynamics and aggregate stability differently in an Ultisol	Yangbo He
17:10 – 17:25	869	Crops and soils respond differently to residue cover management in no-till systems from the pampas region	Martín Díaz-Zorita
17:25 – 17:40	1022	Effects of sugarcane straw removal from soil surface in dissolved organic carbon and soil carbon stock	Maria Regina Gmach
17:40 – 17:55	1660	A comprehensive tool for calculating Cover and Management Factor (C-Factor) of RUSLE for Brazilian managements systems of sugarcane	Gustavo Casoni da Rocha
17:55 – 18:10	--	Closing	Conveners

Thursday (Aug, 16)		Room "Capri II"	
<b>C3.3.2</b>		<b>Nutrient budgets in agricultural soils</b>	
		<b>Convener:</b> Luis Ignacio Prochnow, Director of International Plant Nutrition Institute – IPNI Brazil, Piracicaba-SP. Brazil, E-mail: lprochnow@ipni.net	
		<b>Co-Convener:</b>	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	826 Invited 1	Effects of Potassium Budgets on Soil Fertility and Mineralogy	T. Scott Murrell
15:55 – 16:10	1885 Invited 2	Should soil nitrogen be mined?	Deli Chen
16:10 – 16:25	228	Nitrogen balance affected by tillage, crop rotation, and cultural practice	Upendra Sainju
16:25 – 16:40	842	Cultivation of forest caused larger loss of soil nutrients from Oxisols at the forest'savanna boundary in Cameroon, Central Africa	Shibata, Makoto
16:40 – 16:55	1093	Why Do Smallholder Farmers in Papua New Guinea, Fiji, Kiribati, The Philippines and Central West Africa Not Invest in Management of Soil Fertility?	Michael J Webb
16:55 – 17:10	1935	Nutrient Budgets and Use Efficiency Indices in Grain Crops of Argentina	Fernando O. García
17:10 – 17:25	2569	The conundrum of low crop yields and negative nutrient balances in sub-Saharan Africa	Shamie Zingore
17:25 – 17:40	3157	Natural capital accumulation in agricultural soils under no till grain cropping in Brazilian Cerrado	Vinicius de Melo Benites
17:40 – 17:55	1458	Biomass and macronutrient demand estimation of fast-growing forest species in Corrientes - Argentina	Nicolás Ignacio Stahringer
17:55 – 18:10	2333	Nutrients balance of the main agricultural products of Uruguay, years 1990, 2000 and 2010.	Victoria Mancassola
18:10 – 18:15	--	Closing	Conveners

Thursday (Aug, 16)		Room "Oceania IV e V"	
<b>C3.3.6</b>		<b>Sustainable phosphorus fertilizer use in tropical soil</b>	
		<b>Convener:</b> Paul J. A. Withers. Bangor University, Bangor, UK. E-mail: p.withers@bangor.ac.uk	
		<b>Co-Convener:</b> Vinicius de Melo Benites. Embrapa Soils. Rio de Janeiro, RJ, Brazil. E-mail: vinicius.benites@embrapa.br	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	320	Phosphorus Placement for Annual Crops in the Tropics	Luis Prochnow
15:55 – 16:10	597	Animal manures applied to soil as a phosphorus source: Impacts on soil legacy phosphorus to crops and for runoff losses	Maria do Carmo Horta
16:10 – 16:25	849	Poor P use efficiency and novel fertilizers - when can the latter mitigate the former?	Mike McLaughlin
16:25 – 16:40	1598	Development of activated dolomite phosphate rock fertilizers for sustainable agriculture in tropical and subtropical regions	Zhenli He
16:40 – 16:55	2389	Changes in phosphorus fractions due to the forest-pasture-sugarcane conversion in Brazil	Amin Soltangheisi
16:55 – 17:10	2447	Using current knowledge of phosphorus fertilizer reaction pathways to improve P use efficiency	Ganga M. Hettiarachchi
17:10 – 17:25	2450	Maize growth as a function of residual phosphorus of soluble phosphorus sources applied in very clayey soil	Antonio Saraiva Muniz
17:25 – 17:40	1221	Response of soil Olsen-P to P budget and its relationship with soil properties of three typical soil types in China under long-term fertilization	Shuxiang Zhang
17:40 – 17:55	2793	Organic acid loaded nanoclay polymer composite and phosphate solubilizing bacteria for solubilization of Indian rock phosphates: A step towards sustainable P management	Dipak Ranjan Biswas
17:55 – 18:10	--	Closing	Conveners

Thursday (Aug, 16)		Room "Asia IV, V e VI"	
<b>C3.3.10</b>		<b>Beneficial management practices for sustaining soil fertility - II</b>	
		<b>Convener:</b> Linzhang Yang, Jiangsu Academy of Agricultural Sciences, Nanjing, China. E-mail: lzyang@issas.ac.cn	
		<b>Co-Convener:</b> Rafael Otto, ESALQ/USP, Piracicaba, Brazil. E-mail: rotto@usp.br	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	775	A meta-analysis and review on the long-term role of organic amendments in building soil nutrient fertility	Marta Camps-Arbestain
15:55 – 16:10	1241	Sustainable management of soils through the use of cover crops to aid maize production	T Storr
16:10 – 16:25	1264	Soil chemical attributes and formation of biogenic aggregates associated to the application of animal waste	Thadeu Rodrigues de Melo
16:25 – 16:40	1525	Integrated crop-livestock systems for enhancing soils and water quality in northern Great Plains, USA	Sandeep Kumar
16:40 – 16:55	1534	Strategies to secure adequate nutritional status of high yielding corn and soybeans	Gabriel Barth
16:55 – 17:10			
17:10 – 17:25	1965	The effect of the timing of maize and clover residue applications to a soil on carbon and nitrogen cycles	Tsukino Ito
17:25 – 17:40	1602	Soil chemical properties after long-term nitrogen and phosphorus fertilization of grain sorghum	Alan Schlegel
17:40 – 17:55	1791	Effects of sunn hemp rotation and sugarcane straw removal on soil chemical quality	Camilo Ernesto Bohórquez-Sánchez
17:55 – 18:10	--	Closing	Conveners

Thursday (Aug, 16)		Room "Aruba I"	
<b>C3.6.1</b> <b>C3.6.2</b> <b>C.3.6.3</b> <b>C.3.6.4</b>	<b>Oasis soils: can our wisdom and experience survive in Anthropocene - II</b> <b>Salinity mapping and modelling salinization processes - II</b> <b>Salinity management and remediation of salt-affected soils - II</b> <b>Impact of land use change on soil and the environment in dry regions - II</b>		
	Convener: Jingsong Yang, Institute of Soil Science, Chinese Academy of Sciences, Nanjing, China, E-mail: jsyang@issas.ac.cn Tibor Toth, Institute for Soil Sciences, Hungarian Academy of Sciences, Budapest, Hungary, E-mail: tibor@rissac.hu		
	Co-Convener: John Triantafyllis, University of South Wales, School of Biological, Earth, and Environmental Sciences, Sidney, Australia, E-mail: j.triantafyllis@unsw.edu.au Donald Suarez, USDA ARS Salinity Laboratory, Riverside, USA. E-mail: Donald.suarez@ars.usda.gov		
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	1771	Effects of biochar, fulvic acid and organic fertilizer on the improvement of barley yield and nitrogen use efficiency in a coastal saline soil of China	Xiangping Wang
15:55 – 16:10	1779	Effects of impoundment of the Three Gorges Reservoir on the dynamics of salt-water and soil salinity in the Yangtze River Estuary	Xie Wenping
16:10 – 16:25	282	Establishment of Sunflower and Maize on wet soils in the salt-affected coastal region of Bangladesh	Priya Lal Chandra Paul
16:25 – 16:40	1752	Evaluation of sustainable irrigation regimes of mulched drip irrigation for cotton in an oasis of southern Xinjiang, China	Baoguo Li
16:40 – 16:55	1997	Experimental and Modeling Assessment of Salinity Leaching Efficiency in Soils	Laosheng Wu
16:55 – 17:10	225	Reclamation of Saline Soils by Freezing Saline Water Irrigation	Xiaojing Liu
17:10 – 17:25	415	Rehabilitation of saline-sodic soils using a rubble barrier and adding biochar or compost	Elizabeth Chávez-García
17:25 – 17:40	3207	Response of <i>Solanum lycopersicum</i> L. cv. Chonto to halotolerant plant growth promoting bacteria isolated from Colombian saline springs	Lucía Ana Díaz
17:40 – 17:55	2390	Reclamation of saline-sodic soil by growing plants in semiarid of Brazil	Maria Betânia Galvão Santos Freire
17:55 – 18:10	1288	Assessment and management of saline and sodic soils in the eastern part of Georgia	Ekaterine Sanadze
18:10 – 18:15	--	Closing	Conveners

Thursday (Aug, 16)		Room "Galápagos II"	
<b>C3.5.2</b>		<b>Native metallophytes from mine spoils as a potential source for phytoremediation</b>	
		<b>Convener:</b> Jaume Bech, University of Barcelona, Barcelona, Spain, E-mail: jaumebechborras@gmail.com	
		<b>Co-Convener:</b> Maria Manuela Abreu, Instituto Superior de Agronomia, University of Lisbon, Lisboa, Portugal, E-mail: manuelaabreu@isa.ulisboa.pt	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	453	Arbuscular mycorrhizas differentially alter uptake dynamics under toxic soil concentrations of Cd and Zn in <i>Populus trichocarpa</i> .	Vinicius Henrique De Oliveira
15:55 – 16:10	1262	<i>Dicranopteris dichotoma</i> : a rare earth elements (REEs), aluminum (Al) and silicon (Si) hyperaccumulator	Wen-Shen Liu
16:10 – 16:25	510	Effect of Pb mining activities on soil properties, heavy metal levels and plant uptake in two communities of Ebonyi State, Nigeria	Olayinka I. Nwachukwu
16:25 – 16:40	815	Hyperaccumulator identified from native weed species and its hyperaccumulation mechanism	Wei Shuhe
16:40 – 16:55	1854	Influence of fly ash application and mycorrhiza inoculation on heavy metals availability and survival of different <i>Acacia</i> species in heavy metal contaminated soils from Selebi-Phikwe, Botswana	Venecio U. Ultra, Jr.
16:55 – 17:10	2561	Native species of ultramafic massif of Barro Alto, GO, Brazil, can successfully be used to revegetate Ni mine spoil heaps	Leide R. M. de Andrade
17:10 – 17:25	630	Phytoremediation of Chilean copper mine tailings with <i>Atriplex halimus</i> , adding humic substances and magnetite.	Yasna Tapia
17:25 – 17:40	1759	Rare earth elements fractionation in soil-plant system during phytoextraction of ionic REEs mine tailings using <i>Phytolacca americana</i> L.	Ming Yuan
17:40 – 17:55	--	Closing	Conveners



## Division 4: The Role of Soils in Sustaining Society and the Environment

### Thursday, 16 August

Thursday (Aug, 16)		Room "Oceania I e II"	
<b>C4.1.1</b>		<b>Soil ecosystem services</b>	
		<b>Convener:</b> Rachel Prado, Brazilian Agricultural Research Corporation (Embrapa), National Research Center for Soils, Rio de Janeiro, Brazil	
		<b>Co-Convener:</b> Ana Turetta e Elaine Fidalgo, Brazilian Agricultural Research Corporation (Embrapa), National Research Center for Soils, Rio de Janeiro, Brazil	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	Invited	Soils contribution to ecosystem services provision: Using land information for farm planning and design within boundaries	Alec D. Mackay
15:55 – 16:10			
16:10 – 16:25	1031	Development of a multi-functional land evaluation for dedicated bioenergy crops.	James Payne
16:25 – 16:40	1980	From process understanding via soil functions to sustainable soil management: a systemic approach	Ute Wollschläger
16:40 – 16:55	455	Impact of tropical land-use intensification on soil ecosystem services	Thomas Guillaume
16:55 – 17:10	2347	Quantification of soil services at the plot scale using modeling approach: A case study of a drained agricultural field affected by land-use change	Chalhoub Maha
17:10 – 17:25	314	Soil Security Assessment contributing to ecosystem service.	Damien Field
17:25 – 17:40	2149	Using the DPSIR model in the Colombian policy for sustainable soil management: an ecosystem service approach	Fabio R. Leiva
17:40 – 17:55	--	Closing	Conveners

Thursday (Aug, 16)		Room “Ilha Bela II”	
<b>C4.2.3</b>		<b>Soil quality to secure human and environmental health</b>	
		<b>Convener:</b> Ganga Hettiarachchi, Department of Agronomy, Throckmorton Plant Sciences Center, Kansas State University, Manhattan, USA	
		<b>Co-Convener:</b> <a href="#">Margareth Simões</a> , Brazilian Agricultural Research Corporation (Embrapa), National Research Center for Soils, Rio de Janeiro, Brazil	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	1190	Changes in soil attributes promoted by wastewater reuse in a rural community in Brazil	Jerusa Schneider
15:55 – 16:10	1986	Ecological assessment of petroleum contaminated soils (Sakhalin Island) using ecological functions	Ekaterina Kovaleva
16:10 – 16:25	733	Soil demand for ensuring food security: a case study for Austria	Andreas Baumgarten
16:25 – 16:40	463	Managing Soil Health for Improving Human Health	Rattan Lal
16:40 – 16:55	289	Long-term Effect of Different Fertilization and Cropping System on the Persistence of Antibiotic Resistance Genes in Soil Measured using Highly Parallel qPCR and sequencing	Fang Wang
16:55 – 17:10	469	Effect of biochar on Cd bioavailability in soil-rice systems and human health implication based on a meta-analysis	De Chen
17:10 – 17:25	958	Prioritizing Biophysical and Socioeconomic Factors for Enhancing Soil Fertility in Sub-Saharan Africa: Summit Results	P.V. Vara Prasad
17:25 – 17:40	1081	Prioritizing Biophysical and Socioeconomic Factors for Enhancing Soil Fertility in Sub-Saharan Africa: Survey Results	Zachary P. Stewart
17:40 – 17:55	1590	Efficiency of biodegradable and pH-responsive polysuccinimide nanoparticles (PSI-NPs) as smart nano-delivery systems to enhance fertilizer/pesticide efficacy	Xiaoping Xin
17:55 – 17:40	--	Closing	Conveners

Thursday (Aug, 16)		Room "Capri V"	
<b>C4.3.1</b>		<b>Ecological soil management systems and soil quality</b>	
		<b>Convener:</b> Heitor Mancini Teixeira, Farming Systems Ecology, Production Ecology and Resource Conservation (PE&RC) graduate school, Wageningen University, The Netherlands	
		<b>Co-Convener:</b> Fernanda de Paula Medeiros, Soil Department, Federal University of Viçosa, Viçosa, Minas Gerais, Brazil	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	2505	Changes in soil organic carbon stocks across the Forest-Agroforest-Agriculture/Pasture continuum in various agroecological regions	Ramachandran PK Nair
15:55 – 16:10	1007	Chemical and physical attributes for quality assessment of soils from forest areas altered by the use of pasture and agriculture in the northern Amazonia	Luciana da Silva Barros
16:10 – 16:25	2594	Establishment of a Silvopastoral System with selection of native forest species, consortiated with Brachiaria ( <i>Brachiaria brizantha</i> ) cv. Marandú and <i>Mucuna negra</i> ( <i>Mucuna pruriens</i> ), in the Chiquitano Dry Forest Biome, Chiquitania Region of Bolivia.	Ricardo Suárez Mejía
16:25 – 16:40	2060	Microbial activity and physicochemical traits of floodplain soils affected by tailings deposition from the Fundão dam breach, Minas Gerais, Brazil	Helena Santiago Lima
16:40 – 16:55	946	Optimization of landscape structure and land use by designed method combining GIS and artificial intelligence approaches	Marek Bednář
16:55 – 17:10	1449	Soil biotic contributions to nitrogen fertility in manure-amended agroecosystems: perspectives and practical implications for humid temperate regions	Joann Whalen
17:10 – 17:25	810	Soil macrofauna as indicator to recover degraded pastures with cover crops and agroforestry systems	Julio Alegre
17:25 – 17:40	1441	Soil organic matter properties and greenhouse gas emissions in tropical peatlands under land use change	Louis-Pierre Comeau
17:40 – 17:55	960	Valuation of soil ecosystems services under different restoration models in a tropical hotspot	Katarzyna Korys
17:55 – 18:10	--	Closing	Conveners

## Friday, 17 August

### Division 1: Soil in Space and Time

Friday (Aug, 17)		Room "Oceania VI e VI"	
<b>C1.3.1</b>		<b>Soil-forming processes and their transformation under human impact</b>	
		<b>Convener:</b> Nikolay B. Khitrov; Dokuchaev Soil Science Institute, Moscow, Russia	
		<b>Co-Convener:</b> Markus Anda; Center for Agricultural Land Resources Research and Development, Indonesia	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	2791	Are Plinthosols properties and evolution influenced by prolonged flooding?	Alfredo B. De-Campos
13:55 – 14:10	457	Biogeochemical cycling of silicon and its roles on soil genesis and evolution in a typical subtropical ecosystem	Jin-Ling Yang
14:10 – 14:25	568	Changes of soil aggregate stability on soil formation process at glacial till	Mihkel Are
14:25 – 14:40	859	Evolution of soil redistribution rates in alpine soils of the Central Rocky Mountains using fallout radionuclides ( <sup>239+240</sup> Pu) and stable isotopes (δ <sup>13</sup> C)	Raquel de Castro Portes
14:40 – 14:55	2034	Mount Cameroon (Central Africa): a unique observatory for assessing the influence of time, precipitation and temperature on pedogenic processes in volcanic parent material	Daniela Sauer
14:55 – 15:10	699	Spatial and temporal variability of soils formed on varved clays (Northwest Russia)	Natalia N. Matinian
15:10 – 15:25	503	Variants of genesis of soil cover pattern with gilgai topography in Russia	Nikolay Khitrov
15:25 – 15:40	--	Closing	Conveners

Friday (Aug, 17)		Room “Capri IV”	
<b>C1.5.1</b>		<b>Global soil carbon modeling</b>	
		<b>Convener:</b> Lin Yang, Nanjing University, Nanjing, China	
		<b>Co-Convener:</b> Andrés Calderín García, UFRRJ, Seropédica, RJ, Brazil	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	788	Global space-time soil carbon assessment using dynamic covariates and a mechanistic model	Budiman Minasny
13:55 – 14:10	416	Using MIR spectrometry to predict soil carbon for the soil survey program in the USA	Richard Ferguson
14:10 – 14:25	2010	Soil carbon stock: effects of different management in the Brazilian savanna	Michael Henriques Pereira
14:25 – 14:40	1203	Towards a regional soil information system for South America: building the South American soil organic carbon map	Guillermo Federico Olmedo
14:40 – 14:55	2942	How a robust spectral and analytical soil organic carbon libraries can contribute for a sustainable agriculture?	André Marcelo de Souza
14:55 – 15:10	956	Use of predictive models for space prediction of carbon content and soil aluminum in the municipality of Petropolis-RJ	Rafael Gomes da Mota Gonçalves
15:10 – 15:25	1359	Soil organic carbon stock at 0-30 cm map of Brazil	Jesus F. Mansilla Baca
15:25 – 15:40	1802	Soil organic stock estimation through digital soil mapping approach: How many soil samples are required at different scales?	Priyabrata Santra
15:40 – 15:55	--	Closing	Conveners

Friday (Aug, 17)		Room "Aruba II"	
<b>C1.5.2</b>		<b>Crucial techniques for the critical zone: Soil morphometrics, monitoring &amp; modeling</b>	
		<b>Convener:</b> Peter Finke, Universiteit Gent, Gent, Belgium	
		<b>Co-Convener:</b> Alfred HarteminkUW-Madison, Madison, WI, USA	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	651	A tale of two CZ's: Contrasting shallow and deep human-environmental dynamics	Zachary Brecheisen
13:55 – 14:10	1913	Accurate prediction of soil reaction (pH) and sum of basis through portable X-ray fluorescence (pXRF) spectrometer in tropical soils	Sérgio Henrique Godinho Silva
14:10 – 14:25	476	Coupling Dynamic Soil Property Field Studies and Modeling for U.S. Soil Survey	Candiss O. Williams
14:25 – 14:40	1528	Digital mapping of soils from a microbasin representative of the soils of the Rio Preto Basin Federal District	Marilusa Pinto coelho Lacerda
14:40 – 14:55	2855	Monitoring and modeling of Russian chernozem soil fertility	Nadezda Vasilyeva
14:55 – 15:10	764	Untangling of spatio-temporal soil processes at different scales through Fourier-based and state-space analysis	Ole Wendroth
15:10 – 15:25	1511	Images classification for digital soil mapping in Roraima, North Amazônia	Nicoló Clemente
15:25 – 15:40	1119	Simulating soil formation in a Mediterranean watershed with the new MILESD2 ? the importance of spatially-explicit soil water dynamics	Tom Vanwallegem
15:40 – 15:55	--	Closing	Conveners

## Division 2: Soil properties and processes

### Friday, 17 August

Friday (Aug, 17)		Room "Asia I, II e III"	
<b>C2.2.1</b>		<b>Soil organic matter dynamics from molecules to landscapes</b>	
		<b>Convener:</b> Dr. Boris Jansen, Institute for Biodiversity and Ecosystem Dynamics, Amsterdam, The Netherlands.	
		<b>Co-Convener</b> Dr. Karen Vancampenhout, Cluster for Bioscience Engineering Technology, Geel, Belgium.	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	1006	The effect of land use change on particulate- and mineral-associated carbon in different soil types	Balwant Singh
13:55 – 14:10	2700	High organic inputs explain SOC storage in a long-term agroforestry system: experimental and modeling approach	Claire Chenu
14:10 – 14:25	1994	Global carbon sequestration in peat-moss ecosystems under a changing climate	Geoffrey Abbott
14:25 – 14:40	854	Changes in organic matter dynamics in agricultural landscape in relation to soil degradation: from landscape to local level and vice versa	Bonivoj Sarapatka
14:40 – 14:55	1782	Biogeochemical Fate and Stability of Iron Oxide-Organic Carbon Complexes	Dinesh Adhikari
14:55 – 15:10	200	Increasing amount of soil organic matter in forest soils of North Germany is stabilized by occlusion within soil aggregates	Erik Grüneberg
15:10 – 15:25	1686	Carbon sink strength of subsoil horizons of Brazilian Oxisols	Ivan Souza
15:25 – 15:40	2574	Coastal wetland soil organic matter chemistry of Mississippi River deltaic plains: degradation status and control factors	Jim Wang
15:40 – 15:55	438	Probing the Effect of Calcium on Organic Carbon Sequestration to Ferrihydrite	Tyler Sowers
15:55 – 16:10	--	Closing	Conveners

Friday (Aug, 17)		Room "Oceania IX e X"	
<b>C2.5.1</b>		<b>Soil interfacial reactions and their control of biogeochemical cycles</b>	
		Convener: Dr. Siobhán Staunton, INRA, Montpellier, France.	
		Co-Convener Dr. Jeferson Dieckow, UFPR, Curitiba, Brazil.	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	Invited	<i>Role of surface interactions on the organic matter composition and content in tropical and subtropical soils</i>	Deborah Dick
13:55 – 14:10			
14:10 – 14:25	2722	Affirmation of the Existence of Humic Substances and Humin and their Importance in the Interfacial Reactions of Soil Organic Matter	Roger S. Swift
14:25 – 14:40	718	Microbial community composition structured by pyrogenic organic matter regulates the soil carbon and nitrogen transformation processes	Jianming Xu
14:40 – 14:55	524	Succession and resource partitioning of bacterial and fungal communities at different biogeochemical interfaces	Ellen Kandeler
14:55 – 15:10	2324	Precipitation and soil moisture: drivers of redox potential, iron reduction, and carbon decomposition in a tropical forest soil in Puerto Rico	Diego Barcellos
15:10 – 15:25	868	Soil carbon dynamics affected by changes in soil water repellency	Emilia Urbanek
15:25 – 15:40	690	An Investigation of Organic Matter Quality and Quantity in Acid Soils as Influenced by Soil Type and Land Use	Qinhua Shen
15:40 – 15:55	586	Role of bacterial biomass in the development of soil water repellency	Marc-Oliver Goebel
15:55 – 16:10	2086	Soil organic matter decomposition under anaerobic-abiotic conditions	Carolina Merino
16:10 – 16:15	--	Closing	Conveners



## Division 3: Soil Use and Management

### Friday, 17 August

Friday (Aug, 17)		Room “Capri III”	
<b>C3.2.2</b>		<b>Soil management in organic production and agroecology</b>	
		<b>Convener:</b> José Antonio Azevedo Espindola, Embrapa Agrobiologia, Rio de Janeiro, Brazil. E-mail: jose.espindola@embrapa.br	
		<b>Co-Convener:</b>	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	1145	Reduced tillage practices decrease soil erosion in organic farming systems	Steffen Seitz
13:55 – 14:10	1152	Soil Basal Respiration of soils cultivated with Agroforestry and Horticulture in Atlantic Forest Biome	Gustavo Pereira Valani
14:10 – 14:25	1180	Yield of rocket under different amounts and <i>Sena uniflora</i> L.	Marcos Antonio Vieira Batista
14:25 – 14:40	2000	Biomarkers in <i>Allium cepa</i> L. for the assessment of soil toxicity under organic and conventional management	Jorge Luis Gallego-Zapata
14:40 – 14:55	2164	Use of recycled paper mulch in lettuce production	Aginaldo Roberto de Jesus Freitas
14:55 – 15:10	2970	Managing indigenous arbuscular mycorrhizal fungi to benefit field crops in sustainable production systems.	Michael Goss
15:10 – 15:25	1124	Monitoring of long-term (8 years) effect of composted sewage sludge application on zinc in agricultural soil and evaluation of the plant availability of zinc in the applied compost	Yasuo M Nakamaru
15:25 – 15:40	483	Evaluation of bio-intensive complimentary cropping systems under different planting methods and recycling of crop residues under rainfed organic agriculture	Lokanath H. Malligawad
15:40 – 15:55	--	Closing	Conveners

Friday (Aug, 17)		Room "Aruba I"	
<b>C3.2.1 WG12</b>		<b>Managing and remediating floodplain and wetland soils</b>	
		<b>Paddy Soils: Mitigating GHG emission and enhancing productivity in rice-based systems</b>	
		<b>Convener:</b> Mizuhiko Nishida, Tohoku Agricultural Research Center, National Agriculture and Food Research Organization. Akita, Japan, E-mail: mizuhiko@affrc.go.jp	
		<b>Co-Convener:</b> Vanessa Wong, School of Earth, Atmosphere and Environment Monash University, Clayton, Australia. E-mail: vanessa.wong@monash.edu	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	373	Release of trace elements from a serpentine soil controlled by oxidation-reduction cycles with a microcosm system	Zeng-Yei Hseu
13:55 – 14:10	685	Effects of repeated removal of rice straw and application of bio-ethanol production residue derived from rice straw in a paddy field on its soil, rice growth and greenhouse gas emissions.	Fumiaki Takakai
14:10 – 14:25	1501	Preliminary screening of the affected riparian areas of the Gualaxo do Norte river by the Samarco's mine dam burst using pXRF	Gabriel William Dias Ferreira
14:25 – 14:40	1606	Biodegradation of hydrocarbons under methanogenic conditions in different oil sands tailings	Tariq Siddique
14:40 – 14:55	1731	Impact of water management on greenhouse gas production and soil fertility during rice production in southern Florida	Jennifer A Cooper
14:55 – 15:10	1856	Fertility re-evaluation of paddy soils in tropical Asia after 50 years of the Green Revolution (FREPS 50): Case studies in Thailand and the Philippines	Junta Yanai
15:10 – 15:25	2467	Could biochar and green manure be a substitute for synthetic nitrogen fertilization to guarantee rice grain yield and decrease greenhouse gas emissions?	Mellissa Ananias Soler da Silva
15:25 – 15:40	843	Temporal trends of rice yield in a long-term paddy field experiment and their relations with climate warming	Mizuhiko Nishida
15:40 – 15:55	1096	Nitrogen loss from anammox and denitrification for different fertilization managements in paddy soils	Chuan Qin
15:55 – 16:10	2872	Application of microwave and optical remote sensing data for monitoring wetland agriculture	Adam Csorba
16:10 – 16:15	--	Closing	Conveners

Friday (Aug, 17)		Room "Capri III"	
<b>C3.2.2</b>		<b>Soil management in organic production and agroecology</b>	
		<b>Convener:</b> José Antonio Azevedo Espindola, Embrapa Agrobiologia, Rio de Janeiro, Brazil. E-mail: jose.espindola@embrapa.br	
		<b>Co-Convener:</b>	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	1145	Reduced tillage practices decrease soil erosion in organic farming systems	Steffen Seitz
13:55 – 14:10	1152	Soil Basal Respiration of soils cultivated with Agroforestry and Horticulture in Atlantic Forest Biome	Gustavo Pereira Valani
14:10 – 14:25	1180	Yield of rocket under different amounts and Sena uniflora L.	Marcos Antonio Vieira Batista
14:25 – 14:40	2000	Biomarkers in <i>Allium cepa</i> L. for the assessment of soil toxicity under organic and conventional management	Jorge Luis Gallego-Zapata
14:40 – 14:55	2164	Use of recycled paper mulch in lettuce production	Agnaldo Roberto de Jesus Freitas
14:55 – 15:10	2970	Managing indigenous arbuscular mycorrhizal fungi to benefit field crops in sustainable production systems.	Michael Goss
15:10 – 15:25	1124	Monitoring of long-term (8 years) effect of composted sewage sludge application on zinc in agricultural soil and evaluation of the plant availability of zinc in the applied compost	Yasuo M Nakamaru
15:25 – 15:40	483	Evaluation of bio-intensive complimentary cropping systems under different planting methods and recycling of crop residues under rainfed organic agriculture	Lokanath H. Malligawad
15:40 – 15:55	--	Closing	Conveners

Friday (Aug, 17)		Room “Europa”	
<b>C3.2.6</b>		<b>Agricultural management to protect soil resource to support a growing population - II</b>	
		<b>Convener:</b> Laila Yesmin. Manitoba Biotechnology Limited & Visiting Scientist, University of Waterloo, Waterloo, Canada. E-mail: yesminl@mymts.net.	
		<b>Co-Convener:</b> Fernando Cesar Bachiega Zambrosi. Agronomic Institute of Campinas (IAC), Campinas, Brazil. E-mail: zambrosi@iac.sp.gov.br Ciro Antonio Rosolem, Faculty of Agronomic Sciences –São Paulo State University - FCA/UNESP. Botucatu, SP, Brazil, E-mail: rosolem@fca.unesp.br	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	191	Green economy improved soil water productivity in drylands of China	Wentai Zhang
13:55 – 14:10	194	Intercropped Woody Species in the Sahel to Resist Drought: Agronomic Performance and Soil Quality	Richard Dick
14:10 – 14:25	1814	Nitrogen budget in an intensively farmed peri-urban region	S. Bittman
14:25 – 14:40	1872	Lignite amendment of feedlot manure: mechanism for nitrogen retention and dynamics during composting	Robert Impraim
14:40 – 14:55	2313	Evaluation and Quantification of Environmental Sustainability of Different Tillage Treatments in South Texas.	Andrea Maeda
14:55 – 15:10	2708	Meeting Global Agricultural Demands with Sustainable Phosphorus Management	Heidi Peterson
15:10 – 15:25	2763	Mixed/intercropping systems as a new paradigm for soil resilience, sustainable food and economic sovereignty.	Mikael Motelica-Heino
15:25 – 15:40	3077	Evaluation of the water footprint under production tecnificada of guava (Psidium guajava) in the Valley of the Cauca (Colombia - South America)	Ana Maria Trejos Arana
15:40 – 15:55	--	Closing	Conveners

Friday (Aug, 17)		Room "Capri II"	
<b>C3.3.3</b>		<b>Advancement of plant nutrition studies for sustainable agriculture - II</b>	
		<b>Convener:</b> Toru Fujiwara, atorufu@mail.ecc.u-tokyo.ac.jp	
		<b>Co-Convener:</b> Rodrigo Marcelli Boaretto, Agronomic Institute of Campinas (IAC), Citrus Research Center, Cordeiropolis, Brazil. E-mail rmboaretto@gmail.com; boaretto@centrodecitricultura.br	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	1274	Interactions between selenium and cadmium in soil and crop: can Cd content in crops be controlled by Se fertilization?	Marie-Cécile Affholder
13:55 – 14:10	1669	Solubility of Ten Iron Fertilizers in Eleven North American Soils	Travis Shaddox
14:10 – 14:25	1864	Short-term response and nitrogen use efficiency of biogas residue application on different soils cultivated with wheat	Amanda A. França
14:25 – 14:40	241	Ultrastructure characterization of manganese toxicity symptoms in soybean plants	Rafael Lawandovski Porto
14:40 – 14:55	426	Evaluation of Polyhalite for Grain Production in Pampean soils of Argentina	Ricardo Melgar
14:55 – 15:10	1266	Improvement of soil fertility and biodiversity by beneficial microorganisms isolated from the natural environment	Anna Konieczny
15:10 – 15:25	1826	Selenium uptake by different plants as affected by characteristics of Some Egyptian Soils	Abdou A. Soaud
15:25 – 15:40	1945	Growth and physiological aspects in tomato genotypes in response to boron supply	Greice Leal Pereira
15:40 – 15:55	--	Closing	Conveners

Friday (Aug, 17)		Room "Galápagos I"	
<b>C3.3.5</b>		<b>Soils for mitigating global warming: greenhouse gas emission reduction and/or enhancing carbon sequestration - II</b>	
		<b>Convener:</b> João Luis Carvalho. Brazilian Bioethanol Science and Technology Laboratory (CTBE). Campinas-SP, Brazil, E-mail: joao.carvalho@bioetanol.org.br	
		<b>Co-Convener:</b> Carlos E. Cerri. Luiz de Queiroz College of Agriculture. University of Sao Paulo. Piracicaba-SP, Brazil, E-mail: cepcerri@usp.br	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	2078	System of rice intensification (SRI) in temperate regions to improve grain yield and to mitigate greenhouse gases	Kosuke Noborio
13:55 – 14:10	2192	Temporal soil carbon dynamics and conservation practices in a semi-arid cotton producing region of Texas	Katie Lewis
14:10 – 14:25	2825	Soil methane and microbial communities in the soil profile under Amazon forest-to-pasture conversion	Moacir Tuzzin de Moraes
14:25 – 14:40	3206	Response of soil microbial processes to long-term management practices in subtropical grazing lands during different seasons	Saroop S. Sandhu
14:40 – 14:55	1299	Tidal Wetland Soils for Greenhouse Gas Mitigation: Scientific Progress and Research Gaps	Brian A. Needelman
14:55 – 15:10	2111	Soil organic carbon sensitivity to management and climate change in rice-based cropping systems	Pauline Chivenge
15:10 – 15:25	2610	Compost but not cover crops increases soil carbon at depth after 19 years of management in irrigated row crops in a Mediterranean climate	Kate Scow
15:25 – 15:40	846	Carbon sequestration through afforestation and reforestation in the mangrove forests of southern Thailand.	Yuji Sakai
15:40 – 15:55	3027	Soil organic carbon stock in assessment of the relative importance of location and land use in southeastern Nigeria	Sunday E. Obalum
15:55 – 16:10	--	Closing	Conveners

Friday (Aug, 17)		Room "Asia IV, V e VI"	
<b>C3.3.10</b>		<b>Beneficial management practices for sustaining soil fertility - III</b>	
		<b>Convener:</b> Dr. Clayton Butterly (Department of Animal, Plant & Soil Sciences, AgriBio, the Centre for AgriBioscience, La Trobe University, Victoria 3086 Australia. E-mail: C.Butterly@latrobe.edu.au	
		<b>Co-Convener:</b> Rafael Otto, ESALQ/USP, Piracicaba, Brazil. E-mail: rotto@usp.br	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	2188	Tree-row proximity did not induce an increase in soil biological and chemical fertility in two temperate alley-cropping agroforestry systems	Camille D'hervilly
13:55 – 14:10	2303	Runoff and soil loss at plot scale under different coffee managements in tropical conditions and a steep Ultisol, Costa Rica	Villatoro Sanchez Mario
14:10 – 14:25	2703	Soil fertility dynamic of ten land use systems in the Peruvian Amazon	Ruby Vega Ravello
14:25 – 14:40	2747	Soil carbon and nutrient change after 11-years of a short-rotation woody crop cycle	Daniel Markewitz
14:40 – 14:55	2767	Balanced fertilization: a prerequisite for effective soil fertility management in smallholder maize farms in Nigeria	Jibrin Mohammed Jibrin
14:55 – 15:10	3177	Water and silicon management on improving rice productivity in Central Java, Indonesia	Adha Fatmah Siregar
15:10 – 15:25	3196	Impacts of soil exchangeable aluminium concentrations on acid upland New Zealand grasslands.	Jim Moir
15:25 – 15:40	--	Closing	Conveners

Friday (Aug, 17)		Room "Galápagos II"	
<b>C3.5.3</b>		<b>Frontier of soil quality evaluation after remediation of contaminated field</b>	
		<b>Convener:</b> Zeng-Yei Hseu, Department of Agricultural Chemistry, National Taiwan University, Taipei, Taiwan. E-mail: zyhseu@ntu.edu.tw	
		<b>Co-Convener:</b>	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	Invited 517	Successful stories of soil remediation decision by health risk assessment approaching technology for As, Cr, Ni, Cu and Zn-contaminated rural soils in Taiwan	Zueng-Sang Chen
13:55 – 14:10			
14:10 – 14:25	1364	Investigation of potentially contaminated industrial sites in Serbia	Dragana Vidojevi?
14:25 – 14:40	1768	Changes in soil properties during phytostabilization of Rare Earth Elements mine tailings using ramie ( <i>Boehmeria nivea</i> )	Chang Liu
14:40 – 14:55	1794	Soil development in ion-adsorbed REE mine tailings to assess the sustainability of the reclamation	Huot Hermine
14:55 – 15:10	1953	Evaluating soil quality and food safety for the rural soils with anthropogenic and geogenic heavy metals after in-situ stabilization	Yi-Ting Lee
15:10 – 15:25	3149	Contents of Heavy Metals in Urban Soils: evaluation at São Bartolomeu and Joventino Silva Parks in Salvador, Bahia, Brazil	Évelen da Paixão Santana
15:25 – 15:40	602	Evaluation of Cd Immobilization Effects in a Polluted Wetland Soil after Stabilization with Calcium Polysulphide	Chen Tu
15:40 – 15:55	--	Closing	Conveners



## Division 4: The Role of Soils in Sustaining Society and the Environment

### Friday, 17 August

Friday (Aug, 17)		Room “Bora-Bora III”	
<b>C4.1.3</b>		<b>Soil in the Anthropocene</b>	
		<b>Convener:</b> <a href="#">Pavel Krasilnikov</a> , Faculty of Soil Science, <a href="#">Lomonosov Moscow State University</a> , Moscow, Russia	
		<b>Co-Convener:</b> Norma Eugenia García Calderón, Faculty of Sciences, <i>Campus-Juriquilla</i> , Universidad Nacional Autónoma de México, (UNAM), México	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	468	Amazonian deforestation and soil biodiversity	André L.C. Franco
13:55 – 14:10	1114	Being a good 'soil farmer'? The uneasy relation between “soil health” and “good farming” in British agriculture.	Anna Krzywoszynska
14:10 – 14:25	2410	Policy Distortion, Farm Size, and the Overuse of Agricultural Chemicals in China	Baojing Gu
14:25 – 14:40	835	Research Development and Future Prospects on Soil Pollution and Remediation in China	Yongming Luo
14:40 – 14:55	486	The importance of soil information in land use planning in the Sardinia region, Italy	Andrea Vacca
14:55 – 15:10	505	The Maya Anthropocene: Soils, Paleosols, and ancient Agriculture (but no Terra Preta) in the Maya Lowlands	Timothy Beach
15:10 – 15:25	3186	Traditional Māori agriculture: kūmara ( <i>Ipomoea batatas</i> ) origin, soil amelioration techniques, and Māori kūmara systems in Aotearoa (New Zealand)	Charles Hyland
15:25 – 15:40	--	Closing	Conveners

Friday (Aug, 17)		Room "Capri V"	
<b>C4.2.2</b>		<b>Soil quality and food security in the tropics</b>	
		<b>Convener:</b> Cassio Hamilton Abreu Júnior, Plant Nutrition Laboratory, Center for Nuclear Energy in Agriculture, University of São Paulo (CENA/USP), Piracicaba, São Paulo, Brazil	
		<b>Co-Convener:</b> Marcia Thais de Melo Carvalho, Brazilian Agricultural Research Corporation (Embrapa), National Research Center for Rice and Beans, Santo Antônio de Goiás, GO, Brazil	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	1421	Biochemical characterization of selenium toxicity symptoms in cowpea plants	Andre Rodrigues dos Reis
13:55 – 14:10	1337	Effect of different approaches of fertilizer recommendation on growth, yield and quality of soybean in a Vertisol.	K.K.Math
14:10 – 14:25	834	Effect of methods of Zinc and Fe nutrition on yield and quality of chickpea genotypes	Ganajaxi Math
14:25 – 14:40	394	How can we mitigate impact of climatic variability on crop production in the semiarid tropics of Africa?	Hitoshi Shinjo
14:40 – 14:55	1811	Impacts of Commercial Rhizobium Inoculants on Tropical Soybean (Glycine max) Varieties in the Guinea Savanna Agroecology of Northern Ghana	Edwin K. Akley
14:55 – 15:10	412	Promoting the 4R among smallholder farmers in the tropics: Successes, challenges and lessons learned	Bucaro, Andres
15:10 – 15:25	1678	Relationship between Cadmium levels in soil and beans in cacao production systems of the Colombian central Andean region	Martha C. Henao
15:25 – 15:40	1582	Soil Health for Climate Change Resilience and Food Security in the Central American Dry Corridor	Marie-Soleil Turmel
15:40 – 15:55	--	Closing	Conveners

Friday (Aug, 17)		Room “Ilha Bela II”	
<b>C4.5.1</b> <b>C4.5.2</b>		<b>Integration of historical, philosophical and sociological worldviews to secure and sustain soils in the future</b> <b>Foreseeable breakthroughs in soil science</b>	
		<b>Convener:</b> Sabine Grunwald, University of Florida, Gainesville, USA.	
		<b>Co-Convener:</b> Marcos Bacis Ceddia, Soils Department, Federal Rural University of Rio de Janeiro, Rio de Janeiro, Brazil.	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	418	Three critical failures of soil science and opportunities to overcome them: spatial inference, uncertainty, economics	Keith Shepherd
13:55 – 14:10	1306	Perception, beliefs and values of soil, its health and degradation along an urban - rural gradient.	Renita Kay Kastner-Wilcox
14:10 – 14:25	546	Stripping science off soil: soil conservation in the post-truth era	Andrei Rozanov
14:25 – 14:40	1255	The Cooperative Research Centre for High Performance Soils: An innovative approach to soil research in Australia.	Michael Crawford
14:40 – 14:55	2202	The first German Handbook of Soil Science and its Editor Edwin Blanck	Karl Stahr
14:55 – 15:10	401	Is there evidence for the validity of the doctrine to abandon synthetic fertilizers in organic agriculture?	Holger Kirchmann
15:10 – 15:25	549	The cavalry charge: attractive plants and army ants in an organic farming experiment	Carlos A. R. Moura
15:25 – 15:40	--	Closing	Conveners

## Working groups (Oral presentations)

### Monday, 13 August

Monday (Aug, 13)		Room "Aruba II"	
<b>C1.3.2 WG01</b>		<b>Soil pedogenesis and diversity in extreme environments</b>	
		<b>WG01 - Cryosols: Progress in understanding the dynamic soils of colder regions</b>	
		<b>Convener:</b> Sergey V. Goryachkin, Russian Academy of Sciences, Russia Megan Balks, Soil and Environmental Sciences. University of Waikato, Hamilton, New Zealand  <b>Co-Convener:</b> Carlos Schaefer, Soils Department, UFV, Viçosa, MG, Brazil Dimitry Konyushkov, Dokuchaev Soil Science Institute, Moscow, Russia	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	1149	Deserts - Pedogenesis and Life in Areas with Little Water	Farhad Khormali
15:55 – 16:10	470	Characterization and classification of soils in a topossequence under sandstone in Manicoré, South Amazon	Elilson Gomes de Brito Filho
16:10 – 16:25	933	Differential soil genesis and geochemical composition in a serpentinite outcrop under tropical humid climate in Minas Gerais, Brazil	Emerson Ferreira Vilela
16:25 – 16:40	721	Extreme soils of humid high mountains, caused by different factors	Marek Drewnik
16:40 – 16:55	1453	Human-induced soils of european Russia in extremely rich and extremely uncomfortable conditions	Andrey Dolgikh
16:55 – 17:10	1244	Patches of life in the Atacama Desert - heterogeneity analyses of soil organic carbon	Mörchen, R.
17:10 – 17:25	1473	Pedogenesis in extreme environments: implications for understanding soil covers of the present and the past	Nikita Mergelov
17:25 – 17:40		<b>Close C1.3.2 / Opening WG01</b>	<b>Conveners</b>
17:40 – 17:55	507	Emission of greenhouse gases from natural and human-affected cold soils of Eurasia: controls of spatial variability	Dmitry Karelin
17:55 – 18:10	431	Sulfur and phosphorus speciation in soils on James Ross Island, Antarctic Peninsula, as assessed by XANES spectroscopy	Prietzl Jörg
18:10 - 18:15	--	Closing	Conveners

