

# TC201 DYKES AND LEVEES

## *Hybrid Committee Meeting*

**17 June 2026, 13:00-13:45 (CEST)**



## AGENDA

1. Opening of the meeting. Attendance record. Additional items to be added if requested
2. Acknowledgement of outgoing Chair and welcome by the new Coordinating Team
3. 'Guard of Honour' – Recognition of Meindert Van's Contribution to TC201
4. Appointment of TC Representatives to the new ISSMGE Geotechnical Research Journal
5. Terms of Reference (Attachment 1)
6. Membership review
7. TC201 Wider Community
8. Task Forces & Call for ideas
9. Past and future activities
  - a. TC201 Report Techniques for reinforcement and renovation of levees
  - b. Ongoing International Projects
10. TC201 talks and posters presented at ICSMGE Vienna 2026
11. Any other business
12. Next TC106 meeting

# 1. Attendance record. Additional items to be added if requested

## Attendance record

<https://forms.office.com/e/xifdeN1RTs>



## 2. New Core Team and acknowledgement of outgoing Chair



**Chair**

**Alessandro Tarantino**  
University of Strathclyde  
Glasgow, UK

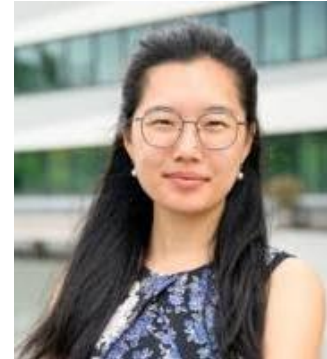
[alessandro.tarantino@strath.ac.uk](mailto:alessandro.tarantino@strath.ac.uk)



**Vice-Chair**

(Norma) **Patricia López Acosta**  
Universidad Nacional Autónoma de México  
Mexico City, Mexico

[NLopezA@iingen.unam.mx](mailto:NLopezA@iingen.unam.mx)



**Secretary**

**Yida Tao**  
DELTARES  
Delft, Netherlands

[Yida.Tao@deltares.nl](mailto:Yida.Tao@deltares.nl)



**Immediate Past Chair**

**Cor Zwanenburg**  
DELTARES  
Delft, Netherlands

[Cor.Zwanenburg@deltares.nl](mailto:Cor.Zwanenburg@deltares.nl)

(maternity leave until Nov 2026)

# 3. 'Guard of Honour'

## Recognition of Meindert Van's Contribution to TC201



**Meindert Van**

DELTARES

Delft, Netherlands

[Meindert.Van@deltares.nl](mailto:Meindert.Van@deltares.nl)

Meindert Van is stepping down from TC201.

He initiated the TC in May 2006 and led the TC for its first ten years, making a significant contribution as Chair to the wider Dykes and Levees community. He then passed the role of Chair to Cor Zwanenburg in February 2016.

Even after stepping down as Chair, he continued to make key contributions to TC201 by leading two major reports.

- TC201 Report *Failure Paths for Levees* (2022)
- TC201 Report *Techniques for reinforcement and renovation of levees* (2026)

While the ISSMGE does not formally provide for “Membership for Life” within Technical Committees, such recognition would be much deserved in Meindert’s case.

# 4. Appointment of TC Representatives to the new International Journal of Geoengineering Case Histories

ISSMGE International Journal of Geoengineering Case Histories  
<https://geocasehistoriesjournal.org/editorial-board>

The TC-appointed Editorial Board member responsibilities are

- (a) review no more than 5 papers per year (typically less);
- (b) serve as Guest Editor of a special issue from the Technical Committee on case histories in the next couple of years.

**Cor Zwanenburg (Immediate Past Chair) is the TC201 appointed Editorial Board member**

# 5. Terms of Reference

## Updated Terms of Reference uploaded to the TC201 website

Geotechnical Aspects of Dykes and Levees and Shore Protection

About

News

Terms of Reference

Membership

Task Forces

International Projects

 Sign-up to receive committee news

Objective 1: Dissemination

+

Objective 2: Guidelines & Recommendations

+

Objective 3: Conference Assistance

+

Objective 4: Industry Links

+

**ACTION for TC201 Members:  
Review the Terms of Reference and propose any amendments to the Core Team**

# 6. Membership review

	Nominated Members	Corresponding Members
Voting right	Yes	No
Max number nominated by National Societies	2	<b>Unlimited</b>

The distinction between Nominated and Corresponding members is very subtle; in practice, voting occurs only for the nomination of the Chair.

