

14th International Conference of the East and Southeast Asia Federation of Soil Science Societies

National Taiwan University, Taipei, Taiwan. November 3–8, 2019

***Smart Soil Management for
Sustainable Agriculture***

**ESAFS
TAIWAN**

2019

PROGRAM BOOK

Organized by



Sponsored by



Contents

PREFACE.....	1
The 14 th ESAFS General Information.....	2
General Information in Taiwan.....	6
Organizing Committees	10
Conference Program at a Glance.....	12
Conference Floor Plan	14
Keynote Speakers.....	15
Oral sessions	16
Conference Program	18
Posters	32
Odd poster numbers.....	32
Even poster numbers.....	38

PREFACE

Soil is not only important for sustainable agriculture, but also crucial to environmental quality. The negative impacts of civilization development on our environment are rapidly growing due to the increase of global population, yet humans are getting dependent on the high quality of soil resources for surviving on the earth. The East and Southeast Asia Federation of Soil Science Societies (ESAFS) is dedicated to the exchange of recent advances in soil science in the East and Southeast Asian regions, providing the better understanding of the attributes of soil quality and the way of improving soil and associated environmental quality for sustainable food security and healthy life of East and Southeast Asia as well as world population.

This international conference, ESAFS 2019, is an integrated platform for interaction among scientists, consultants, and policy makers, who are responsible for the research and technology transfer of soil science, fertilizer management, and plant nutrition in order to cope with the rapid industrial development globally. ESAFS 2019 is hosted by National Taiwan University (NTU) and Chinese Society of Soil and Fertilizer Sciences (Taiwan) and is held at GIS Convention Center of NTU in Taipei, Taiwan. It aims to emphasize the multidisciplinary collaboration for the development of smart soil management for sustainable agriculture. The presentations of ESAFS 2019 are focus on soil education and public awareness, emerging contaminant elements in soil-plant systems, pedogenesis and soil information, soil fertility and plant nutrition, soil ecology, paddy soil remediation and food safety, soil management and climate change, soil and water management, and forest soils. There is also an education trip of post conference for the visit of landscape, ecology, and culture of soils in central Taiwan.

The organization committee of ESAFS 2019 would like to appreciate a number of people helped us to achieve our aims and we would like to thank all of them: all the committees of ESAFS 2019 and staffs and students in my lab (Soil Survey and Remediation Laboratory, Department of Agricultural chemistry, NTU). In addition, we would like to thank the Ministry of Science and Technology, Taiwan and Apollo Technology Co., LTD. for financially supporting the conference.



Zeng-Yei Hseu

Chairman, ESAFS 2019

President, Chinese Society of Soil and Fertilizer Sciences (Taiwan)

Professor, Department of Agricultural Chemistry, National

Taiwan University

3 November 2019



The 14th ESAFS General Information

Conference

The 14th International Conference of the East and Southeast Asia Federation of Soil Science Societies.

Venue

GIS NTU Convention Center, Taipei, Taiwan
(B1, No. 85, Sec. 4, Roosevelt Rd., Da'an Dist., Taipei City, Taiwan)

Conference Organizers

The East and Southeast Asia Federation of Soil Science Societies (ESAFS)
National Taiwan University (NTU)
The Chinese Society of Soil and Fertilizer Sciences (CSSFS) (Taiwan)

Dates (November 3-8, 2019)

Registration for foreign participants: 15:00-19:00, Sunday, Nov. 3; (GIS NTU Convention Center, Plato Hall)

Registration: 08:00-09:00, Monday, Nov. 4; (GIS NTU Convention Center, Lobby)

Opening Ceremony: 09:00-09:20, Monday, Nov. 4; (The Forum Hall)

Closing Ceremony: 16:10-16:30, Tuesday, Nov. 5; (Socrates Hall)

Educational Trip: Wednesday-Thursday, Nov. 6 -7

Departure of foreign participants: Friday, Nov. 8

Welcome Reception (For foreign participants)

Time: 17:30-19:00, Nov. 3

Location: GIS NTU Convention Center, Plato Hall

Council Meeting

Time: 12:00-14:00, Nov. 4

Location: 11th Floor, Just Sleep Hotel 捷絲旅臺大尊賢館

11F, No. 83, Sec. 4, Roosevelt Rd., Taipei, Taiwan

台北市大安區羅斯福路四段 83 號 11 樓

Welcome banquet with Puppetry Show (Foreign participants & invited guests)

Time: 18:00-21:00, Nov. 4

Location: Marée Restaurant 水源會館

No. 16, Siyuan St, Zhongzheng District, Taipei City, Taiwan (See map in P.7)

台北市中正區思源街 16 號

Lunch

Lunch Boxes will be provided during Nov. 4 and 5 in exchange for lunch coupons of each day.

Location: GIS NTU Convention Center, Lobby

Coffee/Tea/Refreshments

Coffee and tea will be served in morning/afternoon tea and coffee time at the GIS NTU Convention Center, Lobby

Poster Sessions

Time: 13:00-14:00, Nov. 4 & Nov. 5

(Nov. 4 ODD poster number only; Nov. 5 EVEN poster number only).

Location: Plato Hall, GIS NTU Convention Center

Internet Connection

Free Wi-Fi is available in the GIS NTU Convention Center, but different passwords for each Hall. Internet connection information will be announced in each hall.

Certificate of Attendance

Certificates of attendance will be available for application at the registration desk (GIS NTU Convention Center, Lobby) on Nov. 4 - 5. After conference, we'll give it to you by email.

Abstracts

All abstracts can be accessed online (<http://esafs2019.cssfs.org.tw/>) or through the USB flash drive provided.

Badges

All participants including exhibitors are kindly requested to wear their badges when attending activities of the conference. Our staffs are easily recognizable by their DEEP BLUE T-shirts with the ESAFS Logo and YELLOW BADGES.

Presentation Guidelines

Oral Presentations:

For keynote speakers, each paper is allocated 40 minutes, with 30 minutes for presentation and 10 minutes for questions and answers.

There are three to four parallel oral sessions during each period after keynote session.

Each paper is allocated 10 minutes for volunteer speakers respectively and last 2 minutes for questions and answers should be included.

Oral volunteers should hand in their presentation material on USB drives and copy necessary files to PDF/PPT Collection Desk during registration period or in the session room at least 30 minutes before the “session” starts.

Please go to the session room at least 5 minutes before the session starts, and check presentation material with the computer and audio-visual equipment.

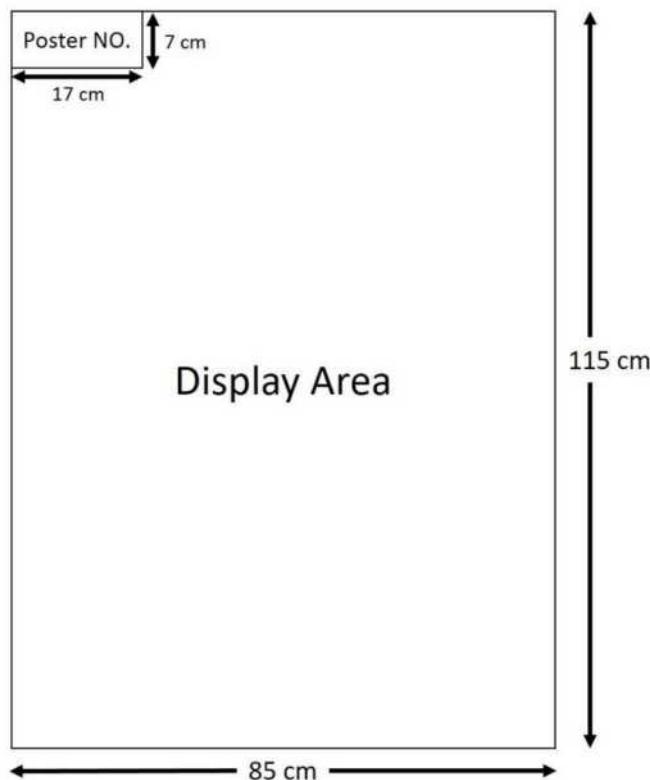
The computer in each session room can display MS PowerPoint and Adobe PDF files.

If you use other digital storage devices not supported by the computer in the session room, please ask a staff to transfer the files.

Poster presentations:

Poster Panel Size

Please refer to this visualization of the poster panels to be used during the conference. The display area for posters is **85 cm (width) × 115 cm (height)**. Please ensure that your poster does not exceed this size. A sub-area (17 cm wide × 7 cm high) on upper-left corner should be reserved for poster number label manufactured and provided by the conference organizers.



Poster Allocation

Posters are displayed in the room "Plato Hall", GIS Convention Center. Posters will be displayed on **November 4 (Monday) for ODD poster number only and November 5 (Tuesday) for EVEN poster number only**. Each poster has been assigned a poster number. Please see the session of **Posters (P.32)** of this program book for your poster number. These numbers are also posted in the upper left-hand corner of each poster board.

Poster Set-Up and Take Down

Posters of **ODD poster number** must be set up by **10:30 on November 4 (morning tea time)** and can be remained on display until 17:10 on November 4. Please **remove by 17:30 on the same day**.

Posters of **EVEN poster number** must be set up by **10:30 on November 5 (morning tea time)** and can be remained on display until 15:20 on November 5. Please **remove by 15:40 on the same day**.

Dedicated poster sessions have been scheduled during 13:00-14:00 on November 4-5. Authors will be expected to stand by the posters during these poster session time to answer questions.

Any poster remaining in place after 16:00 on November 5 will be removed by the organizers who accept no responsibility for loss or damage.

Poster Fixing

Thumbtacks will be available in the poster area. Poster panels are also suitable for Velcro fixing, but please ensure that you bring a sufficient amount of materials with you. Adhesive tape or twin adhesive is not allowed.

Poster Content

The poster should include title, author name(s), and affiliation(s). It is highly recommended to use illustrations, charts, tables, and other visually appearing objects to convey your research work. Make sure all materials are clearly readable from a distance. You may bring other relevant materials, e.g., full paper, addendum, etc. to the poster sessions.