Monday (Aug, 13)		Room "Oceania VI e VII"	
<b>WG02</b>		<b>Digital soil mapping: Progress in digital soil mapping</b>	
		<b>Convener:</b> Luboš Borůvka; Food and Natural Resources Czech University of Life Sciences Prague Kamycka, Czech Republic	
		<b>Co-Convener:</b> Alessandro Samuel-Rosa; Universidade Tecnológica Federal do Paraná, Brazil / Helena Pinheiro; Universidade Federal Rural do Rio de Janeiro, RJ, Brazil	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	316	Assessment of digital soil class mapping at high resolution in mountainous areas	Waldir de Carvalho Junior
15:55 – 16:10	1818	Consistency of soil legacy data from different sources in regional and national scale	Lubos Boruvka
16:10 – 16:25	1762	Exploring co-spatial patterns between soil biodiversity and pedodiversity across New South Wales	Vanessa Pino
16:25 – 16:40	2083	High resolution digital soil mapping on a complex landscape in the Sandspruit catchment, Western Cape, South Africa	Treva Flynn
16:40 – 16:55	2666	The modifiable areal unit benefit - choosing the optimum analysis scale for digital soil mapping	Bradley Miller
16:55 – 17:10	1623	Mapping soil organic carbon stocks at a field-scale by using 3D regression-kriging	Asim Biswas
17:10 – 17:25	529	Identifying the spatial drivers and scale-specific variations of soil carbon in a montane natural forest ecosystem in Sri Lanka	Senani Bandara Karunaratne
17:25 – 17:40	1628	The Water-Smart Agriculture Project in Central America - A multi facet Digital Soil Mapping Platform for building soil information capacity and rescuing soil data	Axel Schmidt
17:40 – 17:55	2415	Mapping highly organic soils in Scotland using remote sensing	Laura Poggio
17:55 – 18:10	--	Closing	Conveners

## Tuesday, 14 August

Tuesday (Aug, 13)		Room "Aruba I"	
<b>WG14</b>		<b>Acid Sulfate Soils</b>	
		Convener: Leigh Sullivan, Acid Sulfate Soil Commission, Office of the Deputy Vice-Chancellor (Research and Innovation). Victoria, Australia, E-mail: l.sullivan@federation.edu.au	
		<b>Co-Convener:</b> Peter Österholm, Åbo Akademi University, Department of Geology and Mineralogy, Domkyrkotorget, Finland, E-mail: posterho@abo.fi	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	198	Sulfidization process in Acid Sulfate Soils of Senegal, West Africa	Fall A. C. A. Lamine
15:55 – 16:10	449	Effects of calcium carbonate and peat addition on agricultural acid sulfate soil microbiology and geochemistry	Eva Högfors-Rönnholm
16:10 – 16:25	692	Decomposition of organic matter during remediation of an acid sulfate soil	Angelika Koelbl
16:25 – 16:40	1009	Severe and sustained soil and water acidification following the Millennium Drought in the lower Murray-Darling Basin, Australia	Luke Mosley
16:40 – 16:55	1072	Modeling the acidifying potential for acid sulfate soils	Anton Boman
16:55 – 17:10	1100	Reducing release of acidity and metals from agricultural acid sulfate soils with hydrochemical precision treatment	Krister Dalhem
17:10 – 17:25	1229	How much peat should be left to protect underlying sulfidic mineral soil in peat extraction sites?	Miriam Nystrand
17:25 – 17:40	2758	Investigating the legacy of trace metals and REEs mobilised from acid sulfate soils during an extreme drought and evaluating their application as a palaeodrought proxy.	Thomas Job
17:40 – 17:55	836	New Developments in Precision Chemical Treatment of Acid Sulfate Soils	Sten Engblom
17:55 – 18:10	--	Closing	Conveners

## Thursday, 16 August

Thursday (Aug, 16)		Room "Oceania VI e VII"	
<b>WG05</b>		<b>Proximal soil sensing (PSS)</b>	
		<b>Convener:</b> Gustavo M. Vasquez, Pesquisador Embrapa Solos, Rio de Janeiro, RJ, Brazil	
		<b>Co-Convener:</b> Zhou Shi, College of Environmental and Resource Sciences, Zhejiang University, China	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 16:05	Invited	<i>Applications of electromagnetic induction techniques in soil studies across different spatial and temporal scales</i>	Jingyi Huang
16:00 – 16:25	Invited	<i>Machine learning and computer vision applications in proximal soil sensing</i>	Asim Biswas
16:25 – 16:40	1690	Development of a low cost MIR spectrometer for proximal soil sensing: progress and challenges	Matthew Keller
16:40 – 16:55	2678	Estimating soil organic carbon with soil Vis-NIR spectroscopy: a comparison of different algorithms in two forest areas	Gabriele Buttafuoco
16:55 – 17:10	300	Monitoring soil moisture dynamics at the plot scale using repeated electromagnetic induction surveys	Jingyi Huang
17:10 – 17:25	2667	Prediction of total silicon concentrations in French soils using pedotransfer functions from mid-infrared spectrum or pedological characteristics	Nicolas PA Saby
17:25 – 17:40	2434	Seeing is believing: managing soil variability, improving crop yield and minimising off-site impacts in sugarcane using proximal soil sensing and digital soil mapping	John Triantafilis
17:40 – 17:55	789	Soil spectra fusion based on Outer Product Analysis (OPA): a strategy for modeling soil properties	Fabrício da Silva Terra
17:55 – 18:10	968	Soil survey for agricultural land physical quality grade assessment using in-situ vis-NIR spectroscopy in Jiangxi Provicne, China	H Y Li
18:10 – 18:15	--	Closing	Conveners

Thursday (Aug, 16)		Room “Galápagos III”	
<b>WG07 WG08</b>		<b>Universal Soil Classification: Progress for the development of a Universal Soil Classification System</b>	
		<b>WRB: Soil Classification for understanding soil genesis, map legends and soil functions. Experiences with WRB and other systems</b>	
		<b>Convener:</b> Jon Hempel (†), USDA Natural Resources Conservation Service, Retired, Lincoln, NE, USA Peter Schad, Technical University of Munich, Soil Science, Germany	
		<b>Co-Convener:</b> Erika Micheli; Department of Soil Science and Agricultural Chemistry, Szent Istvan University, Gödöllő, Hungary Cornie van Huyssteen, University of the Free State, Soil and Crop and Climate Sciences, Bloemfontein, South Africa	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	1063	An international system of soil horizon nomenclature	Curtis Monger
15:55 – 16:10	2661	Evaluation and correlation studies of centroid units from Brazilian Soil Classification System	Lúcia Helena Cunha dos Anjos
16:10 – 16:25		Close WG07 / Opening WG08	Conveners
16:25 – 16:40	410	Suggestions for the 4th edition of the WRB	Peter Schad
16:40 – 16:55	640	Collisions of the “genetic” and “quantitative” approaches in an international soil classification WRB 2015	Kabala Cezary
16:55 – 17:10	2874	The diagnostic continua of the soil of Europe to support the definition of soil function	Erika Micheli
17:10 – 17:25	2761	Red soils of the tropics ? challenges for soil classification	Ben Harms
17:25 – 17:40	1153	Ability of WRB system to classify the soils with clay illuviation under various (pedo)environmental conditions	Marcin Switoniak
17:40 – 17:55	1386	Evaluation of the world reference base (WRB, 2015) as a strategy to reduce the propagation of uncertainties in the national soil cartography in Mexico	Carlos Omar Cruz-Gaistardo
17:55 – 18:10	--	Closing	Conveners



Thursday (Aug, 16)		Room "Galápagos I"	
<b>WG13</b>		<b>SUITMA</b>	
		<b>Convener:</b> Kye-Hoon John Kim, Department of Environmental Horticulture, The University of Seoul, Korea, E-mail: johnkim@uos.ac.kr	
		<b>Co-Convener:</b> Maxine J. Levin, USDA-Natural Resources Conservation Service, National Soil Survey Center, Beltsville MD, USA, E-mail: maxine.levin@wdc.usda.gov Przemysław Charzyński, Nicolaus Copernicus University in Toruń, Lwowska, Poland, E-mail: pecha@umk.pl	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	1258	SUITMAs as hotspots of anthropogenic carbon accumulation	Viacheslav Vasenev
15:55 – 16:10	1741	Global soil sealing in urban reduce carbon storages	Shaohua Wu
16:10 – 16:25	2866	Biochar-assisted phytoextraction of cadmium and zinc in contaminated soils	Jean Louis Morel
16:25 – 16:40	2314	Monitoring of soil ecological functions of an urbic Technosol after applying biochar and compost.	Blanca Prado
16:40 – 16:55	3008	Soils within Cities Global approaches to their sustainable management - composition, properties, and functions of soils of the urban environment	M.J. Levin
16:55 – 17:10	2944	Visualising the Soil Platform Function - A Cultural Critique of Anthropogenic Soils	Alexandra Toland
17:10 – 17:25	1170	Characteristics of edifisols of Shanxi Province, China	Przemysław Charzyński
17:25 – 17:40	2643	Impact of nature-based solution on urban soil quality in different urban areas of Europe	Ryad Bouzouidja
17:40 – 17:55	1265	Integration of organohalide-respiring bacteria and nanoscale zero-valent iron (Bio-nZVI-RD): A perfect marriage for the in-situ soil remediation of organohalide pollutants	Siyuan Chen
17:55 – 18:10	--	Closing	Conveners

Thursday (Aug, 16)		Room "Bora-Bora III"	
<b>WG15</b> <b>WG16</b>		<b>Cultural Patterns of Soil Understanding A: Anthropological, psychological, religious and spiritual perspectives on soils</b>	
		<b>Cultural Patterns of Soil Understanding B: Dialogues between traditional and scientific knowledge and perceptions of soils by different stakeholders</b>	
		<b>Convener:</b> Nikola Patzel, International Union of Soil Science's (IUSS, WG Cultural Patterns of Soil Understanding, Germany	
		<b>Co-Convener:</b> Guilherme Sobrinho, Psychology and Afro-descendant Information Laboratory, Federal Rural University of Rio de Janeiro (LAPSIAFRO/UFRRJ), Seropédica, Rio de Janeiro, Brazil	
Schedule	ID	Title	Presenter
15:30 – 15:40	--	Opening	Conveners
15:40 – 15:55	2399	Deep culture related to soil ecosystems	Pavel Krasilnikov
15:55 – 16:10	1824	Soils within the Yoruba mythology: an example of a modern conceptualization from an ancient mythology.	Guilherme Augusto Nascimento Sobrinho
16:10 – 16:25	2870	Experience in an afrodescending rural community using humic acids as a vegetal biostimulant for the promotion of family agriculture	Liliana Gomez Gomez
16:25 – 16:40	451	Stakeholders' Mental Models of Soil Food Value Chain in South Florida	Claire Friedrichsen
16:40 – 16:55	511	Soil in Rumi's thought	Seyed Kazem Alavipanah
16:55 – 17:10	2809	Cultural and scientific roots of soil perceptions by university and secondary school's students in Minas Gerais, Brazil.	Cristine Carole Muggler
17:10 – 17:15	--	Closing	Conveners

## Friday, 17 August

Friday (Aug, 17)		Room "Galápagos III"	
<b>WG03</b> <b>WG06</b>		<b>WG03 - Digital Soil Morphometrics: Soil imaging and image analysis at multiple scales</b>	
		<b>WG06 - Soil Monitoring: Soil monitoring evolving tools and challenges</b>	
		<b>Convener:</b> Alfred Hartemink, University of Wisconsin, Madison, WI, USA	
		<b>Co-Convener:</b> Markus Steffens, Research Department Ecology and Ecosystem Management, Technical University of Munich, Germany	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	2959	An in-situ soil methodology for characterizing soil porosity changes through the vegetation period	Endre Dobos
13:55 – 14:10	2848	Development of in situ quantification of soil structure: methodology and analysis	Cristine Morgan
14:10 – 14:25	526	Digital managing and processing of soil and forest habitat data on a country scale	Przemyslaw Musial
14:25 – 14:40	2171	InfoSoilsBr: the Brazilian soil profiles framework	Marcos Bacis Ceddia
14:40 – 14:55	1478	Measuring soil properties with your smartphone	Matt Aitkenhead
14:55 – 15:10	1300	Viewing soils	Alfred Hartemink
15:10 – 15:25		<b>Close WG03 / Opening WG06</b>	<b>Conveners</b>
15:25 – 15:40	947	Sampling methods for topsoil monitoring - A comparison of spade and gouge-auger sampling for topsoil monitoring at continental scale	Reto Giulio Meuli
15:40 – 15:55	2710	Agriculture's role as a terrestrial carbon sink: Getting back what was lost	Neal Eash
15:55 – 16:10	--	Closing	Conveners

Friday (Aug, 17)		Room "Bora Bora I"	
<b>WG09</b>		<b>Soil Modeling: Challenges and perspectives in soil modelling</b>	
		Convener: Dr. Harry Vereecken, Forschungszentrum Jülich, Germany.	
		Co-Convener: Dr. Michael H. Young, University of Texas, Austin, USA.	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	1834	A global assessment of future risks for below-ground biodiversity	Carlos A. Guerra
13:55 – 14:10	480	An improvement of the hydraulic-energy indices for physical soil structure evaluation	Robson André Armindo
14:10 – 14:25	2009	Goals and activities of the ISMC soil development and intercomparison panel (Soil-MIP)	Jan Vanderborght
14:25 – 14:40	2863	Soil as a self-organized system: theoretical and practical considerations	Patrick Lavelle
14:40 – 14:55	1014	The Agricultural Ecosystems Services (AgES) watershed model is used to estimate the spatial complexity of soil hydraulic properties in a field-scale agricultural watershed, Colorado, USA	Timothy R. Green
14:55 – 15:10	2859	The International Soil Modeling Consortium: status and perspectives	Roland Baatz
15:10 – 15:25	1426	Retrieving systemic information for modeling soil processes interactions: the BonaRes knowledge portal	Ulrich Weller
15:25 – 15:40	2014	Modelling below-ground fungal communities: a mechanistic and trait-based approach	Wilfred Otten
15:40 – 15:55	--	Closing	Conveners

Friday (Aug, 17)		Room "Capri I"	
<b>WG10</b>		<b>Hydropedology: Hydropedology and critical zone science: toward systems soil science</b>	
		Convener: Hans-Jörg Vogel	
		Co-Convener: Dr. Quirijn de Jong van Lier, USP, Piracicaba, Brazil	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	1251	A systemic approach to model soil functions	Hans-Jörg Vogel
13:55 – 14:10	2764	Spatial and temporal variations of SWC and its response to intensive human managements in the critical zone of the Loess Plateau, China	Yunqiang Wang
14:10 – 14:25	969	Towards 3D-modelling of critical zone evolution: achievements and challenges	Peter Finke
14:25 – 14:40	2768	Towards integrated modeling of soil systems	Harry Vereecken
14:40 – 14:55	2547	The contribution of hydropedological assessments to the availability and sustainable management of water, for all (SDG#6)	Johan van Tol
14:55 – 15:10	--	Closing	Conveners

Friday (Aug, 17)		Room "Oceania IV e V"	
<b>WG11</b>		<b>Land Degradation</b>	
		<b>Convener:</b> Bal Ram Singh, Department of Environmental Sciences, Norwegian University of Life Sciences (NMBU), Norway. E-mail: balram.singh@nmbu.no	
		<b>Co-Convener:</b>	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	543	Potential of conservation agriculture to mitigate historical and future greenhouse gas emissions in subtropical regions	Daniel Ruiz Potma Goncalves
13:55 – 14:10	1068	Distribution characteristics of soil aggregates and its organic carbon in gravel-mulched land with different cultivation years	Zhongming Ma
14:10 – 14:25	1073	Wheat yield and soil carbon, nitrogen and phosphorus reveal legacy effects of artificial erosion and amendments on a Dark Brown Chernozem	Francis J. Larney
14:25 – 14:40	1269	The relationship between the erodibility factor (K) and parameters of soil fertility in agricultural lands of Gaziantep Province, Turkey	Erdihan Tunc
14:40 – 14:55	1584	Biochar stabilization in two Chilean soils of volcanic and non-volcanic origin	Cristina Muñoz Vargas
14:55 – 15:10	2433	Using humified organic matter from lignite, as plant biostimulant of <i>Brachiaria decumbens</i> in post coal mining land reclamation in a semiarid zone	Nelson O. Valero
15:10 – 15:25	2702	Application of different organic amendments in restoration of contaminated soils of Kola Peninsula	Polina Tregubova
15:25 – 15:40	3075	Chemical attributes of anthropic A horizon under different soil uses in southern Amazonas	João José Costa Silva
15:40 – 15:55	2397	Cropping systems to prevent water erosion in sloping lands of Colombia under a changing climate	Franco Obando-Moncayo
15:55 – 16:10	--	Closing	Conveners

Friday (Aug, 17)		Room "Aruba I"	
<b>C3.2.1 WG12</b>		<b>Managing and remediating floodplain and wetland soils</b>	
		<b>Paddy Soils: Mitigating GHG emission and enhancing productivity in rice-based systems</b>	
		<b>Convener:</b> Mizuhiko Nishida, Tohoku Agricultural Research Center, National Agriculture and Food Research Organization. Akita, Japan, E-mail: mizuhiko@affrc.go.jp	
		<b>Co-Convener:</b> Vanessa Wong, School of Earth, Atmosphere and Environment Monash University, Clayton, Australia. E-mail: vanessa.wong@monash.edu	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	373	Release of trace elements from a serpentine soil controlled by oxidation-reduction cycles with a microcosm system	Zeng-Yei Hseu
13:55 – 14:10	685	Effects of repeated removal of rice straw and application of bio-ethanol production residue derived from rice straw in a paddy field on its soil, rice growth and greenhouse gas emissions.	Fumiaki Takakai
14:10 – 14:25	1501	Preliminary screening of the affected riparian areas of the Gualaxo do Norte river by the Samarco's mine dam burst using pXRF	Gabriel William Dias Ferreira
14:25 – 14:40	1606	Biodegradation of hydrocarbons under methanogenic conditions in different oil sands tailings	Tariq Siddique
14:40 – 14:55	1731	Impact of water management on greenhouse gas production and soil fertility during rice production in southern Florida	Jennifer A Cooper
14:55 – 15:10	1856	Fertility re-evaluation of paddy soils in tropical Asia after 50 years of the Green Revolution (FREPS 50): Case studies in Thailand and the Philippines	Junta Yanai
15:10 – 15:25	2467	Could biochar and green manure be a substitute for synthetic nitrogen fertilization to guarantee rice grain yield and decrease greenhouse gas emissions?	Mellissa Ananias Soler da Silva
15:25 – 15:40	843	Temporal trends of rice yield in a long-term paddy field experiment and their relations with climate warming	Mizuhiko Nishida
15:40 – 15:55	1096	Nitrogen loss from anammox and denitrification for different fertilization managements in paddy soils	Chuan Qin
15:55 – 16:10	2872	Application of microwave and optical remote sensing data for monitoring wetland agriculture	Adam Csorba
16:10 – 16:15	--	Closing	Conveners

## Poster Sessions (13:30 – 15:00 / Room: Europa)

Monday, 13 August

Division 1: Soil in Space and Time

Monday (Aug, 13)		TOTEN 1	
<b>C1.1.1</b> <b>C1.1.2</b>		Using soil morphology and micromorphology Structural indicators of soil quality using X-ray computed tomography	
Schedule	ID	Title	Presenter
13:30 – 13:40	3146	Effect of wetting and drying cycles in genesis of cohesive soil horizons from north-east Brazil	Juliana Matos Vieira
13:40 – 13:50	2771	Hydraulic-energy indices and functions associated with micromorphological analysis to evaluate soil structure under integrate crop-livestock system	Aline M. Huf dos Reis
13:50 – 14:00	2731	Micromorphological comparison of impacted and non-impacted soils un the Sonora River Basin: case of Buenavista del Cobre mine	Maria Yazmin Rivera-Uria
14:00 – 14:10	3194	Micromorphological study of Thionic Technosols formed of mine tailings: case of ecological restoration of Peña Colorada, Colima Mexico.	Jaime Diaz-Ortega
14:10 – 14:20	1293	Micromorphology of soils erosion processes in applied urban expansion area of the coastline north of Maceió-ALl	Samuel Vitor Oliveira dos Santos
14:20 – 14:30	1198	Micromorphology of the superficial horizons of the Yellow Red Acrisol subject to cattle grazing	Antonio Soares da Silva
14:30 – 14:40	2998	Soil micromorphometric analysis as indicator of the subsurface erosive process genesis	Nayana Alves Pereira
14:40 – 14:50	2516	Assessing the consequences of improved plant water use efficiency on soil structure using X-Ray computed tomography	Tinashe Mawodza
14:50 – 15:00	2689	Assessing the impact of soil-seed contact on water relations for efficient seed germination using X-ray Computed Tomography	Sebastian Blunk
15:00 – 15:10	2719	Mitigation of soil compaction by the use of cover crops in compacted Oxisol	Altamir Mateus Bertollo



Monday (Aug, 13)		TOTEN 2	
<b>C1.1.2</b> <b>C1.1.3</b>		Structural indicators of soil quality using X-ray computed tomography Using soil morphology and micromorphology indicators of soil health	
Schedule	ID	Title	Presenter
13:30 – 13:40	1499	Quantifying Soil Structure Dynamics in Agroforestry Riparian Buffers using X-ray Computed Tomography	Anastassia Lagounova
13:40 – 13:50	1071	Renting the same room: Do roots repeatedly reoccupy the same spaces?	Ivanah Oliver
13:50 – 14:00	3218	Surface characterization of an entisol using microtomography	Cassia Bezerra Machado
14:00 – 14:10	857	Using X-ray Computed Tomography to assess how plant roots can remediate compacted soils via reorganisation of the rhizosphere	Jasmine Burr-Hersey
14:10 – 14:20	1040	X-ray computed microtomography against retention curve for assessing porosity in Latossolos (Ferralsols) with contrasting vegetation cover	Marcelo Wermelinger Aguiar Lemes
14:20 – 14:30	3216	X-Ray Computed Tomography applied to analyze soil structure under different infiltration techniques	Larissa F Costa
14:30 – 14:40	271	X-ray microtomography analysis of lime application effects on soil porous system	Talita R. Ferreira
14:40 – 14:50	1867	Visualization of soil microstructure under conventional tillage and fallow using micro-focus x-ray computed tomography.	Isaiah IC Wakindiki
14:50 – 15:00	1376	Features of Fe-Mn nodules in southern Indiana Loess with a fragipan horizon	Zhong-Xiu Sun
15:00 – 15:10	954	Micromorphological description for final diagnosis of a non-lithified paleosol ? a case in Brazil	Camila Fernandes Miranda

Monday (Aug, 13)		TOTEN 3	
<b>C1.1.3</b> <b>C1.2.1</b>		Using soil morphology and micromorphology indicators of soil health The geography of soils in a changing world	
Schedule	ID	Title	Presenter
13:30 – 13:40	400	Micromorphology of two Planosols in Rio Grande do Sul State, south of Brazil.	Luís Fernando da Silva
13:40 – 13:50	2969	Pedogenesis of Bt horizons in the Marília Formation (Bauru Basin Cretaceous), Brazil.	Diego Sullivan de Jesus Alves
13:50 – 14:00	607	The unique fabric of pedo- and lithopedogenic gravels in Brazilian savanna soils: archives of soil polygenesis on tropical sedimentary terrains	Yuri L. Zinn
14:00 – 14:10	349	Fate of Co-containing phyllo-manganate: Implications for Co sequestration	Fan Liu
14:10 – 14:20	2630	Behavior of a pedological Oxisols-Ultisols system in the municipality of Terra Roxa Paraná, Brazil	Rafael Martins Sanches
14:20 – 14:30	2371	Development of some Mongolian soil types of Forest Steppe and Gobi Desert zones and their ecological evaluation	Undrakh-Od Baatar
14:30 – 14:40	1367	Distribution and Formation Environment of Fe-Mn Nodules in the soils derived from Quaternary Loess-like materials in the North of China	Qiu-Bing Wang
14:40 – 14:50	2823	Evolution of the São Pedro Cuesta Escarpment Foothills in São Paulo, Southeastern Tropical Brazil: Preliminary Results	Grace Bungenstab Alves
14:50 – 15:00	1703	Five decades in research on Vertisols: A bibliometric analysis	Lima Glêvia
15:00 – 15:10	2858	Influence of relief on mineralogical development in soil in the semi-arid region of Pernambuco, Brazil	Juliet Emília Santos de Sousa

Monday (Aug, 13)		TOTEN 4	
C1.2.1 C1.2.2		The geography of soils in a changing world Remote sensing applied to soil science	
Schedule	ID	Title	Presenter
13:30 – 13:40	755	Modeling and Digital Soil Mapping in Western Region Agricultural sites of the Central Valley of Costa Rica: a tools for assesing soil fertility	Bryan Alemán Montes
13:40 – 13:50	598	Pedo-ecotone as a specific soil-geographic unit	Hryhorii Moroz
13:50 – 14:00	2739	Relation of pedoenvironments with forms of nitrogen and phosphorus in semiarid soils.	Victor Junior Lima Felix
14:00 – 14:10	747	Soil fertility mapping: its transference to farmers by using GIS online tools	Carlos Henríquez Henríquez
14:10 – 14:20	1477	Spatial variability of soils and its relation to plant biodiversity in fluvioglacial and lacustrine landscapes of South Karelia on a large scale	Igor Ilichev
14:20 – 14:30	2587	Volcanic island in the central part of Kurily Range: pedodiversity and Andosol properties	Sergey Khokhlov
14:30 – 14:40	2766	A combined gis-analysis of major forest-forming conifers, soils and climate distributions in central Siberia	Elena I. Parfenova
14:40 – 14:50	286	A novel technique for detection of shallow soils using remote temporal images in central Brazil	Wanderson de Sousa Mendes
14:50 – 15:00	2194	Analysis of hazard factors to risk desertification in the Amaime river basin, department of Valle del Cauca (Colombia - South America)	Diana Lucia Correa-Moreno
15:00 – 15:10	2683	Analysis of the incidence of fires in different classes of soils and biomes in the state of Minas Gerais-Brazil	Eliana Elizabet dos Santos

Monday (Aug, 13)		TOTEN 5	
C1.2.2		Remote sensing applied to soil science	
Schedule	ID	Title	Presenter
13:30 – 13:40	1536	Assimilating satellite images and soil spectroscopy to model soil loss to evaluate crop residues removal for bioenergy	Bruna Cristina Gallo
13:40 – 13:50	3220	A comprehensive multi-objective sampling layout optimization method	Ziyue Chen
13:50 – 14:00	2537	Building a spectral library for estimating soil texture in the Santa Catarina State, Brazil	Elvio GIASSON
14:00 – 14:10	2095	Comparative analysis of five digital elevation models: SRTM, ASTER, ALOS-PALSAR, UAV and Laser Scanner	Athos Alves Vieira
14:10 – 14:20	2754	Delineating soil nutrient management zones based on fuzzy clustering optimized by sPCA in a Colombian Oxisol.	Ruby S. Hernández S.
14:20 – 14:30	2760	Determination of potential soil management zones from soil electrical conductivity, DEM and yield data in an Oxisol of Colombia	Jaime H. Bernal R.
14:30 – 14:40	2275	Determination of the P index for the watershed area of the Marrecas stream using geoprocessing	Joelma Divina Murliki
14:40 – 14:50	2211	Digital elevation based soil mapping method for hilly areas built up of unconsolidated sediment	Károly Kovács
14:50 – 15:00	2214	Discriminatory performance of data obtained by unmanned aerial vehicle in soil-plant systems	Filipe Castro Felix
15:00 – 15:10	2928	Geo-environments of the southern part of Sempre-Vivas National Park, Espinhaço, Minas Gerais, Brazil	Raphael Wakin de Araujo

Monday (Aug, 13)		TOTEN 6	
C1.2.2		Remote sensing applied to soil science	
Schedule	ID	Title	Presenter
13:30 – 13:40	2528	How to address the lack of soil mapping in the semiarid Chaco, a case in Santiago del Estero, Argentina	Cristina Angueira
13:40 – 13:50	203	Integrating multitemporal satellite image and laboratory surface spectral data for mapping soil classes using multiple endmember spectral mixture analysis	Raúl Roberto Poppiel
13:50 – 14:00	2172	Land use and occupation of the urban sub-basins of Ilhéus, State of Bahia, Brazil	Samuel de Amaral Macedo
14:00 – 14:10	1594	Local-scale soil organic carbon prediction in Southern Brazil	Diego José Gris
14:10 – 14:20	2606	Multi-temporal relationship between soil moisture in the root zone in <i>Coffea arabica</i> (L.) and the plant vigor obtained by images of UAV	Diego Armando Amaro da Silva
14:20 – 14:30	987	Open soil surface dynamics as a factor for efficient soil mapping based on remote sensing data	Prudnikova E.Yu.
14:30 – 14:40	1936	Predicting soil organic carbon content in farmland using Fourier transform decomposed variables	Lin Yang
14:40 – 14:50	1066	Quantifying forfeited wheat yield due to soil sodicity in high, moderate and low rainfall conditions in the northern grains region of Australia	Yunru Lai
14:50 – 15:00	637	Soil Conditioners in Land Use and Land Cover in the Lagoa Formosa county, Minas Gerais, Brazil	Ligia Faria Tavares de Souza
15:00 – 15:10	1609	Soil use in the hydrografic basin of Ribeirão Jataizinho, PR and implications for erosion processes.	Rosana Kostecki de Lima

Monday (Aug, 13)		TOTEN 7	
C1.2.2		Remote sensing applied to soil science	
Schedule	ID	Title	Presenter
13:30 – 13:40	254	Spatial relationship between soybean crop and soil properties in a Colombian oxisol	Sergio Tovar-Hernandez
13:40 – 13:50	2882	Spatio-temporal Land Use Dynamics and Soil Organic Carbon in Swiss Agroecosystems	Felix Stumpf
13:50 – 14:00	296	Spectral attributes selection based on data mining for bare soil detection in remote sensing images	Marilusa Pinto Coelho Lacerda
14:00 – 14:10	617	Strategies on Pedological Mapping: from traditional to digital	Fellipe Alcantara de Oliveira Mello
14:10 – 14:20	858	Surface soil moisture: point measurements, tower and satellite - voyage through the scales	Mateusz Lukowski
14:20 – 14:30	2784	Temporal and spatial expression of water deficit evaluated through SPI and SPEI indices in mediterranean central Chile	Elizabeth Ramírez
14:30 – 14:40	713	The use of the spiking methodology for the improvement of global prediction models for total aluminium, iron and silica content in soils from Paraná State	Marcos Rafael Nanni
14:40 – 14:50	2287	Unmanned Aerial System (UAS) as a tool to quantify conventional and conservation tillage crop treatment effects	Murilo Maeda
14:50 – 15:00	429	Use of Lidar derived Digital Elevation Maps and Principal Component Regression to Scale up Topographic Models of Soil Properties	Greg McCarty
15:00 – 15:10	1236	Using multi-temporal polarimetric Sentinel-1 data to monitor soil moisture over winter crops	Miguel Eduardo Zabala Rodriguez

Monday (Aug, 13)		TOTEN 8	
C1.2.2 C1.3.1		Remote sensing applied to soil science Soil-forming processes and their transformation under human impact	
Schedule	ID	Title	Presenter
13:30 – 13:40	355	Mapping of native mate herbs in the northern plateau of Santa Catarina state using GIS and remote sensing techniques	Ludmila Nascimento Machado
13:40 – 13:50	1010	Attributes of Planossolos in different physiographic regions of Rio Grande do Sul State, Brazil.	Paulo César do Nascimento
13:50 – 14:00	1448	Change of soil pH in a long-term experiment of Detritus Input and Removal Treatment	Katalin Juhos
14:00 – 14:10	397	Consequences of land use change for soils in peri-urban environments.	Kalinina Olga
14:10 – 14:20	1017	Diversity of pedogenetic processes in Southern Crimea	Agadzhanova N.
14:20 – 14:30	587	Impact of pedogenetic factors on the content of organic matter in Vojvodina soils (Serbia)	Jovica Vasin
14:30 – 14:40	1567	Long-term effects of litter input change on carbon content in the soil of a Central European deciduous forest	Istvan Fekete
14:40 – 14:50	2330	Magnetite and maghemite: genesis, geochemistry and magnetism in Fe-rich Rhodic Oxisols in the Minas Gerais State, Brazil	Luiz Aníbal da Silva Filho
14:50 – 15:00	1239	Map of the soil surface color of Rio Grande do Sul obtained by diffuse reflectance	Priscila Vogelei Ramos
15:00 – 15:10	1506	Prospecting of soils in toposequences in Southwestern Mato Grosso - Brazil	Ana Paula Barbosa Lima

Monday (Aug, 13)		TOTEN 9	
C1.3.1 C1.3.2		Soil-forming processes and their transformation under human impact Soil pedogenesis and diversity in extreme environments	
Schedule	ID	Title	Presenter
13:30 – 13:40	323	Researches on the Evolution of Red Yellow Soil on the Earth	Zhongjie Ye
13:40 – 13:50	1307	Saline sodic cryoturbated soils at Barguzin Depression and processes of their formation	Vasily Ubugunov
13:50 – 14:00	322	Soil covers variability as an indicator of intraplate base level change: an example from the San Francisco Craton, Minas Gerais, Brazil	Renata Jordan Henriques
14:00 – 14:10	2513	Soil distribution associated with special coffee farming in Mantiqueira mountains, Carmo de Minas, MG	Aurélio Alves Amaral Chaves
14:10 – 14:20	2913	Soil-landscape relationship in slightly dissected plateau in Central Brazil	Renato Henrique Ferrari
14:20 – 14:30	356	Urban soils in the Metropolitan Region of São Paulo (Brazil) and their role in the provision of ecosystem services	Wagner Sousa Gomes
14:30 – 14:40	2356	Using luminescence dating to understand Ferralsol genesis near Piracicaba, SP, Brazil	Tobias Sprafke
14:40 – 14:50	2378	Vegetation produces but pedoturbation decides where carbon is allocated in soils: Assessing O and A horizon thicknesses across the forest-prairie biome transition in Minnesota, USA	Adrian A. Wackett
14:50 – 15:00	1837	Weathering sequence of clay-size minerals based on weathering index and silicic acid activity	Tetsuhiro Watanabe
15:00 – 15:10	3009	Characteristics and genesis of profiles developed from Amphibolite complex rocks in Southwestern Nigeria	Sikiru Adekoya Muda



Monday (Aug, 13)		TOTEN 54 – EXTRA – Division 1	
<b>C1.3.1</b> <b>C1.2.1</b> <b>C1.2.2</b> <b>WG02</b>		Soil-forming processes and their transformation under human impact The geography of soils in a changing world Remote sensing applied to soil science Digital soil mapping: Progress in digital soil mapping	
Schedule	ID	Title	Presenter
13:30 – 13:40	2050	Effects of land use change on soil acidification and organic matter storage in tropical forests	Kazumichi Fujii
13:40 – 13:50	589	Clay and iron profiles of E, G, soft plinthic B, and prisma-cutanic B horizons described during the land type survey of South Africa	C.W. van Huyssteen
13:50 – 14:00	548	Analysis of a pedological transformation system of the Diamantina Plateau, MG	Roberta Borges Parreira
14:00 – 14:10	1411	Generation of exposed soil composites based on Landsat imagery (1984-2014) for large regions	Uta Heiden
14:10 – 14:20	3161	Soil property prediction: comparing covariates spatial resolution	Eliana de Souza
14:20 – 14:30	1977	Validating POLARIS and DSMART disaggregated soil maps using field-scale soil surveys	Jason P. Ackerson
14:30 – 14:40			
14:40 – 14:50			
14:50 – 15:00			
15:00 – 15:10			

**Division 2: Soil properties and processes**  
**Monday, 13 August**

Monday (Aug, 13)		TOTEN 10	
<b>C2.1.1</b>		Soil structure dynamics	
Schedule	ID	Title	Presenter
13:30 – 13:40	326	Inter-relationship between physical attributes and carbon storage in Oxisol and Humic Inceptisol under tillage	Carla Eloize Carducci
13:40 – 13:50	768	Productivity of Linseed genotypes under edaphoclimatic conditions in Dourados City- MS	Kaliana Gottschalk de Freitas
13:50 – 14:00	992	Soil aggregate stability cultivated with organic strawberry under management systems	Daiane de Fatima da Silva Haubert
14:00 – 14:10	2096	Soil physical attributes in an integrated crop-livestock systems in southern Brazil	Douglas Rodrigo Kaiser
14:10 – 14:20	278	Tensile strength and friability of soil aggregates cultivated with organic strawberry under no-tillage	Nádia da Silva Salatta
14:20 – 14:30	2656	Total carbon and nitrogen contents and soil aggregation index under onion culture systems in succession or crop rotation	Arcângelo Loss
14:30 – 14:40	1412	Soil structural state in continuous cropping systems	Pérez Bidegain Mario
14:40 – 14:50	2565	Aggregate Stability in Soil with Humic and Histic Horizons in a Toposequence under Araucaria Forest	Daniel Hanke
14:50 – 15:00	2279	Aggregation and organic carbon in Oxisol under areas with and without tillage	Mariele Monique Honorato Fernandes
15:00 – 15:10	3135	Assessment of soil compression stress and organic carbon content under grazing and swine manure application	Douglas Leandro Scheid

Monday (Aug, 13)		TOTEN 11	
C2.1.1		Soil structure dynamics	
Schedule	ID	Title	Presenter
13:30 – 13:40	2342	Assessment on Soil Aggregate Stability Relations with Organic Carbon Pools at different Tropical Climates and Soil Use Systems in Colombian Andes.	Efrain Francisco Visconti Moreno
13:40 – 13:50	2138	Biological and mechanical decompaction of an Oxisol in the Brazilian Western Amazon.	Anderson Cristian Bergamin
13:50 – 14:00	1393	Clay fraction flocculation degree of Mato Grosso do Sul State soils	Rafaela Silva Santana
14:00 – 14:10	249	Coffee conilon shaded by rubber tree improving the soil structure	Gustavo Soares de Souza
14:10 – 14:20	1281	Compaction of the soil in sugarcane cultivation area under different soil preparations	Ciro Pozzi Garcia
14:20 – 14:30	1920	Correlation between tensile strength and clay and organic matter content in a transect in the Micaela basin, RS, Brazil	Thais Palumbo Silva
14:30 – 14:40	770	Cover crops in the Ocidental Amazon	Alam Carlos da Silva Costa
14:40 – 14:50	1530	Determination and analysis of curve of soil water retention under different ground coverings, wetland matogrossense	Osvaldo Borges Pinto Junior
14:50 – 15:00	1756	Determination of optimized soil matric potential thresholds for potatoes.	Jean-Pascal Matteau
15:00 – 15:10	2191	Determination of the physical quality of sandy soil at different depths by computed tomography Rx in microtomograph.	Luanda Torquato Feba

Monday (Aug, 13)		TOTEN 12	
C2.1.1		Soil structure dynamics	
Schedule	ID	Title	Presenter
13:30 – 13:40	3150	Direct shear resistance parameters of a Bt horizon: under field and saturated moisture	Tiago de Oliveira Santos
13:40 – 13:50	2599	Does land use change the spatio-temporal nature of soil moisture? A multi-spectral analysis in the Caatinga	Cynthia Wright
13:50 – 14:00	471	Effect of agricultural plaster, soil scarification and culture succession systems on physical attributes of a dystrophic red-yellow latosol, in Porto Velho - RO	Elyenayra Nogueira Pinheiro
14:00 – 14:10	345	Effect of land use, location and depth on soil organic carbon stock and aggregate dynamics of degraded ultisol in Nsukka, Southeastern Nigeria.	Azuka Chukwuebuka Vincent
14:10 – 14:20	1430	Effect of soil texture and structure on the K ( $\theta$ ) function parameters.	Cezar Augusto Medeiros Rebouças
14:20 – 14:30	2914	Effective hydraulic conductivity and its relationship with soil attributes of cerrado Mato-Grossense	Yuri william Santos Duarte
14:30 – 14:40	2819	Erodibility Interril and its relationship with attributes of Cerrado soils Mato-Grossense	Edwaldo Dias Bocuti
14:40 – 14:50	686	Estimation of soil temperature based on climatic parameters with artificial neural network model and artificial neural network - firefly hybrid model (case study, Tabriz, Ahar)	Davoud Zarehaghi
14:50 – 15:00	2297	Evaluation of a physical-empirical PTF for soil water retention	Daniel Boeno
15:00 – 15:10	263	Evaluation of the application of anthropic load on a trail in the Serra da Canastra national park	Rita de Cássia Ribeiro Carvalho

Monday (Aug, 13)		TOTEN 13	
C2.1.1		Soil structure dynamics	
Schedule	ID	Title	Presenter
13:30 – 13:40	2620	Evaluation of the stability of soil aggregates in the forest islands of two agro-ecological zones in Burkina Faso.	B. Amelie Bougma
13:40 – 13:50	3023	Impact of land use on physical quality and GHG emissions in the Atlantic Forest Biome	Reginaldo Barboza da Silva
13:50 – 14:00	2664	Impact of mechanized forest management on soil penetration resistance in eucalyptus cultivation	Judyson de Matos Oliveira
14:00 – 14:10	1542	Importance of long-term experiments in soil management of productive processes	Tiago Stumpf da Silva
14:10 – 14:20	1750	Indicators of the physical quality of soils cultivated with rubber tree ( <i>Havea brasiliensis</i> ) in the Brazilian Cerrado Biome	Roberta Ferreira Coutinho
14:20 – 14:30	1029	Influence of biochar on microstructural behavior of a Brazilian subtropical soil	Amanda Romeiro Alves
14:30 – 14:40	1589	Influence of different types of grasses on soil pore volume in silvopastoral system	Vanessa de Sousa Lourenço
14:40 – 14:50	3132	Integral variable of soil penetration resistance as soil physical quality indicator	Cláudio Roberto Marciano
14:50 – 15:00	902	Interrill soil erosion and aggregate stability along a climate gradient (arid to humid) on hillslopes in Chile	N. Bernhard
15:00 – 15:10	1689	Land levelling effects on the relationships of lowland hydro-physical soil attributes, southern Brazil land	Alexsandra Dayanne Soares de Campos

Monday (Aug, 13)		TOTEN 14	
C2.1.1		Soil structure dynamics	
Schedule	ID	Title	Presenter
13:30 – 13:40	803	Least limiting water range in consortium of corn and forage grasses under no-tillage	Lucas de Oliveira Neves
13:40 – 13:50	215	Load support capacity of oxisol with and without controlled traffic in a sugarcane area	Lenon Henrique Lovera
13:50 – 14:00	3000	Moving towards functional physical properties for an improved understanding of soil structure	José Miguel Reichert
14:00 – 14:10	3013	Nonlinear models for calibration of soil moisture capacitance sensors in tropical mountainous Inceptisols and Ultisols	Bárbara Pereira Christofaro Silva
14:10 – 14:20	961	Oxisol and Ultisol CO <sub>2</sub> emission and soil pore classes after soil tillage of sugarcane area in Brazil	Carolina Fernandes
14:20 – 14:30	1729	Physical attributes of a soil submitted to biological decompaction and mechanical in Rondonia	Renan Marré Biazatti
14:30 – 14:40	2067	Physical attributes of soil cultivated under different species of cover crops	Juan Ricardo Rocha
14:40 – 14:50	1327	Physical attributes of soil in the pineapple culture in Miracema do Tocantins - TO	Thalline Rodrigues da Silva
14:50 – 15:00	2170	PHYSICAL ATTRIBUTES OF SOIL UNDER MANAGEMENT OF CUPUAÇU ( <i>Theobroma grandiflorum</i> ) IN THE MUNICIPALITY OF CANUTAMA, SOUTH OF THE AMAZONAS	Juliana Malta de Assis
15:00 – 15:10	3110	Physical quality and blocked pores in Humic Inceptisol under flax cultivation	Letícia Salvi Kohn

Monday (Aug, 13)		TOTEN 15	
C2.1.1		Soil structure dynamics	
Schedule	ID	Title	Presenter
13:30 – 13:40	2154	PHYSICAL ATTRIBUTES OF SOIL IN ARCHAEOLOGICAL BLACK LAND AREA (TPA) WITH COCOA CULTIVATION IN THE SOUTH OF AMAZONAS	José Igor Silva Praça
13:40 – 13:50	3034	Pore Size Distribution Frequency of Intensively Cultivated Oxidic Ferralsols.	Thaís Nascimento Pessoa
13:50 – 14:00	283	Porosity of an Ultisol cultivated with soybean in integration system for livestock farming	Melissa Alexandre Santos
14:00 – 14:10	417	POROUS SPACES OF SOIL IN AREA UNDER CULTIVATION OF GUARANA (Paullinia cupana) IN SOUTH OF AMAZONAS	Anderson Viera Rodrigues
14:10 – 14:20	2126	Red Latosol physical attributes under degraded pastures in Dourados-MS, Brazil	João Claudio Teodoro Turtt
14:20 – 14:30	2070	Resistance to penetration in Latosol cultivated under different species of green manure	Ivne Franco Pires
14:30 – 14:40	975	Resistance values to penetration in red argisol with different doses of limestone with and without superficial agricultural plaster.	Everton Luís Santos
14:40 – 14:50	1921	Soil aggregation evaluation in systems with cover crops using ultrasonic energy	Micael Stolben Mallmann
14:50 – 15:00	1992	Soil aggregation in rhizosphere and in bulk soil of a Haplorthox soil in Paraná, Brazil.	Aline Martineli Batista
15:00 – 15:10	2452	Soil macroinvertebrate activity and pore size distribution: characterization by X ray CT and 3D image analysis.	Giacomo Mele

