



3rd International Soil Judging Contest

August 8-11, 2018
Seropédica, RJ, Brazil

Final Report



International Union of Soil Sciences



**Sociedade Brasileira de
Ciência do Solo**



UFRRJ
UNIVERSIDADE FEDERAL RURAL
DO RIO DE JANEIRO

Embrapa

Solos



Introduction

As part of the celebrations of the International Decade of Soils and the 21st World Congress of Soil Science (WCSS), the 3rd International Soil Judging Contest (3rd ISJC) has been organized to celebrate the soil science and its importance to the life on this planet. The occasion is a great opportunity for students, research people and others interested in soils from around the world to interact and experience some of the landscapes and tropical soils of Brazil.

The scope of the 3rd ISJC is for participants to use their knowledge and practical skills to describe, understand and interpret soil characteristics in the field. Participants will be challenged to describe a series of contest profiles and landscapes using their skills.

Based on those activities, the aims of this event are:

- to encourage the wider adoption of the discipline of soil judging around the world;
- to give motivated students an opportunity to assess soil in a different part of the world;
- to give students an opportunity to develop networks in the soil science community;
- and to demonstrate the career opportunities that soil science offers.

The 3rd ISJC is an event supported and promoted by the IUSS (International Union of Soil Science) and the SBCS (Brazilian Soil Science Society). It was run at the Federal Rural University of Rio de Janeiro and the surrounding area during the week before the 21st WCSS, from August 08 to 12, 2018. The contest had 12 teams registered (47 students/competitors and 12 coaches). The teams came from all around the world: Brazil, Korea, United Kingdom, Spain, South Africa, USA (2 teams), Mexico (2 teams), Russia, China (Taipei) and Australia. Besides that, 23 volunteers (8 international and 15 local volunteers) attended to help the organizing team (11 people - 8 local and 3 international). The total number of participants was 93 people.

All the logistical organization was prepared by the Federal Rural University of Rio de Janeiro (UFRRJ), Federal University of Santa Maria (UFSM) and Embrapa Soil. All the financial support were provided by the IUSS, 21st WCSS/SBCS, UFRRJ, UFSM and Embrapa Soil.

The weather, the outdoor landscapes and the effort of the participants (volunteers, students and professors) contributed to the success of the event. The students had the

opportunity to exchange experiences among themselves, creating new bonds of friendship. The overall evaluation of the event was positive. The details of the schedule and organization will be presented below.

Event Program

General Schedule

Day	Period	Activities
August 7 th	Afternoon	Welcome and registration at the Tulip Inn hotel
Day 1 August 8 th	Morning	Opening and indoor training (UFRRJ)
	Afternoon	Outdoor training (UFRRJ)
	Evening	Happy hour
Day 2 August 9 th	Morning	Field trip (Seropédica/Itaguaí)
	Afternoon	Field trip (Seropédica/Itaguaí)
	Evening	Free
Day 3 August 10 th	Morning	Field practice (UFRRJ)
	Afternoon	Field practice (UFRRJ)
	Evening	Coach's meeting (to be announced)
Day 4 August 11 st	Morning	Contest (to be announced)
	Afternoon	Contest (to be announced)
	Evening	Compilation of final results and happy hour
August 12 nd	Morning	Transfer from the hotel in Itaguaí to Rio de Janeiro (Windsor Convention Center)