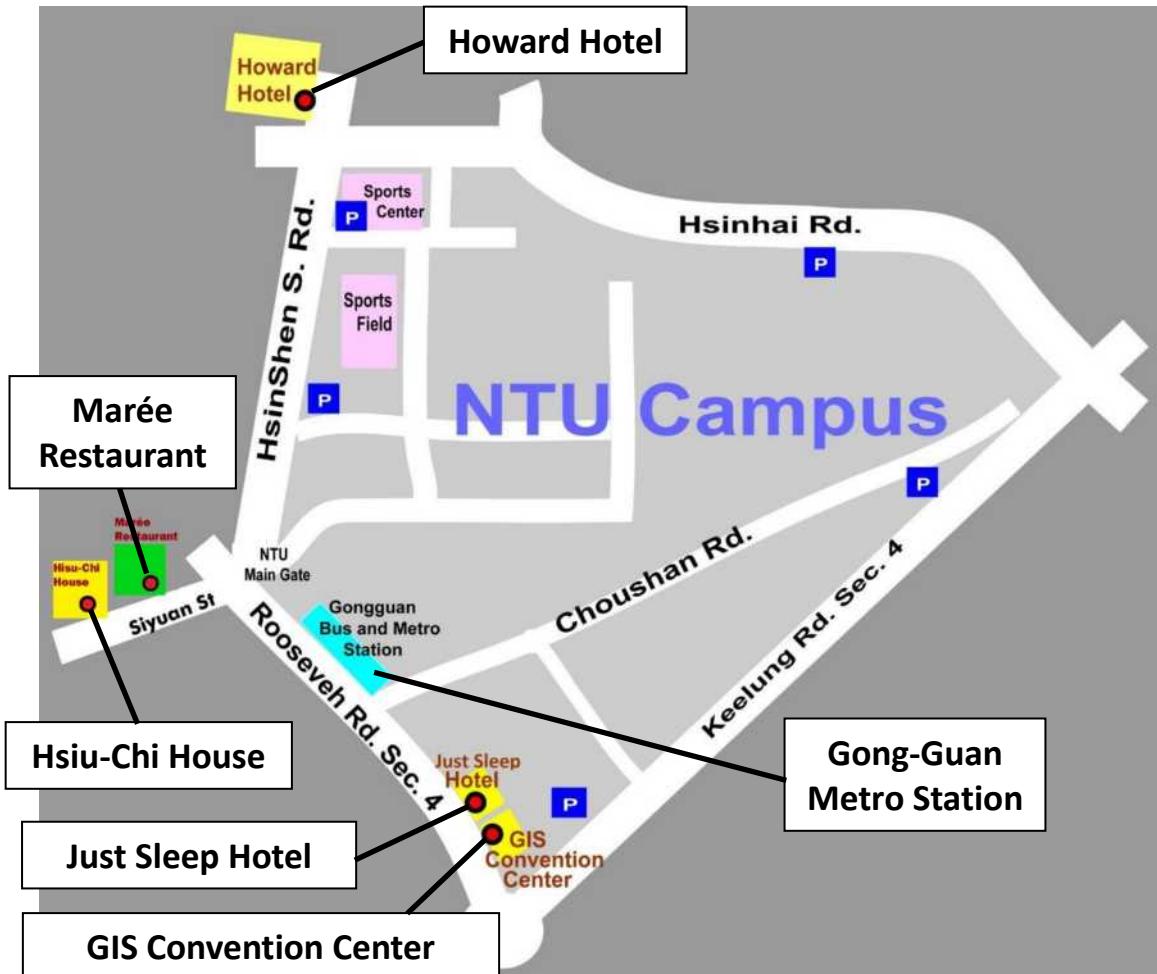
General Information in Taiwan

Transportation Information

Between Taiwan Taoyuan International Airport (formerly known as CKS International Airport) and Taipei City:

Routes	Fare (NT\$)	Service Hours	Journey Time
Metro Taoyuan 	Adult NT\$150 Child NT\$70 (one way)	6:00-22:55	40 mins (Express) 55 mins (Commuter)
By Taxi	1,500 NTD /one way		Approx. 40 min.
By Bus		(CKS International Airport ↔ Taipei Railway Station)	
Kuo-Kuang Motor Transport (Kuokuang Line) 1819	Adult NT\$140 Child NT\$70 (one way)	24 Hours/day Intervals: 15-20 minutes	55 minutes
CityAir Bus 1960 East	Taipei Adult NT\$145 Child NT\$70 (one way)	Taoyuan Airport 05:50-01:05 Taipei City Hall Bus Station 04:40-23:00	60~70 minutes

1. You can take metro systems from Taoyuan International Airport to Taipei Main Station (<https://www.tymetro.com.tw/tymetro-new/kr/index.php>) and transfer into Metro Taipei (<https://m.metro.taipei/kr/>) to Just Sleep Hotel at G07 Stop (Gongguan) along Exit No. 2 and turn left going 50 meters to find the circle-shaped building behind street (Just Sleep Hotel). The GIS NTU Convention Center is located nearby the Just Sleep Hotel.
2. Bus ticket counters are located in the Arrival Passenger Reception Areas of both Terminals of airport.
3. Taxi from Taipei Railway Station to National Taiwan University is about 135 NTD.
4. If you take the MRT from Taipei Railway Station to Gongguan Station, it will cost 20 NTD.
5. Howard International House Taipei, Just Sleep Hotel@NTU, Hsiu-Chi House and GIS Convention Center are less than 1 kilometer from Gongguan MRT Station (see the map below)



Taxi is the most convenient way to travel within Taipei City. If you take taxi around Taipei downtown, it will cost less than 250 NTD, starting with 70 NTD for 1.25 km. An additional 5 NTD (approx. 0.15 USD) will be charged for each additional 200 m or 80 seconds thereafter.

The Conference Venue address (in Chinese)

集思台大會議中心 GIS National Taiwan University Convention Center 地址：台北市羅斯福路四段 85 號 B1 Add: B1, No. 85, Sec. 4, Roosevelt Rd., Da'an Dist., Taipei City
--

MRT

Gongguan Station, Exit 2

Songshan-Xindian Line (Green Line (3)) : At the station exit 2, take the left turn to Roosevelt Rd. Here you will find the GIS NTU Convention Center on your left-hand side. (2 minutes walking)

Metro Taipei Route Map



Currency

The Country's currency is the New Taiwan Dollar (NTD). The current exchange rate is approximately NTD 31.1 /1 USD (Feb, 1, 2019, subject to change). Foreign currencies can be exchanged at hotels, airports* and a number of government-designated banks. Major credit cards are widely accepted, and traveler's checks may be accepted by a number of tourist-oriented business and at most international tourist hotels and banks.

*There is no currency exchange after 21:30 in the bank of Taoyuan International Airport.

Tipping and Taxes

Tipping is not customary in most places in Taiwan. The one exception is tipping the bellboy when you check into a hotel. A 10% service charge and a 5% value-added tax are added to room rates and meals.

Electricity

110 Volts A.C. Taiwan uses electric current at 110 volts AC/60 Hz with two- (in most cases) or three-prong USA-type sockets. Appliances from Europe, Australia or South-East Asia will need an adaptor or transformer. Many hotels also have sockets for 220-volt appliances.



Time Zone

Taiwan is 8 hours ahead of Greenwich Mean Time (GMT).

Useful Words

English	Mandarin Chinese
Hello	Ni Hau
Sorry, Excuse me	Duei Bu Chi
Thanks	Shie Shie
Please	Ching
Welcome	Huan Yin
Bottoms up	Gan Bei

Organizing Committees

Chairman

Professor, **Zeng-Yei Hseu** (National Taiwan University)

Vice-chairman

Distinguished Professor, **Dar-Yuan Lee** (National Taiwan University)

Secretary General

Professor, **Shih-Hao Jien** (National Pingtung University of Science and Technology)

International Advisory Committee

Takashi Kosaki (President, International Union of Soil Science / Professor, Aichi University)

Jae E Yang (Former President, International Union of Soil Science / Professor, Kangwon National University)

Nanthy Bolan (Professor, University of Newcastle)

Huu-Sheng Lur (Dean, College of Bioresources and Agriculture, National Taiwan University)

Zueng-Sang Chen (Professor Emeritus, National Taiwan University)

International Scientific Committee

S. M. Imamul Huq (President, Soil Science Society of Bangladesh)

Renfang Shen (President, Soil Science Society of China)

Budi Mulyanto (President, Indonesian Soil Science Society)

Ryusuke Hatano (President, Japanese Society of Soil Science and Plant Nutrition)

Yong Seon Zhang (President, Korean Society of Soil Science and Fertilizer)

Rosazlin Abdullah (President, Malaysian Society of Soil Science)

Keshav R Adhikari (President, Nepalese Society of Soil Science)

Edna D. Samar (President, Philippine Society of Soil Science and Technology)

M.G.T.S. Amarasekara (President, Soil Science Society of Sri Lanka)

Pitayakon Limtong (President, Soil and Fertilizer Society of Thailand)

Minh Tien Tran (Secretary in general, Vietnam Society of Soil Science)

Zeng-Yei Hseu (President, Chinese Society of Soil and Fertilizer Sciences (Taiwan))

Budiman Minasny (Professor, The University of Sydney)

Local Organizing Committee

Hung-Yu Lai (National Chung Hsing University, Taiwan)
Chen-Chi Tsai (National Ilan University, Taiwan)
Yuan Shen (National Chung Hsing University, Taiwan)
Jen-Hshuan Chen (National Chung Hsing University, Taiwan)
Shan-Li Wang (National Taiwan University, Taiwan)
Chong-Ho Wang (National Pingtung University of Science and Technology, Taiwan)
Wei-min Hsiang (Agricultural Research Institute, Taiwan)
Fo-Ting Shen (National Chung Hsing University, Taiwan)
Ying-Ming Li (Agriculture and Food Agency, Taiwan)
Yong-Hong Lin (National Pingtung University of Science and Technology, Taiwan)
Chin-Hua Ma (World Vegetable Center, Taiwan)
Li-Feng Ni (Hualien District Agricultural Research and Extension Station, Taiwan)
Kai-Wei Juang (National Chiayi University, Taiwan)
Hong-Yu Guo (Agricultural Research Institute, Taiwan)
Chi-Ling Chen (Agricultural Research Institute, Taiwan)
Yuh-Ming Huang (National Chung Hsing University, Taiwan)
Yu-Min Tzou (National Chung Hsing University, Taiwan)
Chiu-Chung Young (National Chung Hsing University, Taiwan)
Shan-Nei Huang (Harmony Organic Agriculture Foundation, Taiwan)
Sheng-Bin Ho (National Taiwan University, Taiwan)
Ching-Ho Lin (Kaohsiung District Agricultural Research and Extension Station, Taiwan)
Wen-Lung Lai (Taichung District Agricultural Research and Extension Station, Taiwan)
Chao-Ming Lai (National Taiwan University, Taiwan)
Ren-Shih Chung (National Taiwan University, Taiwan)
Zhen-Qing Zhao (National Chung Hsing University, Taiwan)

Conference Program at a Glance

Venue: GIS NTU Convention Center, National Taiwan University

Sunday Nov. 03, 2019

15:00-19:00	Registration for foreign participants	Plato Hall
17:30-19:00	Reception for foreign participants	