Monday (Aug, 13)		TOTEN 16	
C2.1.1		Soil structure dynamics	
Schedule	ID	Title	Presenter
13:30 – 13:40	2092	Soil Physical Attributes and Productivity in Corn-Green Manure Intercropping	Wellington da Silva Toledo
13:40 – 13:50	990	Soil physical attributes as a function of crop rotation and soil acidity amendment in a long term no till System (NTS) study.	Jayme Ferrari Neto
13:50 – 14:00	3140	Soil Physical Indicators in an Agroforestry System in the Cerrado-Amazonian Maranhense Forest	Diego Freire Almeida
14:00 – 14:10	2221	Soil precompression stress related to water meniscus forces	Paulo Ivonir Gubiani
14:10 – 14:20	1670	Soil resistance to penetration in sugarcane area as a function of different soil tillage	Tiara Moraes Guimarães
14:20 – 14:30	2737	Soil resistance to penetration of an Plintossolo Argilúvico under different management systems	Djavan Pinheiro Santos
14:30 – 14:40	1460	Soil tillage effects on some soil physical properties in a lowland soybean cropping system	Vinícius Pedron
14:40 – 14:50	1751	Soil water storage and water available in irrigated wheat crop in the Cerrado	Thiago Henrique Ferreira Matos Castañon
14:50 – 15:00	2127	Space correlation of soil texture in archaeological black land area under different uses in south of Amazonas	Luana Celestino Calista
15:00 – 15:10	2185	Space variability of aggregate stability only in arqueological black land area (tpa) with cocoa cultivation in south of Amazonas	Estefani de Souza Oliveira



Monday (Aug, 13)		TOTEN 17	
C2.1.1		Soil structure dynamics	
Schedule	ID	Title	Presenter
13:30 – 13:40	2972	Spatial distribution of attributes of Red Oxisols by geostatistics in Geographic Information Systems.	Ronaldo Luiz Mincato
13:40 – 13:50	2055	Spatial variability of hydraulic properties in two contrasting soils under maize monoculture	Oscar Seguel
13:50 – 14:00	2177	SPATIAL VARIABILITY OF STABILITY OF SOIL AGGREGATES IN ARCHAEOLOGICAL BLACK LAND AREA (TPA) WITH COFFEE CULTIVATION IN SOUTH OF AMAZONAS	Francisca Xavier Quintino Neta
14:00 – 14:10	2649	Specific surface area for the development of pedotransfer functions and their use in the estimation of water retention and availability in soils of the State of Santa Catarina.	Juliano Silva Teles
14:10 – 14:20	1323	Susceptibility to erosion of soils in the Planalto Serrano Catarinense under forest cultivation.	Leonardo de Assis Lopes
14:20 – 14:30	3098	Tensiometer with reading systems in the estimation of soil hydraulic parameters	Francisco Ítalo Fernandes de Oliveira
14:30 – 14:40	2729	The change of kaolinite's physical properties after cultivation of Bacillus sp. The change of kaolinite's physical properties after cultivation of Bacillus sp.	Bykova Galina
14:40 – 14:50	3094	The role of biopores to reduce the mechanical impedance to soybean root elongation	Nayara Caroline Majewski Ulbrich
14:50 – 15:00	2061	Ultrasonic energy in the stability of the aggregates of oxidic Oxisols with intensive cultivation and irrigation	Marcel Thomas Job Pereira
15:00 – 15:10	2999	Use of pedotransfer function to predict field capacity of soils of Pernambuco State, Brazil	Estevão Lucas Ramos Da Silva

Monday (Aug, 13)		TOTEN 18	
C2.1.2		The role of soil physics in water conservation and food security	
Schedule	ID	Title	Presenter
13:30 – 13:40	2302	Are shallow impermeable layers beneficial for vegetation function in the semi-arid zone?	Alexandre Tadeu Brunello
13:40 – 13:50	1599	Artificial neural networks to estimate soil moisture content under corn in integrated crop-livestock-forest system	Vinicius Marchioro
13:50 – 14:00	1916	Characterization of soil physical attributes in degraded slope for revegetation purposes	Fábio Ribeiro Pires
14:00 – 14:10	997	Climate change impact on groundwater quantity under different land management systems in Central Sand Area of Wisconsin, USA.	Birl Lowery
14:10 – 14:20	204	Cover plants on the control of soil water content in sugar cane areas	Ingrid Nehmi De Oliveira
14:20 – 14:30	2617	Data assimilation techniques for retrieving soil moisture in root-zone by using a combination of satellites.	Uvarov M.V.
14:30 – 14:40	1263	Effect of Afforestation of Marginal Lands on Infiltration and Penetration Resistance	Thomas J. Sauer
14:40 – 14:50	841	Effect the runoff harvesting collection area shape on the efficiency of the water conservation in the soil profile	Pedro Berliner
14:50 – 15:00	324	Effects of solute type and mineralization on soil salt ions during the release water process	Quanen Guo
15:00 – 15:10	658	Establishment of critical soil water potential tresholds for water stress deficit in Carica Papaya	Róger Armando Fallas Corrales

Monday (Aug, 13)		TOTEN 19	
C2.1.2		The role of soil physics in water conservation and food security	
Schedule	ID	Title	Presenter
13:30 – 13:40	2429	Estimation of surface runoff using the stable infiltration rate determined by different methods	Felipe Dalla-zen Bertol
13:40 – 13:50	2234	Evaluation of a low-cost sensor to implement a wireless soil moisture sensor networks	Pedro Vieira CRUZ
13:50 – 14:00	3230	Evaluation of the hydraulic conductivity of the soil under different uses and sun-exposed faces	Lopes, Vanessa Schiavon
14:00 – 14:10	745	Evapotranspiration: model versus measurements	Sascha Reth
14:10 – 14:20	2018	Filtration of Phytophthora and Pythium Zoospores in Recycled Irrigation Water to Control Plant Disease Outbreaks in Greenhouse	Sangho Jeon
14:20 – 14:30	1644	Hydrological characteristics of four Soilless Substrates for Potting Cultivation	Eleandro Silva da Cruz
14:30 – 14:40	284	Infiltration of water in a Oxisol in organic corn crop using different cover crops	Juliana Megumi Kanashiro de Oliveira
14:40 – 14:50	2616	Influence of soil layers with canal bed with different water cuttings on frost heaving of lining structure	Xiangdong Shen
14:50 – 15:00	277	Measuring near-wilting soil hydraulic properties and their application in crop water availability modeling	Quirijn de Jong van Lier
15:00 – 15:10	2613	Modernizing surface irrigation and land levelling in Hetao with application of the DSS SADREG	Haibin Shi

Monday (Aug, 13)		TOTEN 20	
C2.1.2		The role of soil physics in water conservation and food security	
Schedule	ID	Title	Presenter
13:30 – 13:40	2950	Physical attributes of a dystrophic Yellow Latosol submitted to different mulchings in 'Ateira' (Annona squamosa L.) plantation	João Vitor Garcia de Lima
13:40 – 13:50	2990	PHYSICAL SOIL QUALITY INDICATORS UNDER CASSAVA HARVESTING SYSTEMS (Manihot esculenta Crantz)	Sandra Andréa Santos da Silva
13:50 – 14:00	897	Retention and availability of water from a soil treated with biochar	Maria Maiara Cazotti
14:00 – 14:10	2527	Seasonal Plant Water Status in Native Shrubs and Trees, northeastern Mexico	Humberto González Rodríguez
14:10 – 14:20	2648	Simulation of planting date on the yield of vegetable soybean and irrigation strategy in southern Taiwan by GLYCIM model	Chu-Chung Chen
14:20 – 14:30	2153	Soil and crop management strategies under drought conditions in the semiarid north of Chile	Ricardo Quintana
14:30 – 14:40	592	Soil moisture movement and spatial distribution on sand dune at a cold desert in the central Eurasian, China	Hongfei Zhou
14:40 – 14:50	295	Soil penetration resistance and water content of a Oxisol cultivated with degraded pasture in recovery with estilosants	Beatriz Santos Bisi
14:50 – 15:00	3071	Soil physical properties affected by different land uses in the Cauquenes catchment, central Chile.	Eduardo Vega
15:00 – 15:10	2432	Soil-use changes: effect on the water dynamic in soils	Tania Soledad Rey Montoya

Monday (Aug, 13)		TOTEN 21	
<b>C2.1.2</b> <b>C2.2.1</b>		The role of soil physics in water conservation and food security Soil organic matter dynamics from molecules to landscapes	
Schedule	ID	Title	Presenter
13:30 – 13:40	824	Spatiotemporal Heterogeneity of Soil Water Content at Different Size of Gaps of Pinus koraiensis-Dominated Broadleaved Mixed Forest	wenbiao duan
13:40 – 13:50	2266	The influence of thin soil fractions in the attenuation of groundwater contamination	Francisco Afonso Cavalcanti-Junior
13:50 – 14:00	2049	Validation of a hydrological model to simulate water transport in a volcanic ash soil of southern Chile	Tihare Hermosilla
14:00 – 14:10	360	Variability of soil hydraulic properties and its impact on predictions of an agro-hydrological model	Thalita Campos Oliveira
14:10 – 14:20	794	Water retention properties of stony soils.	Balin Robertson
14:20 – 14:30	1522	PHYSICO-EMPIRICAL APPROACH TO PREDICT SOIL WATER RETENTION	Rodrigo Pivoto Mulazzani
14:30 – 14:40	3236	The role of cover crop in improving rainwater and nutrient use efficiency for a no-tilled dryland corn and soybean rotation system	Gary Feng
14:40 – 14:50	2981	Geophysical investigation of soil moisture content for agricultural purposes	Ruan Ainslie
14:50 – 15:00	2631	Atributos de solos sob manguezais do Delta de Parnaíba, Piauí, Brasil, por análise multivariada	Gustavo Souza Valladares
15:00 – 15:10	2160	Space variability of carbon stock and organic carbon of soil with cupuaçu cultivation in south of Amazonas, Brazil	Ludmilla Colares Rodrigues

Monday (Aug, 13)		TOTEN 22	
C2.2.1		Soil organic matter dynamics from molecules to landscapes	
Schedule	ID	Title	Presenter
13:30 – 13:40	1882	Adsorption kinetics of dissolve organic matter at the water-air interface	Gilboa Arye
13:40 – 13:50	3141	Determination of Oil in Contaminated Soil by Low-Field Nuclear Magnetic Resonance (NMR)	Catarina Mendes Rebello
13:50 – 14:00	1635	Study by attenuated total reflectance spectroscopy of structural changes of humified organic matter by chemical perturbations via alkaline dissolution and peroxidation	Diego Restrepo
14:00 – 14:10	1186	An advanced wet oxidation methods of soil organic carbon determination	sanjib kar
14:10 – 14:20	272	Benefits of biochar application to tropical soils: greenhouse gas emissions, soil improvement and crop yield	Carlos Eduardo P Cerri
14:20 – 14:30	1330	Carbon stock losses and decomposition in riparian and well-drained areas under lowland rainforest transformation systems on Sumatra, Indonesia	Nina Hennings
14:30 – 14:40	1958	Carbon storage along a climosequence of soils developed from contrasting granites in northeast Brazil	Marina Monteiro Feitosa
14:40 – 14:50	1494	Characteristics of Biochar produced from water hyacinth in different pyrolysis temperatures	Luana Bottezini
14:50 – 15:00	2641	Characterization and bioactivity of humic acids from different origins in rice plants.	Tadeu Augusto van Tol de Castro
15:00 – 15:10	3047	Charcoal contribution to umbric epipedons of Ferralsols in Brazilian cerrado biome	Marina Justi

Monday (Aug, 13)		TOTEN 23	
C2.2.1		Soil organic matter dynamics from molecules to landscapes	
Schedule	ID	Title	Presenter
13:30 – 13:40	430	Comparison of three methods to determine organic matter in alluvial soils cultivated with cocoa	Salomon Barrezueta-Unda
13:40 – 13:50	2830	Contribution of roots and shoots from summer crops on physical fractions of soil organic matter in two lowland soils	Bruno Chaves
13:50 – 14:00	1379	Decomposition of Eucalyptus leaves in dystrophic soil in phytophysiology of the Cerrado	Sarah Camelo da Silva
14:00 – 14:10	3090	Determination of the parameters: Organic Matter, Density and pH of the soil in areas of plant suppression in the Municipality of Altamira-Pará-Brazil	Samia Cristina de Lima Lisboa
14:10 – 14:20	1027	Does soil management system affect C content of a coarse sandy loam Amazonian Acrisol?	Itauane Oliveira de Aquino
14:20 – 14:30	368	Early stage litter decomposition across biomes	Ika Djukic
14:30 – 14:40	2255	Effect of dissolved organic matter and humic substances on transport of ions and low molecular weight molecules by liquid membranes	Mayra Mora
14:40 – 14:50	701	Effect of litter nitrogen storage and nitrogen release of litter decomposition on soil nitrogen in Pinus koraiensis mixed forests	Chen Lixin
14:50 – 15:00	1622	Effect of prescribed burns on soil organic carbon forms in Histosols of the Itatiaia National Park	Robson Altiellys Tosta Marcondes
15:00 – 15:10	583	Exploring properties of soil organic matter at the microscopic level using molecular dynamics and an upgraded Vienna Soil-Organic-Matter Modeler	Yerko Escalona

Monday (Aug, 13)		TOTEN 24	
C2.2.1		Soil organic matter dynamics from molecules to landscapes	
Schedule	ID	Title	Presenter
13:30 – 13:40	1843	Factors controlling organic carbon storage in tropical soils	Kenta Ashida
13:40 – 13:50	856	Fire influences on litter decomposition: C chemistry and N transformations in thermally altered <i>Pinus radiata</i> needles.	Erinne Stirling
13:50 – 14:00	2444	Glomalin Related Soil Protein from the Itataia phosphate-uranium deposit in the Brazilian semiarid	Maria Eugenia Ortiz Escobar
14:00 – 14:10	2582	How soil C:N ratios vary with depth, particle size and soil fertility in Brazilian forest soils	Marla Alessandra Araujo
14:10 – 14:20	236	Humic substances and total organic carbon of an Inceptisol after 21 years under different soil tillage	Luiz Paulo Rauber
14:20 – 14:30	2208	Influence of eucalypt residue (root and shoot) and N (internal and external) to C and N incorporation in soil organic matter fractions	Emanuelle Mercês Barros Soares
14:30 – 14:40	1509	Influence of magnesium silicate on the persistence of the straw of <i>Brachiaria brizantha</i> cv. Piatã in no-tillage	Izabela Richena Barbosa
14:40 – 14:50	2391	Influence of the organic matter on the availability of heavy metals in the soil in vegetable gardens of the Metropolitan area of Belém/Pa.	Nayara Kelly Feitosa Ferreira
14:50 – 15:00	2098	LEACHING OF CATIONS AND EUCALYPTUS GROWTH UNDER COMPLEMENTARY FERTILIZATION WITH K <sup>+</sup> AND Na <sup>+</sup>	ANÁLIO, Caroline M.
15:00 – 15:10	396	Long Term Dynamics of Soil Organic Carbon Pools in Oil Palm Plantations following Land Use Change: Insights from Physical Fractionation and natural <sup>13</sup> C abundance	Juan Carlos Quezada RIVERA



Monday (Aug, 13)		TOTEN 25	
C2.2.1		Soil organic matter dynamics from molecules to landscapes	
Schedule	ID	Title	Presenter
13:30 – 13:40	1489	Long-term changes in the composition of organic matter	Kerttu Tammik
13:40 – 13:50	1922	Long-term effect of fertilizer and crop residues management under cassava production on changes in soil organic carbon storage	Somrutai Tancharoen
13:50 – 14:00	2716	Macaúba ( <i>Acrocomia aculeata</i> Mart.) contribution to soil organic carbon	Sandro Lucio Silva Moreira
14:00 – 14:10	1928	Methods for the determination of organic carbon in soils of Alagoas State, Brazil	Leila Cruz da Silva Calheiros
14:10 – 14:20	545	Microscopic analysis of the structure, dynamics and absorption properties of the standard Leonardite humic acid using molecular dynamics simulations	Drazen Petrov
14:20 – 14:30	2655	Natural, agricultural and contaminated ecosystems exhibit glomalin in soils with different structural characteristics	Andrés Calderín García
14:30 – 14:40	2820	Organic fertilization in the dragon fruit production	Alexandre Dias Silva
14:40 – 14:50	436	Organic matter content in agricultural soils along main geomorphological units of Vojvodina Province, Serbia	Jordana Ninkov
14:50 – 15:00	2148	Physical fractionation of organic soil matter in different systems of use and management	Júlio César Azevedo Nóbrega
15:00 – 15:10	2099	Relation of total and relative cost of nutrient losses among different pasture management	Rafaela Ramos Bertuani

Monday (Aug, 13)		TOTEN 55 – EXTRA Division 2	
<b>C2.3.1</b>		Soil microbiological processes and nutrient cycling under crop rotation	
<b>C2.3.2</b>		Molecular techniques as a useful tool to reveal soil biodiversity and biotechnological potential of microbial genomes	
<b>C2.2.3</b>		Soil and water pollution: dynamics and evaluation	
<b>C2.2.1</b>		Soil organic matter dynamics from molecules to landscapes	
<b>C2.1.1</b>		Soil structure dynamics	
Schedule	ID	Title	Presenter
13:30 – 13:40	2079	Cover crops diversity improves soil microbiology on crop rotation systems	Bruno Poloto Lopes
13:40 – 13:50	2471	Response of soil bacteria and archaea communities to long-term crop richness in a no-tillage experiment	Jessica Pereira de Souza
13:50 – 14:00	3065	Andisol top-soil as support of a biopurification system to treat water contaminated with atrazine	Marcela Levío
14:00 – 14:10	2864	Quantification and characterization of humics acids by 13-NMR solid state spectroscopy	William Chavarriaga Montoya
14:10 – 14:20	1175	Influence of grazing intensities in integrated crop-livestock system on microbiological attributes in soil	Andrea S. Scaramal
14:20 – 14:30	564	Geometrical modeling of pore space using ellipsoids: application to the simulation of water retention in soils	Olivier Monga
14:30 – 14:40	2881	Availability of heavy metals and other elements in soils under influence of the Itataia uranium-phosphate deposit in Brazil	José Igor Almeida Castro
14:40 – 14:50	2853	Patterns of change in soil organic matter along a latitudinal gradient in Atlantic volcanic Islands	Zulimar Hernández
14:50 – 15:00			
15:00 – 15:10			

## Division 3: Soil Use and Management

Monday, 13 August

Monday (Aug, 13)		TOTEN 26	
<b>C3.1.1</b>		Recent advances in terroir zoning, functioning and sustainability	
Schedule	ID	Title	Presenter
13:30 – 13:40	2274	Distribution of the radical system of capim mombaça mixed with legumes with nitrogen fertilization management	Tassiane Sanchez Calles
13:40 – 13:50	446	Evaluating Heavy Metal Distributions in Agricultural lands near Industrial complexes in Jeon-Buk Regions in Korea	K.I. Kim
13:50 – 14:00	372	Advance in automatic measuring tool of soil losses using water environment research equipment ISCO 6712 Model	Tae-young Kim
14:00 – 14:10	603	African soil partnership implementation plan for addressing the challenges of sustainable soil management in the sub-Saharan Africa	Victor Okechukwu Chude
14:10 – 14:20	2558	Agricultural potential for Crop-Livestock-Forestry integration system in the Matopiba region, Brazil	José Francisco Lumbreras
14:20 – 14:30	2167	Arbuscular mycorrhizal fungi and phosphate fertilization in production of araucaria seedlings	Carlos Vilcatoma Medina
14:30 – 14:40	2597	Background and Reference Values of Heavy Metals in soils of the Brazilian Amazon	Luiz Henrique Vieira Lima
14:40 – 14:50	211	Chemical attributes variability of a quartzipisamment cultivated with eucalyptus in response to limestone application	Elizeu de Souza Lima
14:50 – 15:00	645	Comparison between diagnostic methodology cda versus methodology cda innovated aiming to transform degraded areas into conservation agriculture areas	Oswaldo Julio Vischi Filho
15:00 – 15:10	2136	Definition of soil management specific units at farm level	Juan Carlos Rey

Monday (Aug, 13)		TOTEN 27	
C3.1.1		Recent advances in terroir zoning, functioning and sustainability	
Schedule	ID	Title	Presenter
13:30 – 13:40	952	Delineating homogeneous zones in a watershed with respect of the susceptibility of lands to degradation by agricultural use	Michender Werison Motta Pereira
13:40 – 13:50	2886	Effects of sugarcane removal straw on carbon and nitrogen from soil microbial biomass	Paul Lineker Amaral de Melo
13:50 – 14:00	2421	Energy balance in corn culture, cultivated in different soil conservational preparation systems	Gabrielle Passos
14:00 – 14:10	3153	Eucalyptus harvest residues decomposition as affected by nitrogen fertilization and residue incorporation	Thaís Corrêa Sales
14:10 – 14:20	1967	Evaluation of the accuracy of maps of apparent soil electrical conductivity (ECa) in different sample densities	Kaynara Fabíola Lima Kawasaki
14:20 – 14:30	965	Geological and magnetic susceptibility of land use support capability management in watersheds.	Renata Cristina Araújo Costa
14:30 – 14:40	3130	Influence of the crop-livestock farming integration system on the accumulation of organic matter in the Cerrado of Mato Grosso.	Bianca Nathiele Favetti Chagas
14:40 – 14:50	2225	Magnetic soil susceptibility in the “Cerrado” of Piauí, Brazil	Sammy Sidney Rocha Matias
14:50 – 15:00	719	Morphological characterization and yield of bean and corn crops in different soil classes of a toposequence from Unaí, Minas Gerais	Alceu Linares Pádua Junior
15:00 – 15:10	450	Predicting and evaluating spatial soil information?s using soil profile data and soil maps - Examples prediction soil carbon stock in Germany and potential benefits from biochar application in Ethiopia	Andreas Möller

Monday (Aug, 13)		TOTEN 28	
<b>C3.1.1</b> <b>C3.1.2</b>		Recent advances in terroir zoning, functioning and sustainability Multi-scale and multi-domain approaches to develop smart farming	
Schedule	ID	Title	Presenter
13:30 – 13:40	2640	Productivity and quality of Tempranillo grapes cultivated on three different soils in the Sao Francisco Valley, Brazil	Mayame de Brito Santana
13:40 – 13:50	399	Soil Permeability for Geotechnical Mapping Purposes Applied to Planning	Alan Silveira
13:50 – 14:00	724	Spatial and temporal analysis of synergy and trade-offs between Agroecosystem services in the Dry farming areas of northeast China in nearly a decade	Huang Yuanfang
14:00 – 14:10	953	Water infiltration in soils subjected to direct and conventional planting systems.	Maria Caroline Garcia Paschoal
14:10 – 14:20	538	Zoning Edaphic for grapevines in the Municipality of Santa Maria of Boa Vista-PE.	Tony Jarbas Ferreira Cunha
14:20 – 14:30	1948	Arbuscular mycorrhizae in agroforestry systems with oil palm in the Amazon	Rodrigo da Silva Maia
14:30 – 14:40	1493	Characterization of soil properties effects on apple production in South Uruguay	Alliaume, Florencia
14:40 – 14:50	1694	Conventional and ecological crop management systems affect bacterial diversity on the phyllosphere	Carolinne Rosa de Carvalho
14:50 – 15:00	3202	Evaluation of Soil Nutrients in Drip Irrigation Based on PCA and BP Neural Network	Shuqing Yang
15:00 – 15:10	559	GOANA	Rokhaya Daba Fall

Monday (Aug, 13)		TOTEN 29	
C3.1.2		Multi-scale and multi-domain approaches to develop smart farming	
Schedule	ID	Title	Presenter
13:30 – 13:40	343	Impact of landuse planning and management on land degradation in Kadawa Irrigation scheme, Kano, Nigeria	Bashiru A. Raji
13:40 – 13:50	2534	Land use changes in Poland in the years 2004-2014	Piotr Sk?odowski
13:50 – 14:00	886	Origin and Properties of Deep Sands of South-Eastern Cambodia	Richard W Bell
14:00 – 14:10	2979	Predicting potassium availability for eucalyptus in tropical soils	Filipe Bruno de Oliveira
14:10 – 14:20	664	Root growth of cover crops cultivated under compacted pasture in Rolim de Moura Rondônia	Diogo Arthur Valiati Dantas
14:20 – 14:30	2198	Spatial dependence of the soil mechanical resistance to penetration in areas of sugarcane under mechanized harvesting with controlled traffic at mata paraibana mesorregion of Paraiba State, Brazil	Josévaldo Ribeiro Silva
14:30 – 14:40	706	Spatial variability of organic matter content in a Red Nitosol under an Eucalyptus benthamii plantation	Laura Camila de Godoy Goergen
14:40 – 14:50	2005	The influence of biological preparations and humus content on soil biological activity	Zita Kriauciuniene
14:50 – 15:00	3095	Variation in soil properties, moisture, and botanical composition across catenas in northwest Arkansas, USA	Jenny Richter
15:00 – 15:10	1518	Soybean (Glycine max) development in three tropical soil classes: the principle to determining production environments	Rannery Camargos dos Santos

Monday (Aug, 13)		TOTEN 30	
C3.2.1 C3.2.2		Managing and remediating floodplain and wetland soils Soil management in organic production and agroecology	
Schedule	ID	Title	Presenter
13:30 – 13:40	879	Baseline concentration of vanadium in different types of soils from Taiwan	Cho-Yin Wu
13:40 – 13:50	879	Can earthworms' activity affect water transport and storage in soils?	Jamal Hallam
13:50 – 14:00	456	Comparison of soil quality using comparative diagrams in riparian areas, Brazil	Piero Iori
14:00 – 14:10	2776	Effect of former topography on insufficient growth caused by excess soil water in upland crops cultivated on paddy field	Yuta Shimizu
14:10 – 14:20	1470	Effects of anthropization in veredas from Central Brazil	Maria Emanuely Ramires
14:20 – 14:30	2783	Soil carbon pools in temperate saltmarsh and mangrove environments	Vanessa Wong
14:30 – 14:40	999	Swine slurry effect in the soil organic carbon at no tillage system	Rose Luiza Moraes Tavares
14:40 – 14:50	1176	COMPARISON BETWEEN THE EFFECTS OF SUN-CORAL ( <i>Tubastraea</i> spp.) AND LIMESTONE AS SOIL AMENDMENTS IN CULTIVATED CORN ( <i>Zea mays</i> )	Julia Barra Netto Ferreira
14:50 – 15:00	3183	Content of organic matter and calcium in soil cohesive treated with gypsum and leguminous residues	Jéssica de Freitas Nunes
15:00 – 15:10	1760	Effect of organic amendments and inorganic fertilization in the yield and quality of jalapeño pepper ( <i>Capsicum annuum</i> L.)	Ana Alejandra Valenzuela-García

Monday (Aug, 13)		TOTEN 31	
C3.2.2		Soil management in organic production and agroecology	
Schedule	ID	Title	Presenter
13:30 – 13:40	1310	Influence of an afisol's microbial activity under incorporation of ryegrass, white clover or poultry litter.	CAROLINE JERKE
13:40 – 13:50	2840	Nepheline syenite rock powder as source of potassium to corn	Julio Cesar Raposo de Almeida
13:50 – 14:00	1047	Nitrogen mineralization and nitrous oxide emissions in a sandy soil amended with low-phosphorus broiler litter.	Ariel Szogi
14:00 – 14:10	657	Organic Matter and Physical Attributes of the Soil with Underground Barrage in Agroecological Transition	Wanderson Benerval De Lucena
14:10 – 14:20	776	SOIL MICROBIAL GROUPS RESPONSES TO APPLICATION OF GARLIC BROTH, ESSENTIAL OILS AND Trichoderma spp. USED TO CONTROL Sclerotium cepivorum Berk	Ezequiel D. Bigatton
14:20 – 14:30	3086	Sustainable production of strawberry in Alfisols from coastal rainfed Chile	Alonso Matamoros
14:30 – 14:40	1829	The effects of mix-seeding of barley and hairy vetch on increasing biomass and nutrient contents	Cho Rong Lee
14:40 – 14:50	1030	Variation of chemical attributes of the soil between two years of application of residue water of swine in agrofloresty system.	Adriane de Andrade Silva
14:50 – 15:00	327	Visual evaluation of soil structural quality in organic strawberry production	Camila Pereira Cagna
15:00 – 15:10	1442	Water availability in organic and conventional citrus orchard	Marcelo Raul Schmidt



Monday (Aug, 13)		TOTEN 32	
<b>C3.2.2</b>		Soil management in organic production and agroecology	
<b>C3.2.3</b>		Artificial drainage systems: maintaining soil functions and protecting water resources	
<b>C3.2.4</b>		Nutrient and contaminant transport in drained soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	2015	Soil physical quality and root development of citrus under a biodynamic production system in a Ultisol Dystrophic Hapludalf in Rio Grande do Sul	Caroline Valverde dos Santos
13:40 – 13:50	1793	Colloids control the transport and the fractionation of REEs in a river impacted by ion-adsorption rare earth mining	Ye-Tao Tang
13:50 – 14:00	2361	DIAGNOSIS OF THE CONFLICT OF USE AND OCCUPATION OF SOIL IN HYDRICAL QUALITY: A STUDY IN THE CÓRREGO DA OLARIA WATERSHED - PINDORAMA, SÃO PAULO, BRAZIL	Maria Conceição Lopes
14:00 – 14:10	3134	Forest litter evaporation on Cerrado woodland	Lívia M. P. Rosalem
14:10 – 14:20	1082	Monitoring of available water content variation on different upland soils using undisturbed weighable lysimeters	Junghun Ok
14:20 – 14:30	1772	Spatial variability of soil attributes in a cultivated area of underground dam in the State of the Paraíba, Brazil	Maria Sonia Lopes da Silva
14:30 – 14:40	3104	Standardized difference vegetation index in the relationship of productivity and nitrogen content in corn cultivated in ilpf system	Hugo Miranda Faria
14:40 – 14:50	1247	Agricultural land uses and their effects on water quality in Navarre (Spain)	I. Hernández-García
14:50 – 15:00	2464	Contamination risks by potentially toxic elements into Oxisol irrigated with treated sewage effluent	Aline Michelle da Silva Barbosa
15:00 – 15:10	2817	DISSOLVED ORGANIC CARBON AND NITRATE FLOW IN SURFACE WATERS OF TWO MINI WATERSHED OF THE RIO DAS MORTES RIVER WATERSHED	Tulio Gonçalves dos Santos

Monday (Aug, 13)		TOTEN 33	
C3.2.4 C3.2.5		Nutrient and contaminant transport in drained soils Soil erosion modelling: Global Alliance	
Schedule	ID	Title	Presenter
13:30 – 13:40	2344	Exportation of chemical elements in particulate and soluble forms during rainfall events in a small rural catchment in southern Brazil.	Cláudia Alessandra Peixoto de Barros
13:40 – 13:50	270	Improvement of a simplified model for Phosphorus Thresholds in soils receiving pig slurry in Santa Catarina State, Brazil	Luciano Colpo Gatiboni
13:50 – 14:00	2251	Influence of land use and management on the quality of the water resource	Mariana Bárbara Lopes Simedo
14:00 – 14:10	2133	Boron leaching according to source and soil texture	Filipe Belluco Guerrini
14:10 – 14:20	1544	Water, soil and phosphorus losses in no-tillage under long-term application of liquid dairy manure and simulated rainfall	Jair Augusto Zanon
14:20 – 14:30	520	Assessment of water erosion dynamics by connectivity indices in an agricultural watershed	María Guadalupe Ares
14:30 – 14:40	2801	Different scale rainfall simulation methods and their applicability for erosion modelling	Boglárka Keller
14:40 – 14:50	3148	Erodibility of a Yellow Latosol (LA) under pasture and SAF in the southern region of Amazonas, Brazil by two Indirect Methods	Tatiana Acácio da Silva
14:50 – 15:00	3185	Erodibility of soils in southern Amazonas State for two Indirect Methods	Larissa Carvalho Gato
15:00 – 15:10	2120	Estimation of erosion and proposal of soil conservation practices in Florencia and El Llano in Zamorano, Honduras	Mariana Gómez Botero

Monday (Aug, 13)		TOTEN 34	
C3.2.5		Soil erosion modelling: Global Alliance	
Schedule	ID	Title	Presenter
13:30 – 13:40	2653	Estimation of water erosion by Erosion Potential Method in a watershed of southern Minas Gerais.	Natanael Rodolfo Ribeiro Sakuno
13:40 – 13:50	1730	Hidrossedimentological Simulation using the WATERSED Model	Ana Letícia Sbitkowski Chamma
13:50 – 14:00	2996	Hydrosedimentological dynamics in a hydrographic basin covered by Red Oxisols in Southeast of Brazil	Joaquim Ernesto Bernardes Ayer
14:00 – 14:10	234	Hydrosedimentological modeling with a high level of detail in an urban basin with a high slope	DaríoTomas Rodriguez
14:10 – 14:20	3039	Mapping of rain erosivity in Mato Grosso state	Ricardo Santos Silva Amorim
14:20 – 14:30	1425	Modeling Ephemeral Gully Erosion in Agricultural Fields of Southern Ontario, Canada	Prasad Daggupati
14:30 – 14:40	3173	Monitoring of accelerated erosion in recovered slope using Bioengineering of soils in the state of Alagoas, Brazil	Diego Medeiros1
14:40 – 14:50	2821	NATURAL POTENTIAL OF WATER EROSION FOR MATO GROSSO STATE, BRAZIL	Ricardo Santos Silva Amorim
14:50 – 15:00	2033	Organic matter content under coverage plants	Dione Pereira Cardoso
15:00 – 15:10	1516	Ratio between rare earth element fluxes in suspended sediments and bedload under watershed-scale	Yuri Jacques Agra Bezerra da Silva

Monday (Aug, 13)		TOTEN 35	
<b>C3.2.5</b> <b>C3.2.6</b>		Soil erosion modelling: Global Alliance Agricultural management to protect soil resource to support a growing population	
Schedule	ID	Title	Presenter
13:30 – 13:40	910	Resistance of Acrisols to erosion in soils in Brazilian semi-arid environment	Rennan Cabral Nascimento
13:40 – 13:50	2285	Sediment fingerprinting using geochemical tracers: a global meta-analysis	Rafael Ramon
13:50 – 14:00	2161	Sediment production by different intensity and duration of simulated rainfall	Wilk Sampaio de Almeida
14:00 – 14:10	2134	Soil loss by water erosion in the Oxisols of a hydrographic sub-basin, affluent of a hydroelectric power plant reservoir, Brazilian southeast	Augusto César Ferreira Guiçardi
14:10 – 14:20	1561	Space distribution of rainfall erosivity in climate change scenarios for the state of Tocantins, Brazil	Wharley Pereira dos Santos
14:20 – 14:30	267	Surface soil erosion assessment in a Protected Area on Paraty Municipality coast, Rio de Janeiro State, Brazil	Luana de Almeida Rangel
14:30 – 14:40	2912	Use of tracer and digital filters for runoff separation: an aid to modeling soil erosion in catchments	Felipe Bernardi
14:40 – 14:50	2742	Abundance of microarthropods in conventional tillage and direct systems in areas under cultivation of <i>Nicotiana tabacum</i>	Vanessa Aparecida dos Santos Silva
14:50 – 15:00	656	Aggregate tensile strength in sugarcane areas with different cover crops and soil tillage system	Lenon Henrique Lovera
15:00 – 15:10	1226	Application of hydrogel and organic residue and their effects on soil chemical and biological attributes	Mirian Cristina Gomes Costa

Monday (Aug, 13)		TOTEN 36	
C3.2.6		Agricultural management to protect soil resource to support a growing population	
Schedule	ID	Title	Presenter
13:30 – 13:40	2774	Assessment of crop combinations in small farms for local adaptation to rainfall variability and soil types in the semi-arid tropics	Yenumula Gerard Prasad*
13:40 – 13:50	2442	Assessment the efficient management indicators of irrigation in the production of avocado Hass ( <i>Persea americana</i> Mill) in Colombia	Grajales Guzmán Luis Carlos
13:50 – 14:00	1354	Availability of land for sustainable sugarcane production: Case study for Colombia	Felipe Haenel Gomes
14:00 – 14:10	1925	Can terracing in no-till systems of South Brazil be a strategy to mitigate the water deficit in soybean cultivation?	Tiago Hörbe
14:10 – 14:20	551	Carbon stock of physical fractions of organic soil matter in different management systems	Jean Sérgio Rosset
14:20 – 14:30	1447	Characterization of chemical attributes on soil management function	Katiaíres Evangelista Delpin Malvezi
14:30 – 14:40	754	Chemical P recovery from dairy manure using the Quick Wash process and use of low-P washed manure solids as soil amendments	Virginia Takata
14:40 – 14:50	2921	Conservationist use potential of the Manso river watershed, Minas Gerais - Brazil	Adriana Monteiro da Costa
14:50 – 15:00	269	Corn consortium with brachiaria cv piatã submitted to soil management and phosphorus doses in the crop-livestock integration system on western Amazonia.	Gabriel Ferreira soares
15:00 – 15:10	799	Dynamics of Carbon's handling indices in management systems in the Conesul's region of Mato Grosso do Sul	Camila Beatriz da Silva Souza

Monday (Aug, 13)		TOTEN 37	
<b>C3.2.6</b>		Agricultural management to protect soil resource to support a growing population	
Schedule	ID	Title	Presenter
13:30 – 13:40	820	Effect of inoculation with arbuscular mycorrhizal fungi and blanching on heavy metals chemical forms in edible parts of water spinach ( <i>Ipomoea aquatic</i> Forsk)	Hung-Yu Lai
13:40 – 13:50	1463	Effect of nitrogen doses on absorption, distribution and accumulation of sulfur in banana williams variety	Jaime Torres Bazurto
13:50 – 14:00	1855	Effect of severe fire disturbance on soil mites community assembly in greater xing'an mountain, china	Lin Yinghua
14:00 – 14:10	1513	Effect of the application of copper on the communities of mites and collembolans edaphic in an area under grape cultivation	Gleudson Gimenes Rieff
14:10 – 14:20	329	Evaluation of physical soil attributes of subirrigated lowland in the Araguaia Valley	Marcio Nikkel
14:20 – 14:30	2718	Evaluation of the biometric characteristics of eucalyptus clones at different degrees of soil compaction	Jéssica Conceição Nunes Silva
14:30 – 14:40	2975	Historical overview patterns of agricultural areas and natural vegetation cover in São Paulo state	Paulo André Tavares
14:40 – 14:50	1167	Hydrological monitoring in small rural catchments as a tool in adopting soil and water conservation practices	Danlei de Menezes
14:50 – 15:00	2345	Identification of soil use and occupation on the performance of center pivot	João Alberto Fischer Filho
15:00 – 15:10	1320	Impact of Rice production on soil health parameters: a study of two contrasting rice-growing Regions of Mozambique	David Fangueiro

Monday (Aug, 13)		TOTEN 38	
<b>C3.2.6</b>		Agricultural management to protect soil resource to support a growing population	
Schedule	ID	Title	Presenter
13:30 – 13:40	3213	Impact of the underground dam on soil chemical characteristics in of Arara the municipality, Paraíba State	Roseli Freire de Melo
13:40 – 13:50	2772	In vitro dissolution of a remineralizer as an estimate of its performance in soil	Roseclênia Alves Santos
13:50 – 14:00	2697	Land recover and soil management by Agroforestry system	Marques, Maria Aparecida <sup>12</sup>
14:00 – 14:10	2902	Leguminous mulch and nitrogen influences on soil penetration resistance and mayze growth in Arenic Hapludult soil	Lorena Silva Campos
14:10 – 14:20	1486	Long-term application of liquid dairy manure in no-tillage: effects on water, soil, and phosphorus loss by runoff under natural rainfall	Nerilde Favaretto
14:20 – 14:30	2031	Mechanical resistance to the penetration of a Red Oxisol under different forest systems in the Cerrado.	Diego dos Santos Pereira
14:30 – 14:40	1614	Microbiological attributes as indicators of soil quality in agricultural management	Elaine Araújo
14:40 – 14:50	222	Nutrient activation of different coverage plants in sugarcane areas	Euriana Maria Guimarães
14:50 – 15:00	1406	Participative Quality Index for the No-Till System (IQP) and Soil Structure Rapid Diagnosis (DRES)	Adriana Pereira da Silva
15:00 – 15:10	1562	Physical and Chemical Attributes of Red Oxisols in Southern Minas Gerais, Brazil	André Silva Tavares

Monday (Aug, 13)		TOTEN 39	
<b>C3.2.6</b>		Agricultural management to protect soil resource to support a growing population	
Schedule	ID	Title	Presenter
13:30 – 13:40	2868	Physiological responses of Theobroma cacao L. genotypes to drought stress	Paúl Lama Isminio
13:40 – 13:50	1041	Soil aggregate stability in an Ultisol under increasing cattle trampling pressure	Mastrangelo Enivar Lanzanova
13:50 – 14:00	2723	Soil chemical, physical and microbiological properties under Integrated Crop-Livestock System in Araguaia Valley Region, Mato Grosso State, Brazil	Silvio Yoshiharu Ushiwata
14:00 – 14:10	774	Soil density dynamics and physical fractions of organic matter in management systems in the Conesul's region of Mato Grosso do Sul	Paulo Guilherme da Silva Farias
14:10 – 14:20	3126	Soil losses in different soil management under pasture	Fabiano Oliveira Machado
14:20 – 14:30	1898	Soil mechanical resistance to penetration of maize no-tillage system in succession with cover crops and chiseling systems	Paulo Cesar Conceição
14:30 – 14:40	2300	Soil physical attributes under integrated agricultural production systems at Agreste mesoregion of Paraiba State, Brazil	Victor Ferreira Brandão
14:40 – 14:50	1577	Soil physical quality of an ultisol under crop-livestock-forest integration system in Amazonia, Brazil	Diego Lima de Souza Cruz
14:50 – 15:00	266	Soil quality indicators of a Planosol under integrated Crop/livestock/Forest system at Agreste Mesoregion of Paraiba State, Brazil	André Julio do Amaral
15:00 – 15:10	2270	Soil temperature measurements by newly developed soil probes in Hungary	Zsófia Dobó



Monday (Aug, 13)		TOTEN 40	
C3.2.6		Agricultural management to protect soil resource to support a growing population	
Schedule	ID	Title	Presenter
13:30 – 13:40	2978	Soil water dynamics in a Cerrado fragment and clonal Eucalyptus plantation fertilized with K sources	Fábio Henrique Silva Floriano de Toledo
13:40 – 13:50	1896	Sources, manners application and translocation of sulfur in the initial development of corn.	Rafael de Paiva Andrade
13:50 – 14:00	1758	Spatio-temporal heterogeneity of water table level under cranberry production	Jonathan A. Lafond
14:00 – 14:10	2162	Stability of soil aggregates on over crop cultivation in Piper nigrum in northern Espírito Santo state	Juan Ricardo Rocha
14:10 – 14:20	892	Stability of soil aggregates under distinct management systems of cauliflower at hillslope areas	Nivaldo Schultz
14:20 – 14:30	2860	Subsurface erosion formation and triggering: pedological controlling factors	Gabriela Pereira da Silva Souza
14:30 – 14:40	1285	Theoretical and methodological contributions of the Integrated Management of Watersheds and Coastal Areas (IWCAM), for the improvement of the Sustainable Land Management (SLM) in the province of Cienfuegos.	MsC Ing. Yodani López Fonseca
14:40 – 14:50	3082	Variation of water storage in mobilized soil by deep tilling equipment in the Northwest of Paraná	Gislaine Silva Pereira
14:50 – 15:00	1429	Water and sediment losses in paired zero-order catchments under no-till with and without terraces.	Ana Lúcia Londero
15:00 – 15:10	1428	Wood ashes as an alternative source of potassium in the biomass production of Pennisetum purpureum cv. Cameroon, for energy purposes.	Gabriel Barros Pinto

Monday (Aug, 13)		TOTEN 41	
<b>C3.2.6</b> <b>C3.3.1</b>		Agricultural management to protect soil resource to support a growing population Nitrogen use efficiency (NUE) in tropical soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	2647	Pig slurry application methods: Implications for soil quality parameters and productivity of maize and soybean crops (Córdoba, Argentina)	Bachmeier, Omar Antonio
13:40 – 13:50	365	Soybean yield and physical soil properties in succession to cover crops.	João Henrique Silva Caetano
13:50 – 14:00	3004	Comparing point assessments of soil loss rates with RUSLE estimates in Fogo Island, Cape Verde, Africa	Tomás de Figueiredo
14:00 – 14:10	1726	Soil organic matter and macronutrients dynamics of a long-term conservation tillage experiment in a brazilian Ultisol	Fernanda Cristina Caparelli de Oliveira
14:10 – 14:20	742	15N recovery in depth by flooded rice in Southern Brazil	Gerson Laerson Drescher
14:20 – 14:30	1960	Addition of gypsum with leguminous residue to reduce cohesion and increase maize grain yield.	Stéfanny Barros Portela
14:30 – 14:40	3115	Agronomic characteristics of sunflower cultivars ( <i>Helianthus annuus</i> L.) BRS 122 and BRS 324 under nitrogen fertilization in the brazilian semiarid region.	Amanda Michele Santos de Lima
14:40 – 14:50	1357	Agronomic variables and silage production of maize plant intercropped with forage plants under different nitrogen topdressing rates.	Clarice Backes
14:50 – 15:00	2973	Ammonia volatilization from liquid nitrogen fertilizers treated with urease and nitrification inhibitors	Mateus de Paula Gomes
15:00 – 15:10	959	Ammonia volatilization from nitrogen fertilizer formulated with biochar	Aline Peregrina Puga

