

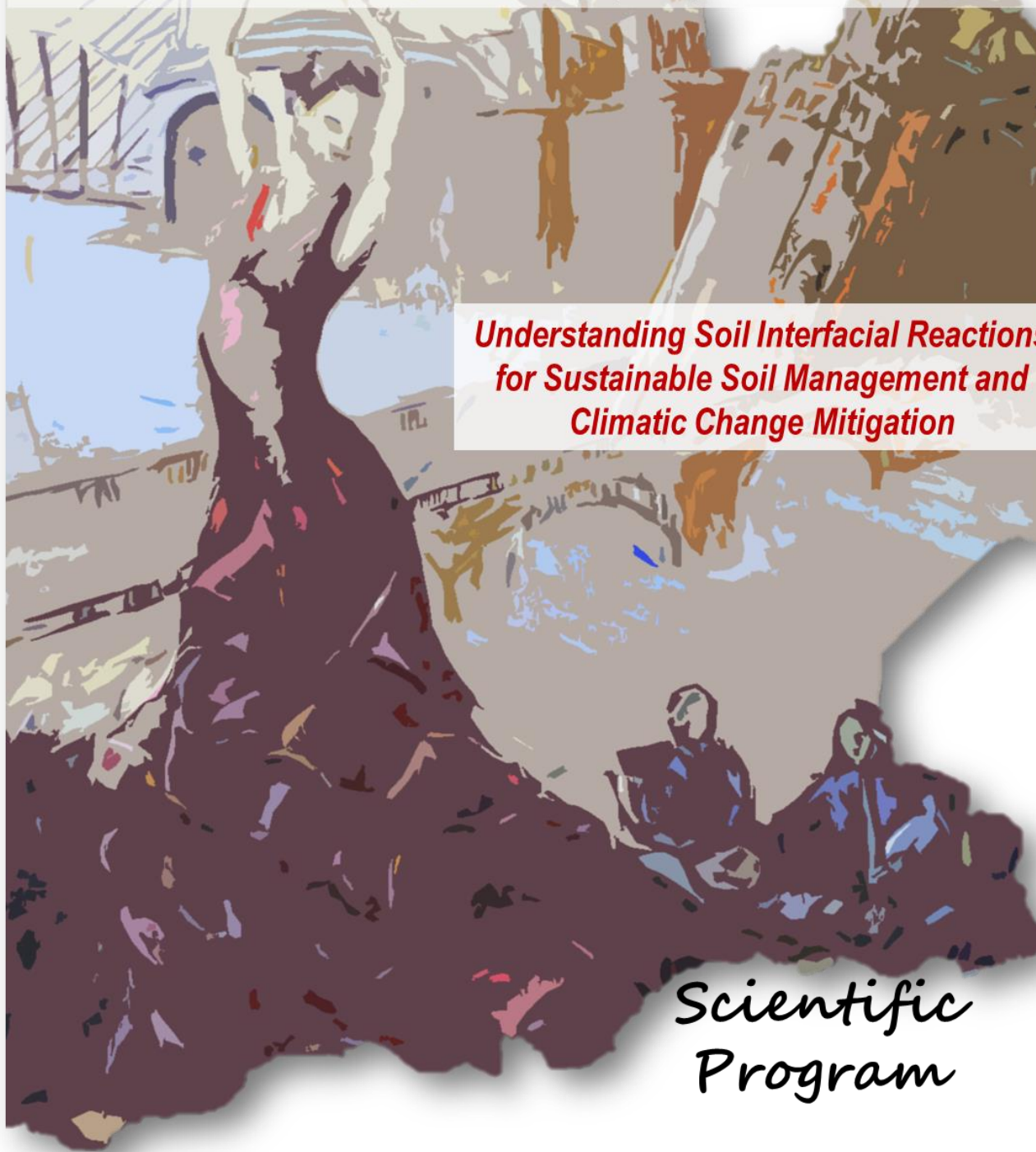
ISMOM 2019

Seville, Spain, June 23-28

8th International Symposium on Interactions of Soil Minerals with Organic Components and Microorganisms,
International Congress of the Division 2.5 of the International Union of Soil Sciences (IUSS)

***Understanding Soil Interfacial Reactions
for Sustainable Soil Management and
Climatic Change Mitigation***

***Scientific
Program***



INDEX:

ORAL PRESENTATIONS.....	2
MONDAY, JUNE 24 TH 2019.....	2
TUESDAY, JUNE 26 TH 2019.....	4
WEDNESDAY, JUNE 26 TH 2019.....	6
FRIDAY, JUNE 28 TH 2019.....	9
POSTER PRESENTATIONS	11
MONDAY, JUNE 24 TH 2019.....	11
<i>Session 1: Soil as a C and N sink (S).....</i>	<i>11</i>
TUESDAY, JUNE 25 TH 2019.....	13
<i>Session 2: New physical, chemical and biological analytical approaches (T).....</i>	<i>13</i>
<i>Session 3: Ecological disturbances (D)</i>	<i>14</i>
<i>Session 4: Dynamics of pollutants at soil interfaces (P4.1-4.10)</i>	<i>16</i>
WEDNESDAY, JUNE 26 TH 2019	16
<i>Session 4: Dynamics of pollutants at soil interfaces (P4.11-4.20) ...</i>	<i>16</i>
<i>Session 5: Soil amendments (A)</i>	<i>17</i>
<i>Session 6: Nutrient availability in soils (N).....</i>	<i>19</i>

ORAL PRESENTATIONS

Monday, June 24th 2019

8:30 – 9:00 **Opening Ceremony**

9:00 – 10:30 **Plenary Session** (Chairs: *Deborah P. Dick* - *José María de la Rosa*)

- **Soil Science – a science of interfaces:** *Siobhan Staunton*, *Eco&Sols*, *INRA*, *Montpellier*, *France* (PS1)
- **Microhabitats controls over soil organic matter dynamics". Why should we care about the microscale when issues are global?** *Claire Chenu*, *INRA*, *AgroParisTech*, *Thiverval-Grignon* (France)

10:30 – 11:00 Coffee Break

11:30 – 13:00 **Session 1 (I/II)** (Chairs: *Elena Boy Fernandez* - *Balwant Singh*)

Soil as a C and N sink – Who is the major player, soil minerals, soil organic matter quality, microbial activity or their interplay?

I. Impact of soil management

- **Tillage increases soil organic carbon in land-use change between grassland and upland crop**
Hatano, Ryusuke - *Mukumbuta, Ikabongo* (S1)
- **C4-accumulation by *Miscanthus* increases with soil organic matter content**
Leifeld, Jens - *Alewell, Christine* - *Paul, Sonja* (S2)
- **Land-use and biogeochemical descriptors of priming effect of soil organic matter dynamics at a landscape scale - a study of a rural agricultural catchment in Brittany, France**
Panettieri, Marco - *Chemidlin, Nicolas* - *Guigue, Julien* - *Thevenot, Mathieu* - *Leveque, Jean* - *Santoni, Anne-Lise* - *Maron, Pierre-Alain* - *Mounier, Stéphane* - *Viaud, Valérie* - *Mathieu, Olivier* (S3)
- **Soil organic carbon pools and composition in response to land uses in Southern Brazil**
Briedis, Clever - *Baldock, Jeff* - *de Moraes Sá, João Carlos* - *Milori, Débora Marcondes Bastos Pereira* (S4)
- **Use of coupled biochar and straw mulch as a technique to mitigate soil erosion and improve soil carbon stocks in burned soils of Southern Iberian Peninsula**
Prats, Sergio - *de la Rosa, Jose Maria* - *Merino, Agustin* - *Keizer, Jacob* - *Valencia, Francisco* - *Alegre, Pilar* - *Prats-Fons, Sergio Jesus* - *Verheijen, Franciscus* (S5)

II. N-Sequestration

- **Abiotic incorporation of inorganic nitrogen to organic forms in Andisols**

Matus, Francisco - Stock, Sevenja - Eschenbach, Wolfram - Dyckmans, Jens - Merino, Carolina - Nájera, Francisco - Köster, Moritz - Kuzyakov, Yakov - Schlüsselburg, Lia - Dippold, Michaela (S6)

- **Is GRSP (glomalin related soil protein) a stable and distinct fraction of soil organic matter?**

Gaoussou, Cisse - van Oort, Folkert - Chenu, Claire - Essi, Marc - Staunton, Siobhan (S7)

13:15 – 14:30 Lunch

14:30 – 16:30 **Poster Session 1:**

Soil as a C and N sink – Who is the major player, soil minerals, soil organic matter quality, microbial activity or their interplay?