Monday Nov. 04, 2019

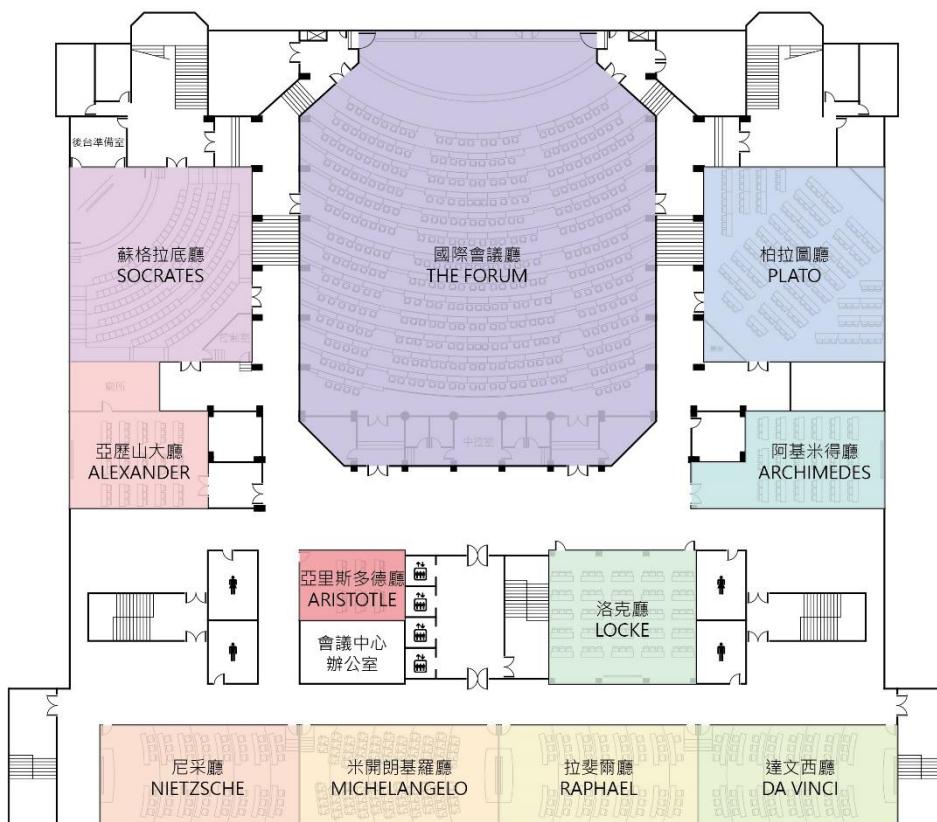
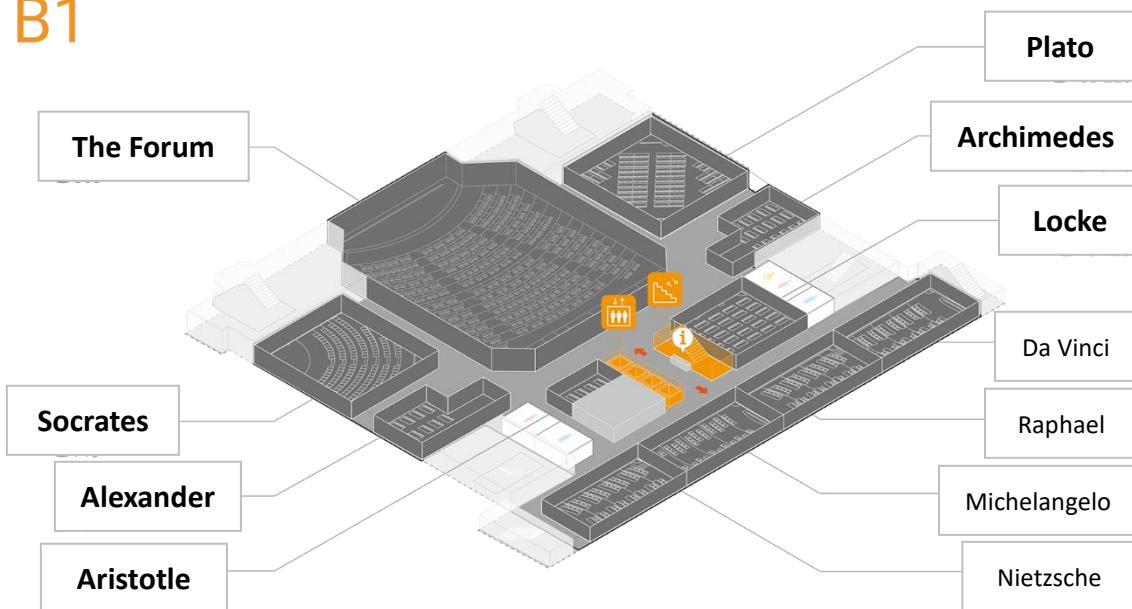
08:00-09:00	Registration			Forum Hall
09:00-09:20	Opening Ceremony (Zeng-Yei HSEU, Chairman)			Forum Hall
09:20-10:00	Keynote Speech 1 (Nanthi BOLAN)			Forum Hall
10:00-10:30 Morning Tea and Coffee				
10:30-11:10	Keynote Speech 2 (Huu-Sheng LUR)			Forum Hall
11:10-11:50	Keynote Speech 3 (Chiu-Chung YOUNG)			Forum Hall
11:50-13:00	Lunch			12:00-14:00 Council meeting (11th Floor, Just Sleep Hotel)
13:00-14:00	Poster Session---Plato Hall (Odd poster number only)			
Room	Socrates Hall	Locke Hall	Alexander Hall	Archimedes Hall
14:00-15:20	S1	S2	S3	Society Report
15:20-15:50	Afternoon Tea and Coffee			
15:50-17:10	S4	S5	S6	Society Report
18:00-21:00	Puppetry show and welcome banquet at La Marée Restaurant (Foreign participants & invited guests only)			

Tuesday Nov. 5, 2019

08:00-09:00	Registration			Forum Hall
Room	Socrates Hall	Locke Hall	Alexander Hall	Archimedes Hall
008:30-9:50	S7	S8	S9	S10
09:50-10:30	Morning Tea and Coffee			
10:30-11:50	S11	S12	S13	S14
11:50-13:00	Lunch			
13:00-14:00	Poster Session---Plato Hall (Even poster number only)			
14:00-15:20	S15	S16	S17	S18
15:20-15:40	Afternoon Tea and Coffee			
15:40-16:00	Closing ceremony (Zeng-Yei HSEU, Chairman)			Socrates Hall

Conference Floor Plan

B1



Keynote Speakers



Keynote Speech 1:

Monday, Nov. 4, 09:20-10:00

Professor Nanthi BOLAN

University of Newcastle, Australia

Biochar application modulates soil health and fertility: a meta-analysis



Keynote Speech 2:

Monday, Nov. 4, 10:30-11:10

Professor Huu-Sheng LUR

National Taiwan University, Taiwan

Development and prospect of a smart farming-based rice production system for sustainable agriculture in Taiwan



Keynote Speech 3:

Monday, Nov. 4, 11:10-11:50

Professor Chiu-Chung YOUNG

National Chung Hsing University, Taiwan

Soil microbial ecology and organic matter application for sustainable agriculture

Oral sessions

Session 1 (S1-Nov. 4; Socrates Hall)

Soil education for pre- and elementary-school children: current issues towards setting an international standard

Moderators: Hideaki HIRAI, Heng TSAI

Session 2 (S2-Nov. 4; Locke Hall)

Emerging contaminant elements in soil-plant systems (I)

Moderators: Dar-Yuan LEE, Tomoyuki MAKINO

Session 3 (S3-Nov. 4; Alexander Hall)

Soil information and digital soil mapping

Moderators: Budiman MINASNY, Kai-Wei JUANG

Session 4 (S4-Nov. 4; Socrates Hall)

Soil Fertility and plant nutrition (I)

Moderators: Tetsuhiro WATANABE, Pi-Hui CHANG

Session 5 (S5-Nov. 4; Locke Hall)

Soil Ecology

Moderators: Ryusuke HATANO, Hung-Yu LAI

Session 6 (S6-Nov. 4; Alexander Hall)

Recent advances in paddy soil science: toward establishments of sustainable rice production, environmentally-friendly managements and food safety (I)

Moderators: Mizuhiko NISHIDA, Yu-Min TZOU

Session 7 (S7-Nov. 5; Socrates Hall)

Soil Fertility and plant nutrition (II)

Moderators: Edna D. SAMAR, Ya-Hui CHUANG

Session 8 (S8-Nov. 5; Locke Hall)

Recent advances in paddy soil science: toward establishments of sustainable rice production, environmentally-friendly managements and food safety (II)

Moderators: Mizuhiko NISHIDA, Shan-Li WANG

Session 9 (S9-Nov. 5; Alexander Hall)

Soil management and climate change (I)

Moderators: Shinya FUNAKAWA, Chi-Ling CHEN

Session 10 (S10-Nov. 5; Archimedes Hall)

Soil and water management

Moderators: Ki-In KIM, Yu-Ting LIU

Session 11 (S11-Nov. 5; Socrates Hall)

Soil management and climate change (II)

Moderators: Kye-Hoon KIM, Chia-Hsin LEE

Session 12 (S12-Nov. 5; Locke Hall)

Emerging contaminant elements in soil-plant systems (II)

Moderators: Hsi-Mei LAI, Jin Hee PARK

Session 13 (S13-Nov. 5; Alexander Hall)

Soil Fertility and plant nutrition (III)

Moderators: Suphachai AMKHA, Ian Auza NAVARRETE

Session 14 (S14-Nov. 5; Archimedes Hall)

Control, remediation and reclamation of soil degradation and soil contamination (I)

Moderators: Junta YANAI, Stefan NORRA

Session 15 (S15-Nov. 5; Socrates Hall)

Soil management and climate change (III)

Moderators: Dang Van MINH, Hsing-Cheng HSI

Session 16 (S16-Nov. 5; Locke Hall)

Control, remediation and reclamation of soil degradation and soil contamination (II)

Moderators: Junta YANAI, Stefan NORRA

Session 17 (S17-Nov. 5; Alexander Hall)

Soil Fertility and plant nutrition (IV)

Moderators: Minh Tien TRAN, Chien-Hui SYU

Session 18 (S18-Nov. 5; Archimedes Hall)

Forest soils

Moderators: Chih-Hsin CHENG, Rosazlin ABDULLAH

Conference Program

Venue: GIS NTU Convention Center, National Taiwan University

Sunday Nov. 03, 2019

Room	Plato Hall
15:00-19:00	Registration for foreign participants
17:30-19:00	Reception for foreign participants

Monday Nov. 04, 2019

Room	Forum Hall
08:00-09:00	Registration
Room	Forum Hall
Moderator	Zeng-Yei HSEU
	Opening Ceremony Opening Remarks: Zeng-Yei HSEU, Chairman Welcome Address: Chia-Pei CHOU, Vice President, National Taiwan University Huu-Sheng LUR, Dean of College of Bioresources and Agriculture, National Taiwan University
Moderator	Dar-Yuan LEE
09:20-10:00	Keynote Speech 1: Biochar application modulates soil health and fertility: a meta-analysis Nanthi BOLAN
10:00-10:30	Morning Tea and Coffee
Moderator	Zueng-Sang CHEN
10:30-11:10	Keynote Speech 2: Development and prospect of a smart farming-based rice production system for sustainable agriculture in Taiwan Huu-Sheng LUR
Moderator	Yuan SHEN
11:10-11:50	Keynote Speech 3: Soil microbial ecology and organic matter application for sustainable agriculture Chi-Chung YOUNG

Monday Nov. 04, 2019

11:50-13:00	Poster Session---Plato Hall (Odd poster number only)			Lunch	12:00-14:00 Council meeting (11th Floor, Just Sleep Hotel)
13:00-14:00	Socrates Hall	Locke Hall	Alexander Hall	Archimedes Hall	
Room	Session 1: Soil education for pre- and elementary-school children: current issues towards setting an international standard	Session 2: Emerging contaminant elements in soil-plant systems (I)	Session 3: Soil information and digital soil mapping	Society Report	
Moderators	Hideaki HIRAI Heng TSAI	Dar-Yuan LEE Tomoyuki MAKINO	Budiman MINASNY Kai-Wei JUANG	Zeng-Yei HSEU Shih-Hao JIEN	
14:00-14:10	Demonstration functions, specific characteristics and high impression of soil museums of the world Zueng-Sang CHEN	Effects of emerging contaminant elements on aquatic food chains in irrigation-pond wetlands Rita YAM	Convolution neural network for mapping heavy metals in the topsoil of New South Wales, Australia Yuxin MA	Soil Science Society of Bangladesh S.M. Imamul HUQ	
14:10-14:20	Soil education in the Philippines for pre-elementary and elementary school children Edna D. SAMAR	The effects of emerging contaminant elements on soil bacteria Nai-Chun LIN	Soil carbon and other nutrient conditions under different land use in Tamil Nadu, South India Soh SUGIHARA	Soil Science Society of China Renfang SHEN	
14:20-14:30	Soil taxonomy of the municipality of Maasim in Saranggani Province, Mindanao, Philippines Acefior GARCIA	Bioavailability of chromium (Cr) from tannery waste for caisim growed on contrasted textural soil Eko HANUDIN	Sensitive soil layers at landslide prone areas of the transitional volcanic landscapes between quaternary and tertiary systems in Java - Indonesia Junun SARTOHADI	Indonesian Soil Science Society Budi MULYANTO	
14:30-14:40	Making shiny soil balls is popular with children, but what kind of soil balls should we make to link to soil education? Haruo TANAKA	Nonexchangeable K threshold to screen radiocesium transfer risk to brown rice for paddy soils in Fukushima Kohei KUROKAWA	Spatial variation of soil chemical properties in paddy fields of Kurunegala District in Sri Lanka W. M. U. K. RATHNAYAKE	Japanese Society of Soil Science and Plant Nutrition Ryuusuke HATANO	

