# **ETH** zürich

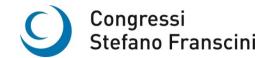


# From modelling towards better prediction in geotechnics

## Winter School

22 – 27 January 2017 Congressi Stefano Franscini CSF Monte Verità, Ascona, Switzerland

Invited by Professor Sarah M. Springman



#### Venue

Hotel and Congress Centre Monte Verità Strada Collina 84 6612 Ascona Switzerland Phone: Tel. +41 91 785 40 40 Fax +41 91 785 40 50 info@monteverita.org www.monteverita.org

#### Directions:

http://www.monteverita.org/en/41/contact-and-directions.aspx http://www.geotechnics.ethz.ch/en/news-and-events/events/winterschool-monte-verita/directions.html

#### **Buses**

Sunday, 22 January 2017

Last public bus leaving Locarno, Piazza Stazione, to Ascona with direct connection to Monte Verità: 17.38

Arrival at Locarno main station after 17.50 (departure of last shuttle): Bus no. 1 to Ascona (bus stop Ascona Posta), then by taxi to Monte Verità

#### **Shuttle**

Shuttle leaving Locarno, Piazza Stazione, at: 13.30 / 14.10 / 14.50 / 15.30 / 16.10 / 17.50

The shuttle will be running for 4 hours in a row (approx. 6 single runs, every 40minutes), max. 11 people/run. (Please consult our website for any changes: <a href="http://www.geotechnics.ethz.ch/en/">http://www.geotechnics.ethz.ch/en/</a>

#### From modelling towards better prediction in geotechnics

# Host: Professor Sarah M. Springman ETH Zurich, Institute for Geotechnical Engineering

#### **Monday to Friday**

#### In parallel

06.30-08.15 Breakfast

07.00-07.45 Yoga or Pilates Balint Room

Ruth Oliver

Please wear gym gear!

07.45-08.15 Meditation Balint Room

**Ruth Oliver** 

Please wear comfortable, loose clothing!

Please note that on **Wednesday** the Yoga/Pilates and Meditation sessions start 15 mins earlier.

#### **Technical management of presentations**

Ralf Herzog, Damoun Taeseri, Alex Marin, Daisy Lucas

Please make sure you hand over your presentations to a member of this team on the evening before your session.

#### Sunday, 22 January 2017

15.00	Check-in	
16.00-19.00	Registration	
17.00-18.00	Yoga / Meditation Ruth Oliver	<b>Balint Room</b>
18.15	Welcome Address Chiara Cometta, Congressi Stefano Franscini Lorenzo Sonognini, Fondazione Monte Verità Sarah Springman, ETH Zurich	Auditorium
18.30	Welcome Drink	
19.00	Dinner	

Monday, 23	January 2017	
08.30	Field Experiments: Unde venis? Quo vadis? Cristina Jommi Chairs: Jan Laue, Pierre André Mayor	Room Auditorium
09.30	Discussion	
10.00	Coffee break	
10.30	6 Presentations – 10 mins & 10 mins discussion / 3 - 5 slides  Pose a key question you would like to have discussed / answered in the afternoon session  Theme: Field and Centrifuge Experiments  Chair: Malcolm Bolton	Auditorium
	Study of the seasonal response of a scree slope in the Swiss Alps Daisy Lucas (ETH Zurich)	
	Structural Stability of Reinforced Road Embankments in the Arctic Corridor Earl de Guzman (University of Manitoba, Winnipeg)	
	Effects of tunnelling under an existing tunnel in clay Chang Ye Gue (University of Cambridge)	
	Large-scale testing of foundations for offshore wind turbines Aligi Foglia (Fraunhofer IWES, Hannover)	
	Landslide generated tsunamis Gemma Bullard (Queen's University, Kingston)	
	Micro-Mechanics of a crushable granular material Giulia Guida (Niccolò Cusano University, Rome)	
12.30	Lunch	
14.00	Discussion session 1 - Field and Centrifuge experiments Small group interaction (roughly 7 per group, 6 groups): Focus on discussing and solving the burning question posed by presenters in the morning session	Balint Room Group 1 – 2 Eranos Room
	Chairs: Lukas Arenson, Ferney Morales, André Arnold	Group 3
	Solve the key question allocated to your group Discuss any of the other questions that interest you	Pioda Room Group 4
16.30	Break	Mandala Room Group 5
17.00-18.00	Feedback session Plenum 1-2 people per group to present answers to the questions posed, 5-10 minutes per group, general discussion Chairs: Lukas Arenson, Ferney Morales, André Arnold	Van der Heydt Group 6 Plenum
19.00	Dinner	Auditorium
20.30	Small group interaction on health and lifestyle (voluntary) Ruth Oliver	<b>Balint Room</b>