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## Expected contribution of TC201 Members

$\geq 0 \rightarrow$  NO

$> 0 \rightarrow$  OK

- The Chair has contacted all current members asking to confirm whether they still intend to serve as 'active' member
- About 40% of members have not yet responded. Two reminders will be sent over the next 3 weeks. If still no response, action taken with National Societies to request removal of these members.

# 7. TC201 Wider Community (1)

- TC201 Nominated Members
- TC201 Corresponding members
- Close friends - wishing to contribute to the wider activities of TC201  
→ If interested in joining TC201, please contact the Core Team.
- Loose friends – interested in being informed of the TC activities

## TC201 friends

Geotechnical Aspects of Dykes and Levees and Shore Protection

About

News

Terms of Reference

Membership

Task Forces

Host Member Society: United Kingdom

Short name: **Dykes and Levees** (TC201)

**GeoWorld Group:** [Geotechnical Aspects of Dykes and Levees and Shore Protection \(TC201\)](#)

 Sign-up to receive committee news



## 7. TC201 Wider Community (2)

- Interaction with ISSMGE TCs with direct and indirect overlap

### FUNDAMENTALS

- TC 101: Laboratory Stress Strain Strength Testing of Geomaterials
- TC 102: Site Characterization
- TC103: Numerical Methods in Geomechanics
- TC104: Physical Modelling in Geotechnics
- TC105: Geomechanics from Micro to Macro
- TC106: Unsaturated Soils

### APPLICATIONS:

- TC210: Embankment Dams
- TC213: Scour and Erosion
- TC220: Field Monitoring in Geomechanics
- TC223: Bio-Geotechnical Engineering

- Interaction with ICOLD Working groups

Internal erosion (IWG-IE)

Overflow and Overtopping Erosion (IWG-OOE)

**ACTION for TC201 Members:**

**Any other group/community to suggest, apart from National groups already represented in the TC201?**

# 8. Task Forces & Call for ideas (1)

**Tentative list  
of Task Forces**



Membership

**Task Forces**

International Projects

Newsletters

TC201 Meetings

Contact

## Technical Task Forces

- T1. Levee stability
- T2. Internal erosion
- T3. Overtopping/overflow erosion
- T4. Monitoring and Early Warning Systems
- T5. Numerical modelling & Digital twinning
- T6. Nature-based solutions
- T7. Site Investigation and Levee Geotechnical Characterisation
- T8. Collaborative experiments

## Cross-Cutting Task Forces

- CC1. Education
- CC2. Collaboration with other TCs
- CC3. Academia-Industry Partnership
- CC\$. Database of Case Histories

## 8. Task Forces & Call for ideas (2)

Please respond to the questionnaire if you have not done so yet



<https://forms.office.com/e/4ecSPrQGtz?origin=lprLink>

### QUESTIONS ADDRESSED

- Technical Task Forces
- Cross-Cutting Task Forces
- Activities within a Task Force
- Activities at TC level

