

ISSMGE TC201

Geotechnical Aspects of Dykes and Levees and Shore Protection

Minutes

On line TC201 meeting

Tuesday June 15th, 2021 (7:00 h Mexico/ 14:00 h Delft/ 22:00 h Seoul).

Attendants:

- | | |
|--|---|
| 1. Cor Zwanenburg (Chairman TC201), The Netherlands | 10. Emőke Imre, Hungary |
| 2. Norma Patricia López-Acosta (Secretary TC201), Mexico | 11. Hirotohi Mori, Japan |
| 3. Meindert Van, The Netherlands | 12. Leen Vincke, Belgium |
| 4. Michael K. Sharp, United States | 13. Patrick Mengé, Belgium |
| 5. Philip Smith, United Kingdom | 14. Adda Athanasopoulos-Zekkos, United States |
| 6. Rémy Tourment, France | 15. Thibaut Mallet, France |
| 7. Alexandre Pinto, Portugal | 16. Esther Rosenbrand, The Netherlands |
| 8. Joana Vlaanderen, Portugal | 17. Jean-Jacques Fry, France |
| 9. Alessandro Tarantino, United Kingdom | |

1. Opening (7:00 h Mexico/ 14:00 h Delft/ 22:00 h Seoul)

The chairman Cor Zwanenburg opens the meeting and welcomes the attendants.

2. Presentation joined document on failure paths

Esther Rosenbrand presents the Report on Failure Paths, including the purpose and method, content of the report, key overviews, and finalizing with the conceptual framework.

Many interventions from attendants, such as:

Philip Smith: "It is a challenge to capture what could possibly happen on dykes or levees in one chart. It becomes unmanageable document for capturing the mechanism during flow conditions".

Jean-Jacques Fry: "I am surprising to see that backward erosion piping is before slope sliding. In my experience backward erosion piping leads to progressive erosion of core, mostly for some types of dykes. Some examples of failures of small dams occur due to backward erosion piping without slope sliding but with progressive erosion on the downstream slope not on the foundation. So I suggest including backward erosion piping on the right side of conceptual framework leading to progressive erosion of core".

Alessandro Tarantino: "Seepage and/or increase of pore water pressure in base or in embankment body needs to consider concentrated flow which could provoke high gradients in both sides of slope".

Emőke Imre: "The roll of increasing shear stress in the base of the dykes could be very important, because if the water level is increasing then the horizontal load is increasing, and it could be very important in the developing of sand boils. Another topic is maybe consider dynamic liquefaction in very loose sand layers (we have some case history in Hungary)".

Jean-Jacques Fry (additional comments): "Backward erosion piping leads to different phenomena depending on the situation, such as slope sliding and progressive erosion of core."

Meindert Van: "He asks Emőke Imre for some examples about dynamic liquefaction. She mentions two examples: one case history in Hungary and another one in Iceland sand material, in sand layers of river dykes. Meindert Van suggests include some definitions in the document about static and dynamic liquefaction, in order to avoid confusion".

Rémy Tourment: "We cannot explain the complete failure process including static liquefaction meaning loss of cohesion in the mass of soil." Thibaut Mallet and Jean-Jacques talk about research project for

studying some evidence of static liquefaction in laboratory. “We have not complete this research, so we are not confident that liquefaction was really involve. However, it is clear that dynamic liquefaction occurs in lot of places overall the world but mainly in very active seismic areas. In general it is not possible to consider all possibilities of failures in one drawing”.

Michael Sharp: “It is a good figure the conceptual framework”.

3. Minutes of last TC201 meeting

Accepted.

4. TC201 activities

- a) 20th ICSMGE-2022 (May 1 to 5, 2022, Sydney, Australia)
 - A pre-conference workshop (Rémy Tourment suggest to verify the possibility to organize this activity, because of the pandemic).
 - A conference session
 - Our annual meeting (Rémy Tourment suggest to verify the possibility to organize this activity, because of the pandemic).
- b) Field trip to water retaining structures in Australia (additional activity during the 20th ICSMGE-2022) It will be intended to organise this field trip after de 20th ICSMGE-2022.