Posters: 1.1-1.50

14:30 – 15:15 **Pico Session 1** (chair: *Marina Paneque*) (Posters 1.1 – 1.50)

16:30 – 18:15 **Session 1 (III)** (Chairs: *Stefanie Grand* - *Martin Gerzabek*):

Soil as a C and N sink – Who is the major player, soil minerals, soil organic matter quality, microbial activity or their interplay?

III. SOM degradation and microbial activity

- **Microbial utilization of litter-derived dissolved organic carbon in topsoil and subsoil**
Preusser, Sebastian - Mikutta, Robert - Guggenberger, Georg - Don, Axel - Kalbitz, Karsten - Kandeler, Ellen (S8)
- **Effect of matric potential on the soil volume involved in the biodegradation of plant residues**
Védère, Charlotte - Vieublé Gonod, Laure - Pouteau, Valérie - Girardin, Cyril - Chenu, Claire (S9)
- **Relative degradability of exogenous organic carbon in function of its concentration and the interaction with native soil organic matter content**
Mendoza, Orly - Deroo, Heleen - Li, Haichao - De Neve, Stefaan - Sleutel, Steven (S10)
- **Position-specific ¹³C labeling and ¹³C-PLFA analysis reveals preferences for free, sorbed or necromass C**
Spielvogel, Sandra - Apostel, Carolin - Herschbach, Jennifer - Bore, Ezekiel - Kuzyakov, Yakov - Dippold, Michaela (S11)
- **Earthworms enhance the microbially mediated build-up of mineral-associated soil organic matter**
Angst, Gerrit - Prater, Isabel – Angst, Sarka- Jilkova, Veronica - Peterse, Francien - Frouz, Jan - Mueller, Carsten W. - Nierop, Klaas G. J. (S12)

- **Some recent advances in understanding, predicting and managing organic carbon stabilisation in new Zealand soils**

Beare, Mike - McNally, Sam - Curtin, Denis - Lawrence-Smith, Erin - Baldock, Jeff (S13)

18:15 – 18:45 **Final Discussion Session 1/I-III**

Tuesday, June 26th 2019

8:30 – 10:30 **Session 2** (Chairs: Sandra Spielvogel - Cesar Plaza):

New physical, chemical and biological analytical approaches – How can they lead us to a better understanding of soil interfaces?

8:30 - 9:00 **Keynote lecture: Potential and applications of Magnetic Resonance Imaging for understanding soil contamination**

*Denis Courtier Murias, Université Paris-Est, Laboratoire Navier (ENPC-IFSTTAR-CNRS)
Champs sur Marne, France (K1)*

9:00 – 10:30

- **Hydrophobic soils and the structuring of soil organic matter at the molecular level**
Henry, David - Daniel, Nicholas - Uddin, S. M. Mijan - Harper, Richard (T1)
- **Use of thermal analysis for the characterization organic matter properties in density fractions of atlantic mineral soils subjected to different soil burnt severities**
Merino, Agustin - García-Oliva, Felipe - Fonturbel, María T - Mani, Shanmugam - Vega, José A. (T2)
- **Matrix approach to the molecular properties study of the Cuban soils on the rice agroecosystem**
Zubkova, Tatiana A. - Recio Espejo, Jose Manuel - Gutorova, Oksana A. - Sheudzhien, Askhad Kh. (T3)
- **Micro-scale physicochemical and biological interactions control biofilms formation and ecological functions in soils**
Cai, Peng - Huang, Qiaoyun (T4)
- **Synthesis of extraterrestrial soil analogues in the hadean eon at > 1000 K**
Hertkorn, Norbert - Ruf, Alexander - Kanawati, Basem - Lucio, Marianna - Schmitt-Kopplin, Philippe (T5)

10:30 – 11:00 Coffee Break

11:00 – 13:00 **Session 3** (Chairs: Isabelle Basile Doelsch - Jiangming Xu)

Ecological disturbances – How do mismanagement of soils (overgrazing, erosion etc.) or natural disasters (fire, flooding etc.) affect the interplay between soil minerals, SOM and microorganisms?

11:00 – 11:30 **Keynote lecture: Speleothems from volcanic caves as records of environmental changes**

11:30 – 13:00

- **Agriculture changes soil organic matter stocks and microbial activities in soils of the galapagos islands**
Gerzabek, Martin - Armin Bajraktarevic, Armin - Keiblinger, Axel Mentler, Katharina - Rechberger, Maria - Zehetner, Franz (D1)
- **Effects of cultivation on soil organic matter storage and organo-mineral interactions in tropical soils of Western Uganda**
Grand, Stephanie - Viret, Fanny - Perroulaz, Arnaud - Lambert, Thibault (D2)
- **Soil properties impacted by residue removal and nitrogen type**
Maysoon, Mikha - Acosta, Veronica- Acosta-Martinez - J., Alan Schlegel (D3)
- **Ecological consequences of invasive e. Coli carrying shiga toxin into the soil**
Jiajia Xing (D4)
- **The encroachment of *Amorpha fruticosa* l. alters soil c and n cycles in natural dry grasslands**
Pellegrini, Elisa - Boscutti, Francesco - Casolo, Valentino - Contin, Marco - De Nobili, Maria (D5)
- **Total population of fungi and bacteria in different fractions of aggregates under contrasted soil managements**
Navas-Vásquez, Mariela - Hontoria, Chiquinquirá - Ulcuango, Kelly - Mariscal-Sancho, Ignacio (D6)

13:15 – 14:30 Lunch

14:30 – 16:30 **Poster Sessions 2/3/4:**

Poster sessions 2/3/4:

New physical, chemical and biological analytical approaches – How can they lead us to a better understanding of soil interfaces?

Posters: 2.1-2.20

Ecological disturbances – How do mismanagement of soils (overgrazing, erosion etc.) or natural disasters (fire, flooding etc.) affect the interplay between soil minerals, SOM and microorganisms?

Poster 3.1-3.20

Dynamics of pollutants at soil interfaces – What is new and how can environmental biotechnology be beneficial for soil restoration and bioremediation?

Posters: 4.1-4.10

14:30 – 15:15 **Pico Session 2/3/4** (chair: María T. Dominguez- Marco Panettieri)
(Posters 2.1 – 2.20 / 3.1 – 3.20 / 4.1 – 4.10)

16:30 – 18:15 **Session 4 (I)** (Chairs: Ruth Ellerbrock - Claudio Zaccone):

Dynamics of pollutants at soil interfaces – What is new and how can environmental biotechnology be beneficial for soil restoration and bioremediation?