First Day Training ProgramDate: August 08th, 2018

Local: UFRRJ campus

Time	Activities
Morning (indoor training)	
8:30	Opening ceremony (for all participants)
9:10	Lecture: Geology, landscapes and soils in Seropédica, RJ, Brazil Helena Saraiva Koenow Pinheiro (UFRRJ, Brazil)
9:50	Break (water and fruits available)
10:10	Lecture: Master Horizons (profile description) Maxine Levin (SSSA, USA)
10:40	Lecture: WRB for Soil Resources Erika Michéli (Szent István University, Hungary)
11:20	Lecture: Soil Taxonomy John Galbraith (Virginia Tech, USA)
12:00	Lunch
Afternoon (outdoor training)	
13:30	Soil texture class (practice) Fabricio de Araújo Pedron (UFESM, Brazil) Ademir Fontana (EMBRAPA, Brazil)
14:30	Lecture: Brazilian Soil Classification System (SiBCS) Ricardo Simão Diniz Dalmolin (UFESM, Brazil) Alessandro Samuel-Rosa (UTFPR, Brazil)
15:10	Break (water and fruits available)
15:40	Examining a soil profile: soil description practice (organizing committee and team coaches)
17:30	Return to the hotel
Evening	
19:30	Happy hour (location will be announced)

The opening ceremony was run in the main auditorium of the Agronomy Institute of the Federal Rural University of Rio de Janeiro, with the presence of the following authorities:

1. Professor Ricardo Luiz Louro Berbara, presidente of the Federal Rural University of Rio de Janeiro.
2. Professor Alexis Rosa Nunner, Director of the Agronomy Institute of the Federal Rural University of Rio de Janeiro.
3. Professor Flavio Anastácio Camargo, chairman of the 21st WCSS and representing the Brazilian Soil Science Society.
4. Professor Erika Michèli, representing the International Union of Soil Science
5. Professor Fabricio Pedron, representing the organizing Committee of the 3rd ISJC.

Fig. 1 – The authorities in the opening ceremony.



Fig. 2 – Lectures during the first morning.



Fig. 3 – Lectures and the audience during the first morning.



Fig. 4 – Outdoor practice: texture exercise.



Fig. 5 – Outdoor practice: soil profile description.



Second Day Training Program - FIELD TRIP

Date: August 9th, 2018

Local: Seropédica and Itaguaí countryside

Time	Activities
Morning	
8:30	<p>Soils and agronomical experiments at the SIPA (Agroecological Integrated Production System), in Seropédica, RJ</p> <p>The SIPA, locally known as "<i>fazendinha agroecológica km 47</i>", is a joining research area of EMBRAPA Agrobiology, UFRRJ and Pesagro-Rio. It has been dedicated to studies and experiments with organic agriculture and agroecology since 1993. The visit will cover some results from recent thesis and dissertations, as well as, soil profiles, hydrological aspects and results from erosion plots.</p> <p>Lecture: Relationship between physical and pedological attributes of a catena of the Fluminense lowland</p> <p>Marcos Bacis Ceddia (UFRRJ, Brazil)</p>
12:00	Lunch
Afternoon	
13:30	<p>Exam of soil profile 1 – Gleysol (Entisol)</p> <p>Brian Needelman (University of Maryland, USA)</p> <p>13:30 – group 1</p> <p>15:30 – group 2</p>
	<p>Exam of soil profile 2 – Planosol (Endoaquult or Fragiudult)</p> <p>Stephen Cattle (University of Sydney, Australia)</p> <p>13:30 – group 2</p> <p>15:30 – group 1</p>
17:30	Return to the hotel
Evening	
-	Free

Fig. 6 – Organic agriculture experience at the Embrapa Agrobiologia.



Fig. 7 – Physical and pedological attributes of a catena of the Fluminense lowland.



Fig. 8 – Field trip practice during the Afternoon.



Third Day Training Program - FIELD PRACTICE

Date: August 10th, 2018

Local: UFRRJ campus

Time	Training Pit 1				Training Pit 2			
	Left		Right		Left		Right	
	In	Out	In	Out	In	Out	In	Out
8:30-10:00	USA2	MEX2	GBR	ESP	SAF	RUS	AUS	KOR
10:00-10:10	Move							
10:10-11:40	KOR	AUS	RUS	SAF	ESP	GBR	MEX2	USA2
11:40-13:30	Lunch							
13:30-15:00	USA1	MEX1	BRA	TWN	-	-	-	-
15:00-15:10	Move							
15:10-16:40	-	-	-	-	TWN	BRA	MEX1	USA1
17:00	Return to the hotel							