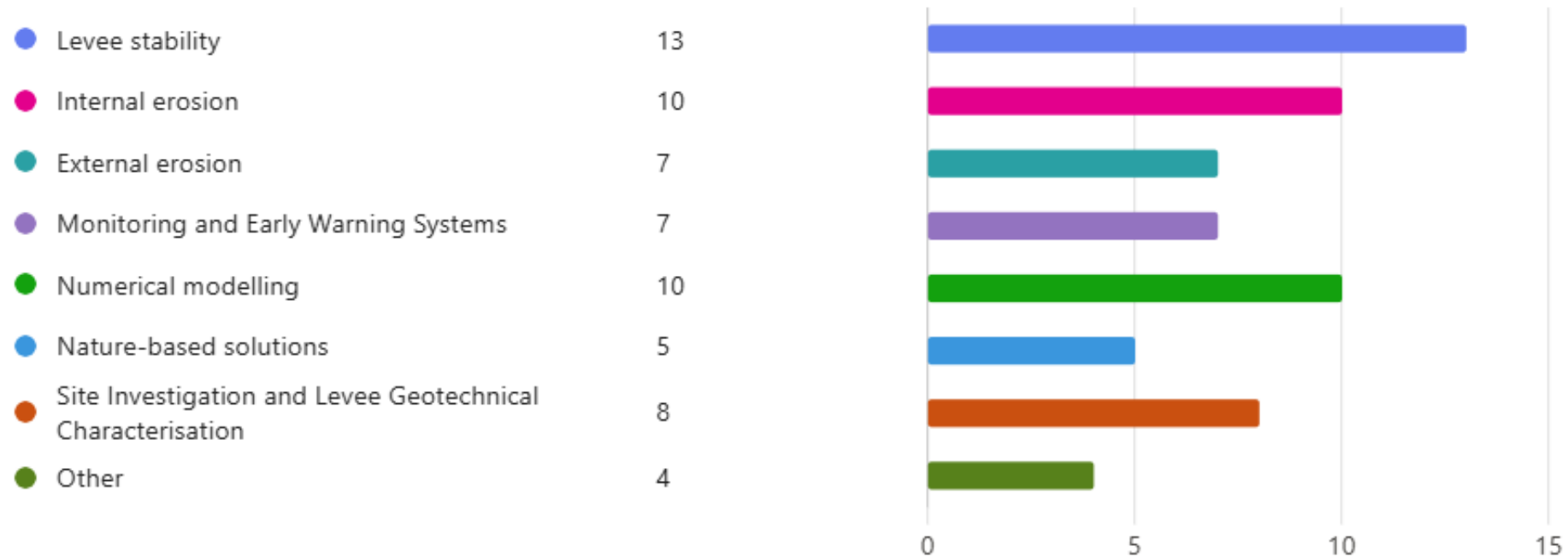
# 8. Task Forces & Call for ideas (3)

1. Below is a tentative list of Technical Task Forces. Please

i) select Task Forces you may wish to contribute to

ii) propose new or alternative Task Forces in 'Other' (list multiple options separated by semicolons)

[More details](#)



## Additional Task Forces proposed

Collaborative experiments / Climate change and resilience of levees / Risk and reliability analysis

# 8. Task Forces & Call for ideas (4)

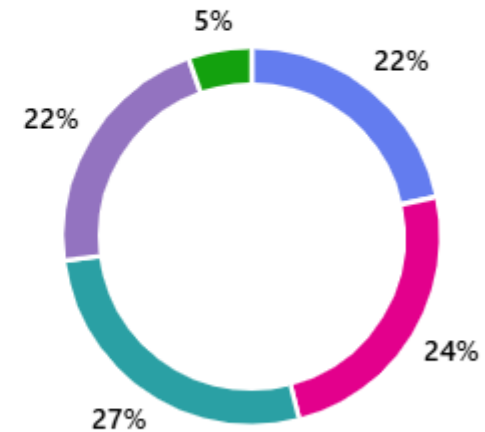
2. Below is a tentative list of Cross-Cutting Task Forces. Please

i) select Task Forces you may wish to contribute to

ii) propose new or alternative Task Forces in 'Other' (list multiple options separated by semicolons)

[More details](#)

● Education and Research Training	8
● Collaboration with other TCs	9
● Academia-Industry Partnership	10
● Database of Case Histories	8
● Other	2



# 8. Task Forces & Call for ideas (5)

3. Suggest activities within a Task Force (e.g., Research webinars, Case study Webinars, White Paper, Virtual Workshops)

[More details](#)

15  
 Responses

Latest Responses

"Interaction with levee authorities"

"I'm interest in organizing and participating to research webinars or case stu... "

...

8 respondents (53%) answered Case study for this question.



**Special Issue on ISSMGE International Journal of Geoengineering Case Histories ?**

# 8. Task Forces & Call for ideas (6)

4. Suggest activities at TC level (e.g., Hybrid 'Regional' Workshops, Technical Sessions at Major Conferences, Training courses, Round-robin exercises) [More details](#)

16  
Responses

Latest Responses

"Workshop together with interested TC104 members (physical modelling)"  
 "In this moment the occasions for meeting the TC members at European level..."  
 ...

8 respondents (50%) answered workshops for this question.