16:30 – 17:00 **Keynote lecture: Remediating soils polluted by trace elements: The Guadamar case study (SW Spain)**

Francisco Cabrera, Instituto de Recursos Naturales y Agrobiología de Sevilla (IRNAS), CSIC. Spain (K3).

17:00 – 18:15

I. Cleaning-up soils

- **Tree species effect on soil organic matter and soil microorganisms in trace element contaminated soils**
Gil-Martínez, Marta - Fernández Boy, M^a Elena - Marañón, Teodoro - Montero González, Juan Fernando - Navarro-Fernández, Carmen M. - Domínguez, María T. (P1)
- **Impact of biochar application on soil quality and microbial communities in a trace element polluted soil**
Campos, Paloma - Miller, Ana Z. - López, Rafael - Hagemann, Nikolas - Knicker, Heike - De la Rosa, José María (P2)
- **The bacterial and archaeal interactome during PCP dechlorination in natural flooded soil under methanogenic and sulfate-reducing conditions**
He, Yan - Zhu, Min - Xu, Jianming (P3)
- **Molecular dynamics simulations of soil condensed phases**
Galicia-Andrés, Edgar - Tunega, Daniel - Gerzabek, Martin H. - Oostenbrink, Chris (P4)

18:15 – 18:45 **Final Discussion Sessions 2/3**

Wednesday, June 26th 2019

8:30 – 10:30 **Session 5 (I)** (Chairs: Elisa Lopez Chapel - Rota Wagai):

Soil amendments (biochar, composts and digestates) – How do they affect interactions at soil interfaces?

8:30 - 9:00 **Keynote lecture: Lessons from the Terra Preta de Índios of the Amazon Region for the utilisation of charcoal as soil amendment**

Etelvino Novotny, EMBRAPA Solos, Rio de Janeiro, Brazil (K3)

I. Biochar as soil amendment

- **Corn-cob-derived biochar protects soil organic C and improves C use efficiency and soil quality in a low-fertility status alkaline calcareous soil**

Riaz, Muhammad - Arif, Muhammad Saleem - Hussain, Qaiser - Yasmeen, Tahira - Arif, Muhammad (A1)

- **The surface behind biochar slow-release fertilizers**
Budai, Alice - Weldon, Simon - Rasse, Daniel P. (A2)
- **Biochar and nitrogen on extracellular enzymes, microbes and organic matter dynamics in sediments**
Gu, Ji-Dong - Luo, Ling (A3)
- **Biochar and denitrification: examining the effect of a biochar temperature series on the kinetics of gaseous N turnover. Which properties matter?**
Weldon, Simon - Rasse, Daniel - Budai, Alice - Tomic, Oliver - Doersch, Peter (A4)
- **Fate of the carvone enantiomers after the addition of biochar to an agricultural soil**
Gámiz, Beatriz - Facenda, Gracia - Celis, Rafael (A5)

10:30-11:00

Coffee Break

11:00 – 13:00 **Session 5 (II)** (Chairs: *Elisa Pellegrini* - *Thilo Rennert*):

Soil amendments (biochar, composts and digestates) – How do they affect interactions at soil interfaces?

II. *Soil amendments and fertilization*

- **Implantation of the separation management of biowaste: challenges for the collection and treatment systems**
Caraballo, Jose - *Bello, Jose* (A6)
- **Functionalized biochar alters nitrogen and phosphorus dynamics in soils**
Mia, Shamim - *Dijkstra, Feike* - *Singh, Balwant* (A7)
- **Different mechanisms controlling the soil bacterial and fungal community in response to long-term organic manure fertilization**
Liao, Hao - *Chen, Wenli* (A8)
- **Making fertiliser from leaves: can novel green manures increase agricultural sustainability?**
Ward, Clo - *Chadwick, Dave* - *Hill, Paul W.* (A9)
- **Impact of maize residue input on reductive dissolution of Fe and consequent co-release and mineralisation of paddy soil native organic matter**
Deroo, Heleen - *Akter, Masuda* - *Bodé, Samuel* - *Boeckx, Pascal* - *Li, Haichao* - *Mendoza, Orly* - *Sleutel, Steven* (A10)
- **Microbial taxa distribution in soil organic matter fractions with ecologically different functions**
Beneduce, Luciano - *Plaza, César* - *Zaccone, Claudio* (A11)

- **BioAgenasol®** - A purely plant-based fertiliser rich in organic substances which sustainably improves the soil structure
Sonnleitner, Ingolf (A12)

12:05– 13:25 **Final Discussion Session 5**

13:30 – 14:30 Lunch

14:30 – 16:30 **Poster Sessions 4/5/6:**

Dynamics of pollutants at soil interfaces – What is new and how can environmental biotechnology be beneficial for soil restoration and bioremediation?

Posters: 4.11-4.20

Soil amendments (biochar, composts and digestates) – How do they affect interactions at soil interfaces?

Poster 5.1-5.25

Nutrient availability in soils – Can our knowledge on soil interfaces improve biotechnological approaches or soil management to decrease the need for artificial fertilizers?

Posters: 6.1-6.20

14:30 – 15:15 **Pico Session 4/5/6** (*chair: Marco A. Jimenez-González*) (Posters 4.11-4.20/ 5.1 – 5.25/ 6.1-6.20)

16:30 – 18:15 **Session 4 (II)** (*Chairs: Beatriz Gamiz - Agustin Merino*):

Dynamics of pollutants at soil interfaces – What is new and how can environmental biotechnology be beneficial for soil restoration and bioremediation?

II Binding of pollutants

- **Binding mechanisms and modelling of heavy metals at the interface of mineral-microorganism complexes**
Huang, Qiaoyun - Chen, Wenli - Cai, Peng - Du, Huihui - Qu, Chenchen (P5)
- **Co-transport of phenanthrene and pentachlorophenol by natural soil nanoparticles through saturated sand columns**
Xu, Jianming - Liu, Fei (P6)
- **Hysteresis associated with sorption-desorption on soils and soil components: how much work is needed to create it?**
Borisover, Mikhail (P7)
- **Sorption of ciprofloxacin onto humic acid, ferrihydrite and its composite. effect of anions as electrolyte.**

Urdiales, Cristian - Gacitua, Manuel - Villacura, Loreto - Pizarro, Carmen - Escudey, Mauricio
- Antilen, Monica (P8)

- **Molecular mechanisms for dissolved black carbon sorption on soil**
Luo, Lei - Cheng, Yuan - Lv, Jitao - Wen, Bei (P9)

18:15 – 18:45 **Final Discussion Session 4 (I/II)**

Friday, June 28th 2019

8:30 -10.30 **Session 1 (IV)** (Chairs: *Monica Antilen – Etelvino H. Novotny*)

Soil as a C and N sink – Who is the major player, soil minerals, soil organic matter quality, microbial activity or their interplay?