Time	Training Pit 3				Training Pit 4			
	L		R		L		R	
	In	Out	In	Out	In	Out	In	Out
8:30-10:00	USA1	MEX1	BRA	TWN	-	-	-	-
10:00-10:10	Move							
10:10-11:40	-	-	-	-	TWN	BRA	MEX1	USA1
11:40-13:30	Lunch							
13:30-15:00	USA2	MEX2	GBR	ESP	SAF	RUS	AUS	KOR
15:00-15:10	Move							
15:10-16:40	KOR	AUS	RUS	SAF	ESP	GBR	MEX2	USA2
17:00	Return to the hotel							

19:00 – Coaches meeting (meeting room - hotel tulip inn)

Fig. 9 – Teams at the field practice.



Fig. 10 – Teams at the field practice.



Fig. 11 – Pits preparation and final photo of the group (practice day).



Fourth Day Program - SOIL JUDGING CONTEST

Date: August 11st, 2018

Local: UFRRJ Campus

Individual Contest (Morning)

Time	Pit 1				Pit 2			
	Left		Right		Left		Right	
	In	Out	In	Out	In	Out	In	Out
9:20-10:20	Usa1-a	Mex1-a	Mex1-b	Usa1-b	Usa1-c	Mex1-c	Mex1-d	Usa1-d
	Twn-a	Bra-a	Bra-b	Twn-b	Twn-c	Bra-c	Bra-d	Twn-d
	Aus-a	Kor-a	Kor-b	Aus-b	Aus-c	Kor-c	Kor-d	Aus-d
10:20-10:30	Move							
10:30-11:30	Usa1-d	Mex1-d	Mex1-c	Usa1-c	Usa1-b	Mex1-b	Mex1-a	Usa1-a
	Twn-d	Bra-d	Bra-c	Twn-c	Twn-b	Bra-b	Bra-a	Twn-a
	Aus-d	Kor-d	Kor-c	Aus-c	Aus-b	Kor-b	Kor-a	Aus-a
11:30-12:30	Move							
12:30-13:30	Usa2-a	Mex2-a	Mex2-b	Usa2-b	Usa2-c	Mex2-c	Mex2-d	Usa2-d
	Gbr-a	Esp-a	Esp-b	Gbr-b	Gbr-c	Esp-c	Esp-d	Gbr-d
	Saf-a	Rus-a	Rus-b	Saf-b	Saf-c	Rus-c	Rus-d	Saf-d
13:40-13:50	Move							
13:50-14:50	Usa2-d	Mex2-d	Mex2-c	Usa2-c	Usa2-b	Mex2-b	Mex2-a	Usa2-a
	Gbr-d	Esp-d	Esp-c	Gbr-c	Gbr-b	Esp-b	Esp-a	Gbr-a
	Saf-d	Rus-d	Rus-c	Saf-c	Saf-b	Rus-b	Rus-a	Saf-a

Team Contest (Afternoon)

Time	Pit 3				Pit 4			
	Left		Right		Left		Right	
	In	Out	In	Out	In	Out	In	Out
9:20-10:20	USA2	MEX2	GBR	-	RUS	SAF	ESP	-
10:20-10:30	Move							
10:30-11:30	RUS	SAF	ESP	-	USA2	MEX2	GBR	-
11:30-12:30	Move							
12:30-13:30	TWN	BRA	MEX1	-	USA1	KOR	AUS	-
13:40-13:50	Move							
13:50-14:50	USA1	KOR	AUS	-	TWN	BRA	MEX1	-
15:30	Return to the hotel							
19:30	Ending Happy hour (Patio Mix Shopping mall)							
All day	Grading the score sheets (organizing team and coaches)							

Fig. 12 – Teams and competitors during the contest.



Fig. 13 – Teams and competitors during the contest.