Tuesday, 24	4 January 2017	
8.30	Laboratory Experiments: Unde venis? Quo vadis?	Room Auditorium
	Andy Take Chair: David Muir Wood	
09.30	Discussion	
10.00	Coffee break	
10.30	6 Presentations – 10 mins & 10 mins discussion / 3 - 5 slides  Pose a key question you would like to have discussed / answered in the afternoon session  Theme: Laboratory Experiments  Chair: Ioannis Anastasopoulos	Auditorium
	Using a triaxial permeameter to assess internal erosion of susceptible soils Fahed Gaber (University of Sheffield)	
	Deviatoric behaviour of peats: some experimental observations Stefano Muraro (Delft University of Technology)	
	Realistic scaling of plant root systems for centrifuge modelling of root- reinforced slopes Teng Liang (University of Dundee)	
	The effect of dynamic loads on the behaviour of non-engineered mudrock backfill materials Shaymaa Kennedy (University of Sheffield)	
	Centrifuge modelling of arching in granular soils and the behaviour of geosynthetic-reinforced soils above voids Talia da Silva (University of Cambridge)	
	Internal mechanics of collisional granular flows in dry and saturated conditions Devis Gollin (University of Sheffield)	
12.30	Lunch	
14.00	Discussion session 2 - Laboratory Experiments  Small group interaction (6 groups):  Focus on discussing and solving the burning question posed by presenters in	Balint Room Group 1 – 2
	the morning session Chairs: Suzanne Lacasse, Jürgen Grabe, Francesca Casini	Eranos Room Group 3
	Solve the key question allocated to your group Discuss any of the other questions that interest you	Pioda Room Group 4
16.00	Break	Mandala Room Group 5
<b>16.30</b> -18.00	Feedback session Plenum 1-2 people per group to present answers to the questions posed, 5-10 minutes per group, general discussion Chairs: Suzanne Lacasse, Jürgen Grabe, Francesca Casini	Van der Heydt Group 6
19.00	Dinner	Auditorium
20.30	Music If you have any (small) musical instruments, please bring them!	
	Small group interaction on health and lifestyle (voluntary) Ruth Oliver	<b>Balint Room</b>

#### Wednesday, 25 January 2017

8.30	Personal Development: The Triumvirate for Human Success – Self-Awareness, Intelligence and Leadership Mark Oliver	Room Balint Room
10.00	Coffee break	
10.30	Personal Development: continued Mark Oliver	Balint Room
12.30	Lunch	
13.45	Excursion Castles of Bellinzona	

#### Visit to the castles Castelgrande (UNESCO) and to the old town

**Bellinzona** is a partly fortified medieval town, known for its 3 castles, which belong to UNESCO's cultural heritage since 2000. Particularly attractive is the Castelgrande, which was renovated in 1984-1991 by one of the most famous architects in Ticino, Aurelio Galfetti. The castle can be reached in a few minutes from town, either by elevator or on foot.

Free time for coffee and shopping

Dinner at the Osteria Nostrana Piazza G. Motta, Ascona Phone +41(0)91 791 51 58

Please wear warm clothing with plenty of layers and comfortable walking shoes, so you can adjust to being inside, outside, or dining! We will travel from one location to the next without returning to Monte Verità.