Room	Socrates Hall	Locke Hall	Alexander Hall	Archimedes Hall
	Session 1: Soil education for pre- and elementary-school children: current issues towards setting an international standard	Session 2: Emerging contaminant elements in soil-plant systems (I)	Session 3: Soil information and digital soil mapping	Society Report
Moderators	Hideaki HIRAI Heng TSAI	Dar-Yuan LEE Tomoyuki MAKINO	Budiman MINASNY Kai-Wei JUANG	Zeng-Yei HSIEU Shih-Hao JIEN
14:40-14:50	Development and implement of an soil curriculum in the senior high school in Taiwan Wen-Shu HUANG	Effect of antibiotics on germination rate, root length and chlorophyll content of four different crops Hyeon-ji CHOE	Soil characteristics in urban area under different land use : A case study of Fuchu in Tokyo, Japan Chiaki MURAKAMI	Korean Society of Soil Science and Fertilizer Jwakyung SUNG
14:50-15:00	General discussion	The distribution of gallium, indium and thallium in different type of arable soils in Taiwan Yu-Hsi LIU	Cadmium and lead concentrations in surface soils of tropical Ultisol: spatial variability in-relation to land use, soil associations and topography A. G. K. S. KODIKARA	Malaysian Society of Soil Science Rosazlin ABDULLAH
15:00-15:10		Vanadium extractability, speciation, and bioavailability in agricultural soils Cho-Yin WU	Digital soil mapping of soil fertility for Thai Jasmine Rice using remote sensing and terrain parameters employing machine learning in Thung Kula Rong-Hai region, Thailand Sasirin SRISOMKIEW	Nepalese Society of Soil Science Keshav R ADHIKARI
15:10-15:20			Efficient utilization mechanism of crop water and nutrients and regulation mode under alternate partial root-zone irrigation Fusheng LI	Philippine Society of Soil Science and Technology Edna D. SAMAR

Afternoon Tea and Coffee					
15:20-15:50	Room	Socrates Hall	Locke Hall	Alexander Hall	Archimedes Hall
		Session 4: Soil Fertility and plant nutrition (I)	Session 5: Soil Ecology	Session 6: Recent advances in paddy soil science: toward establishments of sustainable rice production, environmentally-friendly managements and food safety (I)	Society Report
Moderators	Tetsuhiro WATANABE Pi-Hui CHANG	Ryusuke HATANO Hung-Yu LAI	Mizuhiko NISHIDA Yu-Min TZOU	Zeng-Yei HSIEU Shih-Hao JIEN	
15:50-16:00	Relationship of soil color to soil fertility parameters of major soil series grown to sugarcane C. A. E. VALLEJERA-CORSIGA	Comparison of nutrient utilization strategies of traditional shifting agriculture under different climatic and soil conditions in Zambia, Thailand, Indonesia, and Cameroon Shinya FUNAKAWA	Phylogenetically distinct methanotrophs modulate methane oxidation in rice paddies and mangrove soils Chih-Yu CHIU	Soil Science Society of Sri Lanka M.G.T.S. AMARASEKARA	
16:00-16:10	Silicon availability and its relation to other properties of soils in Taiwan Yin-Chung HUANG	From Effective Microorganisms (EM) Theory to examine soil microbial ecology Lo TSUI	Involvement of microaerophilic iron-oxidizing bacteria in the iron-oxidizing process at the surface oxidized layer of flooded paddy field soil Takeshi WATANABE	Chinese Society of Soil and Fertilizer Sciences (Taiwan) Shih-Hao JIEN	
16:10-16:20	Enhancement in phosphorus uptake by rhizosphere effect in soil with combined application of chemical fertilizer and cattle manure compost Masahiko KATOH	Elemental and mineralogical diversity of serpentine soils in East and Southeast Asia Atsushi NAKAO	Degree of saturation, availability and dynamics of phosphorus in paddy growing Alfisols of Sri Lanka and response of rice (<i>Oryza sativa</i> L.) plants to added P Fertilizers R.S. DHARMAKEERTHI	Soil and Fertilizer Society of Thailand Pitayakon LIMTONG	

Room	Socrates Hall	Locke Hall	Alexander Hall	Archimedes Hall
	Session 4: Soil Fertility and plant nutrition (I)	Session 5: Soil Ecology	Session 6: Recent advances in paddy soil science: toward establishments of sustainable rice production, environmentally-friendly managements and food safety (I)	Society Report
Moderators	Tetsuhiro WATANABE Pi-Hui CHANG	Ryuusuke HATANO Hung-Yu LAI	Mizuhiiko NISHIDA Yu-Min TZOU	Zeng-Yei HSEU Shih-Hao JIEN
16:20-16:30	Introduction of FFTC's proficiency testing program of soil and plant tissue analysis Yu-Wen LIN	Evaluating soil properties of serpentine soils between island arc and mainland area in Asia Chia-Yu YANG	Investigation of the effect of inter-tillage weeding on the distribution of nitrogen-fixing microorganisms in natural farming rice paddies Jin-Feng LIN	Vietnam Society of Soil Science Minh Tien TRAN
16:30-16:40	Effect of FertiGroe®N nanofertilizer on culturable bacterial population, microbial biomass, and enzyme activities in two soil types Carlito Jr Polo BASAY	Plant growth promoting endophytic bacteria confer growth promoting effect and different metabolite profiling in host plant Ryota KATAOKA	Role of biochar and manure combination on chemical properties of paddy soil polluted by mine tailing and the effect on rice (<i>Oryza sativa</i>) production Yulnafatmawita	General discussion
16:40-16:50	Effects of irrigation of livestock wastewater on soil quality and forage agronomic traits Hsin-Jung LIEE	Cutting-edge arbuscular mycorrhizal fungal technology for sustainable agriculture Masanori SAITO	Effects of different iron amendments in paddy soil on arsenic accumulation in rice plants Han-Ting HSU	
16:50-17:00	Use of urine and excreta could improve vegetable production and soil fertility in Central Nepal Sharda KC	Isolation of endophytic fungi from forest soils in Indonesia Keitaro TAWARAYA	Effect of pelletized urea biochar composite on growth and N response of rice plant D.K.R.P.L. DISSANAYAKE	

Room	Socrates Hall	Locke Hall	Alexander Hall
	Session 4: Soil Fertility and plant nutrition (I)	Session 5: Soil Ecology	Session 6: Recent advances in paddy soil science: toward establishments of sustainable rice production, environmentally-friendly managements and food safety (I)
Moderators	Tetsuhiro WATANABE Pi-Hui CHANG	Ryuusuke HATANO Hung-Yu LAI	Mizuhiiko NISHIDA Yu-Min TZOU
17:00-17:10	Determination of base saturation percentage in agricultural soils via portable X-ray fluorescence spectrometer Ashmita RAWAL	Characteristics of soil morphology of high mountain belt in Khuvsgul mountain region, Mongolia Saruul NARANGEREL	General discussion
18:00-21:00	Puppetry show and welcome banquet at La Marée Restaurant (Foreign participants & invited guests only)		

Tuesday Nov. 5, 2019

Room	Forum Hall	Forum Hall	Archimedes Hall
08:00-08:30	Registration		
Room	Socrates Hall	Locke Hall	Alexander Hall
	Session 7: Soil Fertility and plant nutrition (II)	Session 8: Recent advances in paddy soil science: toward establishments of sustainable rice production, environmentally-friendly managements and food safety (II)	Session 9: Soil management and climate change (I)
Moderators	Edna D. SAMAR Ya-hui CHUANG	Mizuhiko NISHIDA Shan-Li WANG	Shinya FUNAKAWA Chi-Ling CHEN
08:30-08:40	Mobility characteristics of inorganic nutrients from soil fertilized with sewage sludge compost Riko SAMATA	Fertility re-evaluation of paddy soils after 50 years of the Green Revolution (FREPS 50) ~ A case study in the Philippines ~ Fukiko MASAI	Evaluation of practices for soil organic carbon sequestration to mitigate climate change in Taiwan Chi-Ling CHEN
08:40-08:50	The effects of biochar, poultry manure and their mixture on soil properties, growth and yield of cocoyam grown on a severely degraded sandy soil of Southwestern Nigeria Michael-Taiwo AGBEDE	Effects of the Green Revolution on long-term changes of fertility status of paddy soils in tropical Asia Junta YANAI	The ultimate loss of soil: coastal and river bank erosion – the example of Camau Peninsula, Vietnam Stefan NORRA
			Ammonium and nitrate contamination of shallow groundwater under vegetable fields in the downstream areas of the Huong River, Central Vietnam Morihiro MAEDA

Room	Socrates Hall	Locke Hall	Alexander Hall	Archimedes Hall
	Session 7: Soil Fertility and plant nutrition (II)	Session 8: Recent advances in paddy soil science: toward establishments of sustainable rice production, environmentally-friendly managements and food safety (II)	Session 9: Soil management and climate change (I)	Session 10: Soil and water management
Moderators	Edna D. SAMAR Ya-hui CHUANG	Mizuhiko NISHIDA Shan-Li WANG	Shinya FUNAKAWA Chi-Ling CHEN	Ki-In KIM Yu-Ting LIU
08:50-09:00	Microbial immobilization of 15N labeled ammonium and nitrate following addition of polysaccharide with different quality Qian MA	The effects of N application methods on N recovery and grain yield of dry direct-seeded rice in north-east Japan Mari NAMIKAWA	Effect of continuous application of livestock manure compost on soil carbon accumulation and GHG emissions from a rice paddy field in a cool-temperate region, Japan Fumiaki TAKAKAI	Assessment of the nitrate-N leaching in the upland soils using the undisturbed monolith gravimetric lysimeter Yelin LEE
09:10-09:10	Effects of combined organic-inorganic fertilization to rice productivity and nitrogen use efficiency Edna D. SAMAR	Digital assessment of soil physical quality in the central region of Taiwan Chien-Hui SYU	Soil spectral library for cocoasoil of Papua New Guinea Kanika SINGH	Sorption and exchange of potassium on montmorillonitic soil clay mineral Zuldaan NASPENDRA
09:10-09:20	Role of plant growth promoting bacteria <i>Brevibacterium linens</i> RS16 in rice (<i>Oryza sativa L.</i>) cultivars to ameliorate salt stress by accumulation of proline and glycine betaine Jeongyun CHOI	Alleviating soil compaction under rice-upland crop rotations with deep tillage leads to increased nutrient availability and rice yield in a long-term experiment Tran Ba LINH	Gross nitrogen transformation rates during shifting cultivation cycle in Northern Thailand Makoto SHIBATA	Modelling organic carbon stocks in croplands of China: the past and the future Yongqiang YU

Room	Socrates Hall	Locke Hall	Alexander Hall	Archimedes Hall
	Session 7: Soil Fertility and plant nutrition (II)	Session 8: Recent advances in paddy soil science: toward establishments of sustainable rice production, environmentally-friendly managements and food safety (II)	Session 9: Soil management and climate change (I)	Session 10: Soil and water management
Moderators	Edna D. SAMAR Ya-hui CHUANG	Mizuhiko NISHIDA Shan-Li WANG	Shinya FUNAKAWA Chi-Ling CHEN	Ki-In KIM Yu-Ting LIU
09:20-09:30	Response of paddy (<i>Oryza sativa L.</i>) under spatially varying levels of soil phosphorus and potassium H. P. G. T. N. KULASINGHE	An evaluation of quantity-intensity relationship of potassium on some low land rice growing soils Kar SANJIB	Assessment of soil health using simple tools and its application Ching-Hua MA	Effects of drip fertigation on soil carbon sequestration and greenhouse gas emissions in sugarcane field Mengling NONG
09:30-09:40	Yield and N use efficiency of rice and peanut applied with different soil amendments in acid upland soil affected with periodic drought M.C.A. SALES	Impact of improving chemical properties of newly established acid sulphate soils for paddy growth Jelly-Amalia SANTRI	Distribution of soil organic carbon and its controlling factors in tropical volcanic regions Han LYU	Effect of rock fragment contents and sizes on saturated hydraulic conductivity in repacked soil columns Mina LEE
09:40-09:50	General discussion	Decomposition patterns of biochars derived from selected Satoyama biomass resources in soils Shin ABE	Early Impact Of cover crops on greenhouse gas emissions and soil microbial activities Artemio Jr MARTIN	General discussion
09:50-10:30				Morning Tea and Coffee