Fig. 14 – Teams and competitors during the contest.



Participants of the 3rd International Soil Judging Contest

Organizing team

Nº	Name	Affiliation	Country	Email
1	Fabício de Araújo Pedron	UFSM	Brazil	fapedron@ufsm.br
2	Marcos Gervásio Pereira	UFRRJ	Brazil	mgervasiopereira01@gmail.com
3	Ademir Fontana	EMBRAPA	Brazil	ademir.fontana@embrapa.br
4	Helena S. K. Pinheiro	UFRRJ	Brazil	lenask@gmail.com
5	Ricardo S. Diniz Dalmolin	UFSM	Brazil	dalmolin@ufsm.br
6	Alessandro Samuel-Rosa	UTFPR	Brazil	alessandrorosa@utfpr.edu.br
7	Yuri Gelsleichter	UFRRJ	Brazil	yuriplanta@gmail.com
8	Lúcia Helena C. dos Anjos	UFRRJ	Brazil	lanjos@ufrj.br
9	Erika Michéli	SIU	Hungary	micheli.erika@mkk.szie.hu
10	Maxine Levin	SSSA	USA	mjl8506@hotmail.com
11	Adam Ksorba	SIU	Hungary	Csorba.Adam@mkk.szie.hu

Local volunteers

Nº	Name	Affiliation	Country	Email
1	Fernanda Reis Cordeiro	UFRRJ	Brazil	fereis.cordeiro@gmail.com
2	Ana Carolina Barbosa do Canto	UFRRJ	Brazil	anacanto@id.uff.br
3	Robson Altiellys Tosta Marcondes	UFRRJ	Brazil	robson.marcondees@gmail.com
4	Douglas da Silva Ferreira	UFRRJ	Brazil	-
5	Sandy Castro da Silva Baia	UFRRJ	Brazil	-
6	Thamires Ferreira Rodrigues da Silva	UFRRJ	Brazil	-
7	Thailla Maria Costa Lisboa	UFRRJ	Brazil	-
8	Karen de Souza Tinoco	UFRRJ	Brazil	-
9	Débora Maria Santos Alves	UFRRJ	Brazil	-
10	Mayhara da Costa Pereira	UFRRJ	Brazil	-
11	Maíra Santos Rizzo	UFRRJ	Brazil	-
12	Lucas Rêgo Mendonça Marinho	UFRRJ	Brazil	-
13	Marcela Machado	UFRRJ	Brazil	-
14	João Reis	UFV	Brazil	joaosantiagor@gmail.com
15	Arcangelo Loss	UFSC	Brazil	arcangelo.loss@ufsc.br

International volunteers

Nº	Nome	IES/IP	Pais	Email
1	Carlos Bonini Pires	KSU	USA	carlos.boninipires@hotmail.com
2	Erin Bush	KSU	USA	erinbush32@ksu.edu
3	Danny Itkin	BGU	Israel	danitkin@gmail.com
4	Jorge Mataix-Solera	SECS	Spain	jorge.mataix@umh.es
5	Sara Mack	U Maryland	USA	smack@umd.edu
6	Brian Needelman	U Maryland	USA	bneed@umd.edu
7	John Bennett	SSA	Australia	john.bennett@usq.edu.au
8	Ki-In Kim	MNU	Korea	rollingkim@gmail.com

Competitors

Brazilian Team

Status	Name	Institution
Coach	Douglas Rodrigo Kaiser	Universidade Federal da Fronteira Sul
Student	Taciara Zborowski Horst	Universidade Federal de Santa Maria
Student	Cleidimar Gerson Steinke	Universidade Federal da Fronteira Sul
Student	Jordana Duarte	Universidade Federal da Fronteira Sul
Student	Flávio de Lara Lemes	Universidade Federal da Fronteira Sul