Monday (Aug, 13)		TOTEN 42	
C3.3.1		Nitrogen use efficiency (NUE) in tropical soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	1197	Ammonia volatilization in oxisol cultivated with maize and irrigated with swine wastewater treated anaerobically	Sarah Mello Leite Moretti
13:40 – 13:50	1326	Ammonia volatilization of nitrogen sources applied in maize in no tillage	Bruno Paulo Moschini
13:50 – 14:00	2369	Analysis of initial growth of pepper pout submitted at nitrogen levels	Jéssica Patrícia Paula Lima
14:00 – 14:10	1303	Cultivation of pout pepper under nitrogen in a greenhouse	Juliane de Souza Beltrão
14:10 – 14:20	2724	Differential response of maize hybrids to inoculation with <i>Azospirillum brasilense</i>	Denise Pacheco Dos Reis
14:20 – 14:30	2156	Does the way of lime application change nitrogen amidic sources efficiency in mitigating N-NH <sub>3</sub> loses?	Marcos Renan Besen
14:30 – 14:40	2752	Effect of natural zeolite on the nitrogen fertilizer efficiency in coffee crop, in Aserrí, Costa Rica	Karla Montero Jara
14:40 – 14:50	750	Effect of the use of nitrification inhibitors in the reduction of nitrogen losses of nitrogenous fluid fertilizer	Ronaldo Batista Pinheiro
14:50 – 15:00	752	Effect of urease inhibitor on a nitrogen fertilizer	Mauro Pinheiro Marra
15:00 – 15:10	1514	Efficiency of nitrogen fertilization and association with rhizobia in <i>Vigna unguiculata</i> in Latosol of the cerrado of Tocantins	Weslany Silva Rocha

Monday (Aug, 13)		TOTEN 43	
C3.3.1		Nitrogen use efficiency (NUE) in tropical soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	2480	Efficiency of nitrogen use due to the application of phosphorus and nitrogen doses inoculated with N <sub>2</sub> -fixing bacteria in cowpea bean	Ester de Paiva Alves Barbosa
13:40 – 13:50	441	Influence of N source on nutrient uptake and cabbage growth.	Ivan Carlos Carreiro Almeida
13:50 – 14:00	2477	Influence of the nitrogen fertilizer coverage administration in the quantity and nodule number of common bean in no-tillage system	Amanda Magalhães Bueno
14:00 – 14:10	1683	MAIZE CROP INOCULED WITH <i>Azospirillum brasilense</i> AND NITROGEN TOP-DRESSING INCREASE GRAIN YIELD AND NITROGEN USE EFFICIENCY	Marccelo Marinho Viana
14:10 – 14:20	1963	Mulching of leguminous trees to improve nitrogen use efficiency in tropical cohesive soil	Virley Gardeny Lima Sena
14:20 – 14:30	1315	Nitrogen (15N) use efficiency in maize as affected by urea treated with boric acid and copper sulfate	Nicole Colombari Cheng
14:30 – 14:40	442	Nitrogen and potassium fertilization in the productive characteristics of BRS 394 wheat in the Cerrado of Mato Grosso	Ronaldo Aparecido de Oliveira
14:40 – 14:50	949	Nitrogen and potassium in the production of braquiaria grass and organic matter of soil in the western Amazon	Edinelia Roos
14:50 – 15:00	459	Nitrogen and sulphur fertilization in the tillering of BRS 394 wheat cultivar irrigated in Brazilian Cerrado	Thiago Henrique Ferreira Matos Castañon
15:00 – 15:10	1362	Nitrogen concentration in signal grass fertilized with nitrogen doses and sources	Guilherme Constantino Meirelles

Monday (Aug, 13)		TOTEN 44	
C3.3.1		Nitrogen use efficiency (NUE) in tropical soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	1344	Nitrogen fertilization and crop management in the agricultural production system in sandy soil	Ana Carolina Mônico Moreira
13:40 – 13:50	1680	Nitrogen fertilization in Brachiaria brizantha cv. BRS Piatã in the end of the rainy season in the state of Rondônia	Cauandrey Deyverson Fagundes
13:50 – 14:00	2962	Nitrogen fertilization with urease inhibitor and nitrification in capim-tifton 85	Edimar Rodrigues Soares
14:00 – 14:10	711	Nitrogen on dry biomass production and calorific power of elephant grass grown in Cerrado biome	Rilner Alves Flores
14:10 – 14:20	1296	Nitrogen use efficiency in maize-forage rotations	Carlos Antonio Costa do Nascimento
14:20 – 14:30	1407	Number of wheat leaves cultivar brs 394 irrigated and fertilized with nitrogen and sulfur combinations in Cerrado mato grossense	Kellyane Pereira dos Santos
14:30 – 14:40	1637	Paiaguas grass yield in two crop-livestock integration system under nitrogen topdressing rates applied	Alessandro José Marques Santos
14:40 – 14:50	1347	Persistence and release of nitrogen from the straw of cover crops under no-till	Hugo Mota Ferreira Leite
14:50 – 15:00	1457	Plant height of herbaceous cotton drip fertigated under nitrogen fertilization and water depth	Daniele Job Alves
15:00 – 15:10	948	Reduction of nitrogen fertilization in corn crop due to combinations of plant growth promoting bacteria	Marcelo Carvalho Minhoto Teixeira Filho

Monday (Aug, 13)		TOTEN 45	
C3.3.1		Nitrogen use efficiency (NUE) in tropical soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	2041	Response of Marandu grass ( <i>Brachiaria brizantha</i> ) to mineral and organic fertilization	Andréia Lopes de Morais
13:40 – 13:50	2759	Root growth and expression OsNRT2.4 gene in rice lines under low nitrate supply	Andressa Fabiane Faria de Souza
13:50 – 14:00	1675	SECONDARY MACRONUTRIENTS CONCENTRATION IN SIGNAL GRASS ( <i>Urochloa decumbens</i> ) FERTILIZED WITH NITROGEN DOSES AND SOURCES	Reges Heinrichs
14:00 – 14:10	978	Soil Inorganic nitrogen content in a system of legume intercropping with pasture in the Brazilian Savannah	Carlos Henrique dos Santos
14:10 – 14:20	743	Urease inhibitor use in nitrogenous fluid fertilizers in mixture with vinasse	Karla Vilaça Martins
14:20 – 14:30	1381	Use of gypsum and leguminous residue to improvement of soil rootability and increase of nitrogen use efficiency in a cohesive tropical soil.	Stefanny Portela
14:30 – 14:40	2367	Vegetative performance of pepper pout under nitrogen doses	Francielly Gonçalves Barbosa-Oliveira
14:40 – 14:50	2351	Volatilization of Ammonia (N-NH <sub>3</sub> ) in Corn ( <i>Zea mays</i> L.) in Function of the Application of Urea, Ammonium Sulphate and Polymer Coated Urea	Bruno Maia Abdo Rahmen Cassim
14:50 – 15:00	1685	Volatilization of NH <sub>3</sub> in nitrogen fertilizers applied on coffee crop with and without straw	Pedro Rocha Santos
15:00 – 15:10	3136	Volatilization, Leaching and Nitrogen Runoff according to dose, sources and soil moisture in rice cultivation.	Luis Armando Castilla Lozano

Monday (Aug, 13)		TOTEN 46	
<b>C3.3.1</b> <b>C3.3.2</b>		Nitrogen use efficiency (NUE) in tropical soils Nutrient budgets in agricultural soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	1709	COMPONENTS OF THE EFFICIENCY OF NITROGEN USE IN CULTURE OF THE INOCULATED CORN WITH <i>Azospirillum brasilense</i>	Karen Alessandra Sousa Castro
13:40 – 13:50	2773	Nitrogen Fertilization at Different Stages in Soybean Culture	Elaine Damiani Conte
13:50 – 14:00	1693	PHOTOSYNTHETIC EFFICIENCY IN THE USE OF NITROGEN IN THE CULTURE OF THE INOCULATED CORN WITH <i>Azospirillum brasilense</i>	Lincon Matheus Araujo Silva
14:00 – 14:10	1257	Productive development of herbaceous cotton fertigated by dripping under nitrogen doses and water slides	Paula Caroline Lima Silva
14:10 – 14:20	1510	Vegetative development of cotton in drip fertigation under nitrogen fertilizer and water depths	Joyce de Oliveira Rodrigues
14:20 – 14:30	2265	Nitrogen fertilization in wheat	Gleize Leviski de Brito
14:30 – 14:40	2201	A sequential extraction procedure to study phosphorus binding forms in arable soils	Kristof Dorau
14:40 – 14:50	1917	Application of an Electric Potential to Retain Plant Nutrients Around the Root Zone in Rice ( <i>Oryza sativa</i> L.)	J. A. Surani Chaturika
14:50 – 15:00	342	Calibrations of phosphorus and potassium modules for an integrated crop macro-nutrients model	Kefeng Zhang
15:00 – 15:10	1485	Changes in nutrients reserves of agricultural soils of the eastern lowlands of Georgia	Giorgi Ghambashidze

Monday (Aug, 13)		TOTEN 47	
C3.3.2		Nutrient budgets in agricultural soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	2116	Chemical attributes and the specific surface area of Oxisol under different uses	Antônia Finkler Dias Fernandes
13:40 – 13:50	2305	Chemical fractionation of copper and zinc in some Mollisols of Córdoba (Argentina), in conditions of waterlogging	Eduardo Buffa
13:50 – 14:00	1548	Chemical properties of a Red Latosol cultivated under a no-till system and under native semi-deciduous dry forest in the Cerrado.	Sara Aparecida Guimarães de Souza
14:00 – 14:10	1420	Control of potential acidity in soil with variable load after surface application of micronized correctives	Jasmine Jurich Pillati
14:10 – 14:20	2512	Effect of base fertilization with fertilizers with or without sulfur on the soil and the sugarcane	Mariana Peduti Vicentini Sab
14:20 – 14:30	1719	Effect of co-inoculation on grain production in Wheat / Soybean succession.	Carolina Fedrigo Coneglian
14:30 – 14:40	3042	Effect of land use change on soil nitrogen availability in northeastern Amazon	Sílvia Fernanda Mardegan
14:40 – 14:50	1390	Effect of potassium fertilization different cassava cultivars under tropical conditions	Claudio Hideo Martins da Costa
14:50 – 15:00	629	Eucalyptus productivity at 44 months in a coppice system according to the number of shoots per strain and mineral fertilization	Natasha Mirella Inhá Godoi
15:00 – 15:10	2976	Evaluation of calcium absorption by 'yellow' melon with green manure use in the Brazilian semiarid	Acacio Figueiredo Neto



Monday (Aug, 13)		TOTEN 56 – EXTRA Division 3	
<b>C3.3.5</b>		Soils for mitigating global warming: greenhouse gas emission reduction and/or enhancing carbon	
<b>C3.2.3</b>		Artificial drainage systems: maintaining soil functions and protecting water resources	
<b>C3.3.7</b>		Contribution of zero tillage (no-till) to sustainable use and management of soils	
<b>C3.1.1</b>		Recent advances in terroir zoning, functioning and sustainability	
<b>C3.2.5</b>		Soil erosion modelling: Global Alliance	
<b>C3.3.3</b>		Advancement of plant nutrition studies for sustainable agriculture	
Schedule	ID	Title	Presenter
13:30 – 13:40	1900	Environmental assessment of the Romão dos Reis basin, Viçosa, MG: case study	Saulo Henrique Barroso
13:40 – 13:50	1947	Impact of Eucalyptus Harvest Residues Management on Soil Carbon Storage and Greenhouse Gas Emission (GHG) in sandy soil in southern Brazil	Jackson Freitas Brilhante de São José
13:50 – 14:00	1950	Controlled traffic farming in no-tillage system in southern Brazil	Tiago De Gregori Teixeira
14:00 – 14:10	1436	Annual methane emissions of production systems in lowlands of Rio Grande do Sul	Walkyria Bueno Scivittaro
14:10 – 14:20	1744	Physical structure of an obstacle Quartzarenic Neosol in different systems of use in the Brazilian Pantanal region	Jeferson da Silva Muniz
14:20 – 14:30	2614	Content of Deep Organic Carbon and Total Nitrogen in Oxisol: Long-Term Effect of Tillage and Crop Rotation	Enza Rigon
14:30 – 14:40	673	Microbial biomass of a subtropical soil as affected by crop residue quality in long-term no-till cropping systems	Cristhian Hernandez Gamboa
14:40 – 14:50	2076	Probable causes of the return of erosion in areas with no-tillage system	Adriana Pereira da Silva
14:50 – 15:00	2732	Biofortification: study under application of n rates by two wheat cultivars	Daniel Ramos Pontoni
15:00 – 15:10	3128	Biological nitrogen fixation in legume crops grown in a consortium with grasses	Jéssica Rafaella de Sousa Oliveira

## Division 4: The Role of Soils in Sustaining Society and the Environment

### Monday, 13 August

Monday (Aug, 13)		TOTEN 48	
<b>C4.1.1</b>		Soil ecosystem services	
Schedule	ID	Title	Presenter
13:30 – 13:40	1348	An Approach to assessment soil ecosystem services in Atlantic Rainforest - Brazil	Vanessa Ingrid Carvalho Saraiva
13:40 – 13:50	3125	ECOLOGICAL CORRIDORS PROPOSAL FOR INTERLIGATION OF THE AUGUSTO RUSCHI BIOLOGICAL RESERVE WITH THE APA OF GOIAPABA-AÇU, ES, USING GEOTECHNOLOGIES	Utálice da Silva
13:50 – 14:00	611	Effect of the agrossilviculture of <i>Euterpe edulis</i> Martius on physical and chemical soil attributes	Fábio Martinho Zambonim
14:00 – 14:10	2481	Evaluation of environmental soil functions in avocado crops Michoacan, Mexico.	Alma Barajas
14:10 – 14:20	1895	Impacts of forest restoration on soil water infiltration: an overview	Sergio Esteban Lozano Baez
14:20 – 14:30	765	Is leaf decomposition more accelerated in a Cerradão or Eucalyptus stand on Cerrado soils?	Karla Monique Silva Carneiro Valadão
14:30 – 14:40	2701	Key soil microbial-derived ecosystem services in Mediterranean native forests: to what extent are they affected by wildfires?	Claudia Rojas
14:40 – 14:50	1138	Land degradation, ecosystem services and food security of the Astrakhan region, Russia	Lavrova Aisylu
14:50 – 15:00	763	Leaf decomposition in eucalyptus stands on Latosol (Oxisol) in the Brazilian Cerrado	Marco Bruno Xavier Valadão
15:00 – 15:10	539	Macro- and micronutrients in western Amazonian forests and their influence on palm (Arecaceae) communities	Søren M Kristiansen

Monday (Aug, 13)		TOTEN 49	
C4.1.1		Soil ecosystem services	
Schedule	ID	Title	Presenter
13:30 – 13:40	1910	Meaning of soils and vegetation in the context of urban heat island and health challenges	Norra
13:40 – 13:50	1873	Molecular identification of ectomycorrhizal fungi occurring in pecan orchards in Rio Grande do Sul / Brazil	Zaida I Antonioli
13:50 – 14:00	1891	Monitoring soil management to assess ecosystem services provision in Atlantic Forest, Rio de Janeiro	Joyce M. G. Monteiro
14:00 – 14:10	1370	Overview of methods to assess the impacts of management practices on ecosystem services to control erosion and soil loss in Latin America.	Rachel Bardy Prado
14:10 – 14:20	715	Potential of agroecosystem services. The case of Slovakia.	Jarmila Makovníková
14:20 – 14:30	3193	Soil Ecosystem Services in Colombian coffee agroecosystem	Liliana Bueno López
14:30 – 14:40	1455	Soil organic matter quality as indicator of ecosystem services	Ana Paula Turetta
14:40 – 14:50	1127	Spatial Bayesian belief networks: A participatory approach for mapping soil vulnerability at the Itatiaia National Park, Brazil	Elias Mendes Costa
14:50 – 15:00	1946	Sugarcane straw removal for bioenergy production in Brazil: short-term effects on soil functions and plant yield	Maurício Roberto Cherubin
15:00 – 15:10	989	The activity of earthworms and their influence on the soil of an Atlantic Plateau hillslope in São Paulo State under primary forests	Geraldo José Diogo Filho

Monday (Aug, 13)		TOTEN 50	
C4.1.1 C4.1.2		Soil ecosystem services Climate change and adaptation of soil functions	
Schedule	ID	Title	Presenter
13:30 – 13:40	2441	Pedodiversity in Brazil: recognizing and valuation	Rosangela Garrido Machado Botelho
13:40 – 13:50	561	High temperature and water stress affect the plant nutrient levels of <i>Panicum maximum</i> under future climatic changes	Eduardo Habermann
13:50 – 14:00	1399	Assessing the potential of a Ferric Luvisol in climate change adaptation.	Daniel OKAE-ANTI
14:00 – 14:10	2189	Biometric variables in young plants of <i>Khaya ivorensis</i> A. Chev. under phytoremediation of Cadmium.	Vitor Resende do Nascimento
14:10 – 14:20	784	Effect of temperature and soil moisture on soil: atmosphere greenhouse gases exchange on an aridity gradient	Everaldo dos Santos
14:20 – 14:30	1088	Relationship of Nitrous Oxide Production and Consumption By Collapsed Palsa	Yuta Takatsu
14:30 – 14:40	2223	Response of soil microarthropods assemblages to different precipitation patterns	Bruna Raquel Winck
14:40 – 14:50	1631	Soil organic carbon turnover rate prediction in the framework of global warming: an approach to determine the role of climate and geochemistry.	Erick Zagal
14:50 – 15:00	781	Use of adaptive legumes genotypes to constraint factors in soil as strategy to improve agricultural sustainability in different cropping system	Luis A. Gomez Jorin
15:00 – 15:10	1880	Soil organic carbon store in Honduras	Arévalo Gloria

Monday (Aug, 13)		TOTEN 51	
<b>C4.1.2</b> <b>C4.1.3</b> <b>C4.1.5</b>		Climate change and adaptation of soil functions Soil in the Anthropocene Carbon sequestration potential of soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	632	The heat on the surfaces of the Federal Rural University of Rio de Janeiro	Thallison Rodrigues de Oliveira
13:40 – 13:50	1713	Soil Habitat Characteristics for a Rare Cactus Can Guide Energy Development, Soil Reclamation, and Plant Reintroduction	Janis Boettinger
13:50 – 14:00	2736	A preliminary study of soil respiration from a semiarid ecosystem of Caatinga at northeast Brazil	Renato Francisco da Silva Souza
14:00 – 14:10	1316	Beyond infrared spectroscopy and spatial analysis: SOC stocks mapping in volcanic soils of Reunion island.	ALLO Myriam
14:10 – 14:20	777	Cacao agroforestry system as a strategy for soil carbon sequestration	Emanuela Forestieri Gama-Rodrigues
14:20 – 14:30	1999	Carbon sequestration in agroforestry systems in the south Peruvian Amazon	Julio Alegre Orihuela
14:30 – 14:40	2711	Carbon storage capacity in natural and intervened land covers in the Andean zone of Southern Colombia.	Felipe Zúñiga
14:40 – 14:50	694	Climate determines the response of soil carbon to no-till	Denis Angers
14:50 – 15:00	354	Effect of designer acidic biochar on coastal saline-sodic soil properties and okra growth	Le Yue
15:00 – 15:10	1340	Impact of sugarcane cultivation on soil carbon dynamics in a semi-arid Brazilian Vertisol	Leandro Reis Costa Santos

Monday (Aug, 13)		TOTEN 52	
C4.1.5		Carbon sequestration potential of soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	1934	Lithology controlled soil organic carbon stocks and stabilization processes in Paramo grasslands of the Peruvian Andes.	Erik Cammeraat
13:40 – 13:50	2644	Litter Decomposition and Microbial Biomass in Clonal Teca Plantation	Caroline Moreira Análio
13:50 – 14:00	828	Long-term effects of different organic and inorganic fertilizer treatments on soil organic carbon sequestration and crop yields on the North China Plain	Nan Zhao
14:00 – 14:10	2818	Panoramic view of the soil carbon stocks of Zona da Mata region, Minas Gerais state, southeast Brazil.	Geraldo Cesar Rocha
14:10 – 14:20	2885	Potential global climate, soil and food security via enhanced weathering of rocks applied to croplands	Binoy Sarkar
14:20 – 14:30	515	Soil Analyses after Growth of Six Winter Cover Crops	M.B. Kirkham
14:30 – 14:40	339	Soil carbon stocks under integrated crop-livestock-forest system in the Brazilian Atlantic Forest region	Alberto C. de Campos Bernardi
14:40 – 14:50	2805	Soil co <sub>2</sub> emission in no-tillage areas with residues from summer and off-season crops	Clariana Valadares Xavier
14:50 – 15:00	1184	Soil organic matter formation under different plant species mixture during 50 years in a temperate region	Karin Kauer
15:00 – 15:10	1172	The effect of biosolids application on organic carbon dynamics in soil	Hasintha Wijesekara

Monday (Aug, 13)		TOTEN 53	
<b>C4.1.5</b> <b>C4.2.1</b>		Carbon sequestration potential of soils Soil and Human Health	
Schedule	ID	Title	Presenter
13:30 – 13:40	2842	The state of the art of the negative impacts in Brazillian carbon stocks due to bad practices	Lucas Henrique Ribeiro Reis
13:40 – 13:50	1171	The use of plant lipids as molecular proxies to trace the origin and dynamics of soil organic carbon	Boris Jansen
13:50 – 14:00	2289	When the forest drops acid: threshold behavior in carbon cycles upon acidification	Karen Vancampenhout
14:00 – 14:10	1468	A brief history of soils and human health studies	Eric C. Brevik
14:10 – 14:20	2340	AGRONOMIC BIOFORTIFICATION OF POTATO ( <i>Solanum tuberosum</i> L.) THROUGH FOLIAR AND SOIL FERTILIZATION WITH ZINC AND ITS INTERACTION WITH CADMIUM	Pedro Pablo Gutierrez Vilchez
14:20 – 14:30	2654	Detection of ampC beta-lactamase from agricultural and forest soils in Nova Friburgo, Rio de Janeiro, Brazil	Eliene dos Santos Lopes
14:30 – 14:40	2583	Detection of the colistin resistance gene ( <i>mcr-1</i> ) from agricultural and forest soils in Nova Friburgo, Rio de Janeiro, Brazil	Camila Costa de Oliveira
14:40 – 14:50	210	Eastern European Pollution Assessment via Portable X-ray Fluorescence Spectrometry: Soils and Vegetation	David C. Weindorf
14:50 – 15:00	1141	Metal and metalloid contaminated soil from an ancient gold Mine - Mina de Chico Rei - Ouro Preto/MG - Chemical extraction studies	Alcylane Caldeira Santos
15:00 – 15:10	3016	Soil and house dust as environmental media of human exposure to trace elements in an historically contaminated area of central Chile	Maite Berasaluce

**Tuesday, 14 August**  
**Division 1: Soil in Space and Time**

Tuesday (Aug, 14)		TOTEN 1	
C1.3.2		Soil pedogenesis and diversity in extreme environments	
Schedule	ID	Title	Presenter
13:30 – 13:40	1001	Characterization and classification of soils under native forest in the Western Amazon, Brazil	Andrei Dobner
13:40 – 13:50	309	Clay minerals formation in a Solod soil in the Brazilian Pantanal wetland	Thiago Tavares Vidoca
13:50 – 14:00	3056	Edaphic characterization of a quartzitic highland Tepui of monte Roraima, Brazil/ Venezuela border	Augusto César Rodrigues Santos
14:00 – 14:10	2988	Genealogic Hypothesis of Semi-Arid Brazilian Ultisols and Inceptisols	Aderson Stanley Peixoto Santos
14:10 – 14:20	1483	Highly Weathered Soil Development in the Southeastern U.S.A.	J.N. Shaw
14:20 – 14:30	3063	Pedogenesis in a semi-arid wetland	Evaniely Sayonara dos Santos Costa Gualberto de Sá
14:30 – 14:40	689	Pedogenic forms of iron and manganese and its implication on soil genesis over a lithosequence in Nigeria.	Babalola, Temitope S.
14:40 – 14:50	338	Physical properties of salt-affected soils surrounding saline and brackish lakes in the Pantanal wetland, Brazil.	Flávia de Oliveira Damaceno
14:50 – 15:00	2832	Soil relations and landscape in ferruginous geosystems: The example of the Tableland of Canga, in Minas Gerais, Brazil.	Cristiane Valéria de Oliveira
15:00 – 15:10	502	Typical and extreme Vertisols in space and time	Irina Kovda



Tuesday (Aug, 14)		TOTEN 2	
<b>C1.3.2</b> <b>C1.3.3</b>		Soil pedogenesis and diversity in extreme environments Anthrosols - the human constructed soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	615	Unity of soils evolution during time	Tskhovrebov V.S.
13:40 – 13:50	1924	Weathering of metamorphic rocks and formation of planosols in semi-arid environment, Brazil	Valdomiro Severino de Souza Junior
13:50 – 14:00	1615	Modelling of water balance dynamics of a Technosol on an abandoned mine site in northern Québec (Canada)	Yves-Dady Botula
14:00 – 14:10	1666	Salt distribution and organization in Soils from Arid and Hyperarid environments, northern Chile	Davi Feital Gjorup
14:10 – 14:20	1629	Amazonian Dark Earth: proposal of modification of the pretic horizon criteria	Fernanda Reis Cordeiro
14:20 – 14:30	2497	Amazonian dark earths located in the fertile floodplains in the central Amazon - Brazil	Wenceslau Gerales Teixeira
14:30 – 14:40	2734	Anthropic soils in central Brazil archaeological sites	Jordana Batista Barbosa
14:40 – 14:50	901	Anthrosols constructed by the indigenous people of southern Brazil	Fabrcio de Araújo Pedron
14:50 – 15:00	1416	Chemical properties and $\delta^{13}C$ of Amazonian Dark Earths under different land uses from Southern Amazon	Rafael de Souza Cavassani
15:00 – 15:10	934	Geochemical balance of Archaeological Dark Earth and adjacent soils in Western Amazonia, Brazil	Luís Antônio Coutrim dos Santos

Tuesday (Aug, 14)		TOTEN 3	
<b>C1.3.3</b> <b>C1.4.1</b>		Anthrosols - the human constructed soils Soil systems and soil classification - their links and feedbacks	
Schedule	ID	Title	Presenter
13:30 – 13:40	1297	Magnetic signature of anthropogenic and non-anthropogenic soils from Western Amazonia, Brazil	Alice Prates Bisso Dambroz
13:40 – 13:50	1563	Magnetic susceptibility and its relation to human modification of soils in archaeological sites in Brazilian central plateau.	Daniel V. Sousa
13:50 – 14:00	3129	Micromorphology study of the soil of the archaeological site Sol de Campinas do Acre	Kelly Brandão
14:00 – 14:10	2483	Spatial variability of soil erodibility in areas of indian dark earth under different uses in the south of the Amazon	Milton César Costa Campos
14:10 – 14:20	293	Spatial variability of soil respiration in Archaeological Dark Earth areas in Amazonas state, Brazil	José Maurício da Cunha
14:20 – 14:30	2850	Terras Pretas Arqueológicas: comparing sites on the Solimões River and its tributaries	João Santiago Reis
14:30 – 14:40	2097	Ecosystem engineers and other macroinvertebrates in dark earths and non-anthropic soils in central Amazonia	Wiliam C. Demetrio
14:40 – 14:50	1828	Features and processes behind charcoal-kiln artefacts on volcanic lands Features and processes behind charcoal-kiln artefacts on volcanic lands	L.D. Olivares-Martínez
14:50 – 15:00	1580	Progress in making fundamental changes to Soil Taxonomy	David Lindbo
15:00 – 15:10	2816	Characterization and classification of soils with lamellae in the semiarid region of Pernambuco, Brazil	Francis Henrique Tenório Firmino

Tuesday (Aug, 14)		TOTEN 4	
C1.4.1		Soil systems and soil classification - their links and feedbacks	
Schedule	ID	Title	Presenter
13:30 – 13:40	974	Characterization of the soil classes of the southeast region of the Mato Grosso State - Brazil, by the digital model of elevation in different reliefs and slopes	Kelly Cristina da Silva Freitas
13:40 – 13:50	1786	Classification of the soils of the area of influence of Santa María Asunción Codex and their pictorial representation	Ma. del Carmen Gutierrez Castorena
13:50 – 14:00			
14:00 – 14:10	1537	Genesis and classification of Gleissolos Belonging of the Meia Ponte River on the Granulitic Complex Anápolis-Itauçú, Goiás State, Brazil.	Djavan Pinheiro Santos
14:10 – 14:20	610	Great groups of soils of the Northeast of Brazil not yet cataloged in the Brazilian System of Soil Classification	José Coelho de Araújo Filho
14:20 – 14:30	1187	Optimal simultaneous classification of salt-affected soils into USDA ST, WRB and Hungarian Soil Classification soil types	Tibor Tóth
14:30 – 14:40	3105	Preliminary characterization study of a Cenozoic-Mesozoic transition layer to improve parameter information for numerical groundwater flux model	Jaqueline Vígolo Coutinho
14:40 – 14:50	2331	Soil potential in agricultural areas of Cerrado in southern Tocantins	Gilberto Coutinho Machado Filho
14:50 – 15:00	1981	Soil Series Survey and Research of Zhejiang Province Based on Chinese Soil Taxonomy	Wanzhu Ma
15:00 – 15:10	2925	Soils and soil organic carbon stocks in the Restinga de Cabedelo National Forest, in Cabedelo and João Pessoa Municipalities, Paraíba State, Brazil	Aline Pacobahyba de Oliveira

Tuesday (Aug, 14)		TOTEN 5	
<b>C1.4.1</b> <b>C1.5.1</b>		Soil systems and soil classification - their links and feedbacks Global soil carbon modeling	
Schedule	ID	Title	Presenter
13:30 – 13:40	2675	Soils of the Brazilian Quadrilátero Ferrífero, Minas Gerais state, under different native vegetation and parent materials	Maurício R Coelho
13:40 – 13:50	452	Soils of the hydrographic bowl of the Uberaba river	Joao Chrisostomo Pedroso Neto
13:50 – 14:00	1841	Identification and classification of the soils of Garhwal Himalayas in India using remote sensing and GIS techniques.	S.K. Mahapatra
14:00 – 14:10	909	Physical, chemical, mineralogical and spectroscopic constitution of the soils of a microbasin representative of the extreme stream basin, Federal District	Otávio Junio de Oliveira Souza
14:10 – 14:20	2727	Soil subgroups of the Northeast of Brazil not yet cataloged in the Brazilian System of Soil Classification	Karolina Esther da Silva
14:20 – 14:30	2282	Prediction models development for organic carbon and total nitrogen in Mexican forest soils through VIS-NIR spectroscopy	Cueto-Wong José Antonio
14:30 – 14:40	577	Carbon stock of a Red-Yellow Latosol under different plant coverages	Victor Barros Damacena
14:40 – 14:50	2393	Estimation of carbon stock and nitrogen in the semiarid region	Isnara Regina Assunção Medeiros
14:50 – 15:00	704	Multivariate analysis of CO <sub>2</sub> emissions in surface horizons under different types of soil cover.	Cássia Barreto Brandão
15:00 – 15:10	2080	Multivariate approach of soil carbon flow in sugarcane areas in Brazil	Paulo Alexandre Silva

Tuesday (Aug, 14)		TOTEN 6	
C1.5.1		Global soil carbon modeling	
Schedule	ID	Title	Presenter
13:30 – 13:40	558	Prediction and mapping of soil carbon using Vis-NIR spectroscopy and magnetic susceptibility	Angélica Santos Rabelo de Souza Bahia
13:40 – 13:50	1444	Scaling impacts on soil organic carbon stocks and its environmental controllers	Kabindra Adhikari
13:50 – 14:00	2200	Spatial variability of Carbon dioxide emission and Carbon stock in silvopastoral system	Deise Cristina Santos Nogueira
14:00 – 14:10	2298	Spatial variability of soil carbon pools in the andean grassland (páramo ecosystem)	Alvarez P.
14:10 – 14:20	2346	Spatial variability of soil CO <sub>2</sub> emission by Sequential Gaussian Simulation in the Cerrado of Mato Grosso do Sul, Brazil	Ludhanna Marinho Veras
14:20 – 14:30	2621	Spatial variability of soil organic carbon from different management systems in the Cerrado - Sete Lagoas, MG	Matheus Paula Fialho de Carvalho
14:30 – 14:40	2398	Spatial variability of soil organic carbon in anthropized areas of the Cerrado in Sete Lagoas, MG	Paulo Antonio Coura
14:40 – 14:50	392	Spectral range (FRX-VIS-NIR-SWIR-MIR) interaction on the organic matter prediction	Diego Fernando Urbina Salazar
14:50 – 15:00	2573	Total soil organic carbon in integrated systems in the Brazilian Amazon	Marilia Locatelli
15:00 – 15:10	2280	Unraveling the fate of organic carbon in plinthic horizons upon flooding	Benini, Natalia Silva

Tuesday (Aug, 14)		TOTEN 7	
<b>C1.5.1</b> <b>C1.5.2</b>		Global soil carbon modeling Crucial techniques for the critical zone: Soil morphometrics, monitoring & modeling	
Schedule	ID	Title	Presenter
13:30 – 13:40			
13:40 – 13:50	914	Using of regression tree for soil organic carbon prediction in the caatinga biome	Valéria Ramos Lourenço
13:50 – 14:00	1163	Using soil spatial data for crop yield estimation and optimisation: A machine learning approach	Stirling Roberton
14:00 – 14:10	2414	Contribution of different environmental covariates in digital soil mapping	Gholam Hosain Haghnia
14:10 – 14:20	654	Evaluation of the spatial distribution of selected soil attributes in the El Oro Province, Ecuador.	Eduarda Lossavaro de Almeida
14:20 – 14:30	2093	Geostatistical mapping of soil organic carbon using isotropic and anisotropic models considering soil mapping units represented at different scales	Luís Carlos Timm
14:30 – 14:40	1632	Pedoclimatic monitoring in high andean intertropical mountains (Bolivia and Peru)	Eduardo Osório Senra
14:40 – 14:50	2903	Proximal sensors on soil profiles evaluation with morphometrics purposes at field conditions	Arnaldo B. Souza
14:50 – 15:00	1555	Quantifying the soil hydromorphism in riparian zone by magnetic induction	K.Prapagar
15:00 – 15:10	2479	Similarity analysis among soil and topographic attributes along a watershed spatial transect, Southern Brazil	Jeferson Prass Pimentel

Tuesday (Aug, 14)		TOTEN 8	
<b>C1.5.2</b> <b>C1.5.3</b>		Crucial techniques for the critical zone: Soil morphometrics, monitoring & modeling Reconciling pedometrics and pedology	
Schedule	ID	Title	Presenter
13:30 – 13:40	2054	Soil cation exchange capacity and sum of bases prediction from pXRF and laboratory analysis in Brazil	Michele Duarte de Menezes
13:40 – 13:50	2131	Spatial dependence structure of the soil saturated hydraulic conductivity along a Brazilian watershed transect	Luana Nunes Centeno
13:50 – 14:00	1866	Evaluation of spectral analysis models for determination of soil attributes	Márcio Rocha Francelino
14:00 – 14:10	957	Using the Toposhape algorithm as a tool to automatic generation of terrain variables applied to digital soil mapping in a watershed	Mara de Andrade Marinho
14:10 – 14:20	565	A detailed soil weathering evaluation of profiles from parent material to soil by proximal sensing (gamma ray, X ray, hyperspectral vis-nir-swir-mir)	Clécia Cristina Barbosa Guimarães
14:20 – 14:30	2237	Characterization of the magnetic susceptibility and its correlation with the chemical attributes in the Cerrado region	Sammy Sidney Rocha Matias
14:30 – 14:40	2232	Chemical attributes characterization in soil of Barreiras of Piauí city, Brazil	Sammy Sidney Rocha Matias
14:40 – 14:50	1250	Distribution of the soils in the watershed of the São Francisco Verdadeiro river, watershed of the Paraná III - state Paraná - Brazil	Bruno Aparecido da Silva
14:50 – 15:00	2186	Environmental covariates selection by mathematical algorithm for digital soils mapping of mountainous relief area	Martin Meier
15:00 – 15:10	967	Estimation of sediment moisture with terrestrial laser scanner data	Felipe Carvalho Santana

## Division 2: Soil properties and processes

Tuesday (Aug, 14)		TOTEN 9	
C2.2.1		Soil organic matter dynamics from molecules to landscapes	
Schedule	ID	Title	Presenter
13:30 – 13:40	3169	Response Surface of Humic Acids on Rice Roots	Orlando Carlos Huertas Tavares
13:40 – 13:50	1574	Root composition and soil properties determine CO <sub>2</sub> efflux from root residue mineralization	Julius Jose Koritschoner
13:50 – 14:00	332	Slow-cycling fractions are more sensitive to temperature than fast-cycling fractions during long-term turnover of soil organic carbon	Guoan Wang
14:00 – 14:10	2884	Soil carbon dynamics under silvopastoral systems in Northern Minas Gerais/ Brazil	Leidivan Almeida Frazão
14:10 – 14:20	317	Soil Labile Carbon and Carbon Management Index under different land use and management systems in the Brazilian Cerrado	Fabiane Pereira Machado Dias
14:20 – 14:30	202	Soil microbial biomass and humic substances under Eucalyptus cultivation of different age	Wesley Machado
14:30 – 14:40	495	Soil organic carbon content in topsoil of Croatia	Stjepan Husnjak
14:40 – 14:50	1757	Soil organic carbon, microbial biomass and microbial basal respiration of Amazon soil under different use and management	Henildo de Sousa Pereira
14:50 – 15:00	3079	SOIL ORGANIC MATTERS IN AGROFLORESTAIS AND PASTAGEM SYSTEMS, IN THE MUNICIPALITY OF BRAZIL NOVO-PARÁ-BRAZIL	Wemerson Shimon Ladeira da Costa
15:00 – 15:10	979	Soil Texture and ORGANIC CARBON FRACTIONS in ARID-semiarid soils of Argentina	Mirko schiavi



Tuesday (Aug, 14)		TOTEN 10	
C2.2.1		Soil organic matter dynamics from molecules to landscapes	
Schedule	ID	Title	Presenter
13:30 – 13:40	1847	Spatial variations and influencing factors of soil organic matter contents in different layers and agricultural land uses in Taoyuan, Taiwan	Xiao-Nan Liu
13:40 – 13:50	1860	Stock of organic carbon in spodic horizons of Brazilian Spodosols	Andressa Rosas de Menezes
13:50 – 14:00	1550	Structural study of humin and its interaction with humic acids by Fourier-transform mid-infrared spectroscopy	Angélica García
14:00 – 14:10	530	Study of the molecular structure of peat and humic substances from peat soils	Evgeny Lodygin
14:10 – 14:20	2227	The effect of biostimulants on the yield, water and nutrient use efficiency of wheat in drought stress condition	M.M. Tehrani
14:20 – 14:30	3181	The forest systems influence in the dynamics of the carbon and nitrogen in soils of Tabasco and Campeche, Mexico.	Aaron Jarquin Sanchez
14:30 – 14:40	1256	The properties and age of organic matter in soils developed under conditions of rapidly retreating Arctic glaciers	Elya Zazovskaya
14:40 – 14:50	1405	The role of Humic Substances in the root growth of lettuce plants	Andressa Classer Bender
14:50 – 15:00	582	Variations of organic carbon and phosphorus in ARID-semiarid soils of Argentina	Luna Martín Alejandro
15:00 – 15:10	2329	Vertical phosphorus (P) mobility in soil under natural pasture	Vanessa Dias

Tuesday (Aug, 14)		TOTEN 11	
C2.2.1		Soil organic matter dynamics from molecules to landscapes	
Schedule	ID	Title	Presenter
13:30 – 13:40	2663	Zn, Ni, Pb and Cu contents in two Histosols soils of Rio de Janeiro state.	Talita de Santana Matos
13:40 – 13:50	993	Acidity levels and diazotrophic bacteria in upland rice production in the Cerrado Oxisol	Willy Cristiny Mendes de Oliveira
13:50 – 14:00	547	Bioenergy sub-products as fertilizers: C, N and P soil dynamics after biochar and digestate application	Gastón Alejandro Iocoli
14:00 – 14:10	578	CHEMICAL DESCRIPTION OF THE SOILS OF ENVIRONMENTS OCCUPIED BY <i>Euphorbia hirta</i> L. (EUPHORBIACEAE)	Thalia Inês Aleixo Barbosa
14:10 – 14:20	2215	EFFECTS OF <i>UROCHLOA</i> SP. INVASION ON SOIL CHEMICAL PROPERTIES IN RIPARIAN FORESTS EDGES	Giovanna Gomes Cordeiro
14:20 – 14:30	2922	Estimation of potencial acidity by the SMP method in representatives soils of Alagoas, Brazil.	Gilson Moura Filho
14:30 – 14:40	951	Evaluation of the development and productivity of maize culture in different fertilization managements in a direct planting system	Amanda Silveira Reis
14:40 – 14:50	2224	Lettuce production under the residual effect of the interaction between selenium and sulfur	Patriciani Estela Cipriano
14:50 – 15:00	2909	Modification of Nonexchangeable Potassium Extraction Method in Calcareous Soils	Kambiz Bazargan
15:00 – 15:10	2856	Multivariate analysis of chemical attributes in anthropic soils under forest at different positions gives landscape in Amazonian	Fernando Gomes de Souza

Tuesday (Aug, 14)		TOTEN 12	
<b>C2.2.1</b> <b>C2.2.3</b>		Soil organic matter dynamics from molecules to landscapes Soil and water pollution: dynamics and evaluation	
Schedule	ID	Title	Presenter
13:30 – 13:40	1161	Stratified chemical analysis in soils submitted to different fertilization management.	Lucimara Rodrigues Padilha
13:40 – 13:50	1954	The iron isotopic fractionation in human-polluted river from soil to the ocean	Zih-Jie Lin
13:50 – 14:00	2598	Phosphorus and silicon fertilizer rates effects on dynamics of soil phosphorus fractions in oxisol under common bean cultivation	Alessandra Mayumi Tokura Alovisi
14:00 – 14:10	1409	Chemical and physical soil attributes of altered forest by pasture and agricultural use in the north Amazonia	Valdinar Ferreira Melo
14:10 – 14:20	2465	Determination of tetracyclines by electrochemical methods, to its application in the adsorption on the clay fraction of volcanic soils	Constanza Venegas
14:20 – 14:30	2572	Rare earth elements in soil correctives and P-containing fertilizers marketed in Brazil	Fernando Bruno Vieira da Silva
14:30 – 14:40	2637	Sulfonamide and fluoroquinolone electro-oxidation and their vinculation with kinetic and computational parameters.	Danilo Ramos
14:40 – 14:50	574	ADSORPTION ISOTHERMS OF Mn, Zn, Cu, Pb AND Cd IN SOILS AND SEDIMENTS WITHIN LA VILLA RIVER BASIN-PANAMA	Jose Ezequiel Villarreal Nuñez
14:50 – 15:00	2789	Anatomical characteristics of adult eucalyptus plants irrigated in the molting phase with wastewater	Thaís Andrade de Carvalho Silva
15:00 – 15:10	912	Arbuscular Mycorrhizal Fungi community in areas affected by iron ore tailings from the Mariana Disaster - MG	Thuany Cerqueira Jordão

Tuesday (Aug, 14)		TOTEN 13	
C2.2.3		Soil and water pollution: dynamics and evaluation	
Schedule	ID	Title	Presenter
13:30 – 13:40	1401	Assessment of nonylphenol monoethoxylates and nonylphenol bioavailability in soils treated with biosolids	Inés Ahumada, Loreto Ascar, Francia Pérez
13:40 – 13:50	2690	Assessment of trace element accumulation in soils with mining influence	M.D. Bobadilla-Ballesteros
13:50 – 14:00	2040	Availability of Cr, Cu, Pb and Zn in soils under Laguncularia racemosa from a tropical estuary - Brazil	Djenyfer Karolaine de Melo Ferreira
14:00 – 14:10	831	Biochar from biosolids microwaved-pyrolysis: Characteristics and potential for use as growing media amendment	Bhawana Bhatta Kaudal
14:10 – 14:20	2053	Biogas and biofertilizer production from dairy cattle manure under organic and conventional production systems in Seropedica, Rio de Janeiro (Brazil)	Érika Flávia Machado Pinheiro
14:20 – 14:30	2241	Building of probe-type passive sampler to study the contents of heavy metals in the aqueous phase	Viviana Garces Villegas
14:30 – 14:40	1158	Cadmium buffer capacity in Chilean soils with different reactivity	Belen Henriquez Caurapan
14:40 – 14:50	2807	Cerium content in roots of arabica coffee cultivated in soil amended with phosphogypsum	Pedro Renato leandro de Souza
14:50 – 15:00	2517	Contents of Pb, Cu and Zn in soils cultivated with parsley the in municipality of Nova Friburgo, state of Rio de Janeiro - Brazil	Júlio César Ribeiro
15:00 – 15:10	2566	Depth distribution of Glyphosate and AMPA, “pseudo-persistent” pollutants, in long-term experiments under no-till and conventional tillage	Jose Luis Costa