Room	Socrates Hall	Locke Hall	Alexander Hall	Archimedes Hall
	Session 11: Soil management and climate change (II)	Session 12: Emerging contaminant elements in soil-plant systems (II)	Session 13: Soil Fertility and plant nutrition (III)	Session 14: Control, remediation and reclamation of soil degradation and soil contamination (I)
Moderators	Kye-Hoon KIM Chia-Hsing LEE	Hsi-Mei LAI Jin Hee PARK	Suphachai AMIKHA Ian Auza NAVARRETE	Junta YANAI Stefan NORRA
10:30-10:40	Soil properties controlling accumulation of C from plant residue Tetsuhiro WATANABE	Assessing fate and toxicity of thallium in rice paddies and rice fish medaka Pei-Jen CHEN	Agricultural practices and soil properties controlling crop production in sandy soils under semiarid tropical climate Hitoshi SHINJO	Advanced countermeasures for cadmium and arsenic contamination in rice under recent international situation Tomoyuki MAKINO
10:40-10:50	Optimization of nitrogen fertilization to minimize yield-scaled nitrous oxide emission in maize cropping field Muhammad Ashraful ALAM	Accumulation and distribution of ECEs in domestic growth rice in Taiwan Hsi-Mei LAI	Alternative nutrient management for sugarcane plantation in the central region adopted from tailor-made fertilizer technology for sugarcane in the Northeast (SimCane), Thailand Napaporn PHANKAMOLSIL	Elution characteristics of various silica materials and their effect on the mitigation of arsenic and cadmium in rice plant Hiroshi TAKENAKA
10:50-11:00	Deposition and metal content of particulate matter on the surface of shrub and tree leaves Seon Ju KWON	Physiological and molecular characterizations of rice in response to gallium and indium Ya-Fen LIN	Production of compost by means of eradicating invasive water hyacinth (<i>Eichhornia crassipes</i>) S. R. AMARASINGHE	Evaluation of adsorptions of cadmium and chromium on the biochars pyrolyzed form different feedstocks Che-Yu CHIH
11:00-11:10	Interactive effects of mycorrhization, daytime and/or nighttime eCO ₂ on plant performance are host-species (N ₂ -fixing vs. non-N ₂ -fixing) or cropping pattern (mono-culture vs. intercropping) dependent Xinhua HE	Mitigation of manganese toxicity using various soil amendments in chromium contaminated soils Jin Hee PARK	Selection of appropriate methods to determine soil Mn availability for low-cadmium rice cultivar Rei SAITO	Chemical speciation and solubility of soil lead and arsenic by thermal treatments Kent SONODA

Room	Socrates Hall	Locke Hall	Alexander Hall	Archimedes Hall
	Session 11: Soil management and climate change (II)	Session 12: Emerging contaminant elements in soil-plant systems (II)	Session 13: Soil Fertility and plant nutrition (III)	Session 14: Control, remediation and reclamation of soil degradation and soil contamination (I)
Moderators	Kye-Hoon KIM Chia-Hsing LEE	Hsi-Mei LAI Jin Hee PARK	Suphachai AMKHA Ian Auza NAVARRETE	Junta YANAI Stefan NORRA
11:10-11:20	Estimation of soil carbon stock change by liming in maize cropping upland soil Song Rae CHO	Effects of thallium on growth and ultrastructure of rice seedlings Chwan-Yang HONG	Sodium selenate application in soil on growth and yield quality in lettuce Suphachai AMKHA	Effect of conservation practices using various materials of mulching in Cameron Highlands Agrosystems, Malaysia Wan Yusoff Wan ABDULLAH
11:20-11:30	Changes in paprika internal electrical conductivity affected by manganese and chromium exposure Seung Ju CHA	General discussion	Use of nano-fertilizer to minimize nutrient losses from sandy regosols H.M.I.K. HERATH	Vertical migration of Fukushima Accident-derived radiocesium-137 in orchard soils under different land use and fertilizer management Kaori MATSUKA
11:30-11:40	General discussion		Soil testing kits as an alternative to laboratory soil testing for soil pH, exchangeable K and available P in Sri Lankan soils Dinaratne-Nihal SIRISENA	Radioactive cesium uptake ability of lupin Takuro SHINANO
11:40-11:50			Effects of calcium and magnesium treatments in acid soil on cadmium absorption by rice plant Bo-Jiun YANG	Blocking the diffusion of gasoline plume in groundwater using a permeable reactive barrier making up of waste distillery sludge Cheng-Chung Liu
11:50-13:00			Lunch	
13:00-14:00			Poster Session---Plato Hall (Even poster number only)	

Room	Socrates Hall	Locke Hall	Alexander Hall	Archimedes Hall
	Session 15: Soil management and climate change (II)	Session 16: Control, remediation and reclamation of soil degradation and soil contamination (II)	Session 17: Soil Fertility and plant nutrition (IV)	Session 18: Forest soils
Moderators	Dang Van MINH Hsing-Cheng HSI	Junta YANAI Stefan NORRA	Minh Tien TRAN Chien-Hui SYU	Chih-Hsin CHENG Rosazlin ABDULLAH
14:00-14:10	Nitrous oxide emission with different type of animal manure and region in South Korea ChangOh HONG	Soil erosion accelerated by deer overgrazing or clear-cutting deteriorates phosphorus availability in forest ecosystems Nanami MURASHITA	Fractionation of phosphorus in soils with different soil types of sugarcane cropland in Okinawa, south Japan Eito NONOMURA	The aeolian additions of the Podzolic soils on the high-altitude mountains in central Taiwan Heng TSAI
14:10-14:20	Mitigation of global warming gas with bottom ash in radish-maize rotation field DoYoung HEO	Plant microbial fuel cells for soil remediation, waste valorization and fate of pollutions Chung-Yu GUAN	Saving irrigating water and fertilizer P to adapt with water scarcity and soil P enrichment in intensive rice production in the Mekong delta-Vietnam Khoi-Minh CHAU	Specific features in soil processes of the reclaimed soils in Japan Masayuki KAWAHIGASHI
14:20-14:30	Green manuring effect on net ecosystem carbon budget and global warming potential in maize field Hae Ri HAN	Anthropogenic disturbance on geopedogenetic processes at the Lower slope of Ungaran Volcano, Central Java - Indonesia Elok-Surya PRATIWI	Livestock holdings control the soil fertility of the homegardens in the Kilimanjaro highlands, Tanzania Yuri ICHINOSE	Roles of typhoon disturbances on seasonal and interannual patterns of litterfall for coniferous and broadleaf plantations in Xitou, Central Taiwan Chih-Hsin CHENG
14:30-14:40	Significant variations in arbuscular mycorrhizal fungal communities between subsoil and topsoil layers under 15-year long-term fertilizer amendments in an intensively managed arable purple soil Xinhua HE	Accumulation of chromium in cyanidiales Yen-Lin CHO	Inhibition of soil amiolease activity by pyroligneous acid to control the release of soil nitrogen Joo Kyung LEE	Genesis and classification of various andic soils in the hills of central Miyagi Prefecture, northeastern Japan: evaluating the effect of volcanic ash using cryptotephra identification Sahoko ONUMA

Room	Socrates Hall	Locke Hall	Alexander Hall	Archimedes Hall
	Session 15: Soil management and climate change (III)	Session 16: Control, remediation and reclamation of soil degradation and soil contamination (II)	Session 17: Soil Fertility and plant nutrition (IV)	Session 18: Forest soils
Moderators	Dang Van MINH Hsing-Cheng HSI	Junta YANAI Stefan NORRA	Minh Tien TRAN Chien-Hui SYU	Chih-Hsin CHENG Rosazlin ABDULLAH
14:40-14:50	Modeling sediment yield response to land use change using SWAT model in Hiso basin, Fukushima, Japan Shilei PENG	Arsenic sequestration by frambooidal pyrite in naturally contaminated soils: chemical extraction, SEM and micro-XRF/XAFS investigation Yohey HASHIMOTO	Salinity effects on soil characteristics, nitrogen recovery and rice growth on two paddy soils in the Mekong Delta Duy-Minh DANG	The phosphorus accumulation and distribution in larch plantation ecosystem at different stand ages Xin CHEN
14:50-15:00	Land suitability for citrus on new sediment soils in Segara Anakan, Cilacap, Indonesia Makruf NURUDIN	Role of organic matter associated with temporal change of radio cesium forms in soil Hirotumi TSUKADA	Response of paddy rice to gypsum topdressing in soils with different level of available sulfur and soluble metals Ayano SUZUKI	Alteration of water soluble organic inorganic matters by converting of land use of tropical peat soil in Malaysia Kensuke MIZUKI
15:00-15:10	Global cropland NPP increase due to agricultural Green Revolution Pengfei HAN	General discussion	Unexpected effect of plastic film mulching: increase soil carbon stock in maize cropping land, due to higher net primary production than respiration carbon loss Ho Gyeong CHAE	Soil fauna distribution on various land use type in super wet tropical rain forest West Sumatra Indonesia Herman HERMANSA
15:10-15:20	General discussion		An evaluation on the effects of humic acid and organic manures on the point of zero charge Sourav Kumar KHAN	Measures to reduce soil erosion on cassava farms in Central Highlands, Vietnam Trinh Cong TU
15:20-15:40			Afternoon Tea and Coffee	
Moderator	Zeng-Yei HSEU (Chairman)		Room	
15:40-16:00	Closing ceremony		Socrates Hall	

Posters

Odd poster numbers

Nov. 4, 2019 (Odd poster number only on Monday)

Plato Hall

Poster No.	Authors	Title
S1-P1	W.Y. Tseng, Y.S. Yen, Y.S. Liao, W.C. Chiu, C.J. Fong and Hung-Yu Lai	"SOIL EXHIBITION TOUR" — The soil education for general public and elementary school children in Taiwan
S2-P1	You-Ren Li, C. H. Syu and D. Y. Lee	Effects of Al on the uptake and accumulation of Ga and In in rice seedlings grown in Ga/In containing solution cultures
S2-P3	Wei-Lin Liu, P.T. Yang, H.W. Lin and S.L. Wang	Sorption of gallium and indium on humic acid-ferrihydrite
S2-P5	Goo Bok Jung, M. J. Chae, M. S. Kong, E. J. Lee, H. I. Jung and S. Y. Hong	Evaluation of chemical properties and heavy metals in upland soils in Korea
S2-P7	Ian Auza Navarrete and C.P Dulfo	Reactive iron controls the dynamics of Ni and Cr in serpentine paddy soils
S2-P9	B. H. Cheah, Y. T. Wang and Ya-Fen Lin	A distinctive effect of high Ga and In on rice physiology and molecular regulation
S2-P11	Y.H Chuang, Cheng-Hua Liu, Ray Hammerschmidt, Wei Zhang, Stephen A. Boyd and Hui Li	Influence of transpiration stream on lettuce uptake of antibiotics
S3-P1	Naoki Moritsuka, K. Matsuoka, S. Sano and J. Yanai	Laboratory and field measurement of magnetic susceptibility of agricultural surface soil for rapid soil assessment
S3-P3	Hiroaki Shimada, J. L. Boettinger, A. R. Jacobson, M. Asano and K. Tamura	Comparison of adjacent soils formed different parent materials, Cache Valley, Utah, USA
S3-P5	Chung Woo Kim, M. J. Yoon, J. Y. Yoo, M. J. Kim, Y. H. Kim and S. T. Hong	Chemical properties of representative soil in Chungbuk province
S3-P7	Porntip Phontusang and S. Sritumboon	Characteristics in spatial variability of soil organic matter under different land uses in northeast of Thailand
S4-P1	M. Akashi, S. Kaneko, K. Kamogari and Ryota Kataoka	Recycle barley bran into fertilizer and its influence on soil microorganisms
S4-P3	Meilania Nugraheni, Kiwamu Ishikura, Lulie Melling, Kitsuo Kusin and Ryusuke Hatano	Production of CO ₂ , CH ₄ and N ₂ O in differently disturbed tropical peat soils
S4-P5	Suci Febryani, Benito Heru Purwanto and Sri Nuryani Hidayah Utami	Phosphate (P) adsorption ability of clay fraction of several soil types in southern slope of Mount Ungaran, Semarang, Indonesia