Coach email: douglasrodrigokaiser@gmail.com

Australian Team

Status	Name	Institution
Coach	Stephen Cattle	University of Sydney
Student	Karin Azzam	University of Sydney
Student	Bethany Sleep	University of Adelaide
Student	Stirling Robertson	University of Southern Queensland
Student	Hasintha Wijesekara	University of Newcastle

Coach email: stephen.cattle@sydney.edu.au

Spanish Team

Status	Name	Institution
Coach	Rosa Maria Poch	Universitat de Lleida
Student	Alba Catalán Merlos	Universitat de Lleida
Student	Mar Carreras	Universidad de Lleida
Student	Iker Hernández García	Universidad Pública de Navarra
Student	Alberto Lázaro López	Universidad Politécnica de Madrid

Coach email: rosa.poch@macs.udl.cat

Chinese (Taipei) Team

Status	Name	Institution
Coach	Zueng-Sang Chen	National Taiwan University
Student	Yen-Lin Cho	National Chung-Hsing University
Student	Chuan-Yen Hsiao	National Chung-Hsing University
Student	Wei-Lin Liu	National Taiwan University
Student	Cho-Yin Wu	National Taiwan University

Coach email: soilchen@ntu.edu.tw

USA Team 1

Status	Name	Institution
Coach	Andrew Sherfy	University of Tennessee
Student	Kelli Roush	Iowa State University
Student	Joseph Loffredo	University of Rhode Island
Student	David Gentry	University of Tennessee-Knoxville
Student	Daniel T. Brumm	University of Wisconsin-Platteville

Coach email: asherfyutk@gmail.com

USA Team 2

Status	Name	Institution
Coach	John Galbraith	Virginia Tech
Student	Braden Povah	California Polytechnic State University
Student	Emma Thompson	Utah State University
Student	Georgianna Scott	Clemson University
Student	Ben Smith	Virginia Tech

Coach email: ttcf@vt.edu

Mexican Team 1

Status	Name	Institution
Coach	Luis Daniel Olivares Martínez	Instituto de Investigaciones sobre los Recursos Naturales
Student	Emiliano Mizraím Martínez Padilla	Universidad Autónoma Chapingo
Student	Miriam Galán Reséndiz	Universidad Nacional Autónoma de México
Student	Luis Rojas Pérez	Colegio de Postgraduados
Student	Axel Cerón González	Universidad Nacional Autónoma de México

Coach email: Idolivares@enesmorelia.unam.mx

Mexican Team 2

Status	Name	Institution
Coach	Alma Barajas	Universidad Nacional Autónoma de México
Student	Edwin Aguilar Andrade	Tec. de Estudios Superiores de Villa Guerrero
Student	Diana Laura Lázaro García	Universidad Nacional Autónoma de México
Student	Judith Amador Sierra	Centro de Investigación Interdisciplinario para el Desarrollo de la Región (CIIDIR-IPN-Dgo)
Student	Leobardo Ibáñez Ocampo	Tec. de Estudios Superiores de Villa Guerrero

Coach email: barajas.alcala@gmail.com

Russian Team

Status	Name	Institution
Coach	Pavel Krasilnikov	Lomonosov Moscow State University
Student	Nelli Agadzhanova	Lomonosov Moscow State University
Student	Iullia Golovleva	Lomonosov Moscow State University
Student	Igor Ilichev	Lomonosov Moscow State University
Student	Fatima Kurbanova	Lomonosov Moscow State University

Coach email: krasilnikov@ecfs.msu.ru; buyvolova@gmail.com

British Team

Status	Name	Institution
Coach	Matt Aitkenhead	The James Hutton Institute
Student	Caleb Melenya	Kwame Nkrumah University
Student	Georges Ndzana	Huazhong Agricultural University
Student	Osim Enya	University of Salford
Student	Luke Beesley	The James Hutton Institute