## ADDITIONAL ACTIVITIES PROPOSED

- Industry-led case study sessions or “problems from practice” to foster academia–industry collaboration
- Techniques for Reinforcement or Renovation of Levees
- Best-Practice Guidelines
- Young researcher presentation forum

## 8. Task Forces & Call for ideas (7)

- The Core Team will tentatively form Task Forces based on expressions of interest (4-5 members per Task Force)
- Efforts will be made to maximise regional, gender, sectoral, and experience diversity
- Task Forces will be formed using a bottom-up approach, i.e. there should be a sufficient number of expressions of interest
  
- The Core Team will propose the composition of the groups; however, there is no obligation to follow these suggestions.
- Task Force kick-off meetings are expected to take place remotely in September. The first kick-off meeting should be attended by the Chair and/or Vice-Chair.

# 9. Past and future activities (1)

## TC201 Report Techniques for reinforcement and renovation of levees

[About](#) | [News](#) | [Terms of Reference](#) | [Membership](#) | [Task Forces](#) | [International Projects](#) | [Newsletters](#) | [TC201 Meetings](#) | [Contact](#)

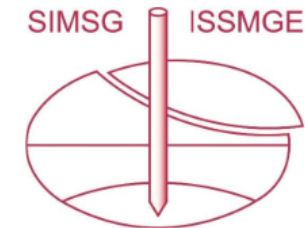
[Sign up to receive committee news](#)

**TC201 - CALL FOR IDEAS**  
 ISSMGE IT Administrator | TC201 | 11-06-2026  
[To TC201 Members and TC201 Wider Community](#)  
 Please, help us shape the activities of TC201 by completing this 5-m  
 ...  
[Read More](#)

**TC201 MEETING AT ICSMGE 2026 IN VIENNA**  
 Alessandro Tarantino | TC201 | 10-06-2026  
 The next TC201 meeting will be held on 17 June 2026, from 13:00 to 13:45, in hybrid format.  
[In-person attendance](#)  
 Room 1.  
 ...  
[Read More](#)

**TC201 REPORT - TECHNIQUES FOR REINFORCEMENT AND RENOVATION OF LEVEES**  
 Alessandro Tarantino | TC201 | 05-06-2026  
 The TC201 Report *Techniques for reinforcement and renovation of levees* was prepared by members of the ISSMGE TC201 *Dikes and levees*. It aims to support practitioners in selecting appropriate methods for site-specific challenges while fostering knowledge exchange among international  
 ...  
[Read More](#)

## Techniques for reinforcement or renovation of levees Final



May 2026

PREPARED BY  
 Technical Committee on  
 Geotechnical Aspects of Dikes and Levees  
 (TC201)

Authors Part I and editors Part II:  
 Meindert Van (Deltares, The Netherlands)  
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 Remy Tourment (INRAE, France)  
 Alessandro Tarantino (University of Strathclyde, United Kingdom)  
 Hirotohi Mori (Yamaguchi University, Japan)  
 Cor Zwanenburg (Deltares, The Netherlands)

Citation: Van, M.A., Tao, P.Y., Tourment, R., Tarantino, A., Mori, H. and Zwanenburg, C. Techniques for reinforcement or renovation of levees. International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE) – Technical Committee TC201 'Geotechnical aspects of dikes and levees', May 2026. Download <https://doi.org/10.53243/R0008>

## 9. Past and future activities (2)

### TC201 Report Techniques for reinforcement and renovation of levees

- Prepared by members of the ISSMGE TC201 *Dykes and levees*.
- To support practitioners in selecting appropriate methods for site-specific challenges
- To foster knowledge exchange among international experts on traditional and innovative approaches.
- Part I → Overview of renovation and reinforcement techniques whereas
- Part II → Inventory of case examples of reinforcement and renovation techniques by TC201 members

Report download here

[https://issmge.org/files/reports/TC201\\_reinforcement\\_renovation\\_report\\_May2026.pdf](https://issmge.org/files/reports/TC201_reinforcement_renovation_report_May2026.pdf)

# 9. Past and future activities (3)

## International Projects supported by the TC201

(The conversion of some planned project workshops into TC201 workshops is under discussion)