IV Soil minerals-organic matter interactions

8:30 - 9:00 **Keynote lecture: Organo-mineral associations in weathered soils and their implications on SOM stabilization**

Deborah P. Dick, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil (K4)

9:00 – 10:30

- **Composition and stability of soil organic matter fractions explained by associations between OM and polyvalent cations**
Ellerbrock, Ruth - Gerke, Horst (S14)
- **Effect of organic matter on mean size of clay minerals in soils of a topossequence from basalt - Brazil South**
Daniel Hanke (S15)
- **Competitive adsorption of humic and fulvic acids onto oxide mineral**
Xu, Yun - Bai, Yilina - Hiemstra, Tjisse - Weng, Liping - Tan, Wenfeng (S16)
- **Effects of active Al and Fe and degree of carbon saturation on organic matter accumulation**
Watanabe, Tetsuhiro - Miyachi, Arata - Hartono, Arief - Funakawa, Shinya (S17)
- **The “nanoclics” model (nanosized coprecipitates of inorganic oligomers with organics): an alternative model of interactions between soil organic matter and non-crystalline Fe Si Al phases**
- Basile-Doelsch, Isabelle – Cam, Nithavong – Levard, Clément – Doelsch, Emmanuel – Devouard, Bertrand – Rose, Jerome (S18)

10:30 – 11:00 Coffee Break

11:00 – 12:00 **Session 6** (Chairs: *Margarita, Osterrieth - José Antonio Gonzalez-Pérez*)

Nutrient availability in soils – Can our knowledge on soil interfaces improve biotechnological approaches or soil management to decrease the need for artificial fertilizers?

- **Efficiency of leonardite iron humate/synthetic chelates mixtures in soybean nutrition**
Cieschi, María Teresa - Lucena, Juan José (N1)
- **Formation of binary and ternary complexes of soil humic acids from different origins with calcium and phosphorus**
Audette, Yuki - Smith, Scott - Parsons, Christopher - Chen, Weibin - Rezanezhad, Fereidoun - Longstaffe, James - Van Cappellen, Philippe (N2)
- **Nitrogen use efficiency in conservation management of paddy fields: soil organic matter and microorganisms as key factors**
Luiz Gustavo Denardin (N3)

12:00- 13.30

Closing session

12:00 – 12:30 **Dr. P.M. Huang Prize Talk:**

Ecological, chemical, and physical nature of soil organic matter

Rota Wagai

National Agriculture and Food Research Organization, Institute for Agro-Environmental Sciences, Tsukuba, Ibaraki, JAPAN

12:30 – 13:00 **Final Discussion Session 1-6**

13:15 –

Good-bye Cocktail with Final remarks

POSTER PRESENTATIONS

Monday, June 24th 2019

Session 1: Soil as a C and N sink (S)

S 1.1	Dynamics stability of soil organic matter in salt-affected soils under different agricultural management in the Egypt's Nile delta valley <u>Emran - Mohamed</u> - Rashad, Mohamed - Doni, Serena - Pardini, Giovanni - Gispert, Maria - Masciandaro, Grazia
S 1.2	Air temperature change of 1°C and rhizosphere affect the organic C associated with the light fractions but not the organic C of the heavy fraction in European beech forest soil <u>De Feudis, Mauro</u> - Cardelli, Valeria - Massaccesi, Luisa - Cocco, Stefania - Corti, Giuseppe - Agnelli, Alberto
S 1.3	Adsorption of soil-solution dissolved organic matter on allophanic constituents <u>Lenhardt, Katharina</u> - Breitzke, Hergen - Buntkowsky, Gerd - Prater, Isabel; Renner, Thilo
S 1.4	Carbon and nitrogen in the soils of the Barents sea coastal area Deneva, Svetlana - Kubik, Olesya
S 1.5	Organic matter composition in a sandy loam Amazonian Acrisol as affected by soil management <u>Dick, Deborah P.</u> - Oliveira, Itauane - Costa, Falberni - Neckel, Djennifer
S 1.6	Does podzolisation lead to a shift of carbon pools? Krettek, Agnes - Rennert, Thilo
S 1.7	Reactive soil minerals shape microbial community composition in topsoil and subsoil <u>Preusser, Sebastian</u> - Liebmann, Patrick - Mikutta, Robert - Kalbitz, Karsten - Guggenberger, Georg - Kandeler, Ellen
S 1.8	Estimation of N₂O emission factor from grassland applied cattle manure, cattle slurry and digested slurry <u>Sugiyama, Chiho</u> - Yasuda, Kaho - Hatano, Ryusuke
S 1.9	Adaptation of olive crops management systems in climate change scenario <u>Casermeiro Martinez, Miguel Angel</u> - De La Cruz Caravaca, Maria Teresa - González Ubierna, Sergio - Molina Abril, Jose Antonio - Pala- Paul, Jesus
S 1.10	Improving fertilization method could reduce nitrogen loss and leaching potential in the North China plain <u>Liu, Churong</u> - Zhang, Yushi - Hongrun, Lui - Zhang, Mingcai
S 1.11	Depth effects on plant residue decay in diverse soils <u>Gregorich, Ed</u> - Helgason, Bobbi - Beare, Mike - Janzen, Henry - Ellert, Ben - Curtin, Denis
S 1.12	Evaluation of soil carbon from integrated crop-livestock-forest systems by laser-induced breakdown spectroscopy <u>Tadini, Amanda M</u> - Martin-Neto, Ladislau - Milori, Débora M.B.P. - Bernardi, Alberto C. C.
S 1.13	High carbon stocks of umbric Ferralsols result from different scales mass movements Martinez, Pedro Henrique - Kleber, Markus - <u>Vidal-Torrado, Pablo</u>

S 1.14	Rapid changes in soil organic matter composition due to shifting to conservation tillage <i>Jakab, Gergely - Zacháry, Dóra - Király, Csilla - Filep, Tibor - Vancsik, Anna - Ringer, Mariana - Madrarsz, Balazs - Szalai, Zoltán</i>
S 1.15	The role of clay mineral composition in the stabilization of som in soils under forest in Hungary <i>Zacháry, Dóra - Filep, Tibor - Balázs, Réka - Király, Csilla - Ringer, Marianna - Jakab, Gergely</i>
S 1.16	Greenhouse gas balances in a temperate deciduous forest with different abundance of beech (<i>Fagus orientalis lipsky</i>) <i>Kooch, Yahya - Moghimian, Negar</i>
S 1.17	Patterns and correlations of iron distribution and SOM quality in a hydromorphic soil <i>Ringer, Marianna - Filep, Tibor - Jakab, Gergely - Király, Csilla - Vancsik, Anna - Zacháry, Dóra - Balázs, Réka - Szalai, Zoltán</i>
S 1.18	Contribution of bacterial biomass to soil particle wettability <i>Goebel, Marc-Oliver - Karagulyan, Mariam - Miltner, Anja - Abu Quba Abd Alaziz, - Diehl, Dörte - Schaumann, Gabriele E. - Kästner, Matthias - Bachmann, Jörg</i>
S 1.19	Beneficial effect of straw recycling in rice paddy: trade-off between greenhouse emission and soil carbon stock increase <i>Lee, Jin Ho - Lee, Jeong Gu - Cho, Song Rae - Song, Hyen Ji - Kim, Pil Joo</i>
S 1.20	Vegetation and pH implications on the dynamic of soil organic matter at high-mountain shrubs ecosystems from Sierra Nevada national park (Granada, Spain) <i>Colchero-Asencio, M. - San-Emeterio, L.M. - González-Pérez, J.A. - Bárcenas-Moreno, G.</i>
S 1.21	Evaluation of liming effect on soil carbon stock changes analyzing net ecosystem carbon budget (NECB) in maize upland soil <i>Cho, Songrae - Lee, Jeonggu - Lee, Jinho - Lim, Jiyeon - Song, Hyeonji - Kim, Piljoo</i>
S 1.22	Quality of soil organic matter in arctic and subarctic environments: from bulk to water-extractable organic matter characterization <i>Agnan, Yannick - Alexis, Marie A. - Kohli, Alice - Parlanti, Edith - Derenne, Sylvie - Sourzac, Mahaut - Anquetil, Christelle - Obrist, Daniel - Castrec-Rouelle, Maryse</i>
S 1.23	Changes in soil organic matter after long-term fertilisation of calcareous soil with pig slurry <i>Jiménez-De-Santiago, Diana E. - Almendros, Gonzalo - Bosch-Serra, Àngela D.</i>
S 1.24	Control of mineral associated organic matter on sorption of ortho-phosphate and vice versa in acid sandy soils <i>Sleutel, Steven - Jiang, Jiayi - De Neve, Stefaan</i>
S 1.25	Molecular carbon structure in a meridional peat bog from Doñana national park (SW-Spain) <i>González Pérez, José Antonio - Jiménez Morillo, Nicasio T. - M. San Emeterio, Layla - Almendros, Gonzalo - González Vila, Francisco J. - Knicker, Heike</i>
S 1.26	Soil easily-extractable glomalin (EEG): molecular characterization <i>Lozano, Elena - M. San Emeterio, Layla - Mataix Solera, Jorge - Arcenegui, Victoria - González Pérez, José Antonio</i>
S 1.27	Carbon stabilization mechanisms in high mountain volcanic soils from Teide national park (Tenerife, Spain) <i>Rodríguez Rodríguez, Antonio - Rodríguez Eugenio, Natalia - Arbelo Rodríguez, Carmen D. - González Pérez, José Antonio</i>