Coach email: Matt.Aitkenhead@hutton.ac.uk

Korean Team

Status	Name	Institution
Coach	Sonn, Yeon-Kyu	Rural Development Administration
Student	Seo, Byoung-Hwan	Gyeongnam National University
Student	Kim, Hyun-Uk	Gyeongnam National University
Student	Lee, Kang-Hae	Je-Ju National University
Student	Pyo, Ji-Seung	Chung-Nam National University
Student	Lee, Danbi	University of Seoul

Coach email: johnkim@uos.ac.kr; green22s@naver.com

South African Team

Status	Name	Institution
Coach	Cornie van Huyssteen	University of the Free State
Student	Angelique Daniel	Northwest University
Student	Ruan Ainslie	Northwest University
Student	Mischke Bouwer	University of the Free State
Student	Anizka Stolk	University of the Free State

Coach email: vanHuyssteenCW@ufs.ac.za

Logistical organization

Transportation

During the event we count on three buses provided by the UFRRJ. The buses were used to make the transportation of participants every day from the hotel to the training/contest sites and back to the hotel (see fig. 15).

Sanitary installation in the field activities

The participants could use two chemical bathrooms available during the field practice activities (see fig. 15).

Fig. 15 – University buses used during the soil judging contest event.



Food and snacks

During the four days of the event, the organizing committee provided all the snacks and lunches without any cost for the participants. For the snacks, the participants could have water, coffee or juice to drink and cookies, cakes, snack foods, sandwich, candies and different kinds of fruits like banana, guava, apple and tangerine. For lunch, we serve a large dish with rice, salad, beans and chicken, pork or beef (see fig. 16). On the first two

days the organization provided tables and chairs for the lunch time. On the last two days the lunch was like a pic-nic in the field.

Fig. 16 – Snacks and lunches served during the soil judging contest event.



Hotel accommodation

All participants were accommodated at the tulip inn hotel in the municipality of Itaguaí (20 km from Seropédica), since in Seropédica there is no hotel with capacity for more than 90 people. The hotel costs were paid by the participants themselves. Only the costs of the organizers were paid by the event funds.

Security and first aid staff

The organizing team could count on two federal security men (from the University Security Staff) properly equipped to keep the participants safe. They stay with participants during the four event days. That was really necessary because we were working in Rio de Janeiro metropolitan area, which sometimes can be unsafety. We had no security problems during the event. We also had two first aid staff accredited by the Red Cross international, Dr. Fabrício Pedron (Brazil) and Dr. Danny Itkin (Israel). We had only three cases assisted, one knee injury prior to the event, which was conducted to the ambulatory and two small and simple field wounds, which were treated in the field.

Volunteers

In addition to the international volunteers and local students, the event had the partnership of the junior rural consultancy company, which is run by the agronomy students of the UFRRJ.

Fig. 17 – Images of the organizing team and all the participants at the end of the contest day.



Final results of the contest

Individual contest

Place	Competitor	Team
1 ^o	Georgianna Scott	USA 2
2 ^o	Ben Smith	USA 2
3 ^o	Alberto Lázaro López	Spain
3 ^o	David Genfry	USA 1
3 ^o	Karin Azzam	Australia
3 ^o	Braden Povah	USA 2

Team contest

Place	Team	Coaches
1 ^o	USA 1	Andrew Sherfy
2 ^o	USA 2	John Galbraith
3 ^o	Spain	Rosa Maria Poch

Overall contest

Place	Team	Coaches
1 ^o	USA 2	John Galbraith
2 ^o	USA 1	Andrew Sherfy
3 ^o	Spain	Rosa Maria Poch

Fig. 18 – Award ceremony.



Fig. 19 – Award ceremony.



The award ceremony of the 3rd International Soil judging Contest was held during the Opening Ceremony of the 21WCSS, on August 12nd, 2018. That was a very important opportunity to show to all the 21WCSS participants what was the Soil Judging Contest.

Santa Maria, Brazil, August 23, 2018.

Fabrício de Araújo Pedron
3rd International Soil Judging Contest Coordinator