Tuesday (Aug, 14)		TOTEN 14	
C2.2.3		Soil and water pollution: dynamics and evaluation	
Schedule	ID	Title	Presenter
13:30 – 13:40	966	Determination of Carbon in São Paulo state soil sample by Near Infrared Spectroscopy	Catarina Celeste Duque
13:40 – 13:50	367	Digital mapping of the natural contents of heavy metals in soils of the Serrana Region of the State of Rio de Janeiro	Leonardo Durval Duarte Guimarães
13:50 – 14:00	710	Effect of anthropization in the water table level change of mountain tropical peatlands	Alexandre Christofaro Silva
14:00 – 14:10	1944	Effects of electrochemical changes on barium content in flooded soil	Douglas Gomes Viana
14:10 – 14:20	2741	Effects of sewage sludge application in a soil with high natural contents of Cd, Zn, and Pb	Rafaella Campos
14:20 – 14:30	2669	Emissions and releases from primary mercury mining activities into terrestrial systems of the Sierra Gorda, Querétaro, México	G. Hernández-Silva
14:30 – 14:40	3228	Engineering Trees into Site Remediation: Case Studies of Using Eucalyptus in Brazil	Lawrence Morris
14:40 – 14:50	2461	Estimate of the sorption atrazine (atz) in horizontal samples of a red-yellow latosol	Alba Rocio Aguilar Piratoba
14:50 – 15:00	2867	Evaluating the pollutant removal potential of swales for the treatment of metaldehyde and other pesticide pollutants within agricultural surface runoff.	Lloyd Cockram
15:00 – 15:10	2642	Extraction of heavy metals from contaminated soils and sediments using different surfactants	Ingrid Hagarová

Tuesday (Aug, 14)		TOTEN 15	
C2.2.3		Soil and water pollution: dynamics and evaluation	
Schedule	ID	Title	Presenter
13:30 – 13:40	408	Fe and Al (hydr)oxides mineralogical phases resulting from co-precipitation with Rare Earth Elements	Jaime W. V. de Mello
13:40 – 13:50	1062	Feasibility of the Bio-sulfur for Soil Remedial Amendment	Jae E. Yang
13:50 – 14:00	2665	Fractionation of aluminium in acidified soils	Peter Matúš
14:00 – 14:10	875	Heavy metals contents in agricultural and forest fragment soils of the city of Nova Friburgo, RJ	Diogo Muniz Alexandre
14:10 – 14:20	1481	Heavy metals in floodplains affected by collapse of the Samarco's dam: a comparison between mine waste and non-affected soils.	Rafael Biscotto Davila
14:20 – 14:30	2272	High copper and zinc doses in acid soil changes the physiological state in young grapevines ( <i>Vitis vinifera</i> )	Tadeu Luis Tiecher
14:30 – 14:40	501	Immobilization of agricultural phosphorus in Midwestern floodplain soils in the U.S.	Yuji Arai
14:40 – 14:50	2833	Impact of soil sterilization on mercury contents in a Latosol grown with common beans	Francielle Roberta Dias de Lima
14:50 – 15:00	1132	Influence of Aluminum and Arsenic in Fe and Al (hydr)oxides mineralogy	Isabela Cristina Filardi Vasques
15:00 – 15:10	475	influence of mercury concentrations on pH in tropical soils of different textures	Jakeline R. de Oliveira

Tuesday (Aug, 14)		TOTEN 16	
<b>C2.2.3</b>		Soil and water pollution: dynamics and evaluation	
Schedule	ID	Title	Presenter
13:30 – 13:40	2204	Inorganic and organic phosphorus in sediments in the Walnut Creek watershed of central Iowa, USA	John L. Kovar
13:40 – 13:50	1200	Íons mobility in oxisol cultivated with maize irrigated with swine wastewater treated in anaerobic biodigester	Edna Ivani Bertoncini
13:50 – 14:00	2463	Kinetics and Adsorption parameters related to Ciprofloxacin adsorption on a volcanic ash derived soil: Effect of organic matter	Cristian Urdiales
14:00 – 14:10	352	Land use effect on stream water quality, a case study in an agricultural watershed of Central Hokkaido, Japan.	Ryusuke Hatano
14:10 – 14:20	2003	Leaching of hexazinone + diuron in different Brazilian cerrado soils	Kerwin Araujo Costa
14:20 – 14:30	2564	Lead accumulation in different plant species cultivated in a contaminated soil	Letícia Cristina Freitas Silva
14:30 – 14:40	2139	Lead fractions in a contaminated soil cultivated with different plant species	Helen Carla Santana Amorim
14:40 – 14:50	1696	Long-term effect of the application of correctives on soil acidity	Jocelina Paranhos Rosa de Vargas
14:50 – 15:00	757	Monitoring of heavy metals content in arable soils and plants in Central Black Earht Regions of Russia	Lukin Sergei
15:00 – 15:10	1392	MORPHOPEDOLOGIC CHARACTERIZATION OF LANDSCAPES UNDER DIRECT AND INDIRECT INFLUENCE OF VULCANIC FLOWS AND WATER QUALITY IN THE HYDROGRAPHIC BASIN OF RIBEIRÃO AREADO, ALTO SÃO FRANCISCO-MG, BRAZIL	Juberto Babilônia de Sousa

Tuesday (Aug, 14)		TOTEN 17	
C2.2.3		Soil and water pollution: dynamics and evaluation	
Schedule	ID	Title	Presenter
13:30 – 13:40	465	Natural levels of heavy metals in different soil types from Paraná 3 Watershed, Brazil	Juliane Maria Bergamin Bocardi
13:40 – 13:50	1142	Nature of boron and minerals in a Japanese hot spring area	Kazuki Kobayashi
13:50 – 14:00	1608	Nitrate leaching in a maize-cover crop rotation in Mediterranean Central Chile.	Alicia Galdames
14:00 – 14:10	1492	Nutrients enrichment in soils irrigated with treated wastewater	Martha Cecilia Riat
14:10 – 14:20	409	Pesticides and Soil	Rojas-Cabezas Edgar
14:20 – 14:30	2219	Phytolith production in forage grasses grown in soils contaminated with nickel	Enilson de Barros Silva
14:30 – 14:40	2277	Phytoremediation of Cadmium by <i>Khaya ivorensis</i> A. Chev. Critical level of toxicity and factors of bioaccumulation and translocation.	Cândido Ferreira de Oliveira Neto
14:40 – 14:50	3103	Phytoremediation of contaminated soil with 2,4-D + picloram in eastern Amazon	Jéssica Paloma Pinheiro da Silva
14:50 – 15:00	1223	Planosols developed under rainfall gradient in the Brazilian semi-arid region	Sebastiana Maely Saraiva
15:00 – 15:10	2908	Principal Component Analysis for urban groundwater characterization	Camila Marcon de Carvalho Leite



Tuesday (Aug, 14)		TOTEN 18	
C2.2.3		Soil and water pollution: dynamics and evaluation	
Schedule	ID	Title	Presenter
13:30 – 13:40	398	Quality reference values for trace elements in soils of Alta Floresta - Mato Grosso, Brazil	Maria Aparecida Pereira Pierangeli
13:40 – 13:50	895	Quantification of nonpoint phosphorus losses derived from soluble fertilizer and cow manure in the Uruguayan Santa Lucía River Basin	Florencia De Lucca Agrelo
13:50 – 14:00	642	SEQUENTIAL EXTRACTION OF METALS IN SOIL AND SEDIMENTS WITH INTENSIVE AGRICULTURAL ACTIVITY WITHIN THE BASIN OF LA VILLA RIVER-PANAMA	Adolfo Santo P
14:00 – 14:10	628	Sharing of fungal species in areas affected by iron tailings after disruption of Fundão dam in Mariana, MG, Brazil	Isabelle Gonçalves de Oliveira Prado
14:10 – 14:20	618	Soil phosphorus vertical mobilization in a Regosol from the semiarid region of Paraíba, Brazil	Kalline de Almeida Alves Carneiro
14:20 – 14:30	2243	Soil-mimicking hybrid composites based on clay, polymer and nitrogen-fixing bacteria for the development of remediation systems of degraded soil	Tulio Lerma
14:30 – 14:40	2105	Soil-plant transfer factors and risk analysis of potentially toxic elements in vegetables and garden soils	Eloa Moura Araujo
14:40 – 14:50	1217	Sorption of clomazone by soils formed on calcite and calcite-dolomite bedrock (Piva Mountain)	Petar Raičević
14:50 – 15:00	3076	Spatial econometric modeling of soils with high cadmium content in cocoa producing areas of Yacopí, Colombia	Heidy Soledad Rodríguez Albarracín
15:00 – 15:10	1571	Sulfur supply on growth of lettuce plants exposed to barium toxicity	Arnon Afonso de Souza Cardoso

Tuesday (Aug, 14)		TOTEN 19	
C2.2.3		Soil and water pollution: dynamics and evaluation	
Schedule	ID	Title	Presenter
13:30 – 13:40	936	The chemistry of legacy phosphorous in US Mid-Atlantic agricultural soils	Kathryn D. Szerlag
13:40 – 13:50	609	The effects of growth stage and iron oxides deposited on rhizosphere soil on the accumulation of cadmium by rice grains of different genotypes	Chien-Hui Syu
13:50 – 14:00	1471	The impact of redox potential and salinity on As cycling and mobility in goethite systems	Joshua Z. Sanchez
14:00 – 14:10	2601	The influence of different mining compounds on phytotoxicity of Cu in field-collected soils	Pedro Mondaca
14:10 – 14:20	668	The potential use of Lolium perenne L. as cover crop in alleviating Copper toxicity in vineyard soils.	Gustavo Brunetto
14:20 – 14:30	1724	Toxicity of pesticide used in the forest system in the survival of the species Folsomia candida	André Junior Ogliari
14:30 – 14:40	2694	Trace elements in sediments and water quality of rivers affected by the rupture of Fundão Dam	Fábio Fernandes Maia
14:40 – 14:50	971	Transfer Factors by Cadmium, Lead and Cobalt from Soil to Tomato Plants Cultivated in Nova Friburgo Region - Rio de Janeiro	Erica Souto Abreu Lima
14:50 – 15:00	1208	Transformations in the Composition of the Poultry Litter during the Initial Composting Phase	Camila da Costa Barros de Souza
15:00 – 15:10	783	Urban impacts over the sediment pollution in Lake Guaíba, Southern Brazil	Leonardo Capeleto de Andrade

Tuesday (Aug, 14)		TOTEN 20	
<b>C2.2.3</b> <b>C2.3.1</b>		Soil and water pollution: dynamics and evaluation Soil microbiological processes and nutrient cycling under crop rotation	
Schedule	ID	Title	Presenter
13:30 – 13:40	2381	Variable surface charge Humic acid-ferrihydrite composite: Influence of electrolytes on Ciprofloxacin adsorption process	Monica Antilen
13:40 – 13:50	1927	Acacia changes litter and soil microbial indicators associated with C and N cycling in intercropped Eucalyptus plantations	Bruna A. B. Lopes
13:50 – 14:00	308	Acid phosphatase activity and removing and replaced the rainforests with pine forests, anual or perennial crops	Arzuaga, Silvia Amanda
14:00 – 14:10	1535	Agricultural soils zoomed in: response of nitrogen-cycling microorganisms and nitrous oxide emissions to stabilized N-fertilizers	Micaela Tosi
14:10 – 14:20	1456	Agronomic efficiency of nitrogen-fixing bacteria in symbiosis with cowpea	Márcia Rufini
14:20 – 14:30	2555	Are soil microbial community associated with irrigation management practices? - A potato production case study.	Thiago Gumiere
14:30 – 14:40	3222	Association between soil biological attributes and coffee yield in the Cerrado Region of Minas Gerais State	Silvia Maria de Oliveira Longatti
14:40 – 14:50	193	Breaking paradigms for agricultural sustainability utilizing plant-growth promoting bacteria and their metabolites: perspectives for the next decade	Mariangela Hungria
14:50 – 15:00	533	Changes in activity of soil microbial community is altered due to plant invasion on the ecosystems of eastern Slovakia	Lenka Bobuřská
15:00 – 15:10	919	Co-inoculation of Rhizobium and Bradyrhizobium on common beans ( <i>Phaseolus vulgaris</i> ) enhances plant growth and nodulation	Rafael de Almeida Leite

Tuesday (Aug, 14)		TOTEN 21	
C2.3.1		Soil microbiological processes and nutrient cycling under crop rotation	
Schedule	ID	Title	Presenter
13:30 – 13:40	2125	Common bean genotypes respond to inoculation with rhizobia strains selected for efficiency in biological N <sub>2</sub> fixation	Jacqueline Savana da Silva
13:40 – 13:50	716	Correction of soil acidity with the use of dairy industry residues	Edenara de Marco
13:50 – 14:00	1361	Dark septate fungi inoculation and fertilization with organic nitrogen source benefit the growth of tomato plants	Jerri Zilli
14:00 – 14:10	1951	Density and diversity of edaphic mites de in an integrated crop-livestock system after 15 years under different grazing intensities	Lisiane Sobucki
14:10 – 14:20	466	Differential biological activity along a soil sequence used for coffee cultivation in the Brazilian Cerrado	Cátia Aparecida Simon
14:20 – 14:30	727	Does agricultural development increase microbial diversity and decrease soil carbon in Zambia?	Toru Hamamoto
14:30 – 14:40	1738	Domestic sewage application effects on microbiological characteristics of a latosol cultivated with <i>Solanum lycopersicum</i> .	Giovana Fornaciari Moreira
14:40 – 14:50	2102	Earthworms intestinal bacteria strains in sugar cane crops	María Cristina Picon
14:50 – 15:00	3145	Effect of <i>Azospirillum brasiliense</i> associated with organic fertilization on off-season maize crop in the region of Parecis - MT	Michael Ortigara Goulart
15:00 – 15:10	1183	Effect of different carbon substrates and phosphorus addition on microbial carbon use efficiency, gross nitrogen mineralization and N <sub>2</sub> O emission from a grassland soil	Kazi R. Mehnaz

Tuesday (Aug, 14)		TOTEN 22	
C2.3.1		Soil microbiological processes and nutrient cycling under crop rotation	
Schedule	ID	Title	Presenter
13:30 – 13:40	3037	Effect of native arbuscular mycorrhiza isolated from acidic volcanic soils on wheat root traits and phosphorus uptake	Alex Seguel
13:40 – 13:50	1373	Effects of Biofertilizer on the root colonization of soy and corn by arbuscular mycorrhizal fungi	Leopoldo Sussumu Matsumoto
13:50 – 14:00	1146	Effects of bokashi fertilizer and rice straw on greenhouse gas emission and rice yield in paddy field	Kazuyuki Inubushi
14:00 – 14:10	2733	Effects of long-term cultivation of forages on microbial soil attributes	Raphael B. A. Fernandes
14:10 – 14:20	1640	Evaluation of groundnut genotypes for variations in their response to phosphorus sources in three agro-ecological zones of Nigeria	Ado Adamu Yusuf
14:20 – 14:30	1553	Evaluation of Soil Microbial Community Changes Under Different Agricultural Land Uses in Eastern Montana, USA	Joshua J. Steffan
14:30 – 14:40	2158	Exotic arbuscular mycorrhizal fungi reduce mycorrhizal colonization rate in cowpea plants	Marco Aurélio Gabriel da Silva
14:40 – 14:50	1612	How deep can ectomycorrhizae go? A case study down to 4 meter depth in a Brazilian eucalyptus plantation under rainfall reduction.	Robin A
14:50 – 15:00	534	Indigenous mycorrhizae enhances carbon and nitrogen uptake by sweet sorghum genotypes grown under two divers soil ecological zones	Ibrahim. A. M. Ahmed
15:00 – 15:10	1199	Inoculation of phosphate solubilizing bacteria enhance growth and nutrient accumulation of <i>Vigna unguiculata</i> (L.) Walp in an Oxisol	Silvia Maria de Oliveira Longatti

Tuesday (Aug, 14)		TOTEN 23	
C2.3.1		Soil microbiological processes and nutrient cycling under crop rotation	
Schedule	ID	Title	Presenter
13:30 – 13:40	2295	Inoculations with efficient nitrogen fixing bacteria increase yields of common bean genotypes grown in separate areas	Maria Vitória Batista Duque Guttierrez Baptista
13:40 – 13:50	1465	Liming may affect in vitro AIA yields of <i>Digitaria eriantha</i> endophytic bacteria	Lira Junior, Mario Andrade
13:50 – 14:00	871	Mesofauna and soil quality in forest systems with leguminous tree	Maurício Rumenos Guidetti Zagatto
14:00 – 14:10	878	Metabolic quantity of edaphic microbiote in different soil uses in the region of the central Cerrado of Brazil	Talita Maia Freire
14:10 – 14:20	344	Microbial Biomass Carbon and Edaphic Fauna under the influence of Coverage Plants with the use of Calder Ash.	Rodrigo Roani
14:20 – 14:30	1618	Native rhizobia effectiveness from legume-based silvopastoral systems	Adriana Bezerra dos Santos
14:30 – 14:40	867	Phosphatase activity in sugarcane fields after application of organic compost and inoculation of P solubilizing bacteria	Antonio Marcos Miranda Silva
14:40 – 14:50	830	Potential of Plant Growth Promoting Rhizobacteria biofertilizer to increase plants production efficiency	Kunlayakorn Prongjunthuek
14:50 – 15:00	1865	Response of N cycling microbes to a urease inhibitor and a nitrification inhibitor in 3 land uses	Aineah Obed Luchibia
15:00 – 15:10	662	Rice rhizosphere and nitrogen input influence microbially mediated nitrogen loss and retention in Australian rice paddies	Arjun Pandey

Tuesday (Aug, 14)		TOTEN 24	
C2.3.1		Soil microbiological processes and nutrient cycling under crop rotation	
Schedule	ID	Title	Presenter
13:30 – 13:40	2939	Soil Enzyme Activities as a Soil Quality indicator under Tillage and No-Tillage Management	Nicola Lorenz
13:40 – 13:50	1930	Soil fauna in different forage plants fertilizer systems in the northwest region of Rio Grande do Sul	Danni Maisa da Silva
13:50 – 14:00	1825	Soil microbial activities are affects by straw of cover plants cultivated in the savannah Soil microbial activities are affects by straw of cover plants cultivated in the savannah	Lizandra de Sousa Luz Duarte
14:00 – 14:10	406	Soil microbial biomass and activity in an integrated crop-livestock system after 15 years under different grazing intensities	Rodrigo Josemar Seminoti Jacques
14:10 – 14:20	2538	Soil microbial biomass carbon under alternative forage crops over weathier seasons	Igor Alexandre de Souza
14:20 – 14:30	1155	Soil Microbial Community Assessment of Highland Vegetable Production Systems in La Trinidad, Benguet, Philippines	Karen S. Bautista
14:30 – 14:40	1862	Soil microbial ecology of Laurel-Leaved and Cryptomeria japonica Forests	Ayuko Itsuki
14:40 – 14:50	998	Soil quality in Integrated Crop-Livestok-Forest systems can be evaluated by biochemical indicators	Leciana de Menezes Sousa Zago
14:50 – 15:00	778	Spider community response to grazing in an integrated crop-livestock system	Joice Aline Freiberg
15:00 – 15:10	287	Straw biochar amendment suppressed Phytophthora blight of pepper by changing soil microbial community with proper application technology	Yan Ma

Tuesday (Aug, 14)		TOTEN 25	
<b>C2.3.1</b> <b>C.2.3.2</b>		Soil microbiological processes and nutrient cycling under crop rotation Molecular techniques as a useful tool to reveal soil biodiversity and biotechnological potential of microbial genomes	
Schedule	ID	Title	Presenter
13:30 – 13:40	3122	Sugarcane straw removal does not change C and N dynamics from sugarcane trash mulch	Adriane Luiza Schu
13:40 – 13:50	1446	Technological viability of rhizobia inoculation in the planting furrow in common bean	Damiany Pádua Oliveira
13:50 – 14:00	362	The impact of post-fire salvage logging on microbial nitrogen cyclers in Mediterranean forest soil	Jorge Mataix-Solera
14:00 – 14:10	2501	Acidobacteria community responses to nitrogen dose and form in Chinese fir plantations in southern China	Ruzhen Jiao
14:10 – 14:20	2695	16s rRNA gene sequencing reveal microbiome variations during different fertilisation practices	Elisa Vendramin
14:20 – 14:30	2418	Bacterial communities monitoring from different uses of Amazon soils focusing on the metanotrophs group.	L. Bresciani
14:30 – 14:40	358	Bradyrhizobium brasilense sp. nov., a symbiotic nitrogen-fixing bacterium isolated from Brazilian tropical soils	Amanda Azarias Guimarães
14:40 – 14:50	2765	Denitrification potentials and riverbank soil bacterial structures along Shibetsu river, Japan	Yoshitaka Uchida
14:50 – 15:00	2596	Diversity of fungi associated with the rhizosphere of Canavalia ensiformis and Crotalaria juncea in soils treated with herbicide sulfentrazone	Karen Caroline Ferreira Santaren
15:00 – 15:10	2888	DNA concentration of the soil may be affected by herbicide applications in high weathered soils	Marco Aurélio Pessoa-de-Souza



## Division 3: Soil Use and Management

### Tuesday, 14 August

Tuesday (Aug, 14)		TOTEN 26	
C3.3.2		Nutrient budgets in agricultural soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	512	Fate of phosphorus under long-term grazed pasture in New Zealand Leo Condrón Lincoln University, Christchurch, 7647, New Zealand (leo.condron@lincoln.ac.nz)	Leo Condrón
13:40 – 13:50	2157	Influence of biofertilizer in the soybean response to phosphorus and potassium fertilization	Adilson Pelá
13:50 – 14:00	2518	Influence of proportion and source of potassium fertilizers on soybean yield	Vinicius Ribeiro Arantes
14:00 – 14:10	1201	INFLUENCE OF SOIL MANAGEMENT AND DEPTH ON pH, Al AND ORGANIC MATTER	Patricia Rojas Nerhot
14:10 – 14:20	736	Investigating polyhalite nutrient movement through soil profiles	Timothy D Lewis
14:20 – 14:30	306	K management strategies to achieve K balance in sandy soils of South central coastal Vietnam	Hoang Thi Thai Hoa
14:30 – 14:40	3233	Making fertilizer practices efficient using polyhalite	Robert Meakin
14:40 – 14:50	2455	Management of the phosphate fertilization of soils with different textures under continuous cultivation of sugarcane in Brazil	Suellen Roberta Vasconcelos da Silva
14:50 – 15:00	1538	Mineral footprint of extensive agriculture in Buenos Aires province in the processes of soil acidification	Miriam E. Presutti
15:00 – 15:10	1613	Nitrogen use efficiency associated with molybdenum	Lílian Angélica Moreira

Tuesday (Aug, 14)		TOTEN 27	
C3.3.2		Nutrient budgets in agricultural soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	1084	Nutritional characteristics of commercial organic fertilizers circulated in Korea	Seok-Cheol Kim
13:40 – 13:50	1699	Perspectives of using Infrared and X-ray fluorescence sensor technology in a Hungarian soil testing and in nutrient management services	Csaba Centeri
13:50 – 14:00	3151	Potassium, calcium and magnesium contents as a function of rotation crops and cover crops under no-tillage system in Cerrado soil	Hugo Henrique Andrade Meneghette
14:00 – 14:10	1464	Poultry litter applications and cropping sequences drive dynamic soil properties and soil diversity under no-tillage	Amanda Ashworth
14:10 – 14:20	3143	Response of sugarcane ( <i>Saccharum officinarum</i> L.) RB92579 under increasing levels of manganese cultivated in sandy soil of the Coastal Tablelands of the Brazilian Northeastern.	Antonio Eduardo Freire Damasceno
14:20 – 14:30	2502	Rock dust as part of the world's fertilizer mix	David Manning
14:30 – 14:40	2546	Sugar cane yield by crop removal of nutrients from the field	José Marcos Garrido Beraldo
14:40 – 14:50	1524	Total carbon, nitrogen and phosphorus stocks in agroecosystems of the Chiloé island, Chile	Silvia Cano
14:50 – 15:00	3154	YIELD OF VINE UNDER PROTECTED ENVIRONMENT USING FERTIRRIGATION WITH DIFFERENT NUTRIENT DOSES	Katiúscia Fonseca dos Santos Strassburger
15:00 – 15:10	3015	Response of corn hybrids genotypes to two different levels of soil fertility	Anna Carla Lima Villela

Tuesday (Aug, 14)		TOTEN 28	
<b>C3.3.2</b> <b>C3.3.3</b>		Nutrient budgets in agricultural soils Advancement of plant nutrition studies for sustainable agriculture	
Schedule	ID	Title	Presenter
13:30 – 13:40	268	Selenium bioavailabiliy in soils from Jequitinhonha Valley	Vico Mendes Pereira Lima
13:40 – 13:50	1586	Influence of silicon supply on different wheat cultivars grown under phosphorus deficiency	Sofia Pontigo
13:50 – 14:00	1914	Enhancing micronutrient availability in different soils: Laboratory incubation study	Daniela Vitti
14:00 – 14:10	3156	Accumulation of N forms in 'Pérola' pineapple as a function of N and P doses	Anne Carolline Maia Linhares
14:10 – 14:20	3171	Accumulation of P forms in 'Pérola' pineapple as a function of N and P doses	Sonaria de Sousa Silva
14:20 – 14:30	2929	Activity of the nitrate reductase enzyme and nitrate and ammonium concentrations in brachiaria palisadegrass as a function of fertilization with nitrogen sources and rates	Marcio Mahmoud Megda
14:30 – 14:40	567	Adjustment in the recommendation of fertilization by leaf analysis in banana "Prata" fertigated	José Aridiano Lima de Deus
14:40 – 14:50	1261	Agronomic biofortification of rice grain with selenium	Josimar Henrique de Lima Lessa
14:50 – 15:00	3117	Biomass and volume of wood in clonal stands of <i>Tectona grandis</i> in Mato Grosso estimated by allometric equations	Rayanne Oliveira Teixeira
15:00 – 15:10	2376	Calcium speciation in limed Brazilian oxisols using Ca K-edge Xanes spectroscopy	Welldy Gonçalves Teixeira

Tuesday (Aug, 14)		TOTEN 29	
C3.3.3		Advancement of plant nutrition studies for sustainable agriculture	
Schedule	ID	Title	Presenter
13:30 – 13:40	3102	Concentration of N, P and K in corn diagnostic leaf as a function of phosphorus doses associated with inoculation with plant growth promoting bacteria	Nathália Cristina Marchiori Pereira
13:40 – 13:50	1154	Controlled release fertilizer in the first production cycle of the banana crop	Leandro José Grava de Godoy
13:50 – 14:00	2954	Correlation between soil fertility and nutrient accumulation in arabica coffee grains	Aymbiré Angeletti da Fonseca
14:00 – 14:10	2118	Cover crops associated with nutrient sources in the initial recovery of degraded areas in bauxite mining in the central-west region of Brazil	Atila Reis da Silva
14:10 – 14:20	2257	Decomposition and nutrient release from cover crops residues of different species growing in peach orchards under subtropical climate	Adrielle Tassinari
14:20 – 14:30	497	Determine nutrient balances of wheat ( <i>Triticum aestivum</i> L) plants with CND-ilor method and their validation	Adel Reyhanitabar
14:30 – 14:40	1085	Development of multifunctional food waste fertilizer having the capability of biocontrol, and phosphate solubility. -A new horizons of food waste recycle using microorganism-	Ryota Kataoka
14:40 – 14:50	636	DISCOVERING SPATIAL DEPENDENCE BETWEEN EXPERIMENTAL UNITS OF A FERTILIZATION FIELD TRIAL IN AN ANDEAN BLACKBERRY CROP ( <i>Rubus glaucus</i> Benth.) IN COLOMBIA	Joan Sebastián Gutiérrez Díaz
14:50 – 15:00	883	DRY MASS PRODUCTION OF PASTURE IN RECOVERY UNDER WOOD ASH DOSES AND APPLICATION FORMS	Tallys Henrique Bonfim-Silva
15:00 – 15:10	3011	Effect of excessive B-spraying on growth and antioxidant activity of European hazelnut cv. Tonda di Giffoni	Cristian Meriño-Gergichevich

Tuesday (Aug, 14)		TOTEN 30	
C3.3.3		Advancement of plant nutrition studies for sustainable agriculture	
Schedule	ID	Title	Presenter
13:30 – 13:40	2926	EFFECT OF MACRONUTRIENT DEFICIENCY IN THE DEVELOPMENT OF THE AFRICAN MOGNO ( <i>Khaya ivorensis</i> )	Mateus Gonçalves de Borba
13:40 – 13:50	2602	EFFECT OF SILICON ADDITION ON ( <i>Sorghum bicolor</i> L.) Moench PLANT GROWN UNDER IRON DEFICIENCY	Márcia Masson Mendes dos Santos
13:50 – 14:00	1432	Effect of urea application on soybean nodulation, CO <sub>2</sub> assimilation and dry matter production at early phenological stage	Nícolas Braga Casarin
14:00 – 14:10	659	Efficiency of organomineral fertilizers in the development of corn plants, cultivated in a cerrado soil.	Angelica Araujo Queiroz
14:10 – 14:20	887	Efficiency of Polyhalite as fertilizer to banana crop in Brazil	Danilo Ramos Sério
14:20 – 14:30	916	Growth and carbon isotopic composition in Eucalyptus seedlings in function of potassium and sodium variable supplies	Nikolas de Souza Mateus
14:30 – 14:40	2790	Influence of aluminum on emergence and root growth of <i>Hancornia speciosa</i> Gomes	Douglas Almeida Rodrigues
14:40 – 14:50	2475	Influence of base fertilization with fertilizers with or without sulfur on sugarcane productivity	Marcelo de Almeida Silva
14:50 – 15:00	1984	Interaction between lime and zinc fertilizer in plant cane	Edilson Cavalli
15:00 – 15:10	2927	Intercalation of borate ions in layered double hydroxides: matrices for source of boron for plant growth	Gustavo Franco de Castro

Tuesday (Aug, 14)		TOTEN 31	
C3.3.3		Advancement of plant nutrition studies for sustainable agriculture	
Schedule	ID	Title	Presenter
13:30 – 13:40	1708	Maize productivity due to the use of biofertilizers in seed treatment and nitrogenous fertilization	Sandro Moreth Borges Santos
13:40 – 13:50	328	Morphophysiological and nutritional characteristics of pineapple cv. Pérola and their influence on size and fruit quality	André Guarçoni
13:50 – 14:00	2260	Multivariate analysis in corn cultivars productivity submitted to fertilization and spacing between rows	Jocelene Costa de Moraes
14:00 – 14:10	644	N supply strategies to young vineyards at begging of production	Lincon Oliveira Stefanello
14:10 – 14:20	195	Nitrogen concentration and SPAD value in off-season maize intercropped with ruzi grass as a function of nitrogen topdressing fertilization	Karina Batista
14:20 – 14:30	1747	Nitrogen uptake and removal in normal and short cycle common bean cultivars	Fernando Vieira Costa Guidorizzi
14:30 – 14:40	1177	Number of leaves of safflower crop under soil moisture maintenance methods	Lucas Tavares Da Silva
14:40 – 14:50	1038	Number of Safflower leaves submitted to doses of vegetal ash and soil compaction levels in Oxisol	Horácio Manfrin Mazero
14:50 – 15:00	638	Phosphorus forms in organs of Cordia trichotoma subjected the phosphate fertilization	Matheus Severo de Souza Kulmann
15:00 – 15:10	891	Photosynthesis in young peach trees submitted to application of nitrogen sources in soil with and without presence of cover crops	Betania Vahl de Paula

Tuesday (Aug, 14)		TOTEN 32	
C3.3.3		Advancement of plant nutrition studies for sustainable agriculture	
Schedule	ID	Title	Presenter
13:30 – 13:40	242	Photosynthetic activity of upland rice plants in response to selenium application Photosynthetic activity of upland rice plants in response to selenium application	Maria Luiza Nunes Palone Fauvel
13:40 – 13:50	674	Physico-Chemical Properties of Soil in Sweetpotato Cultivated Area in Korea	Kyeong-Bo Lee
13:50 – 14:00	3033	Physiological responses to differential boron fertilization on soybean of Brazilian Cerrado	Vitor de Laia Nascimento
14:00 – 14:10	1704	Potassium doses in the cultivation of tomato ( <i>Solanum lycopersicum</i> ) for the industry	Bruno Bernardes de Andrade
14:10 – 14:20	639	Potassium extracted by Ammonium acetate, Mehlich-3 and Sodium tetraphenylboron methods and their relationships with mineralogy in soils under agricultural systems in Uruguay	Marcelo G. Ferrando
14:20 – 14:30	2435	Potassium increases production and reduces the oxidative stress of Tanzania guinea grass used for cadmium phytoextraction	Ellen Cristina Alves de Anicésio
14:30 – 14:40	758	PRODUCTIVE AND NUTRITIONAL CHARACTERISTICS OF WHEAT CULTIVAR BRS 394, FERTILIZED AND IRRIGATED WITH NITROGEN AND SULFUR IN THE BRAZILIAN CERRADO	Edna Maria Bonfim- Silva
14:40 – 14:50	319	Productive components and yield of corn with <i>Azospirillum brasilense</i> associated with silicon and nitrogen doses	Fernando Shintate Galindo
14:50 – 15:00	2824	Productivity and nutritional status of maize grown under different dosages of nitrogen, phosphorus and potassium.	José Lucas Farias da Silva
15:00 – 15:10	2877	Productivity of the sugar cane in the second cycle, cultivated under nitrogen and molybdenum fertilization	Wellisson José Maurio De Andrade

Tuesday (Aug, 14)		TOTEN 33	
C3.3.3		Advancement of plant nutrition studies for sustainable agriculture	
Schedule	ID	Title	Presenter
13:30 – 13:40	347	Quantification of carbon, phosphorus and potassium in a red nitosols under succession of cultures with different historical	Ericles Marques Ribeiro
13:40 – 13:50	290	Silicon fertilization is an alternative tool against the water deficit effects in sugarcane	Monica Sartori de Camargo
13:50 – 14:00	2196	Silicon foliar in development and sugarcane production	Gelza Carliane Marques Teixeira
14:00 – 14:10	1870	Soil characteristics in a long-term liming abandoned agricultural land and the adjacent mixed pine plantation in central Taiwan	Chiou-Pin Chen
14:10 – 14:20	467	The VIUSID agro as an alternative in the nutrition of radish ( <i>Raphanus sativus</i> L.) and beet ( <i>Beta vulgaris</i> L.)	Kolima Peña Calzada
14:20 – 14:30	2792	Tolerance potential of <i>Eugenia dysenterica</i> DC to aluminum	Arthur Almeida Rodrigues
14:30 – 14:40	1543	Use of inverse vulcanization for the production of multifunctional sulfur FERTILIZERS	Stella Fortuna do Valle
14:40 – 14:50	1770	Vegetal cover of soil in grazing under recovery in response to wood ash doses	João Vitor Dourado Soares
14:50 – 15:00	641	Vegetative development of the safflower under doses of wood ash and levels of bulk density	Tulio Martinez Santos
15:00 – 15:10	873	Water use efficiency in safflower crop under soil moisture maintenance methods	Tonny José Araújo da Silva



Tuesday (Aug, 14)		TOTEN 34	
C3.3.4		Greenhouse gases emissions associated with fertilizer use	
Schedule	ID	Title	Presenter
13:30 – 13:40	728	Alfalfa production under base saturation levels in Cerrado Oxisol	Camila Thaina Rueda da Silva
13:40 – 13:50	759	Crude protein in diagnostic leaves of wheat BRS 394 irrigated and fertilized with nitrogen and sulfur	Luana Aparecida Menegaz Meneghetti
13:50 – 14:00	2264	Dry mass of leaves and stems in pasture in recovery using vegetal ash	Louisy Oliveira da Silva
14:00 – 14:10	2627	Influence of Zn/Cu ratio on production components of soybean	Hariane Luiz Santos
14:10 – 14:20	576	Assessment of Nitrous Oxide Emission Factors from Barley Cropland under Land Application of Biosolids	Carmen Cecilia Roman Perez
14:20 – 14:30	2918	CARBON DIOXIDE (CO <sub>2</sub> ), METHANE (CH <sub>4</sub> ) AND NITROUS OXIDE (N <sub>2</sub> O) FLUXES FROM POTATO PRODUCTION SYSTEM (SOLANUM PHUREJA) UNDER TRADITIONAL FERTILIZER AND k-CARRAGEENAN -COATED FERTILIZER MANAGEMENT	M. Camila Morales-Pulido
14:30 – 14:40	1074	Comparison of greenhouse gas emissions with application of organic fertilizers (manure, slurry and digested slurry) in a managed grassland in Southern Hokkaido, Japan	Kaho Yasuda
14:40 – 14:50	2535	Effect of fertilizers on CH <sub>4</sub> production and emission from paddy soil	Takashi Nagasawa
14:50 – 15:00	1784	Emission of greenhouse gases (N <sub>2</sub> O, CO <sub>2</sub> and CH <sub>4</sub> ) of sandy loam Mollisol, under maize?cover crop rotation and nitrogen fertilization	Daniela Mallitasig
15:00 – 15:10	2052	Flow of Greenhouse Gases in the Summer Period in a System of Integrated Crop-Livestock with Nitrogenous System Fertilization	Jonatas Thiago Piva

Tuesday (Aug, 14)		TOTEN 35	
C3.3.4		Greenhouse gases emissions associated with fertilizer use	
Schedule	ID	Title	Presenter
13:30 – 13:40	1774	Methanotrophic activity of isolated bacteria from dairy manure used as fertilizer	Valentina García
13:40 – 13:50	1045	Mitigation of nitrous oxide emissions from soils by coconut coir application	Yutaka Shiratori
13:50 – 14:00	1956	N <sub>2</sub> O emissions from soil subjected to a history application of organic sources application	Rodrigo Otavio Schneider Souza
14:00 – 14:10	557	Nitrous oxide and methane in integrated crop-livestock system with nitrogenated fertilization	Felipe Bratti
14:10 – 14:20	1521	Nitrous oxide emission from soil with urea and biochar	Julia Gonçalves Dias Fonseca Ferreira
14:20 – 14:30	243	Nitrous oxide emissions from a soybean-corn succession under conventional and no-tillage systems	Rafael Cassador Monteiro
14:30 – 14:40	1032	Nitrous Oxide Fluxes, Sources and Processes in an Temperate Agricultural Soil: Moisture and N Addition Effects	E.M.S.K.Thilakarathna
14:40 – 14:50	2419	Simulating soil organic carbon and nitrous oxide fluxes after pig deep litter addition in annual crops using DayCent model	Douglas Adams Weiler
14:50 – 15:00	2309	Variation of nitrous oxide emission from combined organic and synthetic fertilizer in Citrus unshiu field in Southwestern Japan.	Yo Toma
15:00 – 15:10	1116	Various types of biochar effect on reducing greenhouse gas emission	Sunil Lee

Tuesday (Aug, 14)		TOTEN 36	
<b>C3.3.4</b> <b>C3.3.5</b>		Greenhouse gases emissions associated with fertilizer use Soils for mitigating global warming: greenhouse gas emission reduction and/or enhancing carbon	
Schedule	ID	Title	Presenter
13:30 – 13:40	3081	Nitrous Oxide and Ammonia Emissions from N-Fertilization of Maize and Common Bean in the Brazilian Cerrado	Maria da Conceição Santana Carvalho
13:40 – 13:50	2982	Biological attributes in integrated crop-livestock-forestry (ICLF) systems in the Maranhão State Amazon, Brazil	Joaquim Bezerra Costa
13:50 – 14:00	2292	CARBON OF HUMICS FRACTIONS IN LATOSSOLO (OXISOIL) UNDER DIFFERENT FORMS OF USE IN CERRADO	Tales Emanuel Duarte Santos
14:00 – 14:10	2638	Chemical carbon fractioning in different land uses	José Rafael Vásquez Polo
14:10 – 14:20	579	Contribution of microbial biomass carbon to below-ground biomass carbon budget in an agricultural field in Southern Hokkaido, Japan	Yuma Michinobu
14:20 – 14:30	973	Developing an unmanned air vehicle deployed sensor platform for studying atmospheric emissions of soil carbon dioxide	Marx Leandro Naves Silva
14:30 – 14:40	2408	Dynamics of methane and nitrous oxide emissions in lowland production systems.	Miguel David Fuentes Guevara
14:40 – 14:50	1820	EFFECT OF DIFFERENT SOIL BULK DENSITY AND TEMPERATURE ON SOIL CO <sub>2</sub> EMISSION FROM TROPICAL PEATLAND	Nur Azima Busman
14:50 – 15:00	851	Effect of the endogenous and exogenous minerals on the stability of biochar	Ke SUN
15:00 – 15:10	702	Effect of tillage method and timing in grassland renovation on soil greenhouse gas emissions	Arata Nagatake

Tuesday (Aug, 14)		TOTEN 37	
C3.3.5		Soils for mitigating global warming: greenhouse gas emission reduction and/or enhancing carbon	
Schedule	ID	Title	Presenter
13:30 – 13:40	1397	Effects of rice straw and methanogenic inhibitors on the methanogenesis process in sediments from rice fields	M.Carreras
13:40 – 13:50	2048	EFFECTS OF SOYBEAN EXPANSION ON SOIL CHEMICAL INDICATORS IN THE MATOPIBA REGION, BRAZILIAN SAVANNA	Gregori da Encarnação Ferrão
13:50 – 14:00	2812	Emission factor of nitrous oxide from urine cattle and dicyandiamide use as a mitigation strategy in a subtropical Brazilian grass.	Ezequias Cloy Ferreira
14:00 – 14:10	1646	Emissions of biogenic greenhouse gases in grasslands and croplands of the Chiloé Island, Chile.	Patricia Ibaceta
14:10 – 14:20	2466	Emissions of nitrous oxide and methane in vitro influenced by soil management systems of a long-term field experiment from the south of Brazil	Anaí Sangiovo Ottonelli
14:20 – 14:30	1475	Grazing management contributions to global warming potential in Pampa Biome.	Janquieli Schirmann
14:30 – 14:40	2904	Greenhouse gases fluxes as affected by water potential in soils under sclerophyllous vegetation of Central Chile	Juan-Pablo Fuentes-Espoz
14:40 – 14:50	1067	Influence of irrigation on photosynthetic carbon inputs under ryegrass-white clover pasture in New Zealand	C.R. Medina
14:50 – 15:00	977	Legume cover crops favour soil organo-mineral formation through microbial products	Murilo Veloso
15:00 – 15:10	1450	Liming increases carbon sequestration in tropical cropping systems	Murilo de Souza

Tuesday (Aug, 14)		TOTEN 38	
C3.3.5		Soils for mitigating global warming: greenhouse gas emission reduction and/or enhancing carbon	
Schedule	ID	Title	Presenter
13:30 – 13:40	2966	Magnetism of the Archaeological Black Earth as an agricultural and environmental indicator	Ludmila de Freitas
13:40 – 13:50	790	Manure type affects manure degradation rate, soil biogeochemistry, and greenhouse gas emissions	Tien Weber
13:50 – 14:00	2492	Multifunctional agroecosystems in the semi-arid environment to mitigate the impacts of climate change	Vanderlise Giongo
14:00 – 14:10	773	Nitrous oxide emission from urine and dung patches in subtropical Brazil and its reduction by the nitrification inhibitor dicyandiamide	Jeferson Dieckow
14:10 – 14:20	2451	Nitrous oxide emissions of production systems in lowlands of Rio Grande do Sul	Thaís Murias Jardim
14:20 – 14:30	391	Organic carbon stock in Haplic Cambisol under winter cover crops and corn in summer	Jorge Luiz Locatelli
14:30 – 14:40	920	Organo-mineral interaction is the main stabilization mechanism of C from animal manures in a subtropical sandy Acrisol under no-tillage	Lucas Antonio Telles Rodrigues
14:40 – 14:50	2778	Participatory technology demonstrations for enhancing climate resilience in varied agro-ecologies across India	A.K. Singh
14:50 – 15:00	1966	Passive mineral carbonation as a potential atmospheric C sink: exploratory samples from Brazil.	Antonio Carlos de Azevedo
15:00 – 15:10	2794	pH modulation of microbial communities driving the methane cycle in the Amazon Forest-to-Pasture conversion	Leandro Fonseca de Souza

Tuesday (Aug, 14)		TOTEN 39	
<b>C3.3.5</b>		Soils for mitigating global warming: greenhouse gas emission reduction and/or enhancing carbon	
Schedule	ID	Title	Presenter
13:30 – 13:40	1852	Plant diversity affects GHG fluxes in an ecological engineering experiment in a disturbed Sphagnum peatland (La Guette, France)	Sébastien Gogo
13:40 – 13:50	1000	Short-term effects of deep ploughing on soil C stocks following renewal of a dairy pasture in New Zealand	Roberto Calvelo Pereira
13:50 – 14:00	667	Soil Carbon and Nitrogen content in areas of agricultural expansion in southern Brazil	Felipe Bonini da Luz
14:00 – 14:10	208	Soil carbon dynamics from a degraded pastureland to an agrisilviculture system in the Cerrado	Thais Rodrigues Coser
14:10 – 14:20	212	Soil carbon stock predictive models on archaeological black lands - natural and transformed	Camila Viana Vieira Farhate
14:20 – 14:30	1157	SOIL CARBON, NITROGEN AND PHOSPHORUS STOCKS OF FOREST ISLANDS OF WEST AFRICA	Caleb Melenya
14:30 – 14:40	3232	Soil CH <sub>4</sub> and N <sub>2</sub> O fluxes in an improved-fallow slash-and-mulch agroforestry system for one year in secondary forest and one year of crop cultivation in eastern Amazonia of Brazil	Aaron Joslin
14:40 – 14:50	2443	Soil CO <sub>2</sub> emission and correlations with soil properties in under no-tillage with different crops rotations	Gustavo André de Araújo Santos
14:50 – 15:00	2843	Soil CO <sub>2</sub> emission in Eucalyptus and silvopastoral systems with 30 years of conversion in the Brazilian Cerrado	Christtiane Fernandes Oliveira
15:00 – 15:10	1467	Soil fluxes of nitrous oxide and methane in Pampa grassland afforested with Eucalyptus spp.	Frederico Costa Beber Vieira