<p>About</p> <p>News</p> <p>Terms of Reference</p> <p>Membership</p> <p>Task Forces</p> <p><b>International Projects</b></p> <p>Newsletters</p> <p>TC201 Meetings</p> <p>Contact</p>	<div style="text-align: right; margin-bottom: 10px;"><a href="#">Sign-up to receive committee news</a></div> <p><b>BEAVER4LIFE - Brief Analysis of Vulnerability for river Embankment Reinforcement (2026-2030)</b></p> <p>Coordinator: Union of Municipalities of Faenza Romagna (URF), Italy Scientific Coordinator: Professor Michela Marchi (University of Bologna, Italy) Web link: TBC Contact: <a href="mailto:michela.marchi@unibo.it">michela.marchi@unibo.it</a></p> <p><b>DIGITAL DIKES - A multiscale framework for risk assessment of Backward Erosion Piping (2026-2032)</b></p> <p>Coordinator: Professor Vanessa Magnanimo (University of Twente, Netherlands) Web link: <a href="https://www.digital-dikes.nl/">https://www.digital-dikes.nl/</a> Contact: <a href="mailto:info@digital-dikes.nl">info@digital-dikes.nl</a></p> <p><b>LIFE SANDBOIL - Natural-based solution to mitigate flood risk due to SAND BOILs reactivations along the Po River (2020-2025)</b></p> <p>Coordinator: Professor Laura Tonni (University of Bologna, Italy) Web link: <a href="https://lifesandboil.eu/">https://lifesandboil.eu/</a> Contact: <a href="mailto:projectnews@lifesandboil.eu">projectnews@lifesandboil.eu</a></p>
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### **ACTION for TC201 Members and Friends:**

- **Report any other major projects relevant to TC201**

## 9. Past and future activities (4)

### International Conferences

- **9<sup>th</sup> International Conference on Unsaturated Soils (UNSAT2027)**  
June 6-9, 2027, Greater Boston, MA, USA  
Abstract Deadline: 26 June 2026  
→ A dedicated session on dykes and levees could be organised if there is sufficient critical mass
- **XVIII DANUBE-EUROPEAN CONFERENCE ON GEOTECHNICAL ENGINEERING**  
9-12 June 2027, Budapest, Hungary  
Abstract Deadline: Contact ASAP Edina Koch (Conference chair) at [info@18decge.hu](mailto:info@18decge.hu)  
→ A dedicated session on dykes and levees could be organised if there is sufficient critical mass
- **XXII Technical Dam Control International Conference**  
14-17 September 2027  
Abstract Deadline: TBC  
<https://tkz.is.pw.edu.pl/> - Agnieszka Dąbska [agnieszka.dabska@pw.edu.pl](mailto:agnieszka.dabska@pw.edu.pl)

### **ACTION for TC201 Members and Friends:**

- **Contact the Core Team if you intend to submit an abstract to any of the above-mentioned conferences**
- **Put forward relevant conferences/workshops that can possibly include a TC201 session**

## 9. Past and future activities (5)

### Interaction with 'TC220 Field monitoring'

- **One-day hybrid workshop focused on sharing experiences and best/worst practices in levee monitoring.**  
→ Possibly liaised to stakeholder/open events organised within consortium projects
- **Introductory lectures (online)**  
on instruments (or classes of instruments) used in levee monitoring, covering operating principles, advantages and limitations, installation procedures, and troubleshooting
- **Troubleshooting sessions (online)**  
where researchers and professionals involved in monitoring can raise questions and discuss challenges related to monitoring systems and/or data processing.

### **ACTION for TC201 Members and Friends:**

- **Contact the Core Team if you intend to submit an abstract to any of the above-mentioned conferences**
- **Put forward relevant conferences/workshops that can possibly include a TC201 session**