Poster No.	Authors	Title
S4-P7	D.H. Wu and Pei- Rong Du	Study of genetic diversity and rice breeding mode for low-Cd accumulation
S4-P9	Hoang Huu Chien, R. Otomo, K. Okumura, K. Yamane, D.V. Minh, T. Shimamura, S. Tanaka and K. Iwasaki	Soil properties affecting the quality of special local tea produced in Thai Nguyen Province, Northern Vietnam
S4-P11	Yanling Wang, Xinghong Xu and Dan Yin	Retention and release of soil phosphorus from various aggregates in the red soil with long-term fertilization
S4-P13	Prapasiri Tongsiri and H.Y. Lai	Assessment of soil properties suitable for tea cultivation in Taiwan
S4-P15	G. Z. Ling, X. X. Wang, S. Yang, M. M Chang, X. L. Tang and Xiao-Feng Li	Seasonal alleviation of Mn-induced chlorosis in sugarcane seedlings facilitated by ammonium and rainfall
S4-P17	Natthawipa Onlamai, S. Sritumboon and P. Phontusang	Variation of soil potassium in different land uses in Northeast of Thailand
S4-P19	Jinsen Zheng and S. Funakawa	Optimizing nitrogen management to balance food and environmental objectives in two maize systems of the Tanzanian highlands
S4-P21	H. Tasi and Hao-Yun Yang	The study of sauerkraut manufacture affecting soil salinity in Dapi Township
S4-P23	Hsiu-Yen Chang, Tzu-Shan Su, Yin-Ren Lai, Shudi Pan and Shan-Li Wang	Speciation of phosphorus in acidic paddy soil as affected by rice-straw biochars
S4-P25	Sheng Zhou, Huifeng Sun, Jining Zhang, Xianxian Zhang and Cong Wang	Rice yield, nitrogen use efficiency and greenhouse gases emission in response to controlled-release fertilizer combined with wheat straw incorporation in a paddy field
S4-P27	Pornthiwa Kanyawongha, N. Phanchindawan and A. Sriprachote	Soil fertility status and leaf nutrient concentrations of robusta coffee in the multi-cropping system with para rubber
S4-P29	Sharmin-Akter Chowdhury, S. K. Paul, K. Suzuki and N. Harada	Growth and yield performance of aromatic rice varieties in response to different nitrogen fertilization treatments
S4-P31	Eun-jin Lee, Yoo-hak Kim, Myung-suk Kong, Tae-Gu Lee, Ha-il Jung, Goo-bok Jung, Seong-Soo Kang and Yihyun Kim	Introduction of on-site diagnosis & prescription built by linking soil testing with on-site diagnosis and its application
S4-P33	Hyeon-suk Cho, M. C. Seo, W. G. Sang, P. Shin and J. K. Baek	Effect on rice yield and content of soil carbon according to the difference types of organic matter in paddy soil
S4-P35	HuiSu Bae, H. S. Jang, U. H. Kim, S. H. Ahn and J. T. Youn	Effect of nitrogen fertilizer on seed yield and growth response for Italian ryegrass in the saemangeum reclaimed tidal land
S4-P37	Indika Kaumudini Herath, and D. M. D. I. Wijebandara	King coconut husk: A source of potassium for coconut plantations

Poster No.	Authors	Title
S4-P39	Shinsuke Mori, H. Fujimoto and G. Ishioka	Application of an enriched stable isotope tracer to wet-direct seeded rice cultivation: plant incorporation of seed coating-derived molybdenum
S4-P41	Zih-An Lin, Liang-Ching Hsu, Chao-Yu Pan, Yu-Min Tzou and Yu-Ting Liu	Transformation of phosphorus species in sediments under aerobic and anaerobic environment with various water salinity
S4-P43	S. Jiao, W. Y. Wang, X. M. Zhao, H. B. Wang, and B. Sui	Effects of tillage methods on main fertility characteristics of chernozem soil and maize yield
S5-P1	Shin Eitaki, H. Ueno, S. Kaneda and Y. Toma	Effect of earthworm activity on growth of komatsuna and nitrogen dynamics by using ¹⁵ N-labeled white clover
S5-P3	Byung-Keun Hyun, Chang hun Lee, Sang-Ho Jeon, Yongseon Zhang and Sukyoung Hong	The research review of soil ecosystem services
S5-P5	Suvendu Das, Song Rae Cho, Muhammad Ashraful Alam, Hogyeong Chae and Pil Joo Kim	Slag silicate fertilizer amendment decreases microbial modulation of carbon storage in submerged rice cropping systems
S5-P7	Keisuke Tomioka, A. Kawaguchi, A. Kawakami, A. Masunaka, K. Nomiyama, H. Sekiguchi and N. Ishikawa	Early dead ripe of bread wheat (<i>Triticum aestivum</i>) by a soil inhabiting fungus, <i>Ophiophaerella korrae</i>
S5-P9	Akihiro Yamamoto, Jun Wasaki, Yuichi Funatsu and Takayuki Nakatsubo	Aluminum concentration of plants growing in highly acidic solfatara fields
S5-P11	YouJin Lee and K.H. Kim	Quality assessment of the soils from seven parks in Seoul
S5-P13	Shinsuke Mori	Environmental changes in the vicinity of wet direct-seeded rice under different soil conditions with or without organic matter - Effect of oxygen generating coating material on the 'spermosphere'
S5-P15	C.H. Ko, F.T. Shen and Yu Siang Jhang	Isolation and characterization of rhizobia associated with peanut (<i>Arachis hypogaea</i> L.)
S5-P17	Y. Yang, F.T. Shen and Wonder Nathi Dlamini	Influence of various organic fertilizer amendment on rhizospheric and endophytic bacterial community structure and tomato growth
S5-P19	C.M. Huang, W.C. Chen, S.H. Lin, Y.N. Wang and Fo Ting Shen	Exploration of root-associated bacteria from medicinal plant <i>Platycodon grandiflorum</i>
S6-P1	Zhi-Xun Lai, Chien-Hui Syu and Dar-Yuan Lee	Effects of oxygen releasing compound application and its application timing on arsenic accumulation in paddy rice grown in arsenic-elevated paddy soils
S6-P3	Wan-Ting Chiao, Zhuoer Chen and Kai-Wei Juang	Cadmium distributions and physiological traits in the rice seedlings of two major Taiwan cultivars
S6-P5	Shao-Yun Hung, C. H. Syu and D. Y. Lee	Arsenic accumulation and speciation in rice grains influenced by calcium silicate application and rice cultivars grown in As-contaminated paddy fields

Poster No.	Authors	Title
S6-P7	Chen-Yu Liao, C.Z. Huang, D.H. Wu, P.J. Wang and K.W. Juang	Variation in cadmium toxicity to the seedlings among weedy red rice accessions and rice cultivars
S6-P9	Y.W. Lin, C.Y. Cheng, C.Y. Chih, K.W. Juang and Chien-Hui Syu	Arsenic accumulation in rice grains of major Taiwan rice cultivars
S6-P11	Takuro Tanimichi and Kazuyuki Inubushi	Effect of bokashi fertilizer and slag fertilizer on greenhouse gas emission from paddy soil
S6-P13	Mizuhiko Nishida, F. Takakai, T. Sato, K. Kaneta, K. Tsuchiya and T. Takahashi	Compost nitrogen applied to paddy fields can be utilized as a decade-long source of the nitrogen for rice plants
S6-P15	Kye-Hoon Kim, J. H. Yoon, Y. S. Cho, D. B. Lee, Y. J. Lee, D. Y. Kim and Y. R. Choi	Effects of controlled-release fertilizers on nitrogen use efficiency in rice (<i>Oryza sativa L.</i>) cultivation
S6-P17	K. Katashima, K. Suzuki, T. Miki, Q.C. Xu, S. Ohkubo, M. Iwaishi and Naoki Harada	Comparison of bacterial communities among submerged rice soils collected from several regions in Japan
S6-P19	Kazuhiro Hosoya, C. Iwata, T. Tsujimoto, H. Ueno, Y. Toma, Y. Yamashita, M. Adachi and T. Kono	Application effects of green manure on growth and yield of paddy rice, and soil nutrients in low-input sustainable rice cultivation
S7-P1	C.L. Chen, Y.F. Chang and Chen-Chi Tsai	Impacts of feedstocks and pyrolysis temperature of biochar on soil carbon dynamics of oxisols and inceptisols in Taiwan
S7-P3	Guocheng Wang, Z.K. Luo, E.L. Wang and W. Zhang	Reducing greenhouse gas emissions while maintaining yield in the croplands of Huang-Huai-Hai Plain, China
S7-P5	Pongsathorn Sukdanont, Kimura Akari, Supachai Amkha, Noppol Arunrat and Ryusuke Hatano	Soil parameters as CH ₄ emission factors from Thai paddy soils—Khon Kaen and Ayutthaya
S7-P7	Qing Zhang and Wen Zhang	Projective analysis of staple food crop productivity in adaptation to future climate change in China
S7-P9	Yamamoto Akinori, Mizumura Ayano, Akiyama Hiroko	Effect of spent coffee-grounds application on nitrification, denitrification, and N ₂ O emission
S7-P11	JongSik Lee, G.Y. Kim, E.J. Choi, S.I. Lee, J.H. Hur and W.L. Son	The development of LCI DB of agro-materials in Korea
S7-P13	Ki-In Kim, S. Suwanmanon, J.H. Han, S.W. You, K.K. Lee, J.H. Moon, S.H. Kim, S.U. Park, H.W. Yoon and J.W. Yeo	Estimation on soil erosion with lysimeter in southwest regions of Korea
S7-P15	Myung Chul Seo, J. H. Kim, Y. H. Lee, W. G. Sang, J. I. Cho, P. Shin and J. K. Baek	Estimation of soil carbon sequestration at paddy fields applied with continuous rice straw by using multivariate regression neural network
S7-P17	Khoi-Minh Chau, L. Tran, M. Dang, P. Nguyen, K. Toyoda and R. Hatano	Using compost, biochar and silicon as soil amendment for sustainable soil uses under saline intrusion in the Mekong River Delta-Vietnam