S 1.28	Does subsoil mixing with topsoil increase the capacity of soils to sequester carbon? <u>Qu, Rong</u> - Hallett, Paul - Smith, Jo
S 1.29	Storage and quality of soil organic carbon as reflected by humic acid mid-infrared spectral patterns <u>Jiménez-González, Marco A.</u> - Álvarez, Ana M. - Carral, Pilar - Hernández, Zulimar - Almendros, Gonzalo
S 1.30	The effect of mineral substrate in the molecular composition of the soil organic matter in volcanic soils as reflected by analytical pyrolysis Hernández, Zulimar - Almendros, Gonzalo - <u>Jiménez-González, Marco A.</u>
S 1.31	Designing microbial inoculants for the restoration of degraded soils by drought <u>Angulo, Violeta</u> - Kowalchuk, George - Alexandre, Jousset - Hefting, Mariet
S 1.32	Parent rocks or parent shells: soil formation in maritime Antarctic <u>Bedernichek, Tymur</u> - Zaimenko, Natalia - Loya, Vlasta - Partyka, Tetyana
S 1.33	Assessment of the organic carbon sequestration potential of the forest soils of the central middle atlas of morocco facing climate change <u>El Mderssa, Mohamed</u> - Benjelloun, Hassan - Zennouhi, Omar - Nassiri, Laila - Ibijbjen, Jamal
S 1.34	Occurrence of soil fungi in Antarctic in their relationship with c and n of soil <u>Duran, Paola</u> - Jorquera, Milko - Barra, Patricio - Paz, Cristian - Mora, María De La Luz
S 1.35	Evaluation of long-term land management practices on soil carbon stocks and stabilisation under conventional and organic agricultural systems Fernandes Zani, Caio - Taylor, James A. - Abbott, Geoffrey D. - Cooper, Julia - <u>Lopez-Capel, Elisa</u>
S 1.36	Carbon dynamics in soils: evolution of organo-mineral interactions after a forest to vineyard transition <u>Quéro, Solène</u> - Cornu, Sophie - Cam, Nithavong - Balesdent, Jérôme - Duvivier, Adrien - Borschneck, Daniel - Basile-Doelsch, Isabelle
S 1.37	From charcoal to biochar: 10 years of progress in research on pyrogenic carbon in soils at IRNAS-CSIC <u>De La Rosa, Jose María</u> - Knicker, Heike
S.1.38	Nematodes and microbial community affect the sizes and turnover rates of organic carbon pools in soil aggregates Jiang, Yuji
S 1.39	Carbon and nitrogen stocks and soil health indices in subtropical soils of Argentina <u>Toledo, Diana Marcela</u> - Knicker, Heike, Contreras Leiva - Stella Contreras Leiva – Arzuaga, Silvia – Galantini, Juan Alberto

TUESDAY, JUNE 25TH 2019

Session 2: New physical, chemical and biological analytical approaches (T)

T 2.1	Initial soil forming processes in Andosols in Antarctica <u>Pospisilova, Lubica</u> - Vlček, Vitězlav - Uhlík, Peter - Eichmeier, Aleš
T 2.2	Estimation of bacterial community tolerance to Cu background in non-polluted soils <u>Campillo-Cora, Claudia</u> - Alonso-Vega, Flora - Nóvoa-Muñoz, Juan Carlos - Arias-Estévez, Manuel - Fernández-Calviño, David

T 2.3	Determination of the spatial variability of soil water content using electromagnetic induction <u>Chaali, Nesrine</u> - Bernal, Alejandra - Jaramillo, Camilo - Calderón, John - Ouazaa, Sofiane - Serralde Ordoñez, Diana Paola
T 2.4	Magnetic nanoparticles based solid phase extraction coupled with voltammetry for determination of vanadium species <u>Filik, Hayati</u> - Avan, Asiye A. - İpek, Sümeyye - Kara, Tutku
T 2.5	New physical approaches for soil structure characterization <u>Guenat, Claire</u> – Schomburg, Andreas – Fischer, Franziska – Luiset, Alexandre – Le Bayon, Claire – Turberg, Pascal
T 2.6	Analysing metals in organic amendments with portable x-ray fluorescence Ajmal, Fátima - Burgos, Pilar - de la Rosa, José María - <u>López Núñez, Rafael</u>
T 2.7	Influence of biocrusts in bacterial community structure along a soil depth gradient in semiarid ecosystems <u>Soria, Rocío</u> - Ortega, Raúl - Soriano, Miguel - Miralles, Isabel
T 2.8	A metagenomic window into driving mechanism of soil biogeochemical cycling processes, <u>Ma, Bin</u> - Xu, Jianming
T 2.9	Influence of physical volume of rice plants on calculating seasonal methane flux in closed chamber method <u>Lim, Ji Yeon</u> - Cho, Song Rae - Kim, Pil Joo
T 2.10	Synthesis of borate nanoparticles and its applications as a potential foliar spray boron fertilizer in lettuce (lactuca sativa) <u>Meier, Sebastian</u> - Meriño, Cristian - Seguel, Alex - Morales, Arturo - Mejias, Jaime
T 2.11	Extract and identify the biomarker molecules of organic matter from soils under the long-term rice cultivation <u>Ding, Yuanjun</u> - Chen, Shuotong - Pan, Genxing
T 2.12	XRD and electron microprobe investigation of clay minerals in haplic Luvisol <u>Horáková, Eva</u> - Pospíšilová, Lubica - Vlček, Vitezslav - Uhlík, Peter - Eichmeier, Aleš - Menšík, Ladislav
T 2.13	Metagenomic study in two crusted semiarid ecosystems with different degradation state Soria, Rocio - <u>Rodriguez-Berbel, Natalia</u> - Ortega, Raúl - Miralles, Isabel
T 2.14	Influence of physico-chemical soil properties in soil microorganisms from crusted semiarid ecosystems <u>Soria, Rocío</u> - Ortega, Raúl - Miralles, Isabel
T 2.15	Spectrofluorometric characterization of alkali-extractable soil organic matter: the application of emission excitation matrix spectroscopy, fluorescent and UV-VIS indices Anna Vancsik - Tibor File -, Gergely Jakab - Balázs Madarász - Lilla Gáspár - Lili Szab -, Dóra Zacháry - Csilla Király - Zoltán Szalai