# 10. TC201 talks and posters presented at ICSMGE Vienna 2026

Location: Room M1

1.61\_62

**Date: Wednesday, 17/June/2026**

1:45pm -	<b>WE-01:</b> Numerical Methods II Location: Room A	<b>WE-02: Ground</b> Improvement & Soft Soils & Reinforced Fill Structures Location: Room C	<b>WE-03: Dykes and Levees &amp; Tailing and Mine Wastes</b> Location: Room M1	<b>WE-04:</b> Transportation I Location: Room M2	<b>WE-05: Field</b> Monitoring & System Performance Location: Room N1	<b>WE-06: Young</b> Engineers II Location: Room N2	<b>WE-07: Deep</b> Foundations II Location: Room 1.61_62	<b>WE-08: Offshore</b> & Risk Location: Room 1.85_86
4:15pm -	<b>WE-09:</b> Numerical Methods S II Location: Room A	<b>WE-10: Micro to</b> Macro & Geo- Education S Location: Room C	<b>WE-11:</b> Geotechnical BIM and DT & Machine Learning S Location: Room M1	<b>WE-12:</b> Transportation S Location: Room M2	<b>WE-13: Field</b> Monitoring & Site Characterization & Observational Method S Location: Room N1	<b>WE-14: Tailing and Mine Wastes &amp; Dykes and Levees &amp; Megacities S</b> Location: Room N2	<b>WE-16: Slope</b> Stability & Reinforced Fill Structures S Location: Room 1.85_86	

# 10. TC201 talks and posters presented at ICSMGE Vienna 2026



## PRESENTATIONS - Room M1 – 1.45-3.45

### 1. An international report of TC201 on retrofitting and reinforcements of levees

Meindert Van<sup>1</sup>, Yida Tao<sup>1</sup>, Esther Rosenbrand<sup>1</sup>, Cor Zwanenburg<sup>1</sup>, Remy Tourment<sup>2</sup>, Alessandro Tarantino<sup>3</sup>, Kenichi Maeda<sup>4</sup>, Hirotooshi Mori<sup>5</sup>

### 2. Durability of hydraulic structures reinforced with lime: a French onsite experience

Federica Bertola<sup>1</sup>, Marcello Mutti<sup>1</sup>, Jorrit Gillijns<sup>1</sup>, Lucile Saussaye<sup>2</sup>

### 3. Developing a full-scale experimental set-up for the simulation of backward erosion piping

Elena Dodaro, Emanuele Tumedei, Ilaria Bertolini, Michela Marchi, Laura Tonni, Guido Gottardi

# 10. TC201 talks and posters presented at ICSMGE Vienna 2026



## SHORT PRESENTATIONS & POSTERS -Room N2 – 4.15-5.45

### 4. Impact of a ditch on dike stability for uplift conditions

C. Zwanenburg, C. Cengiz, B.C. Noijons, M.P. Fransen

### 5. Reliability-based internal erosion analyses on the Szigetköz floodplain area

Edina Koch, Richard Ray, Mais Mayassah

### 6. Geotechnical insights for sustainable coastal protection: embankment seawall solutions in high-risk zones

Angelica Lou Dolor Casibua, Jose Carlo Eric Lasola Santos, John Michael Bueno Gargullo, Jose Raphael Lazaro Japlos

### 7. Impact of ITZ around unmixed soil-aggregates on hydraulic properties of earth levees material reinforced by deep soil mixing method

Myriam Duc<sup>1</sup>, Juba Amrioui<sup>2</sup>, Alain Le Kouby<sup>1</sup>

### 8. Feedback on 10 years experience of soil mixing cut-off walls in levees of the Loire River

Lucile SAUSSAYE<sup>1</sup>, Alain LE KOUBY<sup>2</sup>, Sébastien PATOILLARD<sup>3</sup>, Loic GERVAIS<sup>4</sup>

### 9. Appropriate shear strength evaluation method for river embankments consist of fine or gravelly soils

Takeshi Kodaka<sup>1</sup>, Keita Lee<sup>2</sup>, Masanori Ishihara<sup>3</sup>, Yuichi Kubo<sup>4</sup>

## POSTERS

### 10. Estimation of the mobilized shear strength of soft clays under different loading and unloading conditions

Baris Trak

### 11. Investigating porewater pressure response in a dyke foundation soil under a hypertidal environment

Peter Rosvall, Craig Lake , Barret Kurylyk, Vincent Goreham, Farimah Arabchobdar

# 11. Any other business

TBC

## 12. Next TC106 meeting

### Single TC meeting

Central Europe 15:00–16:00 CET  
Australia: 23:00 – 00:00 AEST  
China: 22:00 – 23:00us  
US East: 09:00 – 10:00 ET  
US West: 06:00 – 07:00 PT

### Two TC meetings

Central Europe: 16:00–17:00 CET  
US East: 10:00–11:00  
US West: 07:00–08:00

Central Europe: 8.30-9.30 CET  
China: 15:30–16:30  
Australia: 18:30–19:30

**ACTION for TC201 Members and Friends:**

- **Express your preference**