Tuesday (Aug, 14)		TOTEN 40	
<b>C3.3.5</b> <b>C3.3.6</b>		Soils for mitigating global warming: greenhouse gas emission reduction and/or enhancing carbon Sustainable phosphorus fertilizer use in tropical soil	
Schedule	ID	Title	Presenter
13:30 – 13:40	798	SOIL ORGANIC CARBON DYNAMICS IN TRADITIONAL RUBBER TREE AGROFORESTRY SYSTEMS IN SOUTHERN COLOMBIAN AMAZON	María Paula Llanos Cabrera
13:40 – 13:50	1558	Soil potential to methane uptake in native and planted forests	Josiléia Acordi Zanatta
13:50 – 14:00	2476	Soil-aggregate groups at various depths under silvopasture in comparison with planted and native forests and managed pasture in a Brazilian Oxisol	Felipe M. Pinheiro
14:00 – 14:10	1202	Stock and carbon aculumulation in latosolo (oxisol) under eucalyptus cultivation in Cerrado	Bruno de Oliveira Dias
14:10 – 14:20	3147	The effect of bamboo powder application on the yield of Japanese white radish ( <i>Rhaphanus sativus</i> L.) and soil properties	Atsunobu Kadono
14:20 – 14:30	1234	Nitrogen stock in latosolo (oxisol) under different forms of use in Cerrado	Belchior Oliveira Trigueiro da Silva
14:30 – 14:40	1728	Shoot:root ratio and belowground carbon inputs of oats ( <i>Avena sativa</i> L.) in a southern Brazil Inceptisol under grazing intensities.	Ricardo Henrique Ribeiro
14:40 – 14:50	2529	The Changes of Soil Carbon Content According to Organic Material Types in Upland Soil	Hyeoun-Suk Cho
14:50 – 15:00	1783	Agronomic characteristics of <i>Brachiaria ruzizienses</i> grass in response of different doses of phosphorus	Lucas Vinícius Albuquerque de Oliveira
15:00 – 15:10	2658	Agronomic response to different doses and forms of application of organomineral phosphate fertilizer produced with chicken manure	Adelson Paulo de Araújo

Tuesday (Aug, 14)		TOTEN 41	
C3.3.6		Sustainable phosphorus fertilizer use in tropical soil	
Schedule	ID	Title	Presenter
13:30 – 13:40	922	CHEMICAL ATTRIBUTES OF THE SOIL IN PASTURE AREA ARISING FROM APPLICATION FORM OF PHOSPHORUS DOSES AFTER SEVEN YEARS IN WESTERN AMAZON	Andressa Gregolin Moreira
13:40 – 13:50	1564	Diffusion flow of phosphate sources in different contact time	Miguel Martins Neto
13:50 – 14:00	2383	Diffusion of phosphorus from granular monoammonium phosphate with different proportions of phyllosilicate in Oxisols of Brazil	Marco Antonio Pereira de Ávila
14:00 – 14:10	1810	Do Content, Concentration and Co-Applicants Spatially Impact Liquid Phosphorus Fertilizer Fixation in a Brazilian Oxisol?	Ganga M Hettiarachchi
14:10 – 14:20	1408	Economic analysis of different sources of phosphorus applied to oxisols under no-tillage at different levels of fertility in the Central-South region of Paraná	Magno Batista Amorim
14:20 – 14:30	2808	Effect of alternative phosphate applied in differents conditions of pasture in Oxisols.	Natalia Rodrigues Ferreira Eloy
14:30 – 14:40	550	Effect of phosphate solubilizing microorganisms on maize yield and yield attributes in the Sete Lagoas region	Rafael Augusto Lima Rodrigues
14:40 – 14:50	2074	Effects of phosphate fertilization on the growth of Vochysia haenkeana Mart. seedlings	Matheus da Silva Araújo
14:50 – 15:00	1147	Efficiency of phosphorus absorption in corn hybrids	Mussa Mamudo Salé
15:00 – 15:10	2699	Estimation of reference values ??of foliar concentration of N, P, K and Ca, adjusted to Andean blackberry crops (Rubus glaucus Benth.), in Colombia	Cardona, William Andrés



Tuesday (Aug, 14)		TOTEN 42	
C3.3.6		Sustainable phosphorus fertilizer use in tropical soil	
Schedule	ID	Title	Presenter
13:30 – 13:40	877	Fused phosphates agronomic efficiency in soils with different P levels	Juliana de Lima Moretto
13:40 – 13:50	1573	Impact of subterranean clover ( <i>Trifolium subterraneum</i> L.) root exudates on phosphorus availability for grapevine ( <i>Vitis vinifera</i> L.) plants in intercropping systems in Andisols	Francisco Contreras
13:50 – 14:00	1242	Impacts of lake sediment reuse on plant growth and soil properties in the field	Mina Kiani
14:00 – 14:10	2943	Improving bone-based phosphate fertilizer by pyrolysis	Cristiano Dela Piccola
14:10 – 14:20	3111	Maize cob productivity fertilized with different phosphorus sources and dosage	Ianna Bizerra Barros
14:20 – 14:30	940	Natural phosphate efficiency use in corn applied with different nitrogen sources	Moniki Campos Janegitz
14:30 – 14:40	2595	Partial acidification of Arraias Rock Phosphate improves P use efficiency in tropical soils	Sulian Junkes Dal Molin
14:40 – 14:50	1169	Partially acidulated rock phosphates containing zeolites for regulating the solubility in soils.	Ana Paula Bettoni Teles
14:50 – 15:00	1508	Phosphate Fertilization via monoammonium phosphate in Corn Crop in Oxysol from Brazilian cerrado region	Gustavo Ferreira Sousa
15:00 – 15:10	3127	Phosphorus and sulfur content in calcareous Vertisol under influence of elemental sulfur	Ewerton Gonçalves de Abrantes

Tuesday (Aug, 14)		TOTEN 43	
C3.3.6		Sustainable phosphorus fertilizer use in tropical soil	
Schedule	ID	Title	Presenter
13:30 – 13:40	3007	Phosphorus availability in cultivated and non-cultivated soils by the Mehlich-1 and Mehlich-3 extractants	Josimar Vieira dos Reis
13:40 – 13:50	1527	Phosphorus extracted by Mehlich 1 and anion exchange resin in in dystrophic Clayey Red Latosol subjected to the anticipation phosphates fertilizer	Maila Adriely Silva
13:50 – 14:00	477	Potential for the use of calcined bone meal as a source of phosphate fertilizer for corn	Daniel Rodrigues Mafra
14:00 – 14:10	3035	Production system of <i>Lupinus mutabilis</i> Sweet 'chocho' on terraces and hillsides with phosphate fertilization in Cajamarca	Silvia Aguero-Aguilar
14:10 – 14:20	1312	Soil chemical attributes as a function of the superficial and localized phosphate fertilization for the soybean in the Cerrado	Mayara Martins e Martins
14:20 – 14:30	1454	Sugarcane yield and technological quality under phosphate sources and filter cake applied at plant establishment.	Thais de Marchi Soares
14:30 – 14:40	1911	The anticipation of phosphate fertilization on the maize crop	Murilo Mendes Machado
14:40 – 14:50	2503	Transitions to sustainable management of phosphorus in Brazilian agriculture	Paulo S Pavinato
14:50 – 15:00	1581	Triple superphosphate granulation with biochar: kinetics of P release	Denison Pogorzelski
15:00 – 15:10	983	Efficiency of the calcined bone meal used as phosphate fertilizer in rice culture	Claudia Roberta Braga de Azevedo

Tuesday (Aug, 14)		TOTEN 44	
C3.3.7		Contribution of zero tillage (no-till) to sustainable use and management of soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	780	BIOLOGICAL SOIL DECOMPACTION USING FORAGE RADISH AND CROTALARIA	Daniel Dias Valadão Júnior
13:40 – 13:50	2175	Bulk density and total porosity of a Dystric Planosol cultivated with pepper in conventional and no-tillage management systems	Isabela Beatriz Pereira da Cruz
13:50 – 14:00	1378	CARBON AND NUTRIENT STOCKS IN CRONOSSEQUENCY OF CROPS UNDER NO-TILLAGE SYSTEM IN THE EASTERN AMAZON	Alessandra Danieli Miranda de Araújo
14:00 – 14:10	1057	Changes in spatial variability of soil properties due land use change	Valle, S.R
14:10 – 14:20	1440	CHEMICAL ATTRIBUTES OF SOIL AND CORN PRODUCTION UNDER DIRECT SEQUENCE AS A FUNCTION OF CALCARY AND PLASTER APPLICATION IN THE EASTERN AMAZON	Sidney Daniel Araújo da Costa
14:20 – 14:30	1309	Chiseling efficiency in the reduction of soil mechanical resistance to penetration o under maize no-tillage system	Lizete Stumpf
14:30 – 14:40	1653	CO2 emission and rearrangement process of soil in short term after soil management submitted to different intensities	Bruna de Oliveira Silva
14:40 – 14:50	787	CORN-CROTALARIA INTERCROPPING SYSTEMS	Franciele Caroline de Assis Valadão
14:50 – 15:00	205	DATA MINING TECHNIQUES FOR CLASSIFICATION OF SOIL CO2 EMISSION	Camila Viana Vieira Farhate
15:00 – 15:10	3121	Degree of clay flocculation and soil organic carbon stocks under no-tillage as affected by chiseling and gypsum application in southern Brazil	Caroline Honorato Rocha

Tuesday (Aug, 14)		TOTEN 45	
C3.3.7		Contribution of zero tillage (no-till) to sustainable use and management of soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	2684	Glomalin-related soil protein after two decades of different tropical soil management	Aristides O Ngolo
13:40 – 13:50	2847	Gypsum and Limestone application methods: Wheat yield, plant mineral nutrition and chemical soil attributes	Marcelo Augusto Batista
13:50 – 14:00	1974	Identifying indicators in a structurally fragile tropical soil to recommend management practices and prevent land degradation in the Amazonian periphery	Virley Gardeny Lima Sena
14:00 – 14:10	2007	Land use and land cover dynamics in western Haiti Land use and land cover dynamics in western Haiti	Wesly Jeune
14:10 – 14:20	766	Mechanical soil properties in long-term, no-till, integrated crop-livestock system.	Jordano Vaz Ambus
14:20 – 14:30	2680	No tillage and other soil and water conservation practices in Paraná State	Tiago Santos Telles
14:30 – 14:40	3170	No-tillage as a conservation system	Kátia Luciene Maltoni
14:40 – 14:50	661	Organic phosphorus fractions in an Oxisol cultivated with sugarcane under green-harvested management	Benedito Luiz CORREIA
14:50 – 15:00	3180	Phosphorus and organic matter contents as a function of rotation crops and cover crops under no-tillage system in the Cerrado	Edson Lazarini
15:00 – 15:10	1374	PHOSPHORUS FRACTIONS IN CHRONOSEQUENCE OF CROPS UNDER NO-TILLAGE SYSTEM IN THE EASTERN AMAZON	Rubia Carla Ribeiro Dantas

Tuesday (Aug, 14)		TOTEN 46	
C3.3.7		Contribution of zero tillage (no-till) to sustainable use and management of soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	2437	Productivity of corn and soybean in iLPF or PD systems with organic or mineral fertilization	Luciane Cristina Lazzarin
13:40 – 13:50	3123	Quality and quantity of crop residues: effects on nitrous oxide emissions.	Raquel Schmatz
13:50 – 14:00	2782	Resistance to soil compaction of an Acrisol under different soil management systems	Wellington da Silva Guimarães Júnnyor
14:00 – 14:10	1387	Soil and sugarcane yield response to tillage management in southern Brazil	Ricardo de Oliveira Bordonal
14:10 – 14:20	2288	Soil structural properties under addition of crop residues and limestone	Guilherme Kangussú Donagemma
14:20 – 14:30	2101	Structural changes of dystrophic yellow latosol in the function of the adoption of the direct plantation system	Jéssica Rodrigues Dalazen
14:30 – 14:40	1505	Sustainable alternative to increase organic matter in soil profile	Miguel Ángel Martínez-Gamiño
14:40 – 14:50	1897	Total Carbon Stock of Soil under Cover Crops and Nitrogen Fertilization	Leandro Alves Freitas
14:50 – 15:00	1787	Water retention, non-saturated hydraulic conductivity and soil porosity under different preparation systems and cultivation plans	Cícero Ortigara
15:00 – 15:10	3022	Carbon content and aggregate stability in Oxisol after ten years of cultivation under no-tillage and fertilization with swine manure	Paulo Cezar Cassol

Tuesday (Aug, 14)		TOTEN 47	
<b>C3.3.8</b> <b>C3.3.10</b>		International nitrogen initiative Beneficial management practices for sustaining soil fertility	
Schedule	ID	Title	Presenter
13:30 – 13:40	2017	ASSESSMENT OF FERTILIZATION EFFICIENCY IN A VINEYARD AT THE MAULE REGION, CENTRAL CHILE	Priscila Tapia
13:40 – 13:50	917	Growth patterns and nutrient extraction by Eucalyptus globulus Labill in the eastern region of Uruguay	Jorge Hernandez
13:50 – 14:00	2688	Analysis of quantitative parameters of the meso and macro edaphic fauna found in corn culture under different forms of fertilization.	Bárbara Clasen
14:00 – 14:10	2077	Aggregate stability in a Oxisol ustox under different management practices in State of Bahia, Brazil	Paloma Cunha Saraiva
14:10 – 14:20	473	Agricultural land application of sanitary sludge	Arrarte Gimena
14:20 – 14:30	1395	AMMONIUM AND NITRATE IN YELLOW LATOSOL IN CHRONOSEQUENCE OF CROPS UNDER NO-TILLAGE IN THE EASTERN AMAZON	Letícia Cunha da Hungria
14:30 – 14:40	2674	Anaerobic incubation as an estimate for the nitrogen mineralization rate in organic wastes	Jessica Zuanazzi Fioritti Corbo
14:40 – 14:50	1918	Analysis of soil chemical fertility level under cashew trees (Anacardium occidentale) in North of Côte d'Ivoire (West Africa)	Diomande Loua Barthélémy
14:50 – 15:00	899	Analytical quality program of soil fertility laboratories that adopt Embrapa methods in Brazil ? 2016/2017 results	Daniel Vidal Perez
15:00 – 15:10	746	Availability of phosphorus in soils amended with dairy manure, urban and industrial sludge.	Amabelia del Pino

Tuesday (Aug, 14)		TOTEN 54 – EXTRA Division 3	
<b>C3.3.4</b>		Greenhouse gases emissions associated with fertilizer use	
<b>C3.3.5</b>		Soils for mitigating global warming: greenhouse gas emission reduction and/or enhancing carbon	
<b>C3.5.3</b>		Frontier of soil quality evaluation after remediation of contaminated field	
<b>C3.3.10</b>		Beneficial management practices for sustaining soil fertility	
<b>C3.3.2</b>		Nutrient budgets in agricultural soils	
<b>C3.1.2</b>		Multi-scale and multi-domain approaches to develop smart farming	
<b>C3.6.3</b>		Salinity management and remediation of salt-affected soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	1673	Mitigation alternatives of the soil nitrous oxide emission associated with eucalyptus nitrogen fertilization	Mariana Alves Ibarra
13:40 – 13:50	844	Effects of Elevated Atmospheric CO <sub>2</sub> on Soil Organic Carbon in Rice Paddy Field	Jianguo Zhu
13:50 – 14:00	227	Effect of diesel and engine oil on the growth and yield of tomato ( <i>Lycopersicon lycopersicum</i> )	S. Amhikian
14:00 – 14:10	428	Effects of Agricultural wastes on Potassium Quantity - Intensity parameters of some soils in Ogun - state, South / Western, Nigeria	Adebimpe Abidemi Taiwo
14:10 – 14:20	1086	Potential of Dichlorodiphenyldichloroethylene (DDE), and Dichlorodiphenyldichloroethane (DDD) degrading endophytic bacterial strains in enhancing phytoremediation	Ahmad Mahmood
14:20 – 14:30	3239	Changes in soil phosphorus balance and phosphorus use efficiency in long-term fertilizer application experiment conducted on agriculturally-used Chernozem soils in Germany	Dirk Freese
14:30 – 14:40	1780	Spatial-temporal variability of available phosphorus in integrated crop-livestock systems in lowlands	Mateus Westerhofer Goulart
14:40 – 14:50	3078	Soybean crop expansion versus slope and soil in the Brazilian Pampa Biome through a GIS	Aline Warnke Hipólito
14:50 – 15:00	1649	Relationships between nitrous oxide emission and soil microbial activity under different irrigation modes and nitrogen treatments	Fusheng Li
15:00 – 15:10	1656	Changes of soil salinity in Saemangeum reclaimed land with the passage of time	Jinhee Ryu

## Division 4: The Role of Soils in Sustaining Society and the Environment

Tuesday (Aug, 14)		TOTEN 48	
<b>C4.2.1</b> <b>C4.2.2</b>		Soil and Human Health Soil quality and food security in the tropics	
Schedule	ID	Title	Presenter
13:30 – 13:40	2932	Spatial distributions of soil lead across scales in the Twin Cities Metropolitan Area, United States	An-Min Wu
13:40 – 13:50	2427	Accumulation and translocation of cadmium in cacao production systems of the Colombian central Andean region	John Fernando Soler-Arias
13:50 – 14:00	927	Achievements and Challenges of the Regional Soil Partnership for Central America, Mexico and The Caribbean	Olegario Muñiz
14:00 – 14:10	1148	Agronomic fortification of Zinc and Iron nutrition on productivity and quality of wheat	Sudha T
14:10 – 14:20	2123	Assessment of chemical quality of soils of horticultural areas of the Federal District	Juscimar Silva
14:20 – 14:30	291	Biological indicators and soil quality indices for red soils under subtropical rainforest and under Pinus sp. plantation	Toledo Diana Marcela
14:30 – 14:40	1230	Fertilizer application alters temporal dynamics of soil inorganic nitrogen and its availability to maize in two soil types in the Tanzanian highlands	Jinsen Zheng
14:40 – 14:50	1452	High resolution soil functional maps for Central America and Oaxaca using Digital Soil Mapping	Phillip R. Owens
14:50 – 15:00	2526	INFLUENCE OF SOILS AND MICRO-ENVIRONMENT ON THE BIOMASS AND BIOACTIVE CONCENTRATION OF PLANTATION GROWN EURYCOMA LONGIFOLIA	Wan Rasidah Kadir
15:00 – 15:10	2693	Influences of culturing eels in paddy fields on soil nutrients and rice's resistance to pests and diseases	Guo-jun Lan



Tuesday (Aug, 14)		TOTEN 49	
C4.2.2		Soil quality and food security in the tropics	
Schedule	ID	Title	Presenter
13:30 – 13:40	696	Knowledge management and technology transfer by the use of scrap farm for soil improvement via mushroom cultivation and inducing mushroom growing in the nature	Orathai Sukreeyapongse
13:40 – 13:50	866	Measurement of biological N <sub>2</sub> fixation in field-grown common bean cultivars in Brazilian Cerrado soil using 15N natural abundance method	Adelson Paulo Araújo
13:50 – 14:00	1443	Pineapple mineral nutrition profile and diagnosis of nutritional status	Marco V. Gutiérrez-Soto
14:00 – 14:10	616	Soil analysis and use of the calcary as an efficient public management in family agriculture in the municipality of Jeceaba, Minas Gerais	Leandro Marciano Marra
14:10 – 14:20	1077	Soil quality under no-till: challenges and opportunities for food security in the tropics	Neal Menzies
14:20 – 14:30	2293	Use of effluent from a pharmaceutical industry as fertilizer for seedlings of a native tree species	Marco Aurélio Kondracki de Alcântara
14:30 – 14:40	1020	Vegetation tillering of <i>Brachiaria ruzizienses</i> in response to different doses of phosphorus	Ramaiany Lohanny Sousa Cremer
14:40 – 14:50	2611	Comprehensive study of soil physical and chemical properties under no-tillage systems in Brazil	Rhuanito Soranz Ferrarezi
14:50 – 15:00	2578	Fertility and metal concentrations in soils of tropical Eucalyptus plantations under residual application of sewage sludge: indication of soil quality	Cassio Hamilton Abreu-Junior
15:00 – 15:10	1813	Large-area soil assessments for agriculture development in tropical Northern Australia	Mark Thomas

Tuesday (Aug, 14)		TOTEN 50	
C4.2.3		Soil quality to secure human and environmental health	
Schedule	ID	Title	Presenter
13:30 – 13:40	761	LEGAL AND ILEGAL DEFORESTATION ACTIONS IN CEARÁ STATE IN 2015 AND 2016	Ana Leônia de Araújo Girão
13:40 – 13:50	1461	Are protected areas a source of quality of life?	Laiz Coutelle Honscha
13:50 – 14:00	514	Assessment of Heavy Metal(loid)s Pollution Status in Agricultural Land near Industrial Complex in Korea	Hyun Uk Kim
14:00 – 14:10	2748	Brazilian Family Agriculture: a small guide family from farmers to researchers	Carlos Victor Dourado Batista
14:10 – 14:20	2659	Cadmium, copper and chromium, pseudo-total concentration and available to soil in long-term experiment	Iolanda Maria Soares Reis
14:20 – 14:30	2712	Can the Quick Diagnosis of Soil Structure (DRES) method describes the soil quality of Brazilian pastures?	Thamires Rodrigues de Sá Valle
14:30 – 14:40	1087	Changes of soil chemical quality index in according to time in paddy soils by long-term application of soil amendments	Myungsook Kim
14:40 – 14:50	1796	CHARACTERIZATION AND VALUATION OF SOILS WITH POTENTIAL INVESTIGATIVE AND PRODUCTIVE IN THE BOGOTA'S SAVANNAH, COLOMBIA.	Gabriela Sepúlveda Prieto
14:50 – 15:00	1503	Chemical characterization of soils adjacent to a wastedump of the Stella Maris polymetallic mine Paso de Indios, Chubut. Argentina.	M.G. Rack
15:00 – 15:10	2047	Comet assay in Eisenia andrei coelomocytes as a tool for assessing the genotoxicity of urban soils	Ronan Adler Tavella

Tuesday (Aug, 14)		TOTEN 51	
C4.2.3		Soil quality to secure human and environmental health	
Schedule	ID	Title	Presenter
13:30 – 13:40	1993	Competitive adsorption of Pb(II), Cu(II), and Zn(II) ions onto hydroxyapatite-biochar nanocomposite in aqueous solutions	Sheng-Mao Yang
13:40 – 13:50	2883	Effect of commercial insecticides used for the control of the western corn rootworm ( <i>Diabrotica virgifera</i> ssp. <i>virgifera</i> ) on the nematode community	Andrea Cerevkova
13:50 – 14:00	573	Effect of different immobilizing agents on soil quality and metal uptake by plant in heavy metal contaminated soil Effect of different immobilizing agents on soil quality and metal uptake by plant in heavy metal contaminated soil	Byoung Hwan Seo
14:00 – 14:10	276	Genotypic variation of rice plants exposed to cadmium in tropical contaminated soil	Thiago Assis Rodrigues Nogueira
14:10 – 14:20	521	Heavy metal sorption indexes in urban soils	Francisco Bautista
14:20 – 14:30	1647	Heavy metals in soils impacted by the alluvial gold mining in the Peruvian Amazon	Velásquez Manuel
14:30 – 14:40	2946	MERCURY BIOEXTRACTION USING EARTHWORM ( <i>Eisenia Foetida</i> ) IN DEGRADED SOILS BY MINING IN THE CHOCO DEPARTMENT (COLOMBIA)	Juan Carlos Montoya Salazar
14:40 – 14:50	2038	Phyto-microbe remediation of heavy metal and organic pollutant co-contaminated farmland soils	Xiaoe Yang
14:50 – 15:00	1391	Potential of urban agriculture in Moscow and its effect on soil	Anna Buyvolova
15:00 – 15:10	1189	Response of soil chemical and microbiological attributes to different ages of riparian forest restoration in Paraná River	Arnaldo Colozzi Filho

Tuesday (Aug, 14)		TOTEN 52	
<b>C4.2.3</b> <b>C4.3.1</b>		Soil quality to secure human and environmental health Ecological soil management systems and soil quality	
Schedule	ID	Title	Presenter
13:30 – 13:40	2603	Soil enzymatic activity as soil quality indicator of metal(loid) contaminated soils: a meta-analysis	Humberto Aponte
13:40 – 13:50	2311	SOIL STRUCTURAL QUALITY IN PASTURELANDS IN THE CITY OF BURITIS (RO), BRAZIL	Carlos Henrique dos Santos Zebalos
13:50 – 14:00	3084	Strategies for phytoremediation in soils contaminated with As, Cd, Pb, and Zn by slag disposal	William Ramos da Silva
14:00 – 14:10	2487	STRUCTURAL QUALITY OF THE SOIL IN AN INTEGRATED SYSTEM OF LIVESTOCK AND AGRICULTURAL PRODUCTION IN THE CITY OF ARIQUEMES (RO), BRAZIL	Edneia Maria Sobrinho Rodrigues
14:10 – 14:20	1952	Using Chrysanthemums as Profitable Phytoremediation of Heavy Metal Contaminated Soils: A case of five-year field experiments in Shanghai, Southeast China	Xue-Feng Hu
14:20 – 14:30	2327	Which pesticides are contaminating Brazilian soils?	Caroline Lopes Feijo Fernandes
14:30 – 14:40	903	Structural quality of the soil according to management in an integrated system of livestock and agricultural production	Karen Andressa Ribeiro Artner
14:40 – 14:50	1990	Acute toxicity in earthworms by the use of forest pesticides	Carolina Riviera Duarte Maluche Baretta
14:50 – 15:00	1541	Agropastoral Degradation of a Steppic Ecosystem by Sand Encroachment in the Southern region of Sétif (Algeria).	Yacine Louadj
15:00 – 15:10	1604	Baby corn and biomass production for green manure in organic production system	Ana Amélia dos Santos Cordeiro

**Thursday, 16 August**  
**Division 1: Soil in Space and Time**

Thursday (Aug, 16)		TOTEN 1	
<b>C1.5.3</b> <b>C1.6.1</b>		Reconciling pedometrics and pedology Human-environment interactions recorded in soils and palaeosols	
Schedule	ID	Title	Presenter
13:30 – 13:40	2986	Mapping of iron oxides using indirect techniques in soils of the Western Paulista Plateau, Brazil.	José Marques Júnior
13:40 – 13:50	2907	Multifractal and joint multifractal analysis of soil water content measured at successive depths and during three periods along a transect	Antonio Paz-González
13:50 – 14:00	3074	Spatial correlation between terrain attributes and soil depth in small-extent rugged terrain	Taciara Zborowski Horst
14:00 – 14:10	2365	Spatial prediction of weathering-related soil properties obtained from portable X-ray fluorescence	Fabio Arnaldo Pomar Avalos
14:10 – 14:20	3088	Spatial variability and multivariate analysis in the determination of the sample density of the Western Paulista Plateau, Brazil	Laércio Santos Silva
14:20 – 14:30	2248	Spatial variability of attributes with different sample densities in the savanna	Sammy Sidney Rocha Matias
14:30 – 14:40	1480	Usage of pedometrics for data evaluation and harmonization in soil profiles from Cerrado region, Mato Grosso do Sul	Pedro Armentano Mudado Xavier
14:40 – 14:50	3045	Use of magnetic susceptibility for the Identification of Pedogenetic Environments in Archaeological Black Earth in southern Amazonas, Brazil	Ivanildo Amorim de Oliveira
14:50 – 15:00	1166	Archaeopedological analyses of Bronze Age land use practices and landscape evolution in Southwest Germany	Sascha Scherer
15:00 – 15:10	2044	Fire dynamics of a mid mountain range - analytical evidence versus fire modelling	Luisa Wöstehoff

Thursday (Aug, 16)		TOTEN 2	
<b>C1.6.1</b> <b>C1.6.2</b>		Human-environment interactions recorded in soils and palaeosols Soil memory: proxies for deciphering records of past environmental conditions in soils and palaeosols	
Schedule	ID	Title	Presenter
13:30 – 13:40	2307	Interface between soils, morphogenetic processes, records of past human occupation and environmental changes in the low terraces of the Jacaré-Guaçu river (Boa Esperança do Sul, State of São Paulo, Brazil)	Pedro Michelutti Cheliz
13:40 – 13:50	772	The coastal soil of the Atacama Desert, properties, and implications in the conservation of mummified bodies, in the validity of the postmortem chemical result and the inference regarding the health of the ancient human populations	Leonardo Figueroa
13:50 – 14:00	1133	Biological memory of soils and occupation layers of archaeological sites.	Elena Chernysheva
14:00 – 14:10	785	Climate and environmental changes in central-eastern Brazil during the Last Glacial Maximum	Ingrid Horák-Terra
14:10 – 14:20	1785	Environmental setting of the early irrigation in Oasisamerica: paleopedological evidences from the alluvial paleosols in la Playa/Sonoran Desert	Georgina Ibarra
14:20 – 14:30	1284	Geochemical signals of pedogenic processes in the profiles of surface and buried soils at the Nozha-Var archaeological site, European Russia	Elena Aseeva
14:30 – 14:40	357	Late Pleistocene Paleosols of Serra da Mantiqueira, southeastern Brazil: pedological processes and genesis conditions	Sheila A. C. Furquim
14:40 – 14:50	707	Paleoenvironmental reconstitution by stable C and N isotopes in a mountain tropical peatland, Minas Gerais State - Brazil	Camila Rodrigues Costa
14:50 – 15:00	1232	Palynofacies and carbon isotope analysis as indicators of pedogenesis and paleoenvironmental changes of upper montane soil in Espírito Santo State, Brazil.	Eduardo Carvalho da Silva Neto
15:00 – 15:10	2423	Pedogenic carbonate crusts (caliches) in tropical karst landscapes as archives for paleoenvironmental reconstructions - a case study from Yucatan Peninsula, Mexico)	Daisy Valera Fernández

Thursday (Aug, 16)		TOTEN 3	
<b>C1.6.2 WG01</b>		Soil memory: proxies for deciphering records of past environmental conditions in soils and palaeosols Cryosols: Progress in understanding the dynamic soils of colder regions	
Schedule	ID	Title	Presenter
13:30 – 13:40	509	Reconstruction of the environment on the basis of complex study of steppe buried palaeosols	Valentina Prikhodko
13:40 – 13:50	720	Soil chronosequence of the Early Iron Age in the central part of the forest-steppe zone of the East European Plain	Tatiana Puzanova
13:50 – 14:00	1625	Genesis and diversity of loamy soils in Middle Taiga Zone of Siberia	Golovleva Iuliia
14:00 – 14:10	445	Greenhouse gas fluxes from forest soil in an upland black spruce stand in interior Alaska	Tomoaki Morishita
14:10 – 14:20	850	Influence of 100 artificial freeze-thaw cycles on soil formation and microbial community structures on James Ross Island, maritime Antarctica	Lars Arne Meier
14:20 – 14:30	1650	Mineralogical transformations and microchemistry of acid sulphate soils in Antarctica	Daví do Vale Lopes
14:30 – 14:40	819	Modern dynamics of cryolithozone soil cover in siberia under conditions of climate change	Desyatkin R.V.
14:40 – 14:50	1588	Soil climate and active layer depth, Ross Sea Region, Antarctica	Annette G. Carshalton
14:50 – 15:00	384	Statistical analysis of the soils of the James Ross Islands Group, Antarctica	Mayara Daher de Paula
15:00 – 15:10	3235	<b>Spatial heterogeneity and environmental controllers of permafrost SOC stocks</b>	Umakant Mishra

Thursday (Aug, 16)		TOTEN 4	
<b>WG02</b>		Digital soil mapping: Progress in digital soil mapping	
Schedule	ID	Title	Presenter
13:30 – 13:40			
13:40 – 13:50	1937	Applying machine learning methods for large-scale soil types prediction	Anna Petrovskaia
13:50 – 14:00	440	Artificial neural networks and object-based classification for digital soil mapping	Fabrcio Fernandes Coelho
14:00 – 14:10	2256	Calibration of a pedological conceptual model for digital soil mapping in Colombia. Case study municipality of La Virginia, Risaralda.	Yolanda Rubiano Sanabria
14:10 – 14:20	1982	Digital segmentation of hillslope position to improve detailed soil mapping	Karina P. P. Marques
14:20 – 14:30	1095	Digital soil mapping in peruvian highlands: predicting soil classes	Carlos Julian Mestanza Novoa
14:30 – 14:40	2027	Digital Soil Mapping of functional soil properties - Tool for decision making at various levels and a technical training process in El Salvador	Torres Luis
14:40 – 14:50	3211	High resolution mapping and soil organic carbon stocks in the Colombian savannas.	Mayesse da Silva
14:50 – 15:00	3175	Incorporating expert knowledge into iterative digital soil mapping	Minerva J Dorantes
15:00 – 15:10	1335	Mapping and analysis of soil types in the agro-pastoral transitional landscape system of Bashang area in North China	Zhuodong Zhang



Thursday (Aug, 16)		TOTEN 5	
<b>WG02</b> <b>WG03</b> <b>WG04</b> <b>WG06</b> <b>WG08</b>		Digital soil mapping: Progress in digital soil mapping Digital Soil Morphometrics: Soil imaging and image analysis at multiple scales Global Soil Map: Progress and challenges Soil Monitoring: Soil monitoring evolving tools and challenges WRB: Soil Classification for understanding soil genesis, map legends and soil functions. Experiences with WRB and other systems	
Schedule	ID	Title	Presenter
13:30 – 13:40	2121	Mapping soil bulk density in Brazil by machine learning	Elpídio Inácio Fernandes Filho
13:40 – 13:50	3166	Morphometric functional units as an input for inferring the spatial variability of soils	Bryan Fuentes
13:50 – 14:00	2144	Soil pH spatial distribution with digital soil mapping (DSM) in central Andes of Peru	Julio Cesar Nazario Rios
14:00 – 14:10	1775	Assessment of water reservoir sediment by ground penetrating radar and x-ray fluorescence analysis	Elaine Caliman Sposito
14:10 – 14:20	1523	A GlobalSoilMap Prototype for the Conterminous United States: Characterizing Uncertainty	Norman B. Bliss
14:20 – 14:30	288	Comparisons between splines and weighted means for filling missing soil horizon data for GlobalSoilMap standard depths	Zamir Libohova
14:30 – 14:40	1179	Updating the categorical soil map of Iran using limited soil legacy data	R. Taghizadeh-Mehrjardi
14:40 – 14:50	542	Turning Band Co-simulation algorithm approach to multivariate mapping of heavy metals spatial contamination in a Cu-Ni exploration field	Peter N. Eze
14:50 – 15:00	1002	Applying the World Reference Base 2015 to soil profile databases of various nomenclatures: Tool, performance and feedbacks	Einar Eberhardt
15:00 – 15:10	2021	Beyond Earth: Can we classify Martian soils with WRB?	Jérôme Juilleret

Thursday (Aug, 16)		TOTEN 6	
WG05		Proximal soil sensing (PSS)	
Schedule	ID	Title	Presenter
13:30 – 13:40	258	A Hybrid Soil Laboratory Analysis for low environment impact	Andre Carnieletto Dotto
13:40 – 13:50	691	Application of Hyperspectral and GF-1 remote sensing data to predict and map soil carbon content	Liu Ting
13:50 – 14:00	1131	Contribution of different Vis-NIR spectral regions to the prediction of soil organic carbon content	Geisy Bahls Fogaça
14:00 – 14:10	1969	Diffuse Reflectance spectroscopy for determination of soil texture	Luiza Mantiça Kreimeier
14:10 – 14:20	1112	Estimation of soil organic matter content in the Yangtze River Delta by Vis-NIR in situ	M H Yang
14:20 – 14:30	2402	Evaluation Of Soil Humidity With The Use Of Ground Penetrating Radar (GPR)	NATHALIE CRUZ SENA
14:30 – 14:40	1319	Experimental evidence of internal scattering and absorption in soil particles	William Philpot
14:40 – 14:50	2563	Ground Penetrating Radar in the determination of gravimetric moisture in Oxisols	Viviane Flaviana Condé
14:50 – 15:00	518	Hyper-spectral Characteristics of Major Types of Soils in Red Soil Region of Jiangxi Province, China	Xiaomin Zhao
15:00 – 15:10	749	Hyperspectral proximal sensor to evaluate the spectral behavior of soil with mining co-product application	Marlon Rodrigues

Thursday (Aug, 16)		TOTEN 7	
WG05		Proximal soil sensing (PSS)	
Schedule	ID	Title	Presenter
13:30 – 13:40	1790	Identification of soil profile classes using 3D spectral surface features	Xian-Li Xie
13:40 – 13:50	2132	Kaolinite and Gibbsite spectral characterization in different geological and geomorphological compartments of the Western Paulista Plateau	Kathleen Lourenço Fernandess
13:50 – 14:00	1212	On-farm technique to assess the nitrogen status of winter crops from optical sensors	Jaime Andres Gomez
14:00 – 14:10	613	Potential of synergy of multiple sensor data layers to predict soil properties	Paulo S. Graziano Magalhães
14:10 – 14:20	1182	Predicting soil clay content from NIR, gamma-ray and XRF curves	Gustavo M Vasques
14:20 – 14:30	2672	Prediction of Soil Organic Carbon using Neural Network with Vis/NIR spectra in highlands of Itatiaia National Park, Rio de Janeiro	Yuri Gelsleichter
14:30 – 14:40	2887	Qualitative evaluation of soil organic matter using Vis-NIR diffuse reflectance spectroscopy in an agroecological production system in Seropédica, Rio de Janeiro (Brazil)	Marcela Lopes Lázaro
14:40 – 14:50	1940	Soil analysis through portable fluorescence X-ray (pXRF) spectrometer: predicting sum of bases (SB) and cation exchange capacity (CEC) in tropical soils.	Marcelo Mancini
14:50 – 15:00	767	Soil apparent electrical conductivity correlated with crop yield	João Pedro Moro Flores
15:00 – 15:10	2195	Spatial variability of elemental contents in a Brazilian cerrado Ustert profile through portable X-ray fluorescence (pXRF) spectrometer	Thaís Santos Branco Dijair

Thursday (Aug, 16)		TOTEN 8	
WG05		Proximal soil sensing (PSS)	
Schedule	ID	Title	Presenter
13:30 – 13:40	3028	Spectroscopic mining of soil archives to fill critical data gaps.	Jonathan Sanderman
13:40 – 13:50	1565	Stratification of a spectral library accordingly to soil texture produces more accurate soil organic carbon predictions?	Jean Michel Moura-Bueno
13:50 – 14:00	3204	The Brazilian Soil Spectral Library (BSSL): a general overview	José Alexandre Melo Demattê
14:00 – 14:10	3209	The geographic and environmental characterization of the Brazilian Soil Spectral Library (BSSL)	Ariane Francine Desidério da Silveira
14:10 – 14:20	519	The Research of Paddy Soil Quality Spatial and Temporal Change in Fengxin County, Jiangxi Province of China	Guorui Hu
14:20 – 14:30	2152	Accuracy of clay content prediction through spectroscopy affected by multivariate method	Nícolás Augusto Rosin
14:30 – 14:40	2413	Comparative adaptive world soil classification systems for map legend design in Nigeria: Soil Association [Local System], Soil Taxonomy, and World Reference Base.	Temitope A. Okusami
14:40 – 14:50	224	Red book of soils of Georgia - experiences with a competitive use of the national soil classification and the WRB	Tengiz F. Urushadze
14:50 – 15:00	3234	Soils on calcareous rocks in recent soil classification systems	Dmitry Konyushkov
15:00 – 15:10	3142	WRB Classification of anthropogenic soils in Korea	Yeonkyu, Sonn

**Division 2: Soil properties and processes**  
**Thursday, 16 August**

Thursday (Aug, 16)		TOTEN 9	
<b>C2.3.2</b>		Molecular techniques as a useful tool to reveal soil biodiversity and biotechnological potential of microbial genomes	
Schedule	ID	Title	Presenter
13:30 – 13:40	1181	Fish processing effluent discharges influenced chemical properties and microbial diversity in arid soils from Patagonia	Nelda Lila Olivera
13:40 – 13:50	1593	In situ cultivation and 16S rRNA-based identification of rhizobacteria associated with wheat seedlings grown in a Chilean Andisol	Jacqueline Acuña
13:50 – 14:00	3223	Increased enzymatic activity and decreased microbial diversity of rice paddy under a long-term no-tillage soil management system	Filipe Selau Carlos
14:00 – 14:10	1929	Isolation and genetic identification of diazotrophic bacteria in Eucalyptus sp.	Kamila Cabral Mielke
14:10 – 14:20	2989	Land use change and soil moisture alter the methanogenesis process in the Amazon Rainforest	Alexandre Pedrinho
14:20 – 14:30	2405	Metagenomic and metaproteomic analysis to unravel microbe associated processes in ferruginous Canga soils.	Rafael Borges da Silva Valadares
14:30 – 14:40	1388	Microbial soil diversity: real-time quantitative polymerase chain reaction (qPCR) and phospholipid fatty acid profiles (PLFA) from communities in response to sustainable agricultural intensification.	Dannae Lilia Serri
14:40 – 14:50	2004	Phylogenetic analysis of nitrogen fixing bacteria isolated from leguminous tree species	Anita Fernanda dos Santos Teixeira
14:50 – 15:00	2320	Responses of maize to drought stress when inoculated with diazotrophic bacteria and small RNAs regulation	MC Urquiaga
15:00 – 15:10	931	Silvopastoral systems drive soil's total bacteria community.	Víctor Lucas Vieira Prudêncio de Araújo

Thursday (Aug, 16)		TOTEN 10	
<b>C2.3.2</b> <b>C2.3.3</b>		Molecular techniques as a useful tool to reveal soil biodiversity and biotechnological potential of microbial genomes Rhizosphere mineral dynamics: soil-plant-microorganism	
Schedule	ID	Title	Presenter
13:30 – 13:40	996	Soil Bacterial and Archaeal community largely reflects changes in soil properties induced by sheep grazing in an arid shrubland of Patagonia	Magali S. Marcos
13:40 – 13:50	1434	Structure of the microbial community in a saline soil from semi-arid region of Pernambuco.	Emanuelle Maria da Silva
13:50 – 14:00	2456	Survey of the bacterial community in soils of fruit orchards from all over Japan.	Andre Freire Cruz
14:00 – 14:10	2489	The microbiome of the high-alpine permafrost and its response to warming	Beat Frey
14:10 – 14:20	2323	Toward a development of bacterial colonization modelling of soil particles: Effect of humic acids on the formation of nitrogen-fixing bacteria biofilms	María E. Berrio
14:20 – 14:30	217	What controls the spatial distribution of microbial communities in agricultural fields?	Bernie Zebarth
14:30 – 14:40	2728	Abundance of N-fixing and nitrifying microorganisms in soybean rhizosphere under the influence of soil cronossequences	Luis Fernando Merloti
14:40 – 14:50	2891	Aggregation of soil is influenced by the use of inoculants with arbuscular mycorry fungi?	Marisângela Viana Barbosa
14:50 – 15:00	2839	ALELOPATIC EFFECT OF AQUEOUS EXTRACTS FROM PIG BEAN PLANTS ON THE MAMONE SEED GERMINATION	Janildes de Jesus da Silva
15:00 – 15:10	3097	Allelopathic extracts of Canavalia ensiformis in the Emergence of Ricinus communis L.	Andreza de Jesus Correia

Thursday (Aug, 16)		TOTEN 11	
C2.3.3		Rhizosphere mineral dynamics: soil-plant-microorganism	
Schedule	ID	Title	Presenter
13:30 – 13:40	2924	Allelopathy of aqueous extracts of <i>Canavalia ensiformis</i> on initial growth of <i>Ricinus communis</i> L.	Caliane da Silva Braulio
13:40 – 13:50	700	An analysis of nematode communities in three habitats invaded by <i>Fallopia japonica</i> .	Andrea Čerevková
13:50 – 14:00	2002	Arbuscular Mycorrhizal Fungal Diversity in Sugarcane Plantations under Different Management Systems	Rosalba Ortega Fors
14:00 – 14:10	3003	Arbuscular mycorrhizal fungi and rhizobium is important during Vinhático seedling production	Paulo Prates Júnior
14:10 – 14:20	2849	Arbuscular Mycorrhizal status of representative plant species growing in different ecoregions of the Atacama desert, Tarapacá region.	Pablo Cornejo
14:20 – 14:30	2245	Bacterial community assemblages associated with the phyllosphere, rhizosphere and leaf litter of <i>Amphyrrox longifolia</i> in the Amazon forest	Julio C. F. Moreira
14:30 – 14:40	1488	<i>Burkholderia</i> spp. strains promote the growth of common bean, cowpea, maize and brachiaria grass	Teotonio Soares de Carvalho
14:40 – 14:50	1797	CAS-Selected Metagenomics: Soil Microbial Mechanisms Involved in Grapevine Micronutrient Nutrition and Chlorosis	Lee Opdahl
14:50 – 15:00	2334	Characterization of rhizobacteria producing Exopolysaccharides (EPS) and Biofilm in sugarcane ( <i>Saccharum officinarum</i> L.).	Yamina Coentro Montaldo
15:00 – 15:10	2522	Co-inoculation of common bean with plant growth promoting microorganisms	Raysa Marques Cardoso