Session 3: Ecological disturbances (D)

D 3.1	Determination of waste acid drugs in the residual water used in the agricultural zone of the "Adjuntas" to irrigation water, in the state of Guanajuato, México <u>García Morales, Marco Antonio</u> - Contreras Rodriguez, Araceli - Solís Valdez, Sara - Morales Garcia, Ma.Rosario
-------	--

D 3.2	Taxonomic and functional analysis of a soil contaminated with heavy metals <u>Navas, Mariela</u> - <u>Pérez-Esteban, Javier</u> - <u>Hontoria, Chiquinquira</u> - <u>Moliner, Ana</u>
D 3.3	Impact of the simultaneous application of herbicides and organic amendments on soil microbial community in a field trial <u>Carpio, María José</u> - <u>García, Carlos</u> - <u>Marín, Jesús María</u> - <u>Sánchez, María Jesús</u> - <u>Rodríguez, María Sonia</u>
D 3.4	Influence of <i>Nothofagus pumilio</i> forest management on Hg content and accumulation in organic matter rich soil horizons <u>Méndez-López, Melissa</u> - <u>Gómez-Armesto, Antía</u> - <u>Mansilla, Romina</u> - <u>Moretto, Alicia</u> - <u>Arias-Estévez, Manuel</u> - <u>Nóvoa-Muñoz, Juan Carlos</u>
D 3.5	P determination of waste acid drugs in the residual water used in the agricultural zone of the “Adjuntas” to irrigation water, in the state of Guanajuato, Mexico <u>García Morales, Marco Antonio</u> - <u>Contreras-Rodríguez, Araceli</u> - <u>Solis Valdez, Sara</u> - <u>Morales-García, Rosario</u>
D 3.6	Impact of the agricultural system soybean-cover crops and PGPR inoculation on rhizosphere microbial communities <u>García De Salamone, Ines Eugenia</u> - <u>Escobar Ortega, Jhovana Silvia</u>
D 3.7	Importance of biogenic silicon in pedological sequences, as a determinant of the edaphic properties of agroecosystems of the argentinian pampean plains <u>Osterrieth, Margarita</u> - <u>Frayssinet, Celia</u> - <u>Benvenuto, Maria Laura</u> - <u>Borrelli, Natalia</u> - <u>Alvarez, Fernanda</u>
D 3.8	Effect of wind erosion on soil organic matter on agricultural land <u>Suleymanov, Azamat</u>
D 3.9	Evidence of biological features in Algerian gypsic soils <u>Belhadj, Hamdi Aissa</u> - <u>Jean-Pierre, Montoroi</u>
D 3.10	Soil microbial biomass responses to essential oils extracted from different Mediterranean herbs <u>Jouini, Amira</u> - <u>Verdeguer Sancho, Mercedes</u> - <u>Micalizzi, Anna</u> - <u>Palazzolo, Eristanna</u> - <u>Badalucco, Luigi</u> - <u>Laudicina, Vito Armando</u>
D 3.11	Evaluation of urban soils under two different land-use types: urban agriculture and urban parks <u>Froidevaux, Manuel</u> - <u>L'haridon, Floriane</u> - <u>Weisskopf, Laure</u> - <u>Bullinger-Weber, Géraldine</u>
D 3.12	The termination method of winter cover crops determines the soil biological properties <u>García-González, Irene</u> - <u>Navas, Mariela</u> - <u>Alonso-Ayuso, María</u> - <u>Mariscal-Sancho, Ignacio</u> - <u>Kramer, Paloma</u> - <u>Quemada, Miguel</u> - <u>Hontoria, Chiquinquirá</u>
D 3.13	Characterization of soil microbial communities from a threatened woodland habitat (European habitat directive, code 9230) located between the temperate and Mediterranean bioregions under a global change scenario <u>Sanmartín, Patricia</u> - <u>Carballeira, Rafael</u> - <u>Paradelo, Remigio</u> - <u>Miller, Ana Z.</u> - <u>Serrano, Miguel</u>
D 3.14	The impacts of boron on the biomass, composition and activity of the soil microbial community <u>Vera, Alfonso</u> - <u>Moreno, José Luís</u> - <u>García, Carlos</u> - <u>Morais, Daniel</u> - <u>Bastida, Felipe</u>

Session 4: Dynamics of pollutants at soil interfaces (P4.1-4.10)

P 4.1	The reactivity of Fe(III)/Fe(II) couples for 2-nitrophenol reduction in various mineral surfaces: the interfacial reactions among Fe, Al and Si <u>Tao, Liang</u> - Li, Hui
P 4.2	Bacterial community tolerance to antibiotics in cu polluted acid soils <u>Santás-Miguel, Vanesa</u> - Arias-Estévez, Manuel - Fernández-Sanjurjo, María José - Álvarez-Rodríguez, Esperanza - Núñez-Delgado, Avelino - Fernández-Calviño, David
P 4.3	Retention of enrofloxacin in agricultural soils <u>Álvarez-Esmorís, Cristina</u> - Conde-Cid, Manuel - Fernández-Sanjurjo, María José - Núñez-Delgado, Avelino - Álvarez-Rodríguez, Esperanza - Arias-Estévez, Manuel
P 4.4	Identification of bacteria in soils of mercury mining areas of Queretaro, Mexico <u>Solís Valdez, Sara</u> - Morales García, Ma. Rosario - Contreras Rodríguez, Araceli - Hernández Silva, Gilberto - Vassallo-Morales, Luis Fernando
P 4.5	Adsorption of lead and copper by bentonite and in the bio-mineral systems <u>Perelomov, Leonid</u> - Perelomova, Irina - Sizova, Olga - Atroshchenko, Yury
P 4.6	Facet-mediated adsorption fractionation of DOM on hematite surfaces <u>Lyu, Jitao</u> - Zhang, Shuzhen
P 4.7	Co-adsorption of zinc and chlortetracycline onto montmorillonite at different pH <u>Wang, Lingqing</u> - Han, Xiaoxiao
P 4.8	Pesticide retention in soils amended with compost and biochar <u>Curiel, Sandra</u> - Marks, Evan A.N. - Marcos, Altamira - González-Delgado, Nieves - Pertejo, Pablo - <u>Rad, Carlos</u>
P 4.9	Self-regulation of the micronutrient composition of the soil profile in the zones of development of sulfate-reducing bacteria (DONBASS) <u>Petrova, Lyudmila</u>
P 4.10	Unsteady state leaching pattern of metallic elements (Cu, Zn, As, Cd, and Pb) from long term weathered mine residue under different drying-wetting conditions <u>Bang, Hyunwoo</u> - Kim, Juhee - <u>Hyun, Seunghun</u>

WEDNESDAY, JUNE 26TH 2019

Session 4: Dynamics of pollutants at soil interfaces (P4.11-4.20)

P 4.11	Oxidative coupling of bromophenol mediated by reduced graphene oxide and black carbon <u>Pei, Zhiguo</u>
P 4.12	Diastereoisomer- and enantiomer-specific distribution and metabolism of hexabromocyclododecanes in soil-plants systems <u>Huang, Honglin</u> - Lv, Lili - Li, Haonan
P 4.13	Pollution source and soil characteristics determine Cr behaviour in soils: phytomanagement feasibility <u>Pradas del Real, Ana Elena</u> - Pérez-Sanz, Araceli - García-Gonzalo, Pilar - Castillo-Michel, Hiram - Gismara, María Jesús - Lobo, Carmen