Poster No.	Authors	Title
S7-P19	Su-Hwan Lee, J.T. Lee, Y.Y. Oh, J.H. Ryu, H.S. Cho, H.S. Bae and B.H. Kang	Effect of gypsum amendment on soil environments and Italian ryegrass seed production in saemangeum reclaimed land of Korea
S7-P21	Sangok Faustina, Sugiura Yuki, Maie Nagamitsu, Melling Lulie and Watanabe Akira	Influence of temperature and pH on mineralization of soil organic matter in tropical peatland
S7-P23	Hyun-Hwoi Ku, S.H Kim, S.Y. Yoo, J.S. Lee, T.W. Kim and S.E. Lee	Comparison of different chamber methods to measure seasonal ammonia emission in upland field
S8-P1	Supranee Sritumboon, S. Sukchan, M. Srisutham and K. Yoshida	Influence of soil moisture content on salinity soil in inland salt-affected soils in northeast Thailand
S8-P3	SangHun Lee, K.Y. Jung, H.C. Chun, J.S. Ryu, Y.D. Choi and H.W. Kang	Response of sesame (<i>Sesamum indicum</i>) to subsurface drip irrigation in sandy-loam soil
S8-P5	Kuei-San Chen and H.Y. Lai	Effects of applying husk biochar on uptake, translocation, and chemical forms of cadmium in two varieties of pak-choi
S8-P7	Po-Yi Chou	A novel application of acoustic televIEWer and packer-test to characterize preferential flow paths of groundwater within the shallow overburden aquifer
S8-P9	KiYuol Jung, S.H. Lee, Y.D. Choi, H.C. Chun and J.S. Ryu	Effect of trenchless drain installation with tractor for multipurpose utilization of poorly draining paddy fields
S8-P11	Hee-Rae Cho, Y.S. Zhang, K.H. Han, J.H. Ok, S.A. Hwang, D.J. Kim, K.H. Jung and S.O. Hur	Feasibility of evaluation methods for reference evapotranspiration in plastic house in Korea
S8-P13	Y.H. Shilh, M.C. Lin, Chi-Ling Chen, Y.W. Lin and T.S. Liu	Arsenic removal from groundwater for agricultural irrigation in Taiwan
S8-P15	Su-Hwan Lee, J.T. Lee, Y.Y. Oh, J.H. Ryu, H.S. Cho, H.S. Bae and B.H. Kang	Effect of irrigation water salinity on spring Potato growth at growth stages
S8-P17	Ke-Chun Lin, Cheng-Han Yang, Wen-Chieh Lin, Po-Hsien Sun and Pi-Hui Suzi Chang	An investigation on the relationships between irrigation water sources and soil quality of farmland of Guandu Plain, Taipei, Taiwan
S8-P19	Hyuck Soo Kim, Seok Soon Jeong, Seung-Min Oh, Sang-Phil Lee, Sung-Chul Kim and Jae E. Yang	Feasibility of bio-sulfur for removal of Cd ²⁺ in aqueous solution
S9-P1	Yi-Jie Liao, C. H. Syu and D. Y. Lee	The effects of water management on the arsenic accumulation and speciation in water spinach grown in As-contaminated soils
S9-P3	Kenji Ono, Y. Yasuda, D. Hoshino and T. Morisita	Relations of interannual fluctuations of between soil respiration rates and forest dynamics in long-term observation at cool-temperate beech (<i>Fagus crenata</i>) stand, northern Japan

Poster No.	Authors	Title
S10-P1	Chen-Chi Tsai and Y. F. Chang	Effects of pyrolyzed temperature of poultry litter biochar on immobilization of heavy metal ions in water and soils
S10-P3	Yumei Kang, S. Fukushima, Y. Sasada and W.G. Zhang	Shrub distribution on dunes in the Horqin Sandy Land of northern China
S10-P5	Pin-Tien Chang and H.Y. Lai	Influence of washing agents and soil particle distribution on the removal of soil fluorine
S10-P7	Jung-Hwan Yoon and K. H. Kim	Assessment of soil erosion at Anbandegi using ^{137}Cs and $^{210}\text{Pbex}$ measurements and USLE
S10-P9	Young-Nam Kim, M. M. Gardiner and P. L. Phelan	Influence of urban agriculture practice associated with organic amendment addition on qualitative change of soil organic matter and linkage with soil quality and health
S10-P11	HyeonSoo Jang, H. S. Bae, S. H. Ahn, J. T. Yun and W. H. Kim	The growth characteristics of Italian ryegrass under the Saemangeum reclaimed land
S10-P13	Wen-Hui Li, Y. C. Hsu and Y. T. Liu	Effects of iron and sulfur on transformation of arsenic species in fluvial sediments
S10-P15	Kesinee Iamsaard and Yao-Tung Lin	Adsorption mechanism and characteristics of Cu^{6+} , Ni^{2+} , Cu^{2+} and Zn^{2+} by biochar derived from agricultural wastes

Posters

Even poster numbers

Nov. 5, 2019 (Even poster number only on Tuesday)

Plato Hall

Poster No.	Authors	Title
S1-P2	Hideaki Hirai, A. Deguchi, S. Shiraishi and T. Kosaki	Soil education for pre- and elementary-school children towards setting an international standard. – How to convey the importance of top soil to support life from the viewpoint of daily rice consumption.
S2-P2	Pei-Wen Chen, C.H. Syu and D. Y. Lee	The accumulation of gallium (Ga) and indium (In) in rice grains in Ga- and In-contaminated paddy soils
S2-P4	Puu-Tai Yang, Hui-Wen Lin, Ying Chen, Liang-Shin Huang and Shan-Li Wang	Mo speciation in soil on the bioavailability of Mo to rice plant
S2-P6	Goo Bok Jung, M. J. Chae, M. S. Kong, E. J. Lee, T. G. Lee, Y. H. Kim and S. Y. Hong	Assessment of human bioavailability quotient for the heavy metal in paddy soils below part of the closed metalliferous mine
S2-P8	Yuri Choi, J. H. Ahn, S. H. Kim, J. H. Yoon and K. H. Kim	Microplastics pollution in soils of Yeoju in Korea
S2-P10	Cheng-Hua Liu, Ya-Hui Chuang, Hui Li, Brian J. Teppen, Stephen A. Boyd, and Wei Zhang	Effect of pyrolysis temperature on sorption of lincomycin by biochars
S3-P2	Yuji Maejima, Y. Takata, T. Kanda, T. Ohkura, H. Obara and K. Kohyama	Comparison of Japanese soil map based on world reference base for soil resources 2014 and 2006
S3-P4	Chin-Chiang Hsu, H. Tsai, S.T. Huang, W.S. Huang and Z.Y. Hseu	The carbon storage along soil profile and its chronometric application—an example of soil chronosequence from the fluvial terraces on the Pakua tableland in central Taiwan
S3-P6	Xia Zhao, D. C. Li, F. Liu and L. Wang	Impacts of categorized and un-categorized expression of soil properties on its mapping results-taking the mapping representation of Qinghai soil survey data as an example
S3-P8	Yeonkyu Sonn, B. H. Seo, W. R. Go, S. H. Jeon, B. K. Hyun and S. G. Yun	Consideration of horizon designation on ST and WRB classification
S3-P10	Mohd Rosli Noor Sharina, A. Rosazlin, K. Wan Rashidah, I. Mohamad Fakhri, M.D. Farahanim and H. Nur Saadah	Assessment of soil mineralogy in Mangrove forest at Pulau Kukup, Johor and Delta Kelantan, Malaysia
S4-P2	Wataru Shiraishi, H. Ueno, Y. Toma, H. Oka, H. Tomi, Y. Yamashita and M. Adachi	Application effects of clinker-tea-waste-compost on paddy rice cultivation

Poster No.	Authors	Title
S4-P6	Angga Prasetya, Eko Hanudin and Sri Nuryani Hidayah Utami	Effects Of organic fertilizer types and foliar fertilizer doses on the Quercetin content of Longevity Spinach Grown on Andisol and Vertisol
S4-P8	Wen-Yu Tseng and H.Y. Lai	Chemical compositions of tea leaves of Shy-Jih-Chuen tea trees with different growing exhibitions
S4-P10	YeJin Lee, S.B. Lee, D.B. Lee, Y. X. Kim, Y.E. Kim, H.J. Kim and J. Sung	Micro minerals deficiency-specific changes in primary metabolites in the shoots and roots of cabbage
S4-P12	Xiaohui Lin, P.F. Han, W. Zhang and G.C. Wang	Changes in alpine soil organic carbon decomposition during the last century
S4-P14	Yu-Ching Lo, B.C. Chen, W.T. Chiao and K.W. Juang	Effects of calcium, magnesium, and potassium on copper toxicity in grapevine seedlings and the physiological responses
S4-P16	J. C. Pang, Y. Ke, L. Lan, X. F. Li and Xin-Lian Tang	Iron effects on alleviation of manganese stress in sugarcane seedlings through reducing Mn uptake
S4-P18	Kai-Yue Chen, F. Y. Tsao, Y. T. Liu and Y. M. Tzou	Phosphate release from humic acid-ferrihydrite co-precipitates in the presence of citric acid
S4-P20	Tzu-Shan Su and Shan-Li Wang	The interaction between biochars and soil colloids in soils
S4-P22	YongZhong Su and T. N. Liu	The establishment and development of <i>Haloxylon ammodendron</i> promotes salt accumulation in surface soil of arid sandy land
S4-P24	HeeSoon Park, K. H. Lee, H. K Oh, H. J. Kang, S. H. Choi and H. M. Shin	Effect of organic material treatment on growth characteristics of <i>Zizyphus jujuba</i> Mill
S4-P26	J.H. Lee, B.R. Choi, J.H. Jang, T.J. Won, H.Y. Do, J.H. Ji, Hyun-Hwoi Ku, S.H. Kim and S.E. Lee	Determination of a release characteristic of controlled-release coated fertilizer for rhizosphere application using logistic curve
S4-P28	Chu Chung Chen, W.T Huang, Y.K. Tu, Y.W. Lin and C.S. Kuan	Effect of leaf nutrients on internal browning of pineapple under cold storage
S4-P30	Cho-Rong Lee, Y.R. Oh, A.H. An, J.R. Cho, K.L. Park and S.M. Lee	The effects of green manure on soil phosphorus availability and phosphorus solubilization
S4-P32	Young Dae Choi, K. Y. Jung, S. M. Jo and S.H. Kim	Change of soil phosphorus distribution by sorghum cultivation in converted paddy soil
S4-P34	Seo-young Yang, Y.H. Lim, H.S. Lee, J.H. Jeong, U.H. Hwang, C.G. Lee and K.J. Choi	Effects of nitrogen fertilizer amount on rice yield and quality of rice flour varieties
S4-P36	Seunghyun Ahn, I. Choi, H. Bae, H. Jang, J. Youn and W. Kim	Changes of the yield and avenanthramide content by the quantity of nitrogen fertilizer in naked oats
S4-P38	Young sang Cho, J. H. Yoon and K. H. Kim	Effect of CRF (Controlled-release fertilizer) on early growth of rice (<i>Oryza sativa</i> L.)
S4-P40	Dumsane T. Matse, Cheng-Hua Huang, Yuh-Ming Huang and Ming-Yi Yen	Effects of coinoculation with Rhizobium and plant growth promoting rhizobacteria on the nitrogen fixation and nutrient uptake of <i>Trifolium repens</i> in low phosphorus soil