**Programme** (approx. timetable)

1.45 pm Departure by bus from Monte Verità

2.30 pm Arrival in Bellinzona

2.45 pm Visit of the castles, Castelgrande (UNESCO) and of the old town

4.45 pm Free time for coffee and shopping

6.00 pm Departure by bus from Bellinzona to the restaurant

6.45 pm Arrival in Ascona

7.00 pm Dinner at Osteria Nostrana in Ascona

9.30 pm Return by bus to Monte Verità

Transfer By bus, on foot through the castles and the centre of town

Thursday, 26 January 2017			
8.30	Numerical Experiments: Unde venis? Quo vadis? Francesca Casini Chair: Lis Bowman	Room Auditorium	
09.30	Discussion		
10.00	Coffee break		
10.30	6 Presentations – 10 mins & 10 mins discussion / 3 - 5 slides  Pose a key question you would like to have discussed / answered in the afternoon session  Theme: Numerical Experiments  Chair: Andy Take	Auditorium	
	Static liquefaction of granular slopes Liam Steers (Queen's University, Kingston)		
	Tailings (mine waste) and tailings dam behavior Roger Knutsson (Lulea University of Technology)		
	Modelling of cyclic stress-strain behaviour of soft sensitive clays considering both static and dynamic soil structure interaction Amardeep Amavasai (Chalmers University of Technology, Gothenburg)		
	Modelling weather-driven deterioration of cut slopes in overconsolidated clay; capturing seasonal ratcheting and progressive failure Harry Postill (Loughborough University)		
	Dynamic pile test of a monopile in water saturated soil Evelyn Heins (Hamburg University of Technology)		
	Inverse analysis of laterally loaded piles subjected to large cyclic loading: Development of a Bouc-Wen Type Soil Reaction Model Konstantinos Kassas (ETH Zurich)		
12.30	Lunch		
14.00	Discussion session 3 - Numerical Experiments Small group interaction (6 groups): Focus on discussing and solving the burning question posed by presenters in the morning session	Balint Room Group 1 – 2 Eranos Room	
	Chairs: Ashraf El-Hamalawi, Ivo Herle, Minna Karstunen	Group 3	
	Solve the key question allocated to your group Discuss any of the other questions that interest you	Pioda Room Group 4	
16.00	Break	Mandala Room Group 5	
<b>16.30</b> -18.00	Feedback session Plenum 1-2 people per group to present answers to the questions posed, 5-10 minutes per group, general discussion	Van der Heydt Group 6	
19.00	Chairs: Ashraf El-Hamalawi, Ivo Herle, Minna Karstunen  Dinner	Plenum Auditorium	
20.30	Entertainment (up to you!) - Group interaction (voluntary) Anyone Sarah Springman or with Ruth and Mark Oliver	Balint Room/ further rooms	

#### Friday, 27 January 2017

8.30 **Prediction : Unde venis? Quo vadis?** 

**Malcolm Bolton** 

Chair: Cristina Jommi

09.30 Discussion

10.00 Coffee break

10.30 4 Presentations – 15 mins & 10 mins discussion / 5 - 10 slides

Slightly longer presentations – free choice!

Theme: Prediction
Chair: Sarah Springman

Debris flow simulation using computational fluid dynamics (CFD) with non-Newtonian rheology

Petter Fornes (Norwegian University of Science and Technology, Oslo)

From progressive to catastrophic failure in planar submarine landslides

Wangcheng Zhang (University of Western Australia, Perth)

Numerical simulation and back-analysis of deep excavations in London Clay through case histories; design

Ying Chen (University of Cambridge)

Strain-dependent slope stability

Kornelia Nitzsche (Dresden University of Technology)

#### **Closing remarks**

12.30 Lunch

14.00 **Trains** 

Fly - Goodbye!

Shuttle to Locarno: to be announced at Monte Verità

### Contact (Pre-conference) Gabriela Laios

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#### **Directions**

www.monteverita.org (Conference hotel) www.sbb.ch (trains Switzerland) www.ticino.ch/en/ (Ticino Tourism) Room

**Auditorium** 

**Auditorium**