P 4.14	Effect of contamination sources on the rate of some potential toxic elements desorption from different soil ecosystems <u>Mansour, Hesham</u> - Awad, Fikry - Saber, Mohamed - Zaghloul, Alaa
P 4.15	Sorption and desorption of methylene blue on humic acid and methylated humic acid and thermogravimetry <u>Rybárik, Jan</u>
P 4.16	Comparison of preferential adsorption between humic and fulvic acid to goethite: kinetics and equilibrium <u>Wang, Long</u> - Weng, Liping - Li, Yongtao
P 4.17	A soil aggregates scale approach to investigate the densities of metals and proton reactive sites of organic matter and clay phases in soils <u>Martins, Jean</u>

Session 5: Soil amendments (A)

A 5.1	Impact of innovative and sea-shell amendments in <i>Bradyrhizobium</i> and soybean symbiotic relationship Seminario, Amaia - Soba, David - Gámez, Angie L - Aranjuelo, Iker - Houdusse-Lemenager, Diane - Yvin, Jean Claude
A 5.2	Aerated static windrow with a semipermeable film as a promising composting technology <u>Al-Alawi, Mutaz</u> - Simon, Barbara - Szegi, Tamas - Gulyas, Miklos
A 5.3	Effects of biochar and poultry manure on cocoyam (<i>Xanthosoma sagittifolium</i> Schott) productivity under sandy soil condition <u>Aqbede, Taiwo Michael</u> - Adekiya, Aruna Olasekan - Odoja, Adeniyi Shadrack - Bayode, Lucia Nike - Omotehinse, Paul Oluwatobi - Adepehin, Imole
A 5.4	Synergy of organic matter in soil, nutrients and biological activity <u>Badalikova, Barbora</u> - Vasinka, Martin
A 5.5	Different response of plastic film mulching on greenhouse gas intensity (GHGI) between chemical and organic fertilizations in maize upland soil <u>Lee, Jeong Gu</u> - Cho, Song Rae - Lee, Jin Ho - Chae, Ho Gyeong - Kim, Pil Joo
A 5.6	Lead sorption in tropical composts: influence of liquid-to-solid ratio <u>Zanin Lima, Jacqueline</u> - Guimarães Silvestre Rodrigues, Valéria
A 5.7	Behavior of the herbicide mesotrione in soil amended with fresh and aged biochar Gámiz, Beatriz - Velarde, Pilar - Spokas, Kurt - Cox, Lucía
A 5.8	Productive parameters and biological activity as indicators of the influence of biochar on the soil-plant-microorganisms system <u>Videgain, María</u> - Marco, Pedro - Martí, Clara - García-Ramos, Francisco Javier - Manyá, Juan José - Jaizme-Vega, María Del Carmen
A 5.9	Smart management of cover crop biomass to mitigate methane (ch4) emission in rice paddy <u>Song, Hyeonji</u> - Lee, Jinho - Kim, Piljoo
A 5.10	Effect biochar of rhizobacteria and on growth of soybean and content of mineral substances in soil Buzurukov, Sanjar - Jabborova, Dilfuza
A 5.11	Long-term effects of organic amendments on microbial communities in a degraded Mediterranean soil <u>Domínguez, María T.</u> - Montiel-Rozas, María Del Mar - Madejón, Paula - Madejón, Engracia
A 5.12	Soil respiration and organic carbon evolution in recent restored soils with organics amendments in a calcareous quarry under semiarid climate Soria, Rocío - <u>Rodríguez-Berbel, Natalia</u> - Ortega, Raúl - Miralles, Isabel

A 5.13	From wastes to resources: citrus hydrolates as natural biostimulants of soil microorganisms <u>Ioppolo, Antonino</u> - <u>Laudicina, Vito Armando</u> - <u>Badalucco, Luigi</u> - <u>Micalizzi, Anna</u> - <u>Saiano, Filippo</u> - <u>Palazzolo, Eristanna</u>
A 5.14	Implication of organic farming practice in change of physical-chemical properties of plough pan layer in paddy soils, Indonesia <u>Hanudin, Eko</u> - <u>Kautsar, Valensi</u> - <u>Hendro Sunarminto, Bambang</u>
A 5.15	Composting optimization of wheat straw for carrier material development <u>Calabi-Floody, Marcela</u> - <u>Medina, Jorge</u> - <u>Suazo, Jonathan</u> - <u>Ordiqueo, Manuel</u> - <u>Aponte, Humberto</u> - <u>Mora, Maria De La Luz</u> - <u>Rumpel, Cornelia</u>
A 5.16	Soil microbial biomass, phosphorus concentration, and nutrient contents are improved by cattle manure and lemon peel application on soil <u>Paredes, Cecilia</u> - <u>Staunton, Siobhan</u> - <u>Mora, María De La Luz</u>
A 5.17	Pesticide retention in tropical agricultural soils amended with rice husk biochar <u>Aldana, Gerardo O.</u> - <u>Hazlerigg, Charles</u> - <u>Werner, David</u> - <u>Lopez Capel, Elisa</u>
A 5.18	How does combined use of poultry manure and phosphate rock amendments affect soil P dynamics, plant biomass production? <u>Poblete-Grant, Patricia</u> - <u>Mora, María De La Luz</u> - <u>Rumpel, Cornelia</u>
A 5.19	Evaluating organic amendments as phosphorus source on the production of a permanent grassland grown in an Andisol from Southern Chile <u>Demanet, Rolando</u> - <u>Paredes, Cecilia</u> - <u>Calabi, Marcela</u> - <u>Poblete, Patricia</u> - <u>Mora, María De La Luz</u>
A 5.20	Study of horticultural post-harvest waste compost amended with zeolites as a soil fertilizer <u>Domene Ruiz, Miguel Angel</u> - <u>Ortega Pérez, Raúl</u> - <u>Segura Rodriguez, Mariló</u> - <u>Martínez Fernández, Eva María</u> - <u>Soriano Rodriguez, Miguel</u> - <u>Miralles Mellado, Isabel</u>
A 5.21	Addition of nanoparticles and biochar to agricultural waste composting: effects on composting process and CO₂-CH₄ emissions <u>Medina, Jorge</u> - <u>Knicker, Heike</u> - <u>Felipe, Pradel</u> - <u>Calabi-Floody, Marcela</u> - <u>Meier, Sebastián</u> - <u>Paneque, María</u> - <u>Cornejo, Pablo</u> - <u>Borie, Fernando</u>
A 5.22	Short-term responses of soil respiration induced with biochar and lime in acid soil <u>Durdevic, Boris</u> - <u>Jug, Irena</u> - <u>Knicker, Heike</u> - <u>Brozovic, Bojana</u> - <u>Vukadinovic, Vesna</u> - <u>Jug, Danijel</u>
A 5.23	Biochar amendments induced negative priming in soil organic carbon by regulated competitive interaction with keystone taxa <u>Chen, Lijun</u> - <u>Jiang, Yuji</u> - <u>Sun, Bo</u>
A 5.24	Competitive interaction with keystone taxa induced negative priming under biochar amendments <u>Chen, Lijun</u> - <u>Jiang, Yuji</u> - <u>Sun, Bo</u>
A 5.25	Effects of charred sewage sludge on carbon sequestration and nitrogen availability at a Mediterranean soil <u>Paneque, Marina</u> - <u>de la Rosa, José María</u> - <u>Leiva, Blanca</u> - <u>González Pérez José Antonio</u> - <u>Kern, Jürgen</u> - <u>Knicker, Heike</u>
A 5.26	International cooperation and transfer of knowledge: biochar and amendment to restore endangered soils in tropical dry forest in Colombia <u>Sandoval, John J.</u> - <u>Panettieri, Marco</u> - <u>de la Rosa, José María</u> - <u>Cabeza, Ivan</u> - <u>Acevedo, Paola</u>