Thursday (Aug, 16)		TOTEN 12	
<b>C2.3.3</b>		Rhizosphere mineral dynamics: soil-plant-microorganism	
Schedule	ID	Title	Presenter
13:30 – 13:40	1402	Dark septate endophytic fungi as plant-growth-promoting	Peter Medeiros
13:40 – 13:50	2971	Edaphoclimatic effects on native rhizobial populations in a tropical semiarid zone, Brazil	Mario de Andrade Lira Junior
13:50 – 14:00	1700	Effect of indigenous and introduced arbuscular mycorrhizal fungi on growth of <i>Allium fistulosum</i> under field condition Effect of indigenous and introduced arbuscular mycorrhizal fungi on growth of <i>Allium fistulosum</i> under field condition	Keitaro Tawaraya
14:00 – 14:10	800	Effect of soybean inoculation and nitrogen fertilization on microbiological activity in a sandy soil	Guilherme Dias Batista
14:10 – 14:20	3029	Effects of different extracts and neem concentrations in microbiological activity and corn-mycorrhizal relationship cultivated in a soil of the "Sertão do Inhamuns" - Ceará, Brazil	Emanuel Dias Freitas
14:20 – 14:30	2510	Effects of inoculation on vegetative development of corn	Vinicius Leite
14:30 – 14:40	1279	Effects of wheat-white lupin intercropping on chemical and microbiological properties of soil related to N and P cycles	Ana Beatriz de Oliveira
14:40 – 14:50	2937	EFFICIENCY OF <i>Streptomyces</i> spp. IN GROWTH, NODULATION AND PRODUCTIVITY OF COWPEA BEANS	Albert Lennon Lima Martins
14:50 – 15:00	2609	Environmental Remediation Potential of Biological Nitrogen Fixation and Its Application	Ying Teng
15:00 – 15:10	2490	Evaluation of corn diameter in response to different inoculation treatments through Balanced Incomplete Block Design.	João Vitor Berner Pereira



Thursday (Aug, 16)		TOTEN 13	
C2.3.3		Rhizosphere mineral dynamics: soil-plant-microorganism	
Schedule	ID	Title	Presenter
13:30 – 13:40	3046	Examining the Influence of Wheat Genotype on Root Exudate Composition and Microbiome Recruitment	Tarah Sullivan
13:40 – 13:50	1110	Factors affecting the nematode community and microbial activity in the soil	Marek Ren?o
13:50 – 14:00	1196	From barley to maize: Exploiting the potential of genotype selection to optimize root-soil interactions	Lumbani Mwafulirwa
14:00 – 14:10	941	Growth of <i>Cymbopogon citratus</i> inoculated with arbuscular mycorrhizal fungi <i>Rhizophagus clarus</i> and <i>Claroideoglossum etunicatum</i> under phosphorus levels	Odair Alberton
14:10 – 14:20	676	Growth, nodulation and nutrient concentrations of lucerne in response to inoculation of arbuscular mycorrhizal fungus and rhizobium	Jianguo Huang
14:20 – 14:30	1991	Hydric stress resistant bacteria associated with Pitaya plants rhizosphere ( <i>Hylocereus undatus</i> )	E.L.D. SILVA
14:30 – 14:40	677	In vitro effect of berberine on soil nitrification	Ling Yuan
14:40 – 14:50	2332	Isolation and characterization of rhizobacteria solubilizers of inorganic phosphates in sugarcane ( <i>Saccharum officinarum</i> L.).	Crísea Cristina Nascimento de Cristo
14:50 – 15:00	2930	Legume-nodulating rhizobia are maize endophytes in Brazilian Semi-Arid	Paulo Ivan Fernandes-Júnior
15:00 – 15:10	435	Lima bean nodulates efficiently with Bradyrhizobium strains isolated from diverse legume species	Elaine Martins da Costa

Thursday (Aug, 16)		TOTEN 14	
C2.3.3		Rhizosphere mineral dynamics: soil-plant-microorganism	
Schedule	ID	Title	Presenter
13:30 – 13:40	1115	Microaerophilic iron-oxidizing bacterial community in the bulk soil and rhizosphere of paddy field	Takeshi Watanabe
13:40 – 13:50	3178	pH and extracellular flux of protons in hyphae of <i>Pisolithus albus</i> and <i>Pisolithus tinctorius</i> grown at different doses of solid particulate iron material	Isabelle Faria Matos
13:50 – 14:00	2268	Phosphate solubilization by fungi under saline stress	Laura Vieira Xavier
14:00 – 14:10	2135	PHOSPHATE-SOLUBILIZING BACTERIA ASSOCIATED WITH SOIL AND RHIZOSPHERE OF CASSAVA ( <i>MANIHOT ESCULENTA</i> ).	Erivaldo Lopes Isidio
14:10 – 14:20	1799	Phosphorus spatial distribution and speciation using low energy $\mu$ -XRF and $\mu$ -XANES in the rhizosphere of an artificial soil experiment	Luis Carlos Colocho Hurtarte
14:20 – 14:30	2411	Poor seed germination and seedling emergence of wet-direct seeded rice seeds are partly induced by several aromatic carboxylic acids produced in the submerged soil	Shinsuke Mori
14:30 – 14:40	1331	Soil carbon cycling enzymes in ectomycorrhizal fungi under heavy metal stress	Gilka Rocha Vasconcelos da Silva
14:40 – 14:50	698	Soil chemical changes after annual pasture species cultivated as mono- and intercrop and in response to phosphorus fertilization	Corina Carranca
14:50 – 15:00	926	Soil macrofauna in arboreal caatinga area managed at the southwest of Bahia	Priscila Silva Matos
15:00 – 15:10	1995	Solubilization of inorganic phosphate by the bacterium UAGF14 <i>Pseudomonas mosselli</i> under hydric stress, saline stress and different carbon sources.	J.M.M. Silva

Thursday (Aug, 16)		TOTEN 15	
<b>C2.3.3</b> <b>C2.4.1</b>		Rhizosphere mineral dynamics: soil-plant-microorganism Dynamic minerals: shifts in soil mineral composition as a result of soil use and management over the human time scale	
Schedule	ID	Title	Presenter
13:30 – 13:40	2676	Symbiotic capacity and plant growth promotion by bacteria isolated from nodules of Mimosa spp. in ultramafic soils	Fábio Bueno dos Reis Junior
13:40 – 13:50	2462	The Effects of Plant Growth-Promoting Bacteria (PGPB) on the Initial Development of Corn	Gustavo Benincá Rodrigues
13:50 – 14:00	1424	The influence of microbial diversity on maize rhizosphere to phosphorus disponibilization	Yasmin Florentino Rodrigues
14:00 – 14:10	1559	CHEMICAL AND MINERALOGICAL OF SOILS OF THE METROPOLITAN REGION OF MANAUS - AMAZONAS, BRAZIL	Matheus da Silva Ferreira
14:10 – 14:20	233	Contribution of amorphous materials in the cohesion of soils of the Barreiras Formation and correlates	Michele Ribeiro Ramos
14:20 – 14:30	792	Could 33 years of K fertilization deprivation alter phyllosilicates and K mineral reserve in the clay fraction of an Oxisol?	Ruan Francisco Firmano
14:30 – 14:40	2395	Description of the mineralogical profile of Oxisols of the Central Amazonia	Jose Zilton Lopes Santos
14:40 – 14:50	2273	Different types of treatment prior to the granulometric analysis of volcanic soils made it possible to determine a regular distribution with other soil properties according to altitude on the western slope of the tropical island of Réunion.	Feder
14:50 – 15:00	1665	Formation of hydroxy-interlayered minerals (HIMs) in integrated crop-livestock systems (ICLS)	Vanessa Thoma Bertolazi
15:00 – 15:10	896	Geotechnical characterization of Vertisols from Bahia State, Brazil	Igor Rodrigues de Assis

Thursday (Aug, 16)		TOTEN 16	
<b>C2.4.1</b> <b>C2.4.2</b>		Dynamic minerals: shifts in soil mineral composition as a result of soil use and management over the human time scale New techniques for advanced mineral studies	
Schedule	ID	Title	Presenter
13:30 – 13:40	1676	Physiological quality of the first sequeiro of sugarcane in the function of potassic fertilization	Frederico Simões Raimundo de Lima
13:40 – 13:50	2082	Potassium release from organic black shales used as remineralizers: effect of size fraction and acid extractors	Jacqueline Kochan Lepchak
13:50 – 14:00	2941	SOIL CHARACTERIZATION, CLASSIFICATION AND FORMATION ON SEDIMENTARY LITHOLOGY IN GRAVATAI MUNICIPALITY, RIO GRANDE DO SUL STATE.	Tatiana Finato
14:00 – 14:10	2958	Analysis of the mass attenuation coefficient in granulometric fractions of soils and their effects regarding the mineralogical properties of each fraction	Luis Valério Prandel
14:10 – 14:20	2945	Elemental release analysis of Polyhalite using micro X-ray fluorescence	Wilfrand Ferney Bejarano Herrera
14:20 – 14:30	1587	Hematite and goethite proportion in soils of Rio Grande do Sul, Brazil	Keyrauan Taha
14:30 – 14:40	2448	Iron oxide Nanoparticles in clay fraction of tropical soils from Peru: Study by X-ray diffractometry and Mössbauer spectroscopy	Mirian Mejia S.
14:40 – 14:50	2024	Magnetic susceptibility on study of Oxisol derived from sandstone in Brazilian Cerrado	Ronny Sobreira Barbosa
14:50 – 15:00	2113	XANES spectroscopy in the study of iron oxides of an Indian Black Earth, Amazonia - Brazil	Anderson Almeida Pacheco
15:00 – 15:10	2645	Impact of eucalyptus plantation on an Ultisol on chemical properties	Estéfane Chaves

Thursday (Aug, 16)		TOTEN 17	
<b>C2.4.3</b> <b>C2.5.1</b>		Influence of biological process in mineral formation Soil interfacial reactions and their control of biogeochemical cycles	
Schedule	ID	Title	Presenter
13:30 – 13:40	553	Crystal-chemical transformations and iron reduction in clay minerals of two Brazilian mangrove soils	Gabriel Ramatis Pugliese Andrade
13:40 – 13:50	726	Mineral-life interaction in the soil environment	Javier Cuadros
13:50 – 14:00	1804	Physical and mineralogical changes of the soil by the action of termites	Tatiele Fruett Dos Santos
14:00 – 14:10	2036	A molecular dynamic study of water molecule on mica surface under different surface electrical field strength	Qinyi Li
14:10 – 14:20	1101	An improved method to synthesize pure allophane	Yang Li
14:20 – 14:30	695	Application of biocomposites with Fe hydroxide and extremophilic red microalgae on Pb removal	Yu-Ting Liu
14:30 – 14:40	2420	Availability of phosphorus in Oxisols in function of incubation time and remaining phosphorus	Tainah Manuela Benlolo Barbosa
14:40 – 14:50	255	Can leguminous trees increase soil phosphorus availability? A link between the P and N cycles in tropical forests and agroforests of Brazil	Antonio Carlos Gama-Rodrigues
14:50 – 15:00	2897	Carbon contents in aggregates under black oat cultivation in the municipality of Nova Friburgo RJ	Douglath Alves Corrêa Fernandes
15:00 – 15:10	297	CO <sub>2</sub> efflux over a hill with different water contents due to heterogeneities in soil texture	Tiago de Carvalho Pessoa

Thursday (Aug, 16)		TOTEN 18	
C2.5.1		Soil interfacial reactions and their control of biogeochemical cycles	
Schedule	ID	Title	Presenter
13:30 – 13:40	769	Differences in surface elemental composition between intact and homogenized soil microaggregates reflect the specific location of elements	Susanne K. Woche
13:40 – 13:50	735	Diurnal variation in soil heterotrophic and total carbon dioxide emission	Jesus Rosario Mancilla Huashuayo
13:50 – 14:00	2008	Dynamics of greenhouse gas emissions during anaerobic soil disinfestation in vegetable soils	Kun Zhu
14:00 – 14:10	1575	Effect of long-term organic matter manipulation on soil biological activity in a temperate oak forest	Zsolt Kotroczó
14:10 – 14:20	407	Effect of soybeans inoculation and nitrogen fertilization on soil nitrogen content in a sandy soil	Carlos Felipe dos Santos Cordeiro
14:20 – 14:30	669	Effects of long-term fertilization on the pathways in N supply	Qiang Ma
14:30 – 14:40	261	Effects of rice cultivars on CH <sub>4</sub> emissions and their possible interaction with soil C availability	Weijian Zhang
14:40 – 14:50	1091	Formation and genesis of natural nanoparticles (NNPs) in flooding Pb-Zn mine tailing soil	Kengbo Ding
14:50 – 15:00	3093	Geomorphological control of carbon and nitrogen dynamics in agricultural areas in the Brazilian Central Plateau	Mateus de Alencar Ramos Fernandes
15:00 – 15:10	2995	How soil carbon and nutrient availability in an integrated crop-livestock-forest system are related?	Janaína de Moura Oliveira

Thursday (Aug, 16)		TOTEN 19	
C2.5.1		Soil interfacial reactions and their control of biogeochemical cycles	
Schedule	ID	Title	Presenter
13:30 – 13:40	703	INFLUENCE OF SOIL WATER-REPELLENCY ON CO2 FLUX UPON REWETTING	Carmen Sanchez-Garcia
13:40 – 13:50	1520	Iron dynamics in replanted mangrove forest (SE-Brazil): preliminary results	Gabriel Nuto Nóbrega
13:50 – 14:00	2029	Microscopic Mechanisms of Lead Retention on Thermoacidophilic Cyanidiales	Yen-Lin Cho
14:00 – 14:10	1515	Nitrogen availability to corn as a result of long-term use of organic sources and mineral nutrients	Carina Marchezan
14:10 – 14:20	2222	Nitrogen isoscapes along a climatic gradient in Alisols in the Northeastern Brazil	Fabio Luis de Souza Santos
14:20 – 14:30	572	Plant growth and plant nitrogen uptake effects on isotopic composition of nitrate leached from pasture systems.	Sephrah Rayner
14:30 – 14:40	2947	Podzolization processes of Yellow Latosols of tablelands conditioned by neotectonism	Claudia Csekö Nolasco de Carvalho
14:40 – 14:50	1012	Rare-earth-element geochemistry in soils developed in different geological settings of Cuba	Ygor Jacques Agra Bezerra da Silva
14:50 – 15:00	1620	RELATIONSHIP BETWEEN THE CONTENT OF STEVIOL GLYCOSIDES IN <i>Stevia rebaudiana</i> Bert., AND EDAPHOLOGIC OFFER OF FIVE REGIONS OF COLOMBIA	Enrique Combatt Caballero
15:00 – 15:10	3006	Residual effect of silicate fertilization and inoculation on the agronomic characteristics of wheat	Jessica Caroline Coppo

Thursday (Aug, 16)		TOTEN 20	
<b>C2.5.1</b>		Soil interfacial reactions and their control of biogeochemical cycles	
Schedule	ID	Title	Presenter
13:30 – 13:40	876	Response of stoichiometry Characteristics and microbial community to agricultural land use change around Taihu Lake Area in Southeast China	Yan Gao
13:40 – 13:50			
13:50 – 14:00			
14:00 – 14:10	238	Soil redox processes coupled dechlorination of pentachlorophenol in flooded condition	Yan He
14:10 – 14:20	190	Sorption kinetics, isotherm and mechanisms of PFOS on soils with different physicochemical properties	Xin Song
14:20 – 14:30	1491	The effect of humic substances on the trace elements toxicity	L.V. Perelomov
14:30 – 14:40	2240	Volatilization of N-fertilizer on sandy soil cultivated with sugarcane	Robson Hortêncio de Lima
14:40 – 14:50	2239	Weathering rates in soils originated from I- and S-type granites across a climosequence of Brazil	Rayanna Jacques Agra Bezerra da Silva
14:50 – 15:00	864	Modelling the potential mobility of heavy metals in red soil in Southern China	Mingxia Wang
15:00 – 15:10	2213	Removal of HCH from aqueous solutions and soils using plants and manure derived-biochars	Diego Aran



Thursday (Aug, 16)		TOTEN 21	
<b>C2.5.2</b>		Advances in techniques to investigate soil interfaces to understand interfacial reactions	
Schedule	ID	Title	Presenter
13:30 – 13:40	939	An assessment of near infrared (NIR) spectroscopy for soil organic matter prediction comparing different pre-processing and multivariate calibration techniques in Southern Brazil	Jacques Krticka Carvalho
13:40 – 13:50	1663	An optical approach to evaluate the effect of various salts on the sedimentation of clay-rich soil material	Attila Nemes
13:50 – 14:00	2318	Application of micronutrients and biostimulants in sugar cane in successive agricultural cycles	Bruno Bernardes de Souza
14:00 – 14:10	201	Assessing the SiO <sub>2</sub> , Al <sub>2</sub> O <sub>3</sub> , Fe <sub>2</sub> O <sub>3</sub> , P <sub>2</sub> O <sub>5</sub> and TiO <sub>2</sub> contents in Brazilian soils via portable X-ray fluorescence equipment	Bruno Teixeira Ribeiro
14:10 – 14:20	1557	Computer vision technology applied to soil analysis by digital image analysis based on colour	Victor J. Palencia
14:20 – 14:30	1869	Description of colloidal clay particles aggregation in the presence of Hofmeister effects: On the relationship of ion adsorption energy and particle aggregation activation energy	Yaxue Luo
14:30 – 14:40	1764	Description of intermolecular interactions of humic acids and low molecular weight organic compounds	Manuel S. Palencia
14:40 – 14:50	350	DRIVERS OF SPECIES DIVERSITY ON GRANITIC HIGHLANDS IN THE MATA ATLÂNTICA OF SOUTHEASTERN BRAZIL	Prímula Viana Campos
14:50 – 15:00	376	Estimation of clay content in Brazilian agricultural soils based on portable X-ray fluorescence data	Tatiane Melo Lima
15:00 – 15:10	1711	Estimation of the specific surface area in subtropical soils of Brazil	Alberto Vasconcellos Inda

Thursday (Aug, 16)		TOTEN 22	
<b>C2.5.2</b>		Advances in techniques to investigate soil interfaces to understand interfacial reactions	
Schedule	ID	Title	Presenter
13:30 – 13:40	2991	FDR sensor calibration for moisture determination in a dystrophic Yellow Latosol from the Savana of Roraima.	Matheus Gonçalves Paulichi
13:40 – 13:50	806	On-Farm Assessment of Soil Health in Kumamoto Japan	Toru Nakajima
13:50 – 14:00	653	Presence of straw in the soil sample increases soil P and MO concentrations	Jaqueline Pereira Machado de Oliveira
14:00 – 14:10	1246	Reasons for the slow emergence of soil meta-proteomics	Siobhan Staunton
14:10 – 14:20	2862	Root Volume by 2D images in soil with different levels of compaction with inoculation of Arbuscular Mycorrhizal Fungi	Raphael Henrique da Silva Siqueira
14:20 – 14:30	904	Soil amendment with ashes generated in wood processing plants - Effect on soil chemical properties	Viviana Falcón
14:30 – 14:40	2974	Soil biogeochemical reactions in controlled slash and burn in the western Amazon	Elizio Ferreira Frade Junior
14:40 – 14:50	652	Spatial distribution of roots in "patched" sodic soil	Milán Cecilia
14:50 – 15:00	1380	Surface energy characterization of an Andisol from souther Chile treated with biosolid.	Itilier Salazar
15:00 – 15:10	1778	The role of iron nanominerals in the preservation of soil organic matter under long-term fertilization	Yuchun Ai

Thursday (Aug, 16)		TOTEN 23	
<b>C2.5.2 WG09</b>		Advances in techniques to investigate soil interfaces to understand interfacial reactions Soil Modeling: Challenges and perspectives in soil modelling	
Schedule	ID	Title	Presenter
13:30 – 13:40	1739	Tolerance to and Accumulation of Cadmium, Copper, and Zinc by <i>Cupriavidus necator</i>	Rayssa Pereira Vicentin
13:40 – 13:50	2020	Transmission X-ray Microscopy (TXM) Reveals the Nonionic Surfactant Adsorption on Bentonite	Yu-Min Tzou
13:50 – 14:00	813	Using DRIFTS to investigate the dynamic effect of organic matter input on soil carbon functional groups	Zhaolong Zhu
14:00 – 14:10	2590	Lithological influence on K, Al concentrations and guano density of <i>Streptoprocane</i> species in quartzitic karst landscape	André Luiz Miranda Reis
14:10 – 14:20	991	The role of organic amendment and cropping system on improving physical and biological properties of a soil poor in quality for sustainable agro-ecosystem	Ardeshir Adeli
14:20 – 14:30	2321	CITRUS ROOT SYSTEM PREFERABLY USES THE MACROPORE SPACE TO EXPLORE COMPACTED SOIL	Mauricio Antônio Coelho Filho
14:30 – 14:40	1037	GEOCHRONOLOGY FOR EVALUATION OF STREAM PIRACY PROCESSES: APPLICATION IN SEDIMENTS OF DRY VALLEYS OF GUARATUBA (SP).	Deborah de Oliveira
14:40 – 14:50	3163	Mineral composition of cowpea ( <i>Vigna unguiculata</i> ) plants fertilized with bulk and nanoparticulated zinc oxides	Franklone Lima da Silva
14:50 – 15:00	1591	Formulation of a nutrient solution from the foliar response to cultivate pineapple (var. md-2) hydroponically considering fluctuations in the concentration of nutrients in solution	Ronald Alberto Chaves Corea
15:00 – 15:10	2646	Litter dynamic in different landscape compartments of the Brazilian Southern Amazon	Marco Antônio Camillo de Carvalho

Thursday (Aug, 16)		TOTEN 24	
WG09		Soil Modeling: Challenges and perspectives in soil modelling	
Schedule	ID	Title	Presenter
13:30 – 13:40	2103	LS-SVM data mining analysis: how does biochar influence soil net nitrogen mineralization in the field	Jianqiang Deng
13:40 – 13:50	2069	Machine learning applied to the mapping of mountain coffee from terrain attribute.	Raiza Moniz Faria
13:50 – 14:00	1736	Modeling Evapotranspiration and Crop Growth of Irrigated and Non-irrigated Corn under Warm Climate	Huihui Zhang
14:00 – 14:10	1706	Modelling soil respiration and net ecosystem exchange in agrolandscapes	Karelin D.V.
14:10 – 14:20	273	Redox potential and nitrous oxide emissions in response to flood irrigation with waste water in central Mexico	Blanca Gonzalez Mendez
14:20 – 14:30	1064	Simulating the effects of soil heterogeneity on grazing management strategies in semi-arid rangelands of the western North American Great Plains	Liwang Ma
14:30 – 14:40	2449	Soil Macroinvertebrates under a livestock system in an Oxisol of Colombian Eastern High Plains.	Lina Moreno
14:40 – 14:50	1692	The importance of the rhizospheric priming effect for Eucalyptus nitrogen nutrition in Brazil and Australia	Rafael Vasconcelos Valadares
14:50 – 15:00	2291	Variation of nematode population of soil in tomato crop with introduction of service crop ( <i>Sinapsis alba</i> L.).	Maria de los Ángeles Quinteros
15:00 – 15:10	908	Modeling for fertilization and liming for sugarcane in low fertility soils	Fábio Cesar da Silva

Thursday (Aug, 16)		TOTEN 25	
<b>WG09</b> <b>WG10</b>		Soil Modeling: Challenges and perspectives in soil modelling Hydropedology: Hydropedology and critical zone science: toward systems soil science	
Schedule	ID	Title	Presenter
13:30 – 13:40	913	Stolf-Scardua model for estimating soil water retention curve (WRC) by clay content	Rubismar Stolf
13:40 – 13:50	1276	Phosphorus contents as indicator of the chemical quality of a yellow red latosol under direct planting with npk, organomineral and bioactivator	Wilber Pereira Machado
13:50 – 14:00	796	Comparison of Physical Quality and Water Management of Substrates Mixtures and Soil Through the Least Limiting Water Range Index	Gabriel Garbanzo León
14:00 – 14:10	2755	Fostering a Global Alliance for Monitoring, Mapping, Modeling, and Managing the Earth's Critical Zone	Yunqiang Wang
14:10 – 14:20	1193	Optimizing and coupling the hillslope hydrological and biogeochemical simulations in stony soils	Qing Zhu
14:20 – 14:30	528	Significant Accumulation of Reactive Nitrogen in the Deep Red Soil Critical Zone	Huayong Wu
14:30 – 14:40	932	Soil Classification System based on Pore Space Structure	Marta V. Ottoni
14:40 – 14:50	2426	Soil water repellency influenced by two tillage systems and wheel track in a Mollisol of central Chile	Ángela Faúndez
14:50 – 15:00	1268	The resistance of soil to penetration as indicator of compaction in different classes of soil under the integration system for livestock and native wood	Gabriel Junqueira Pires
15:00 – 15:10			

## Division 3: Soil Use and Management

### Thursday, 16 August

Thursday (Aug, 16)		TOTEN 26	
<b>C3.3.10</b>		Beneficial management practices for sustaining soil fertility	
Schedule	ID	Title	Presenter
13:30 – 13:40	2852	Biosolid microbial stabilization for potential use as soil improver in Costa Rica.	Fabiola Segura
13:40 – 13:50	1305	Boron content as a function of N rates in Oxisol cultivated with coffee	Danilo Marcelo Aires dos Santos
13:50 – 14:00	3100	Carbon stock in fine roots of agroforestry-based oil palm production in eastern Amazon, Brazil	Saime Rodrigues
14:00 – 14:10	963	Changes in nutrient cycling processes due to the introduction of exotic species in Cerrado native areas	Jonas Inkotte
14:10 – 14:20	2348	Characterization of residual substratum originated by leaf cutting ants, used in the restoration of soils in Colombian tropical dry forest	Miguel Eugenio Cadena
14:20 – 14:30	1280	Characterization of soil fertility variables cocoa planting indifferent areas in the State of Bahia	Thainara Brenda Lameira das Neves
14:30 – 14:40	2495	Characterization of the structure and analysis of microbial diversity in soil exposed to long-term nitrogen fertilization under contrasting agricultural stubble situations	Mónica Boccolini
14:40 – 14:50	2145	Chemical and microbiological attributes in different areas of agriculture and fragment of native forest	Teresinha Esteves da Silveira Reis
14:50 – 15:00	680	Chemical attributes of an Oxisol submitted to management and organic fertilization in the system of crop-livestock integration in the western Amazon	Rodrigo Maciel Nunes
15:00 – 15:10	2296	Clay dispersion in a Ferralsol under raw sugarcane management system	Lucas Augusto de Assis Moraes

Thursday (Aug, 16)		TOTEN 27	
C3.3.10		Beneficial management practices for sustaining soil fertility	
Schedule	ID	Title	Presenter
13:30 – 13:40	1404	Colorimetric dosage of phosphorus by the phospho-molybdic complex reduced in extracts of Mehlich-3	Carlos Antonio da Fonseca
13:40 – 13:50	2900	Compositional analysis of cations and potential acidity of soil for Marandu palisadegrass fertilized with nitrogen sources	Elisângela Dupas
13:50 – 14:00	1034	Corn nutrition cultivated with organic and mineral fertilization	Eric Victor De Oliveira Ferreira
14:00 – 14:10	2063	Correction of soil acidity and nutrient availability in a Oxisol	Luis Felipe Rodrigues de Aquino Sousa
14:10 – 14:20	2051	Cover Crop Cocktails as N and P Source in the Brazilian Semiarid	Antonio Pereira Filho
14:20 – 14:30	2844	Cowpea: spacing and density of plants in cerrado soil.	Mauro Gomes dos Santos
14:30 – 14:40	723	Critical limits for microbial indicators in tropical clayey Oxisols: towards the FERTBIO soil sample concept	Ieda de Carvalho Mendes
14:40 – 14:50	1214	Development of new predictive models to estimate lime requirement of soils from Minas Gerais state, Brazil.	Víctor Hugo Alvarez V
14:50 – 15:00	829	Distribution of C and N in mineral-associated and particulate organic matter within aggregates in a calcareous silty clay loam soil under high-input agro-ecosystems	Xueping Wu
15:00 – 15:10	2428	Do biowastes change the essential oil quality and quantity?	S. Seyedalikhani

Thursday (Aug, 16)		TOTEN 28	
C3.3.10		Beneficial management practices for sustaining soil fertility	
Schedule	ID	Title	Presenter
13:30 – 13:40	262	Do Land Characteristics Affect Farmers' Soil Fertility Management?	Shuhao Tan
13:40 – 13:50	1206	Dynamics of nutrients in maize cultivation under application of various organic fertilizers with different C/N ratios.	R. Tamele
13:50 – 14:00	206	Dynamics of the decomposition of sugarcane straw in the function of different levels maintained on the surface of the soil	Zigomar Menezes de Souza
14:00 – 14:10	1008	Effect of different weed control methods on soil properties on a young teak stand in Costa Rica	Edwin A. Esquivel_Segura
14:10 – 14:20	275	Effect of glyphosate application on biological variables in soils with different agronomic practices	Sterren Maria Alejandra
14:20 – 14:30	3064	Effect of manganese in a transgenic maize crop in sandy and clay soils	Daniele Scudeletti
14:30 – 14:40	366	Effect of the application of olive mill waste on some chemical properties of a soil of the Southwest of Buenos Aires, Argentina.	Suñer Liliana
14:40 – 14:50	3018	Effect of the K-N application levels on two oil palm genotypes in nursery stage	Maria do Rosário Lobato Rodrigues
14:50 – 15:00	257	Effectiveness of a micronutrient delivery system fertilizer in jatropha plants is related to enhanced photosynthesis, gas exchange and biomass allocation	Alexandre Bosco de Oliveira
15:00 – 15:10	2328	Effects of the use of agricultural gypsum on the concentration of calcium, magnesium and aluminum in soils of southern Brazil.	Carla Fernanda Ferreira



Thursday (Aug, 16)		TOTEN 29	
C3.3.10		Beneficial management practices for sustaining soil fertility	
Schedule	ID	Title	Presenter
13:30 – 13:40	1042	Effects of Tillage and Crop Residue Management on Soil Organic Carbon Stock Under Four Different Soil Types in Sudan-Savanna of West Africa	Eeusha Nafi
13:40 – 13:50	1168	Efficiency of soil-applied 67Zn-enriched fertilisers in three consecutive crops	Edson M. Mattiello
13:50 – 14:00	3069	Emission of N <sub>2</sub> O from urine and feces of cattle grazing Brachiaria brizantha pasture fertilized with N or mixed with the forage legume Desmodium ovalifolium	Bruno José Rodrigues Alves
14:00 – 14:10	2496	Eucalyptus yields response to the conditioning of a tropical Brazilian Cerrado soil	Leonardus Vergütz
14:10 – 14:20	1122	Evaluation of coffee ground influence on the soil pH	Cleberon Tiago de Souza
14:20 – 14:30	2896	Evaluation of dispersant solutions for the determination of available phosphorus in Particule Size fractions in a Brazilian Sandy Soil	David Vilas Boas de Campos
14:30 – 14:40	1792	EVALUATION OF ORGANIC AND INORGANIC RESIDUES FOR ORGANIC PRODUCTION SYSTEMS AND SMALL PROPERTIES OF PARAGUAY	Carlos Leguizamón Rojas
14:40 – 14:50	2159	Evaluation of soil physical attributes in cover crops grown under fly ash applicatio	Matheus Antonio Arcego Filipin
14:50 – 15:00	1638	Experiences with oil palm ( <i>Elaeis guineensis</i> Jacq) biomass use at replanting	Floria Ramírez
15:00 – 15:10	2895	Forms of fertilizer application for coppice in <i>Eucalyptus urophylla</i>	Vitor Augusto Cordeiro Milagres

Thursday (Aug, 16)		TOTEN 30	
C3.3.10		Beneficial management practices for sustaining soil fertility	
Schedule	ID	Title	Presenter
13:30 – 13:40	1070	FORMS OF LIMESTONE APPLICATION FOR THE ELEVATION OF BASE SATURATION	Júnior Antônio Rodrigues Mello
13:40 – 13:50	2745	Growth and yield of sugarcane as function of soil preparation and liming rates in sandy soil in two consecutive seasons	Ariani Garcia
13:50 – 14:00	403	GROWTH OF PRE-SPROUTED SUGARCANE SEEDLINGS AS A FUNCTION OF ORGANOMINERAL COMPOST	Rodolfo Lizcano Toledo
14:00 – 14:10	1672	Growth, yield and quality of hydroponically-grown Pineapple plants supplied with different potassium sources	Esteban Loria-Solano
14:10 – 14:20	2804	Impact of conversion of land use on granulometric composition of soil in the Maranhense Amazon, Brazil	Maria Karoline de Carvalho Rodrigues de Sousa
14:20 – 14:30	782	Impact of potassium application on sown pastures and natural grassland in northern Uruguay	Maximiliano Cattani
14:30 – 14:40	3201	Increase of the production of potatoes ( <i>Solanum tuberosum</i> L.) in two localities of the Peruvian highlands by the application of nitrogen mixtures and humic acids	Edgardo Marcelino Alaluna Gutierrez
14:40 – 14:50	2953	Influence of agrominerals on chemical attributes of two soils of Rio Grande do Sul State, Brazil.	Milena Moreira Peres
14:50 – 15:00	2090	Influence of limestone and phosphogypsum on eucalypt productivity in Curvelo - MG	Rodrigo Nogueira de Sousa
15:00 – 15:10	2940	INITIAL GROWING OF <i>Acacia Mangium</i> IN SOIL CLASSES INCORPORATED WITH CARNAUBA STRAW ( <i>Copernicia prunifera</i> )	Brito, Ana Clecia Campos

Thursday (Aug, 16)		TOTEN 31	
C3.3.10		Beneficial management practices for sustaining soil fertility	
Schedule	ID	Title	Presenter
13:30 – 13:40	2893	Inorganic phosphorus in soil after four years of integrated systems of crop-livestock-forest	Gessica de Carvalho
13:40 – 13:50	2834	Integral use of pineapple plant residues for biorefinery and production of an organic soil amendment	Lidieth Uribe
13:50 – 14:00	2124	Labile Carbon in bauxite mined-soils under rehabilitation process with Eucalyptus spp. and Anadenanthera peregrina	Matheus Andrade Ferreira
14:00 – 14:10	812	Late application of potassium fertilizer to soybean: effects on yield and nitrogen concentration in grain	Monica M. Barbazan
14:10 – 14:20	235	Leaf litter decomposition in silvopastoral systems in Colombian Caribbean	Martínez-Atencia, Judith
14:20 – 14:30	544	Lignin and lignin / nitrogen ratio associated with arboreal-shrub components in an agroforestry system without semiarid.	Rafaela Batista Magalhães
14:30 – 14:40	2707	Long term impacts of integrated crop-livestock system with different grazing intensities and stocking methods on soil chemical attributes	Lucas Aquino Alves
14:40 – 14:50	487	Long-term organic amendments under a mediterranean climate: effects on soil pore shapes	Alcira Sunilda Valdez-Ibañez
14:50 – 15:00	1701	Microbial community changes in red latosol under swine liquid manure treatment	Deisi Navroski
15:00 – 15:10	1049	Milho inoculado com Azospirillum brasiliense cultivado sob culturas de cobertura e cinzas	Jonas Guerra

Thursday (Aug, 16)		TOTEN 32	
C3.3.10		Beneficial management practices for sustaining soil fertility	
Schedule	ID	Title	Presenter
13:30 – 13:40	2301	Multifunctional agroecosystems contributing for nutrients cycling in irrigated environments of the Brazilian semi-arid	Alessandra Monteiro Salviano
13:40 – 13:50	448	Nitrogen mobility, ammonia volatilization, and estimated leaching loss from long-term manure incorporation in red soil	Jing Huang
13:50 – 14:00	625	NUTRIENT ABSORPTION BY Capsicum annum L cv. TOPITO AND CUBANEL IN SANTA MARTA, COLOMBIA	Nelson Virgilio Piraneque Gambasica
14:00 – 14:10	1989	Nutrient accumulation and shoot dry matter production by cover crop species	Guiverson Ferreira Bueno
14:10 – 14:20	1418	Parameters of Soil fertility as function of soil tillage systems and liming in Sugarcane	Murilo de Campos
14:20 – 14:30	2226	Phosphorus efficiency and grain yield response of oat cultivars to soil-phosphorus levels.	Pedro Alexandre Varella Escosteguy
14:30 – 14:40	580	Phosphorus organic forms release in long term field experiment depending on maize fertilization and growing systems	Stanko Milić
14:40 – 14:50	2335	Potential reduction of fertilizer application in paddy soils: Nutrient reserve approach from soil mineralogical composition in Indonesia	Markus Anda
14:50 – 15:00	980	Production and quality of 'Syrah' grapes fertigated with nitrogen and potassium	Davi Jose Silva
15:00 – 15:10	489	Productivity and Dry Response of Eucalyptus and Its Relations with Soil Attributes in Brazil	Vinícius Evangelista Silva

Thursday (Aug, 16)		TOTEN 33	
C3.3.10		Beneficial management practices for sustaining soil fertility	
Schedule	ID	Title	Presenter
13:30 – 13:40	1714	Productivity and quality of watermelon fruits according to Potassium fertilization in Amazon	Wesley Santana Ferreira
13:40 – 13:50	1643	Productivity of summer crops due to organic or mineral fertilizers in ILP.	Paulo Hentz
13:50 – 14:00	378	Quantifying phosphorus loss in surface runoff from different crop-pasture rotations in Uruguay.	Barreto, Patricia
14:00 – 14:10	2668	Reduction of the active acidity of the soil due to the application of limestone doses based on different methods of recommendation	Rafael Felipe Ratke
14:10 – 14:20	1568	Reduction of the effects of water deficit on soybean and corn grain yield by the chemical improvement of the rooting layer	Marceli Piccin
14:20 – 14:30	2366	Revised soil survey by changing landuse in Korea	Byung Keun Hyun
14:30 – 14:40	2911	Second-crop corn responses to different residual potassium fertilizer management	Michel Esper Neto
14:40 – 14:50	1546	Shoot dry mass production of the sunflower crop under irrigation levels and potassium fertilization	Raphael Pereira França de Paula
14:50 – 15:00	3060	Short-term dynamics of exchangeable and nonexchangeable K pools in tropical soils under eucalypt	Naiara Fernanda de Souza
15:00 – 15:10	930	Shrub encroachment effects on key soil properties and restoring potential of Patagonian rangelands	Braian Vogel

Thursday (Aug, 16)		TOTEN 34	
C3.3.10		Beneficial management practices for sustaining soil fertility	
Schedule	ID	Title	Presenter
13:30 – 13:40	2207	Soil Chemical Attributes on the Function of Different Kinds of Limestone and Reaction Time	Catharina Bertollini Vassão
13:40 – 13:50	1466	Soil chemical attributes, nutrition and yield of corn and soybean as a function of the application of magnesium silicate	Luiz Gustavo Moretti
13:50 – 14:00	1123	Soil factors affecting sugarcane productivity in Kitadaito and Kume Islands, Okinawa, Japan.	Naoko Miyamaru
14:00 – 14:10	1733	Soil Fertility Survey in St. Vincent and the Grenadines	Renrick Williams
14:10 – 14:20	2037	Soil organic matter and productivity of boreal clay soils	Helena Soinne
14:20 – 14:30	265	Soil quality indicators in crop sequences with a high proportion of soybean: effects of cover crops inclusion and fertilization.	Benintende, Silvia
14:30 – 14:40	988	Sol Organic matter in a Integrated Crop-Livestock Integrated System in different grazing intensities in a subtropical Oxisol	Gabriel Furtado Garcia
14:40 – 14:50	756	Spatial distribution of soil chemical properties as affected by dairy effluent application system	Omar Casanova
14:50 – 15:00	1427	Spatial heterogeneity of tillage increases the resilience of the PLFA profile, but not the size, of the microbial community	Iain Dummett
15:00 – 15:10	737	Study on multi-scale simulation and scale effect of organic carbon in regional soil using a combination of variogram, spatial autocorrelation and multi-fractal methods	Zhang Shiwen

Thursday (Aug, 16)		TOTEN 35	
C3.3.10		Beneficial management practices for sustaining soil fertility	
Schedule	ID	Title	Presenter
13:30 – 13:40	1743	Sugarcane growth and yield as a function of deep soil tillage and liming rates in a clay soil	Gabriela Ferraz de Siqueira
13:40 – 13:50	462	Sugarcane roots growth as function of deep soil tillage and liming	Juliano Carlos Calonego
13:50 – 14:00	3044	The impact of quality and proportions of composting organic materials on the solubilisation of Kodjari phosphate rock in semi-arid West Africa	Elisee Ouedraogo
14:00 – 14:10	492	The soil potassium contents and form transformation under long-term fertilization in red soil	Huimin ZHANG
14:10 – 14:20	1083	Total and dissolved organic carbon in deep soil profiles following pasture conversion, New South Wales, Australia.	Rubeca Fancy
14:20 – 14:30	2425	Total organic carbon as an indicator of the impact of soil management in mountain agriculture in the region of Nova Friburgo, RJ	João Victor Almeida Arantes
14:30 – 14:40	1396	Use of biofertilizer associated to nitrogen-fixing bacteria on yield and yield components of soybean crop	Jaqueline Gaio Spricigo
14:40 – 14:50	3052	USE OF STEEL SLAG AS A LIMING MATERIAL ON SOIL PH AND MICROBIAL POPULATION IN AN ACIDIC SOIL OF THE CENTRAL ANDES OF PERU	Raquel Zea
14:50 – 15:00	1740	VARIABILITY SPATIAL-TEMPORAL OF POTASSIUM IN DIFFERENT LOWLANDS PRODUCTION SYSTEMS	Luciano Pinzon Brauwers
15:00 – 15:10	712	Water use efficiency on sunflower crop under irrigation levels and potassium doses in Oxisol	Luana Glaup Araujo Dourado

Thursday (Aug, 16)		TOTEN 36	
C3.3.10		Beneficial management practices for sustaining soil fertility	
Schedule	ID	Title	Presenter
13:30 – 13:40	1624	Whey as a source of nutrients for forage grasses	Anderson Romão dos Santos
13:40 – 13:50	1519	Boron release from different fertilizer sources in two soil types	Helio Antonio Wood Joris
13:50 – 14:00	2106	Crop residues amendments shaped the N transformation processes in soil during solarization	Chen Wang
14:00 – 14:10	1438	Evaluation of the composting of municipal biosolids with eucalyptus bark and sugarcane bagasse.	Marianne Fidalgo de Faria
14:10 – 14:20	1278	Percolate displacement and soil phosphorus content from the application of bovine livestock wastewater	Morais Carneiro dos Reis
14:20 – 14:30	1512	Spatial variability of fertility and productivity in a fertigated açai area in State of Pará	Graziele Rabelo Rodrigues
14:30 – 14:40	2917	Agroindustrial Residues to Improve Water Consumption and Productivity of Lolium perenne in a Sandy Soil	M. Cristina Diez
14:40 – 14:50	2180	Brachiaria substrate and subsoil for the production of teak seedlings	Leonardo Júnior de Oliveira Medeiros
14:50 – 15:00	2370	Determination of the degree of humification of organic matter in production systems by laser-induced fluorescence spectroscopy (LIFS)	Diego dos Santos Pereira
15:00 – 15:10	1735	ORGANIC AND INORGANIC PHOSPHORUS IN YELLOW LATOSOL UNDER CHRONOSEQUENCE OF CROPS UNDER NO-TILLAGE SYSTEM IN EASTERN AMAZON	Edilson Carvalho Brasil



Thursday (Aug, 16)		TOTEN 37	
C3.3.10 C3.3.11		Beneficial management practices for sustaining soil fertility Biochar for soil fertility management	
Schedule	ID	Title	Presenter
13:30 – 13:40	3025	Sugarcane straw decomposition as a function of quality and quantity of green tops and dry leaves associated with climate conditions	Lauren M. S. Menandro
13:40 – 13:50	1382	Spatial variability of teak leaf nutrition on a farm in the State of Pará	Jeane Oliveira da Silva
13:50 – 14:00	1207	Accumulation of macronutrients and dry mass in winter cover crops after application of forest biomass ash	Gabriela Naibo
14:00 – 14:10	1105	Adsorption isotherms for different kind of designer biochar.	Yuki Moriyama
14:10 – 14:20	923	Biochar and biochar-treated poultry litter compost can reduce greenhouse gas emissions and leaching of inorganic nitrogen from soils	Eunice Agyarko-Mintah
14:20 – 14:30	1877	Biochar impacts on earthworm and bacterial communities in two long-term field experiments in Finland	Jure Zrim
14:30 – 14:40	1469	Biochar improves productivity of degraded pasturelands in Brazil: environmental and socio-economic analysis	Agnieszka Latawiec
14:40 – 14:50	2119	Biochar preparation for returning nutrients to soil	Stella Cristiani Gonçalves Matoso
14:50 – 15:00	741	Characterization of biochars produced from different animal manures and crop straws	Qamar Sarfaraz
15:00 – 15:10	2827	Crop yield and greenhouse gas emissions from sugarcane systems in Brazil: effects from biochar amendment with organic fertilizers	Tatiana F. Rittl