Poster No.	Authors	Title
S4-P42	Yin Wang, Xinyue Zhang, Jian Chen, Shuoran Liu, Guozhong Feng and Qiang Gao	Reduced basal N fertilizer rate improves maize seedling growth, water and N use efficiencies under drought stress by optimizing root morphology and distribution
S5-P2	Yong-Hong Lin and C. L. Wang	Studies on proteomic roles of the <i>Cucumis melo</i> L. symbiotic associations with arbuscular mycorrhizal fungi under different sodium chloride concentrations
S5-P4	T. Yamaguchi, S. Kaneko, K. Kamogari and Ryota Kataoka	Endophytic fungal diversity in barley and their effect on the growth stimulation
S5-P6	Solomon-Oloruntoba Samuel, R. Asiloglu, B. Sevilir, M.O. Akca, K. Suzuki, O.C. Turgay and N. Harada	Protists enhanced short-term effects of biochar treatment on the growth of rice plants
S5-P8	Keisuke Tomioka, A. Kawakami, A. Masunaka, H. Sekiguchi, K. Kato, Y. Ban, K. Takata and N. Ishikawa	Head blight of durum wheat (<i>Triticum turgidum</i> subsp. <i>durum</i>) by a soil inhabiting fungus, <i>Fusarium asiaticum</i>
S5-P10	Simon Peter Dom, Sharon Yu Ling Lau, Son Radu, Makoto Ikenaga and Lulie Melling	Bacterial community structure of tropical peat swamp forests across a peat dome in Sarawak, Malaysia
S5-P12	W. C. Chen and Jean Chang	Effect of individual and mixture application of pesticides on soil microbial communities
S5-P14	S.C. Peng, F.T. Shen and Shih Lin Ma	Isolation and characterization of bacteria associated with tomato (<i>Solanum lycopersicum</i> L.) leaves
S5-P16	Chia Chia Lin and Y.M. Tzou	Applications of engineered biochar for alleviating the obstacles of continuous cropping
S5-P18	C.T. Chang and Yu-Min Tzou	Effects of irradiation and pH effect on Cr(III) photo-oxidation in the presence of Fe(III)
S6-P2	Bo-Ching Chen	Ecological risk assessment of paddy rice exposed to arsenic in a contaminated site in Taiwan
S6-P4	Anongnat Sriprachote, P. Kanyawongha, N. Boonplang and N. Phanchindawan	Genotypic differences in cadmium concentration of soybean
S6-P6	Pin-Jie Wang, W.T. Chiao, L.J. Chu and K.W. Juang	Evaluation of cadmium toxicity and distribution in rice plant associated with physiological regulation
S6-P8	J.B. Sawadogo, M.S. Alam, C. Suekuni, D. Liu, H. Ishikawa, M. Nishida, K. Tsuchiya, T. Takahashi and Susumu Asakawa	Effect of paddy-upland rotation on the abundance of methane-oxidizing and ammonia-oxidizing microbial communities in paddy field soil
S6-P10	Yu-Ching Cheng, Cheng-Yi Lee and Zeng-Yei Hseu	Effects of rice husk biochar on heavy metals solubility under dynamic redox-conditions in a contaminated soil
S6-P12	HyeonSeok Lee, Woon-Ha Hwang, Jae-Hyeok Jeong, Seo-Yeong Yang, Yeon-Hwa Lim, Chung-Gen Lee and Kyung-Jin Choi	Changes in rice growth and heading response to root cutting during transplanting

Poster No.	Authors	Title
S6-P14	Euclid Ferrer Infante, I. A. Navarrete and C. P. Dulfo	Potential health implications of bioaccumulation of chromium and nickel in lowland rice of paddy soils derived from ophiolitic rocks in Zambales, Philippines
S6-P16	Chun-Hui Yu and Shan-Li Wang	Effects of poultry litter biochar application on the uptakes of phosphorus by rice
S6-P18	Pi-Hui Suzi Chang, Cheng-Han Yang and Ke-Chun Lin	Comparing effects of environmentally friendly farming on rice (<i>Oryza sativa L.</i>) quality and yield between cultivars of Taoyuan 3 and Tainan 11 on Guandu plain, Taipei, Taiwan
S6-P20	Shinsuke Mori, Shunsuke Okada, Kimiyasu Takahashi, Hidetoshi Mochizuki and Hidemi Sakamoto	Seedling establishment and rice yield in non-puddling direct seeded rice cultivation under different field conditions with or without tillage
S7-P2	Weixin Ding, Xia Liao, Yuhui Niu, Christoph Müller, Anne Jansen-Willems, Jiafa Luo, Stuart Lindsey, Deyan Liu and Zengming Chen	Biochar significantly reduced N ₂ O emission from upland soils by reducing autotrophic nitrification
S7-P4	Tingting Li and G.C.Wang	Quantifying carbon input for targeted soil organic carbon sequestration in China's croplands
S7-P6	Yun-Jie Lai, Yi-Ting Lee, Ying-Hsiu Hung, Shen-De Chen, Zueng-Sang Chen, Zeng-Yei Hseu, Chen-Chi Tsai and Shih-Hao Jien	The establishment of soil characteristics and parameters of Taiwan representative flatland soil series
S7-P8	Chung-Yu Hsu, K.C. Pan, H.C. Hsu and G.E. Yen	Preliminary DNDC model to estimate carbon emissions from different irrigation methods
S7-P10	GunYeob Kim, J. S. Lee, E. J. Choi and S. I. Lee	Development of CO ₂ emission factor caused by use of lime according to 2006 guideline in Korea
S7-P12	Shigeto Sudo	Progress of soil greenhouse gas measurement method by gas chromatography in the two decades
S7-P14	Kyu Kyu Hmwe, M. Yashima and K. Inubushi	Influence of different N sources and water management on crop yield response to IR50 rice and greenhouse gas emission
S7-P16	Victoria-Faith Eseese, M. Asano, R. Wagai, T. Ohigashi and K. Tamura	The characteristics of soil organic matter of andosols of forest sites in Japan using particle size fractionation and STXM NEXAFS
S7-P18	Su-Hwan Lee, J.T. Lee, Y.Y. Oh, J.H. Ryu, H.S. Cho, H.S. Bae and B.H. Kang	Effect of soil salinity on autumn potato productivity in reclaimed land of Korea
S7-P20	Su-Hwan Lee, J.T. Lee, Y.Y. Oh, J.H. Ryu, H.S. Cho, H.S. Bae and B.H. Kang	Effect of water logging duration on sorghum×sudangrass hybrid growth in Saemangeum reclaimed land of Korea
S7-P22	Seung Min Oh, S.S. Jeong, S.P. Lee, H.S. Kim and J.E. Yang	Estimation of carbon sequestration potential density of topsoil nearby critical regions (Riparian Zone) of soil erosion
S7-P24	Chiho Sugiyama, Kaho Yasuda, Arata Nagatake and Ryusuke Hatano	Comparison of N ₂ O emission factor and N use efficiency among different kind of organic fertilizers at Andosol grassland in northern Japan

Poster No.	Authors	Title
S7-P26	Yi-Ping Wang, Che-Kuan Lee, Yi-Hao Dai and Yuan Shen	Effects of moisturizing on improving the determination of soil organic matter content through VNIR reflectance measurements
S8-P2	Yun-Jie Lai, Pei-Chia Chuang, Yi-Ting Lee, Ying-Hsiu Hung, Tai-Hsiang Huang, Shen-De Chen, Chen-Chi Tsai, Zeng-Yei Hseu, Bing-Sheng Yu and Zueng-Sang Chen	Establishment and discussion of soil heavy metal background concentration in Taiwan
S8-P4	Koji Kameyama, K. Hamada, T. Miyamoto and Y. Iwata	Simulation of solute transport in a sandy soil irrigated with treated wastewater
S8-P6	Chun-Yu Pai and H.Y. Lai	Amendment of husk biochar on chemical forms and health risks of Cadmium in two varieties of lettuce
S8-P8	D.H. Wu, Pei-Jhen Wu, Y.S. Wu, G.S. Li, Y.T. Hsu and C.Y. Yang	Smart agriculture - evaluation of smart irrigation system for rice paddy cultivation in Taiwan
S8-P10	Ping-Chang Chuang and H.Y. Lai	Effects of applying rice husk biochar on the chemical forms of cadmium in the water spinach
S8-P12	Soon Ik Kwon, S.J. Yeob, S.O. Hur, S.K. Choi, S.C. Hong, M.K. Kim, A.S. Roh, S.Y. Hong, C.W. Kim, J.I. Lee, D.Y. Ko, S.W. Kim, K.S. Kim, J.Y. Heo and H.J. Kang	Geographical distribution for water quality of agricultural ground water in Korea
S8-P14	Su-Hwan Lee, J.T. Lee, Y.Y. Oh, J.H. Ryu, H.S. Cho, H.S. Bae and B.H. Kang	Assessment of open-field smart farming practice for ameliorating the impact of the soil salinity on upland crops in the reclaimed land based on subsurface drainage
S8-P16	Dan-Bi Lee, D. Y. Kim, J. H. Yoon and K. H. Kim	Potential substitutes for quicklime (CaO) as disinfectant for carcass burial sites
S8-P18	Mariko Shimizu, A. Nagatake, H. Yamamoto and H. Yokokawa	The effect of groundwater level variation on soybean production in a large-scale field in Hokkaido, Japan
S8-P20	Y.S. Zhang, H.R. Cho, K.H. Han, J.H. Ok, S.A. Hwang and K.H. Jung	Optimum Range on Soil Physical Indicators under Plastic Film House in Korea
S9-P2	Po-Neng Chiang	Distribution of soil carbon storage in plantation forest of central Taiwan: A case study in experimental forest, National Taiwan University
S9-P4	Kai-Wei Chuang, Chih-Hsin Cheng and Chiou-Pin Chen	Effect of land-use change on litterfall production and nutrient accumulation in the montane area of central Taiwan
S10-P2	S. H. Jien and Yong-Hong Lin	Proteins in xylem exudates from rapeseed plants (<i>Brassica napus</i> L.) play a crucial role in cadmium phytoremediation
S10-P4	B. Y. Wang, R. S. Sahu, T. H. Chou and Yang-Hsin Shih	Fate and transport of polybromodiphenyl ethers (PBDEs) in soil: identification and monitoring near a PBDE-utilizing factory in Taoyuan, Taiwan

Poster No.	Authors	Title
S10-P6	Dang Van Minh	Remediation of Pb, Zn and Cd in contaminated mining soils using alkaline materials derived from sub-agricultural products (biochar) and non-hazardous industrial byproducts (apatite and fly ash)
S10-P8	R. J. R. Claveria, T. R. Perez and R. J. B. D. Comia	Metal bioavailability in soils with implications to metallophyte diversity in a Cu-Au processing site in Kias, Benguet, Philippines
S10-P10	MiJin Chae, H. I. Jung, M. S. Kong, E. J. Lee, T. G. Lee, Y. H. Kim and G. B. Jung	Characterization of lead pollution near mine and smelter in Korea using lead stable isotopes
S10-P12	Chuan-Chun Tsai, Chi-Ming Yang and Wen-Dar Huang	Developing correlation of soil cadmium and uptake of cadmium in rice with unmanned aerial vehicle-derived multispectral images
S10-P14	B.L. Ch'ng, C. Chen, Y. Ting and Hsing-Cheng Hsi	Sequestration of mercury and methylmercury in contaminated estuary-sediment by a thin layer cap
S10-P16	Kwon-Rae Kim, M. N. Lee, and S. M. Jeong	Toxic metal(loid)s threshold values in soil established via phytoavailability based empirical model

The 14th ESAFS Contact

Professor Zeng-Yei Hseu (Chairman)

National Taiwan University, Taiwan

E-mail: zyhseu@ntu.edu.tw

TEL: +886-2-33664807

Fax: +886-2-33661887

Distinguished Professor Dar-Yuan Lee (Vice-chairman)

National Taiwan University, Taiwan

E-mail: dylee@ntu.edu.tw

TEL: +886-2-33664811

Fax: +886-2-23638192

Professor Shih-Hao Jien (Secretary General)

National Pingtung University of Science and Technology, Taiwan

E-mail: shjien@mail.npu.edu.tw

TEL: +886-8-7703202 #7168/7388

Fax: +886-8-7740373

Emergency Phone Number

Police (Calling): 110

First-Aid Ambulance: 119

Fire: 119

Organizers



East and Southeast Asia Federation of Soil Science Societies (ESAFS)



National Taiwan University (NTU), Taipei, Taiwan



The Chinese Society of Soil and Fertilizer Sciences (CSSFS), Taiwan

Sponsors



Ministry of Science and Technology, Taiwan





ESAFS TAIWAN **2019**

**14th International Conference of the
East and Southeast Asia Federation of
Soil Science Societies**

Organized by



Sponsored by