Session 6: Nutrient availability in soils (N)

N 6.1	Addition of diverse phosphorus compounds to improve nutrient availability in agricultural soils of cuatro Cienegas basin, Mexico <i>Chávez-Ortiz, Pamela - García-Oliva, Felipe</i>
N 6.2	Root exudates involvement in tomato plants response to low p levels <i>Santoro, Veronica - Martin, Maria - Said-Pullicino, Daniel - Celi, Luisella</i>
N 6.3	The effects of foliar application of different compounds on the enzymes activity and drought tolerance at the end of seasonal growth in pishgham wheat variety <i>Mousavi, Seyedbahman - Faiziasl, Vali - Salmanian Khezerlo, Farzaneh - Esfandiari, Ezatallah - Karimi, Esmaeil</i>
N 6.4	Aluminum-fluoride-oxalate interactions in alpine tundra soil <i>Evans, Andrew - Jacobs, Michael</i>
N 6.5	Interactions of some organic acids with minerals and a red Latosol <i>Bassan Domingues, Cassia Fernanda - Ademércio, Antonio Paccola - Pedro, Magalhães Padilha</i>
N 6.6	Effect of biological soil crusts on the improvement of soil characteristics and on the production of phenolic compounds in saharan plants <i>Ouastani, Mebrouka - Hamdi Aissa, Baelhadj - Khammes, Chaima - Oucif Lebehi, Sabrina - Hadj-Mahammed, Mahfoud</i>
N 6.7	Microbial phosphorus dynamics affected by salinity in an Omani date palm soil <i>Al-Kalbani, Adhari Said Ali - Waldaudi, Jenan Salem - Blackburn, Daniel - Al-Ismaily, Said</i>
N 6.8	Improvement of plant growth, nodulation and yield of common bean (<i>Phaseolus vulgaris</i> L.) and chemical properties of soil by microbiological preparations <i>Jabborova, Difuza - Baboev, Saidmurot - Buzurukov, Sanjar - Davranov, Kakhramon - Jabbarov, Zafarjon</i>
N 6.9	Amorphous silica biomineralizations as a silicon source and its role on the nutrient and micronutrients dynamics on southeastern buenos aires agroecosystems <i>Frayssinet, Celia - Osterrieth, Margarita - Marcovecchio, Jorge - Borrelli, Natalia - Villagran, Diana - La Colla, Noelia - Fernandez Severini, Melisa</i>
N 6.10	Study of the biological crusts of the soil for its potential use in the control of desertification <i>Videla-Delaigüe, Anael - Arenas, Franko - Fuentes, Bárbara - Remonsellez, Francisco</i>
N 6.11	Exploring taxonomic and functional profiles of microbial communities associated with cyanobacteria biocrusts in drylands <i>Miralles Mellado, Isabel - Montero Calasanz, Maria Del Carmen - Ortega Perez, Raul</i>
N 6.12	Boron and zinc spraying is associated to an improved performance in hazelnut (<i>Coryllus avellana</i>) planted in acid soils <i>Meriño-Gergichevich, Cristian - Alarcón, David - Padilla, Daniela - Reyes-Díaz, Marjorie</i>
N 6.13	Quality and Health of soil in citrus producing areas in Colombia affected by the winter wave during 2010 – 2011 season <i>Yacomelo Hernandez, Marlon Jose - Carrascal, Francisco - Pérez, Lumey - León, Rommel - Ramirez, Maria Margarita - Perez, Urley</i>
N 6.14	Relationship of soil organic matter with integrated crop-livestock systems on the paddy fields <i>Müller, Carla Aristonara - Denardin, Luiz Gustavo - Aquino Alves, Lucas - Anghinoni, Ibanor - Dick P., Deborah</i>

N 6.15	Influence of physical and chemical properties of Ñadi soil (Aquands) on structure of nitrogen-transforming bacterial communities under different land uses in Southern Chile <i>Urrutia, Valentina - Dörner, José - Martínez, Oscar - Lagos-Pailla, Lorena</i>
N 6.16	A new biofertilizer design for food security and sustainable agriculture improving phosphorus availability and phosphorus uptake in rhizospheric processes <i>Mora, María De La Luz - Calabi, Marcela - Durán, Paola - Demanet, Rolando</i>
N 6.17	Chemical composition of dust storms in agricultural areas of arid land <i>Alharbi, Abdulaziz</i>
N 6.18	Valorization of iron ore tailings as fertilizers (HBED/Fe siderite, HBED/Fe hematite-goethite, and HS/Fe siderite, HS/Fe hematite-goethite) <i>Grioui, Ilham - Cieschi, María Teresa - Nouri, Mohamed - Abdessatar, Hatira - Yunta, Felipe - Lucena, Juan José</i>
N 6.19	Acid rain and cos of the northeastern region of Popocatepetl <i>Atonal, Diana - Tamariz, José Víctor - Castelán, Rosalía</i>
N 6.20	Chemical characteristics of different humus of earthworms, their importances in the fertility and structuring of soils in a maintainable process <i>Bassan, Cassia Fernanda Domingues</i>
N 6.21	How internal strigolactones levels affects phosphorus acquisition efficiency in wheat <i>Campos, Pedro - Aguilera, Natalia - Lopez-Raez, Juan Antonio - Borie, Fernando - Sequel, Alex</i>

Many thanks to the following sponsors and supporter:



Program Overview:

		Monday	Tuesday	Wednesday	Thursday	Friday
8:00 -		Registration	Registration	Registration		
8:30-10:30			New Techniques	Amendments I		C/N-Sink III
	8:30-9:00	Welcome	Keynote: Denis Courtier Murias	Keynote: Etelvino Novotny		Keynote: Deborah P. Dick
	9:00-9:45	Plenary 1: Siobhan Staunton	T1-T5	A1-A5		S 14 - S18
	9:45-10:30	Plenary 2: Claire Chenu				
10:30-11:00		Coffee Break				
11:00-13:00		C/N-Sink I/II	Soil Disturbance	Amendments II		Nutrient Availability
	11:00-11:30	S1-S7	Keynote: Ana Miller	A6 – A12		N1-N3
			D1-D5			
	12:00-12:30					
	12:30-13:00					
	13:00-13:15				Discussion Session 5	Huang Prize talk: Rota Wagai
13:15-14:30		Lunch			Final Discussion	
					Closing Remarks	
14:30-16:30		Poster: C-Sink: 1.1-1.50	Poster: New Techniques: 2.1-2.20 Soil Disturbance: 3.1-3.20 Pollutants: 4.1-10	Poster: Pollutants: 4.11-4.20 Amendments: 5.1-5.25 Nutrients: 6.1-6.20	Good-bye Cocktail	
	14:30-15:15	Pico session	Pico session	Pico session	Field Trip 14:30	
16:30-18:15		C/N-Sink III	Pollutants I	Pollutants II / Nutrients		
	16:30-17:00	S8-S13	Keynote: Francisco Cabrera	P5 – P8		
			P1 – P4			
18:15- 18:45		Discussion session 1 (I/II/III)	Discussion sessions 2/3	Discussion session 4 (I/II)		
	19:30-22:30		Mills of Alcala d. Guadaira			
	20:15-	Real Alcazar /Reception		Gala Dinner (20:30)		