Thursday (Aug, 16)		TOTEN 38	
C3.3.11		Biochar for soil fertility management	
Schedule	ID	Title	Presenter
13:30 – 13:40	1174	Does softwood biochar act as a long-term fertilizer in boreal conditions?	Subin Kalu
13:40 – 13:50	2509	Effect of biochar and phosphorus application on soil pH and phosphorus availability in a clay and sandy loam soil	Jude J.O Odhiambo
13:50 – 14:00	648	Effect of different biochar treatments on maize growth and foliar nutrient status: the good, the bad and the ugly	Eduardo Guimarães Couto
14:00 – 14:10	1144	Effect of the biochar and manure application on the soil carbon dioxide emission	Ginebra Aguilar, Milagros
14:10 – 14:20	2468	Effects of Biochar on Retention of Nutrients in a Tropical Sandy Loam Soil	Shih-Hao Jien
14:20 – 14:30	1725	Evaluation of soil fertility before and after two crops of black oats under fly ash application	Wilson Galli
14:30 – 14:40	845	Modelling of thermal properties of biochar amended soils	Boguslaw Usowicz
14:40 – 14:50	1076	Nitrogen Dynamic and Crop Production in an Ethiopian Nitosol Applied by Biochars and Anaerobic Digestion Effluents	Shinjiro Sato
14:50 – 15:00	1695	Nutrient content in the dry mass of <i>Avena strigosa</i> Schreb grown under fly ash doses.	Augusto Henrique Debiasi Orsatto
15:00 – 15:10	1884	Nutrient content in the grain of <i>Avena strigosa</i> Schreb grown under fly ash doses	Juliano Marcarini Bordin

Thursday (Aug, 16)		TOTEN 39	
<b>C3.3.11</b> <b>C3.3.12</b>		Biochar for soil fertility management Sustainable land management in rural basins belonging to the south cone of Latin America	
Schedule	ID	Title	Presenter
13:30 – 13:40	1090	Potential use of poultry litter derived hydrochar as soil amendment	Vlvian Mau
13:40 – 13:50	2110	Poultry Litter Biochar as an Alternative to Inorganic Phosphorus Fertilizer in a Year-Round Cropping System	Andressa M Freitas
13:50 – 14:00	1654	Sewage sludge biochar alters the microbiota involved in soil phosphorus cycling	Cícero Célio de Figueiredo
14:00 – 14:10	1932	Soil Water Retention and Plant Available Water in a Mexican Clayey Soil Applied with Designer Biochars Treated with Peroxide and Montmorillonite	Marcelo Takeda Ono
14:10 – 14:20	472	Spatial correlation of chemical attributes of soil in black earth area of archaeological in the south of Amazon	Sabrina Isabela da Silva Fernandes
14:20 – 14:30	2400	The effect of biochar in Atlantic Forest Seedlings: environmental and socio-economic analysis	Aline Rodrigues
14:30 – 14:40	1645	The effect of using waste water treatment residual from pulp and paper industry on soil pH	Cristiane Pain
14:40 – 14:50	1832	Using Phosphorus Rich Biochar to Immobilise Pb in an Urban Contaminated Soil	Jorge Paz-Ferreiro
14:50 – 15:00	1933	Biochar application shaped the distribution of native soil organic carbon accumulation in soil aggregates in a long-term wheat-maize cropping system	zhangzhengcheng
15:00 – 15:10	2439	Can we intensify rice-pastures rotations in Uruguay? Midterm impacts on soil organic matter.	Ignacio Macedo

Thursday (Aug, 16)		TOTEN 40	
<b>C3.3.12</b>		Sustainable land management in rural basins belonging to the south cone of Latin America	
Schedule	ID	Title	Presenter
13:30 – 13:40	2436	Carbon stocks in Caatinga forest soils under cutting management in a chronosequence	Fernando José Freire
13:40 – 13:50	571	CHEMICAL ATTRIBUTES OF THE SOIL IN THE PASSOVER / POULTRY / FOREST TRANSITION ON THE TRANSAMAZONIC ROAD IN THE SOUTH OF THE AMAZONAS	Alicia Rebeca de Souza Santos
13:50 – 14:00	3020	Comparative hydrology in paired watersheds with different soil uses in Southern Brazil	Mayara Torres Mendonça
14:00 – 14:10	2374	Delineating homogeneous management zones according soil fertility - Case study in a watershed in São Paulo, Brazil	Rafael Lacerda Cobra
14:10 – 14:20	1358	Evaluation of the impact caused by the urban and industrial development to the natural soil resource in the Cienfuegos municipality.	M Sc Ing. Yodani López Fonseca
14:20 – 14:30	3043	Hydrological components in small watersheds with eucalyptus and grasslands: monitoring and SWAT modeling	Miriam Fernanda Rodrigues
14:30 – 14:40	1377	Land systematization for soil and ecosystem services conservation. A Watershed level approach	José Daniel Oszust
14:40 – 14:50	504	Land use systems: the effect of cryptofauna on stubble decomposition	Cassani Mariano Tomás
14:50 – 15:00	1018	Patterns in time and depth of soil water contents at some soil conservation practices. Mediterranean and arid zone of Chile.	Manuel Casanova
15:00 – 15:10	1472	Rate of reaction and neutralization of two calcareous byproducts in acid soils under different productive systems	Maria Paula Codina

Thursday (Aug, 16)		TOTEN 41	
<b>C3.3.12</b> <b>C3.5.4</b> <b>C3.6.4</b>		Sustainable land management in rural basins belonging to the south cone of Latin America Greenhouse gases emissions associated with fertilizer use Impact of land use change on soil and the environment in dry regions	
Schedule	ID	Title	Presenter
13:30 – 13:40	594	Responses of water resources to land and soil management in a tropical small watershed under a Payment for Environmental Services public policy	Ricardo de Oliveira Figueiredo
13:40 – 13:50	569	SPACE VARIABILITY OF CHEMICAL ATTRIBUTES OF THE SOIL WITH CUPUAÇU CULTIVATION ( Theobroma grandiflorum) IN SOUTH OF AMAZONAS	Carlos Henrique Gima Relvas
13:50 – 14:00	2983	Assessing the impact of vermicomposting on bacterial community size and structure, and antibiotic resistance attenuation	Lorena Uribe-Lorío
14:00 – 14:10	554	Root-uptake and dissipation of selected pharmaceuticals in soil-water-plant system	Radka Kodesova
14:10 – 14:20	3032	Veterinary Pharmaceutical Adsorption on Soils Amended with Biochar	Gonzalo Tapia Ulloa
14:20 – 14:30	1661	Behavior of chlorpyrifos insecticide on two tropical soils	Rafael Marques Pereira Leal
14:30 – 14:40	1652	Sorption, desorption and mineralization of atrazine in different tropical soils	Murilo Martins Bernardino
14:40 – 14:50	1850	Methodological limits for characterizing the hydrostructural behavior of a saline clayey soil (Kairouan region, Central Tunisia)	MONTOROI Jean-Pierre
14:50 – 15:00	1761	Sediment yield scenarios and water demands of the Bocaina dam, Brazil	Margarita M. López-Gil
15:00 – 15:10	2247	Spatial and temporal analysis of land use and soil occupation in a small town in the NEB	Luciana Mayla de Aquino França

Thursday (Aug, 16)		TOTEN 42	
<b>C3.5.2</b>		Native metallophytes from mine spoils as a potential source for phytoremediation	
Schedule	ID	Title	Presenter
13:30 – 13:40	1334	Accumulation of heavy metals in metalliferous soils of the North Caucasus and Brassicaceae species in connection with the reclamation of soils	Jaume Bech
13:40 – 13:50	375	Arsenic, copper and zinc in the organic tissues and in the silica phytoliths of <i>Setaria vulpiseta</i> growing on a contaminated soil of in a gold mining area	Mariana Ferreira Rabelo Fernandes
13:50 – 14:00	513	Earthworms and arbuscular mycorrhizal fungi on the growth of <i>Canavalia ensiformis</i> in sandy soil contaminated with copper	Natielo Almeida Santana
14:00 – 14:10	2967	Effects of biochar on copper bioavailability and soil microbial communities in a metal-contaminated soils using metallophytes and agricultural plants	Sebastian Meier
14:10 – 14:20	1140	Geochemical distribution of trace metals in urban soils of Hualpen, Chile.	Pedro Tume
14:20 – 14:30	801	Growth and potential for phytoremediation of native grasses of South American grasslands grown in copper-contaminated soils.	Lessandro De Conti
14:30 – 14:40	363	Performance of resistant-rhizobacteria bioaugmentation-assisted phytoextraction by grasses applied in multi-metal(loid) contaminated soils	Cácio Luiz Boechat
14:40 – 14:50	1435	Selection of native tree species for the phytoremediation of copper-polluted soils under tropical climate	Verónica Asensio
14:50 – 15:00	1352	Selection of winter cover crops for copper phytoremediation	Helena Wichneski Trombeta
15:00 – 15:10	2176	Mine soil rehabilitation after hydrophilic polyacrylate polymers application and growth cycles with different autochthonous plant species	Erika S. Santos

Thursday (Aug, 16)		TOTEN 43	
C3.5.3		Frontier of soil quality evaluation after remediation of contaminated field	
Schedule	ID	Title	Presenter
13:30 – 13:40	738	Attenuation of lead accumulation in rice grains with iron amendment on paddy soil and related to iron oxides formation in rhizosphere	Kai-Wei Juang
13:40 – 13:50	2957	Can fungi and bacteria counting be used as an indicator of soil recovery?	Thaís Soto Boni
13:50 – 14:00	1517	Edafic mesofauna in constructed minesoil under different perennial grasses	Eloy Antonio Pauletto
14:00 – 14:10	805	EFFECT OF THE INCORPORATION OF CU AND FE NANOPARTICLES IN THE AVAILABILITY OF CADMIUM IN AGRICULTURAL SOIL	jonathan suazo
14:10 – 14:20	1611	Identification and classification of strong and severe soil degradation in Capão do Leão municipality, Rio Grande do Sul State, Brazil	Luiz Fernando Spinelli Pinto
14:20 – 14:30	793	In Situ Field-Scale Immobilization of Lightly-moderately Cadmium-Contaminated Paddy Soil Using Soil Amendments	Jiachun Shi
14:30 – 14:40	1715	Mycorrhizal spores distribution in soil under ecological restoration systems of Atlantic Forest in Paraná State, Brazil	Carlos Alberto Casali
14:40 – 14:50	485	Optimization of Pollution Induced Community Tolerance (PICT) method for evaluation of soil pollution by heavy metals.	David Fernández Calviño
14:50 – 15:00	1603	Quality Reference Values (QRVs) of metals in soils of Alagoas State, Brazil.	Adriano Barboza Moura
15:00 – 15:10	621	Revegetation of saline tailings contaminated with arsenic from gold mining	Lorena Abdalla de Oliveira Prata Guimarães

Thursday (Aug, 16)		TOTEN 44	
<b>C3.6.3</b> <b>WG11</b>		Salinity management and remediation of salt-affected soils Land Degradation: Restoring degraded lands through soil carbon management	
Schedule	ID	Title	Presenter
13:30 – 13:40	646	Agricultural gypsum as material to improve physicochemical conditions of soils with excess sodium	Johana Ballesterro
13:40 – 13:50	807	Analysis on cultivated land low-carbon management countermeasure under World City Construction	Zhao Yongzhi
13:50 – 14:00	1253	Effects of Biochar and Wood Vinegar on Saline Soil Physical and Chemical Properties and Maize Yield	Zhongyi Qu
14:00 – 14:10	3041	Excessive use of potassium chloride in the banana cultivation: impacts on the vegetative development of the crop	Michele Xavier Vieira Megda
14:10 – 14:20	740	Exploring the impact of polyhalite application on soil sodium	Lino Furia
14:20 – 14:30	1283	Influence of Soil ESP and Salinity on Soil Atterberg Limits and Shrinkage	Hans Klopp
14:30 – 14:40	420	Temporal-spatial features of soil salinity in coastal soil of East China over 3 years	Jianbin LAI
14:40 – 14:50	3219	PHYSI-CHEMICAL AND MICROBIAL PROPERTIES OF COASTAL SOILS WITH DIFFERENT SALINITY CLASSES UNDER NATURAL CONDITIONS IN JIANGSU, CHINA	Liu Guangming
14:50 – 15:00	2571	Short-term effects of loosening and incorporation of straw into the upper subsoil on soil physical properties and crop yield	Gizachew Tarekegn Getahun
15:00 – 15:10			



Thursday (Aug, 16)		TOTEN 45	
WG11		Land Degradation: Restoring degraded lands through soil carbon management	
Schedule	ID	Title	Presenter
13:30 – 13:40	2267	CALCIUM AND MAGNESIUM CONTENTS ACCUMULATED IN DIFFERENT SOIL USES IN THE MUNICIPALITY OF PINDARÉ MIRIM, MARANHÃO, BRAZIL	Elimilton Pereira Brasil
13:40 – 13:50	1324	Carbon stock of an Oxisol under conventional management in chronosequence in the cerrado Northeastern	Leovânio Rodrigues Barbosa
13:50 – 14:00	631	Dry matter yield and soil physical properties after growing cover crops in winter	Edleusa Pereira Seidel
14:00 – 14:10	2545	Including winter service crops for forage production and soil organic carbon buildup in soybean rotations	Eclesia Roxana Paola
14:10 – 14:20	3189	ORGANIC MATTER HUMIFIED AS A PHYTOSTIMULANT OF <i>Brachiaria decumbens</i> : EFFECT ON THE METABOLIC PROFILE OF THE MICROBIAL COMMUNITY RIZOSFERICA Field experiment	Lady Karina Aparicio Sánchez
14:20 – 14:30	2523	PARTICULATE ORGANIC CARBON IN AGROSYSTEMS IN THE BRAZILIAN SEMIARID	Mônica da Silva Santana
14:30 – 14:40	3144	PHOSPHORUS AND POTASSIUM CONTENTS IN THE SOIL OF AN AGROFORESTRY SYSTEM, DEFORESTED AND FALLOW AREA, AND UNDER NATIVE VEGETATION	Julian Junio de J. Lacerda
14:40 – 14:50	2673	Proctor test with undisturbed samples and its relation with the structural quality in a Mollisol	Evelyn Henríquez Aravena
14:50 – 15:00	1949	SOIL ORGANIC CARBON RECOVERY AND COFFEE GRAIN YIELD FOLLOWING BAUXITE MINING	Luís Fernando Januário Almeida
15:00 – 15:10	1249	$\beta$ -Glucosidase and total organic carbon as indicators of the erosion stabilization process of gullies in ?Mar de Morros? environment, Rio de Janeiro, Brazil	Cristiane Figueira da silva

Thursday (Aug, 16)		TOTEN 46	
<b>WG12</b> <b>WG13</b> <b>WG14</b>		Paddy Soils: Mitigating GHG emission and enhancing productivity in rice-based systems	
		SUITMA: Soils of Urban, Industrial, Traffic, Mining and Military Areas	
		Acid Sulfate soils: Acid sulfate soils: processes, assessment and management	
Schedule	ID	Title	Presenter
13:30 – 13:40	1451	Effects of cover crops on soil organic matter fractions under no-tillage systems in the Cerrado	Arminda Moreira de Carvalho
13:40 – 13:50	1795	Four-year impact of the adoption of different integrated crop-livestock systems on the chemical attributes of a lowland soil	Luiz Gustavo de Oliveira Denardin
13:50 – 14:00	1238	The impact of nitrogen fertilizer management on nitrous oxide and ammonia emission in an irrigated rice crop system in the Brazilian Savannah	Beata Eموke Madari
14:00 – 14:10	482	Cropping systems and conservation tillage impacts on soil health and functionality in a rice ecosystem	Mohammad Mofizur Rahman Jahangir
14:10 – 14:20	1126	Determination of the potential acidity of a drained peat bog in the Catalan Pyrenees.	A. Catalán
14:20 – 14:30	1851	Quantification of metals and acidity leached from coarse-grained acid sulfate soil materials in western Finland	Stefan Mattbäck
14:30 – 14:40	1341	Sulfur gas analysis as a potential identification method for acid sulfate soils	Moa Sunabacka
14:40 – 14:50	1350	Temperature sensitivity of microbial greenhouse gas production in a boreal organic acid sulphate soil with a black schist derived subsoil	Asko Simojoki
14:50 – 15:00	522	Study on Soil Quality Changes of In-Situ Leaching Rare Earth Tailings Before and After Reclamation in south, China	Qin Zhang
15:00 – 15:10	1552	The 20th years IUSS WG Urban Soils/Soils of Urban, Industrial, Traffic, Mining and Military Areas (US/SUITMA) anniversary: from its foundation to today	Wolfgang Burghardt

Thursday (Aug, 16)		TOTEN 47	
WG13		SUITMA: Soils of Urban, Industrial, Traffic, Mining and Military Areas	
Schedule	ID	Title	Presenter
13:30 – 13:40	2871	Agromining for the recovery of nickel from contaminated and anthropized soils	Marie-Odile SIMONNOT
13:40 – 13:50	1894	Characterization and classification of the soils used for urban agriculture in Seoul and its vicinity through soil profile description	Kye-Hoon Kim
13:50 – 14:00	614	Direct-push techniques applied to high-resolution lithostratigraphic characterization of a brownfield site in alluvial environment	Leandro Gomes de Freitas
14:00 – 14:10	693	Estimating Bioaccessible Pb and As in Urban Soils: Application of Vis-NIR Diffuse Reflectance Spectroscopy	Anna Paltseva
14:10 – 14:20	460	Phytoextraction of lead, cadmium, chrome and nickel in contaminated soil of the Santo Amaro de Purificação municipality - BA	Romualdo de Almeida
14:20 – 14:30	302	PHYTOREMEDIATION OF SOIL CONTAMINATED WITH RESIDUES OF CIVIL OF CONSTRUCTION (RCC)	Herika Karine Silva Gonçalves
14:30 – 14:40	1417	Rehabilitation of iron ore mine lands in the Southeastern Amazon: Enhancement of soil properties, plant establishment, and revegetation assessment	Silvio Ramos
14:40 – 14:50	814	Remediation of mining affected soil by a two-step process: washing with ferric chloride and amending with lime and organic matter: field experiments	Qi-Tang Wu
14:50 – 15:00	1972	Soils functions affected by urban use in Santa Maria, Brazil.	Jéssica Rafaela da Costa
15:00 – 15:10	3138	Source identification of heavy metals in farmland soil surrounding Huludao Zinc Plant in northeastern China	Yanhong Wang

Thursday (Aug, 16)		TOTEN 54 – EXTRA Division 3	
<b>C3.3.10</b> <b>C3.6.3</b>		Beneficial management practices for sustaining soil fertility Salinity management and remediation of salt-affected soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	884	Phosphorus fractions of Southern Chilean soils according to their genetic evolution	Dante Pinochet
13:40 – 13:50	304	Sodic-saline soil spatial variability characteristics and precision reclamation using farmland scale-based approach	Qiang Zhang
13:50 – 14:00			
14:00 – 14:10			
14:10 – 14:20			
14:20 – 14:30			
14:30 – 14:40			
14:40 – 14:50			
14:50 – 15:00			
15:00 – 15:10			

Tuesday (Aug, 14)		TOTEN 55 – EXTRA Division 4	
<b>C4.1.1</b>		Soil ecosystem services	
<b>C4.1.2</b>		Climate change and adaptation of soil functions	
<b>C4.4.1</b>		Soil science education in the 21st century	
<b>C4.4.2</b>		Soil education and public perception of soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	3101	Deep Soil Carbon in the Critical Zone: climatic controls on the amount and turnover of carbon in weathered bedrock	Kimber Candice Moreland
13:40 – 13:50	2567	Soil sampling and spatial statistics - a multi-level education experience	Guido Lorenz
13:50 – 14:00	3002	Comprehensiveness in the forms of soil perception through educational institutions, traditional peoples and family agriculture in certain regions of Mato Grosso, Brazil.	Willian Marques Duarte
14:00 – 14:10	1754	Physical and water attributes of the soil and the water production of in hydrographic basin	Hudson Carlos Lissoni Leonardo
14:10 – 14:20			
14:20 – 14:30			
14:30 – 14:40			
14:40 – 14:50			
14:50 – 15:00			
15:00 – 15:10			

## Division 4: The Role of Soils in Sustaining Society and the Environment

### Thursday, 16 August

Thursday (Aug, 16)		TOTEN 48	
<b>C4.3.1</b>		Ecological soil management systems and soil quality	
Schedule	ID	Title	Presenter
13:30 – 13:40	2846	CARBON AND NITROGEN SOIL IN DIFFERENT MANAGEMENT OF LONG TERM PASTURES IN THE REGION OF MATA ATLANTICA - BRAZIL	Mirelly Mioranza
13:40 – 13:50	1763	Carbon stock in a sandy soil of the southwestern Amazonia	Falberni de Souza Costa
13:50 – 14:00	2705	CHEMICAL COMPOSITION DIFFERENCES OF MOUNTAIN SOIL AT NATURAL REGENERATION AREAS (NOVA FRIBURGO-RJ)	Ricardo Finotti Leite
14:00 – 14:10	3067	Comparison of soil carbon stock in conventional and organic palm plantation in northeast Amazon	Ariane Flexa de Castro
14:10 – 14:20	894	Ecological farming - soil awareness in praxis	Houřková Beata
14:20 – 14:30	732	Effect of rangeland management on soil properties in South Africa	Elmarie Kotzé
14:30 – 14:40	1231	Epiedafic fauna in a long-term integrated crop-livestock system at different grazing intensiti	Daiane Dalla Nora
14:40 – 14:50	1290	Evaluation of Microbial Activity in Soil under Different Management Methods, with Addition of Organic Material with Deep or Conventional Amendment	Juliana Zucolotto
14:50 – 15:00	2586	Evaluation of substrates and temperatures for germination of <i>Dalbergia nigra</i> (Vell.) Fr. All.	Adriano Alves Fernandes
15:00 – 15:10	2650	Litterfall production and nutrient cycling on Caatinga woody leguminous.	Anacláudia Alves Primo

Thursday (Aug, 16)		TOTEN 49	
C4.3.1		Ecological soil management systems and soil quality	
Schedule	ID	Title	Presenter
13:30 – 13:40	684	Measuring changes in soil carbon stocks in western Japan as influenced by land conversions from forest land to cropland	Nobuhisa Koga
13:40 – 13:50	2140	Monitoring restoration success of soil's quality in forested ecosystems: A global meta-analysis	Adriana Allek Litaiff
13:50 – 14:00	3168	Soil CO <sub>2</sub> efflux in systems conventional and agroforestry-based oil palm production in eastern Amazon, Brazil.	Alessa Nayhara Mendanha Costa
14:00 – 14:10	312	Soil compaction by livestock in selected communally grazed semi-arid savanna rangelands of South Africa	Simeon Materechera
14:10 – 14:20	2100	Soil organic carbon labile fractions as indicator to manage tropical soils with different land use systems of the Peruvian Amazon	Ceila Lao
14:20 – 14:30	2554	Soil quality index, a tool for monitoring and conservation of Chilean sclerophyll forest	Martínez-Herrera, E.
14:30 – 14:40	1617	Soil quality index: evaluating reclamation of bauxite mined-soils under coffee cultivation	Rafael Silva Santos
14:40 – 14:50	3049	Technique of Restoration of Degraded Soils by Extractive Activities in the Peruvian Jungle	Gladys López
14:50 – 15:00	2122	Review of existing knowledge on soil crusting in South Africa with an appraisal of some specific case studies and possible solutions	G.P. Nortje
15:00 – 15:10			

Thursday (Aug, 16)		TOTEN 50	
C4.3.2 C4.4.1		Assessment and inventory of land use change under the SDG's perspective Soil science education in the 21st century	
Schedule	ID	Title	Presenter
13:30 – 13:40	725	CARBON STORAGE DYNAMICS IN SUGARCANE, PASTURES, EUCALYPTUS, COFFEE AND CITRUS IN THE MOGI GUAÇU AND PARDO WATERSHEDS, SOUTHERN BRAZIL	Carlos Cesar Ronquim
13:40 – 13:50	976	Land use change in the farm settlement Umari, Lábrea, in the period of 1996 to 2011	Mariano Vieira dos Santos
13:50 – 14:00	3176	Soil, Agricultural Suitability and Use at Rural Properties in the State of Mato Grosso.	Angelo Mansur Mendes
14:00 – 14:10	986	An Ecuadorian case study on the relationship between student's learning styles and academic performance in soil science	Pablo Quichimbo
14:10 – 14:20	2354	Digital 3d elevation model and augmented reality in the study of the soil/landscape relationship in Roraima, northern Amazonia.	Marcelle A. Urquiza
14:20 – 14:30	3066	Knowledge building in undergraduate soil course: alternative methodologies during the teaching-learning process	Caroline Jardim da Silva Lisboa
14:30 – 14:40	1143	Soil Expert Systems need On Ground Extension Experience	Lawrie R A
14:40 – 14:50	341	Soil Science education in the 21st century to generate conscience and to accomplish the sustainable development goals, and arrive to the XXII century.	Reyes-Sánchez Laura Bertha
14:50 – 15:00	1684	Digital game in soil education	Josiane Pacheco Menezes
15:00 – 15:10			



Thursday (Aug, 16))		TOTEN 51	
C4.4.2		Soil education and public perception of soils	
Schedule	ID	Title	Presenter
13:30 – 13:40	2691	Soils and environment: Conception of students from a rural and an urban school	Viviane Terezinha Sebalhos DalMolin
13:40 – 13:50	2687	Perception regarding the importance of soil by middle and high school students from public schools in Northeastern Brazil	Carolina Malala Martins Souza
13:50 – 14:00	2043	Demonstration of the magnetic characteristic of Perferric Rhodic Oxisols for educational purposes	Clarice de Oliveira
14:00 – 14:10	3072	Evaluation of geography and agronomy students on pet didactic materials presented in the science of the earth office of pet solos	Amanda Dias dos Reis
14:10 – 14:20	3055	Evaluation of the level of knowledge in pedology of the concluding students of the agronomy degree of the state university of Santa Cruz	Máira do Carmo Neves
14:20 – 14:30	2997	Soil Education in Northeastern Brazil, “Maciço de Baturité” Region: instruments and awareness	Susana Churka Blum
14:30 – 14:40	596	Soil in Environmental Education and the implementation of sustainable practices in Public Education of Belém, Pará.	Regilene Angélica da Silva Souza
14:40 – 14:50	3051	Survey on teaching, research and extension activities performed by pet solo between the years of 2011 and 2017	Aline Roma Tomaz
14:50 – 15:00	2486	The soil in an interdisciplinary approach through chemistry teacher training	Ednalva Dantas Rodrigues da Silva Duarte
15:00 – 15:10	369	Utilization non-formal education for the teaching-learning process of soil in the Manaus metropolitan region	Jean Dalmo de Oliveira Marques

Thursday (Aug, 16)		TOTEN 52	
<b>C4.4.3</b> <b>WG16</b>		Placement and accreditation of soil science in the workforce related to natural resources Cultural Patterns of Soil Understanding B: Dialogues between traditional and scientific knowledge	
Schedule	ID	Title	Presenter
13:30 – 13:40	3229	Maanaim environmental: environmental education in practice.	João Luiz Lani
13:40 – 13:50	1718	Reflections on the Gender Distribution and Parity of U.S. Soil Scientists	Chelsea Duball
13:50 – 14:00	3199	Regional Cooperation and Soil Awareness Raising for Sustainable Soil Management in Alps - the EU Interreg Links4Soils Project	Borut Vrščaj
14:00 – 14:10	2740	Contrasting female and male farmers- perceptions on soil ecosystem services	Angélica da Silva Lopes
14:10 – 14:20	2562	Green and black landscapes: participatory environmental stratification and local soil knowledge in a quilombola community	Lucas Teixeira Ferrari
14:20 – 14:30	437	Land use and soil management: The genuine decision-maker and challenges of public policies in Brazil	Juliana Silva de Souza
14:30 – 14:40			
14:40 – 14:50			
14:50 – 15:00			
15:00 – 15:10			

## Satellite Symposia

---

**Tuesday, 14 August**

**ST1** Research in Germany – Lunch Session

Convener: Maxi Neidhardt (DFG/LA)

12:30 – 14:00 / Room: Oceania VI to X

## PARALLEL ACTIVITIES

---

### Soil & Art

#### Art exhibitions:

a) Paintings using soil (portraits of soil scientists, rural landscapes, etc)

Artist: Albano Rodrigues de Oliveira

08:00 – 18:00 / Room: Europa I

b) Pen drawing (bust drawings of Brazilian Soil Science founders)

Artist: Mirian Deniz Machado

08:00 – 18:00 / Space: staircase to the second floor

c) Handicrafts made of soil and recycled materials

Artist: Claudio Lucas Capeche

08:00 – 18:00 / Room: Europa I

d) Soil painting workshop (making paint from soil and painting)

Assistants: Albano Rodrigues de Oliveira and Gilberto Silva Rocha

08:00 – 18:00 / Room: Europa I

e) Creating a World Soils Mural (world soils map to be painted by participants)

Assistants: Brazilian Soil Museum (UFRGS)

08:00 – 18:00 / Space: staircase at the second floor

### ExpoSoil

a) Soil monoliths (3D view of Brazilian soils)

Exhibitor: Embrapa Soils /BR

08:00 – 18:00 / Room: Europa I

b) Brazilian Soil Museum (collections: soil monoliths, rock and mineral display samples, soil colors, soil structures, soils from other countries, soil magnets etc)

Exhibitor: UFRRJ / BR

08:00 – 18:00 / Room: Europa I

c) Portable kits of experiments with soil (soil color, soil particle size, soil texture, soil pH, soil as a conductor of electricity, soil as electricity producer, soil magnetism, soil paint, clay sculptures, soil as a filter, among others)

Exhibitor: USP/ BR

08:00 – 18:00 / Room: Europa I

d) Augmented reality instrument (a tool for teaching hypsometric and surface runoff concepts)

Exhibitor: UFRJ / BR

08:00 – 18:00 / Room: Europa I

e) Soil painting workshop (making paint from soil and painting

Assistants: Albano Rodrigues de Oliveira and Gilberto Silva Rocha

08:00 – 18:00 / Room: Europa I

## **Soil Cinema**

A selection of full-length and short films will be exhibited during the 21<sup>st</sup> WCSS. The movies will be organized will focus on a specific topic, such as agriculture, energy, desertification, education, and others, for each day of the conference, and the main titles scheduled for lunch breaks. The documentary - Between earth and sky, will have the presence of the producer and the director, allowing debates with the audience at the end of the presentation.

### *Feature Films/Director:*

- Between Earth and Sky – Climate Change on the Last Frontier / David Weindorf

13:00 – 14:30 / Room: Asia I (Monday, 13 August)

- Symphony of the Soil (Portuguese Subtitles) / Deborah Koons Garcia

13:00 – 14:30 / Room: Asia I (Tuesday, 14 August)

- Human / Yann Arthus-Bertrand

13:00 – 14:30 / Room: Asia I (Thursday, 16 August)

- Soil, Struggle and Justice: Agroecology in the Brazilian Landless Movement / Andreas Hernandez

12:45 – 13:30 / Room: Asia I (Friday, 17 August)

### *Short Films/Director:*

- Pumzi / Wanuri Kahiu

13:00 – 13:45 / Room: Asia II (Monday, 13 August)

- Sands of the World / Elvira Wersche

13:45 – 14:30 / Room: Asia II (Monday, 13 August)

- Trees, Vines, Palms and Other Architectural Monuments / Paolo Tavares

13:00 – 13:45 / Room: Asia II (Tuesday, 13 August)

- In Transition Is The Most Honest / Cannupa Hanska Luger & Winter Count

13:45 – 14:30 / Room: Asia II (Tuesday, 13 August)

- Correlation Drawing/Drawing Correlations / Margaret Boozer

13:00 – 13:45 / Room: Asia II (Thursday, 16 August)

- Urban Farm Collective / Matthew Moore

13:45 – 14:30 / Room: Asia II (Thursday, 16 August)

- Earth Print, Land Take Belo Monte / Betty Beier

12:30 – 13:00 / Room: Asia II (Friday, 17 August)

- Ala Plastica / Ala Plastica

13:00 – 13:30 / Room: Asia II (Friday, 17 August)

## **SOCIAL ACTIVITIES**

---

### **Opening Ceremony**

The opening ceremony of the 21<sup>st</sup> WCSS will take place on August 12th at the main hall of Windsor Convention & Expo Center (3rd floor). It will begin at 7:00 p.m., in the presence of authorities. Participants of the WCSS are invited to attend.

### **Soil Judging Award**

### **Welcome reception**

After the opening ceremony, participants are invited to gather for a cocktail and to enjoy the sound of Brazilian contemporary music (21:30 – 23:00 / Room: Europa).

### **Gala dinner**

The Gala Dinner will be on August 16th at 7:30 p.m. at the Windsor Convention & Expo Center (room to be defined). The dinner is a wonderful opportunity to meet old friends and colleagues, to recognize achievements and to celebrate during the 21<sup>st</sup> WCSS. To participate in this event, Conference attendees need to be registered for the Gala Dinner. Registration can be made on the website of the event (login area) until July 31st, 2018.

### **Awards and Prizes**

IUSS awards (Dokuchaev, Liebig, and Jeju medals)  
IUSS New Honorary Members  
21<sup>st</sup> WCSS award (Medal Dr. Alvaro Fagundes Barcellos)

### **Closing ceremony**

The closing ceremony will be on August 17th in the main hall of Windsor Convention & Expo Center (3rd floor), from 4:30 to 5:10 p.m. The ceremony will be an opportunity to show the accomplishments of the event and its developments, and to acknowledge everyone that supported and participated in the 21<sup>st</sup> WCSS. It is open for all participants and it will be conducted by the Organizing Committee and IUSS Secretary General and Chairpersons.

## **SPONSORS**

---

### ❖ **Diamond**

[Rede Integração Lavoura-Pecuária-Floresta \(REDE ILPF\)](#)

[Yara Fertilizantes \(YARA\)](#)

[Ministério da Agricultura, Pecuária e Abastecimento \(MAPA\)](#)

[Empresa Brasileira de Pesquisa Agropecuária \(EMBRAPA\)](#)

### ❖ **Gold**

[Meter](#)

### ❖ **Silver**

[Global Soil Partnership \(GSP\)](#)

[Food and Agriculture Organization \(FAO\)](#)

[Conselho Nacional de Desenvolvimento Científico e Tecnológico \(CNPq\)](#)

[Coordenação de Aperfeiçoamento de Pessoal de Nível Superior \(CAPES\)](#)

### ❖ **Brass**

[Soil Science Society of America \(SSSA\)](#)

[Soil Science Society of China \(SSSC\)](#)

[Itaipu Binacional \(ITAIPU\)](#)

[Fundação Agrisus – Agricultura Sustentável \(AGRISUS\)](#)

[Caixa Econômica Federal \(CAIXA\)](#)

## EXHIBITION

---

Opening hours: 8:30-18:00

Local: Windsor Conv. & Expo Center (2nd Lower Level)

Total Area: 2,064 m<sup>2</sup>

Capacity: 3,000 person.

### **Exhibitors / booth number**

Alemmar / 20

AMS / 09

Astro 34 / 08

British Society of Soil Science / 04

Copernicus / 37

CSIRO Publishing / 38

DFG- Deutsche Forschungsgemeinschaft / 39

Editora UFV / 06

Elsevier / 44

Euro Soil / 40

European Comission / 49

Gasmet / 11

InterMag / 01

Jacto / 19

Marconi / 12 13

MIDI / 50

Neobio e Microanalysis / 47

Ralco / 41

Sentek Soil / 15 16

Spectral / 43

Springer / 46

Tecnal / 14

Tourism Toronto / 07

Umwelt-Geräte-Technik GmbH / 45



## WHERE ARE THE ROOMS?

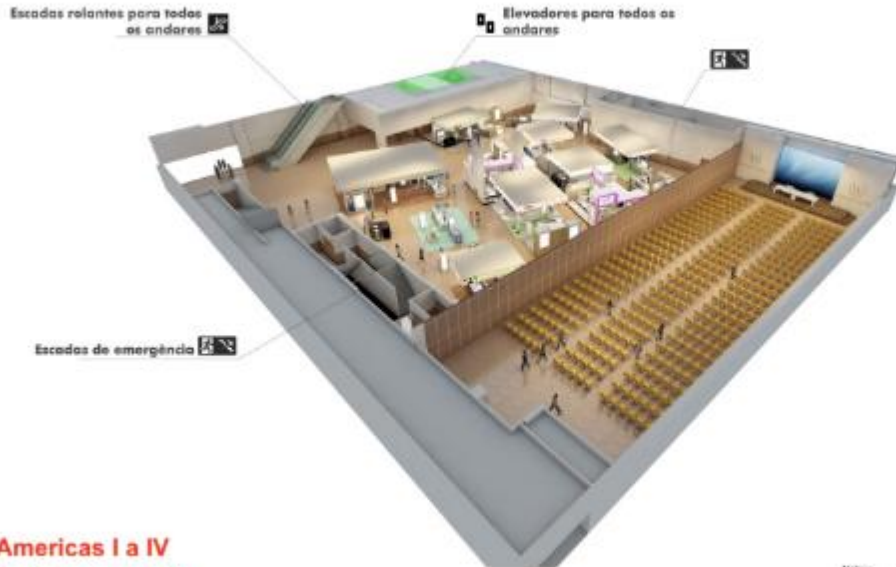
---

LEVEL	ROOMS
2 <sup>nd</sup> lower level (-2)	America, Galapagos, Arruba, Ilha-Bela
Ground level (0)	Europa
1 <sup>st</sup> level (1)	Ibiza, Capri
2 <sup>nd</sup> level (2)	Oceania, Bora-Bora
3 <sup>rd</sup> level (3)	Asia

# FLOOR PLANS

## 2nd lower level (-2)

### MASTERPLAN CONVENÇÕES - 2º SUBSOLO

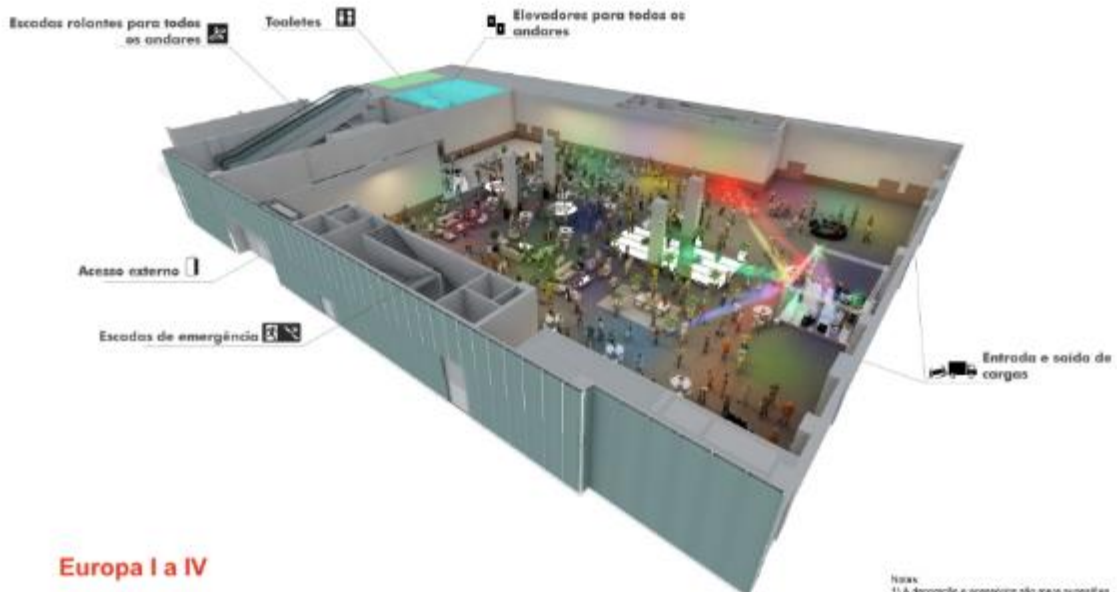


**Americas I a IV**  
**Galápagos I a III**  
**Aruba I a III Ilha-Bela I a V**

Notas:  
 1) A decoração e acessórias são mais sugestões.  
 2) As escadarias, os corrimões metálicos e pilares neste planta poderão sofrer alterações.  
 3) Os pilares poderão sofrer alterações de acordo com o projeto estrutural.

## Ground level

### MASTERPLAN CONVENÇÕES - TERREO



**Europa I a IV**

Notas:  
 1) A decoração e acessórias são mais sugestões.  
 2) As escadarias, os corrimões metálicos e pilares neste planta poderão sofrer alterações.  
 3) Os pilares poderão sofrer alterações de acordo com o projeto estrutural.

## 1st level (1)



## 2nd level (2)

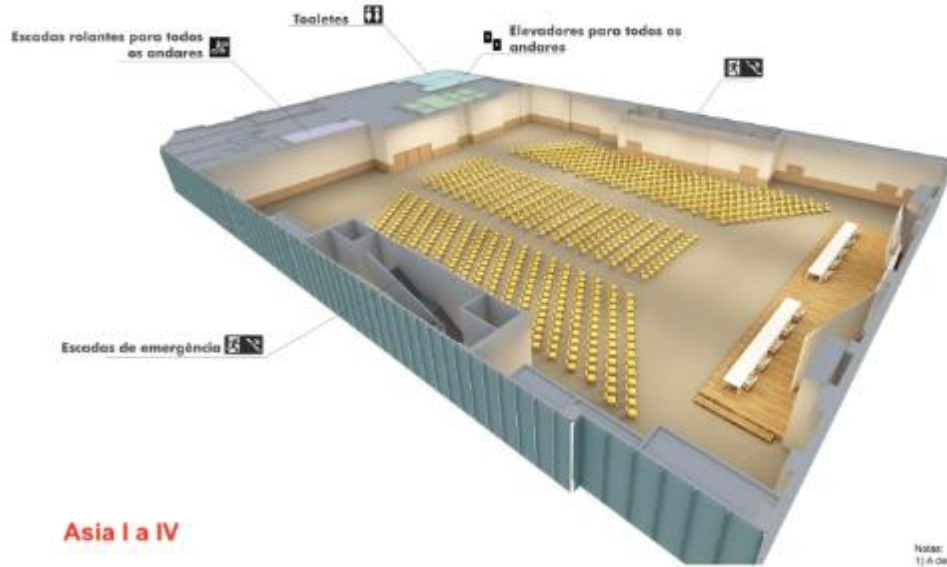


Oceania I a X  
 Bora-Bora I a V

Notas:  
 1) A decoração e acessórios são mera sugestão.  
 2) As esquadras, as cores das paredes e pisos, nada mais poderão sofrer alterações.  
 3) Os pilares poderão sofrer alterações de acordo com o projeto estrutural.

### 3rd level (3)

#### MASTERPLAN CONVENÇÕES - 3º PAVIMENTO



Notas:  
1) A decoração e assentos são mais sugestivos.  
2) As esquadrias, as cores dos materiais e pilares nesta planta poderão sofrer alterações.  
3) Os pilares poderão sofrer alterações de acordo com o projeto estrutural.

## GENERAL PROGRAM

	Aug 12 Sunday	Aug 13 Monday	Aug 14 Tuesday	Aug 15 Wednesday	Aug 16 Thursday	Aug 17 Friday
08:00		01 General Conference	03 General Conference	Technical Tours	05 General Conference	07 General Conference
09:00		02 General Conference	04 General Conference		06 General Conference	08 General Conference
10:00	Registration	Coffe break	Coffe break		Coffe break	Coffe break
11:00		01 Inter-Divisional Symposia	02 Inter-Divisional Symposia		03 Inter-Divisional Symposia	04 Inter-Divisional Symposia
12:00		Lunch	Lunch		Lunch	Lunch
13:00						
14:00		01 Poster Session	02 Poster Session		03 Poster Session	04 Poster Session
15:00		Coffe break	Coffe break		Coffe break	Coffe break
16:00						
17:00		01 Divisional Symposia	02 Divisional Symposia		03 Divisional Symposia	04 Divisional Symposia
18:00		Parallel activities	Parallel activities	Parallel activities	Parallel activities	
19:00						
20:00	Welcome Reception				Gala Dinner	Closing
21:00						

## OUR MASCOT

---



### The Armadillo

Soil biodiversity is the driving force behind the chemical and physical processes occurring in the soil that sustain life on the planet. Hans Jenny stated that organisms are one of the factors of soil formation. Among them, we emphasize the Armadillo as an agent of soil transformation, where it obtains shelter, protection and food. Our mascot, dressed in the traditional vest of the SBCS and carrying instruments of field and laboratory work, represents the Brazilian soil scientists, responsible for the biggest transformation of tropical agriculture of the planet. This Armadillo also represents the biodiversity of Brazilian soils that needs to be known and preserved. He is a natural pedologist of friable soils in the Cerrado and a worthy representative of our work and achievements.

**Hosted by**



**Supported by**



**Diamond sponsor**



MINISTÉRIO DA  
AGRICULTURA, PECUÁRIA  
E ABASTECIMENTO



**Gold sponsor**



**Silver sponsor**



**Bas sponsor**