5. The time capsule project

The chairman Cor Zwanenburg showed a presentation about this issue, which intend connecting and interacting with individual members of the ISSMGE all around the world about the work of the ISSMGE (past, present and future). The ISSMGE Time Capsule 2021 has been conceived to help achieve this aim. Many paths to communicating with individual members already exist: Web site/App, Library (open source), Bulletin, Geoworld, Virtual University, Technical Committees, Member Societies, Young members (YMPG), Corporate Associates (CAPG), Time Capsule blog. And additionally, ISSMGE affiliated Conferences (4 year international, 4 year regional, Individual technical committee, Local/sub regional).

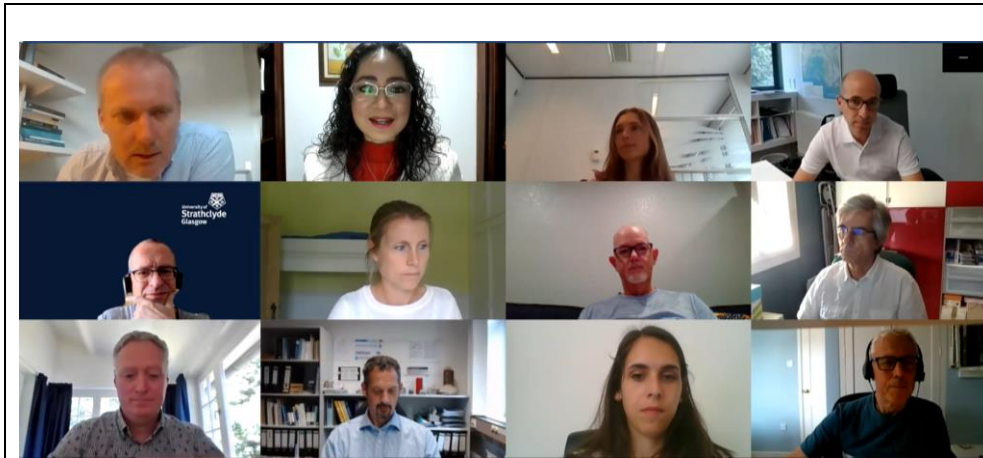
Rémy Tourment says that TCP is a very interesting project but is too ambitious in terms of time, because dates are very close.

6. Any other business

- New members. We warmly welcome the new TC201 members.
- 6th International Conference on Geotechnical and Geophysical Site Characterization 26-29 September, 2021, Congress Center, Budapest, Hungary. Emőke Imre talks about this conference. She says that the Organizing Committee have not decided if partially it will be with some presence people and partially it will be online. It will be a session about dykes and dams, and maybe the possibility of organizing an online workshop about this topic. One or two online days and the other days could be in person.
- How do you feel to have online meeting?
Many members say that videoconferences allow more attendants participate from many parts in the world. Others members consider that physical meeting allow knowing and learning each other, face to face is better. One suggestion is to have more online meetings in the meantime and then in the International Conferences.

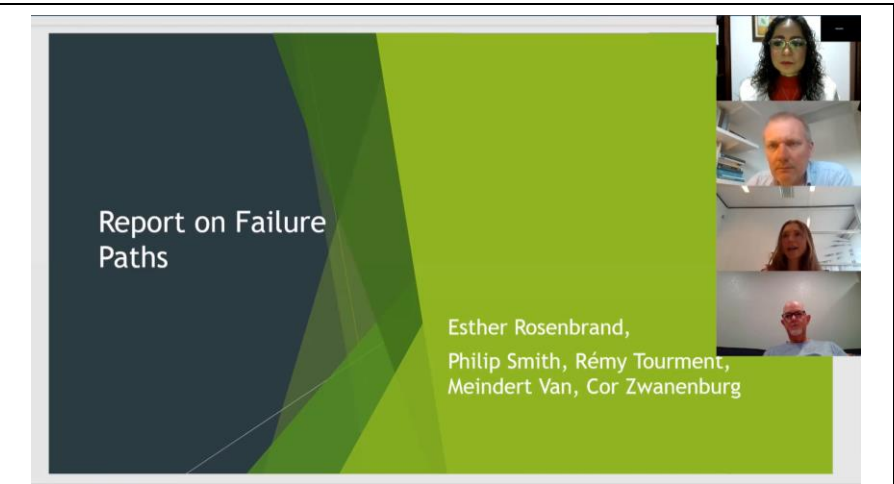
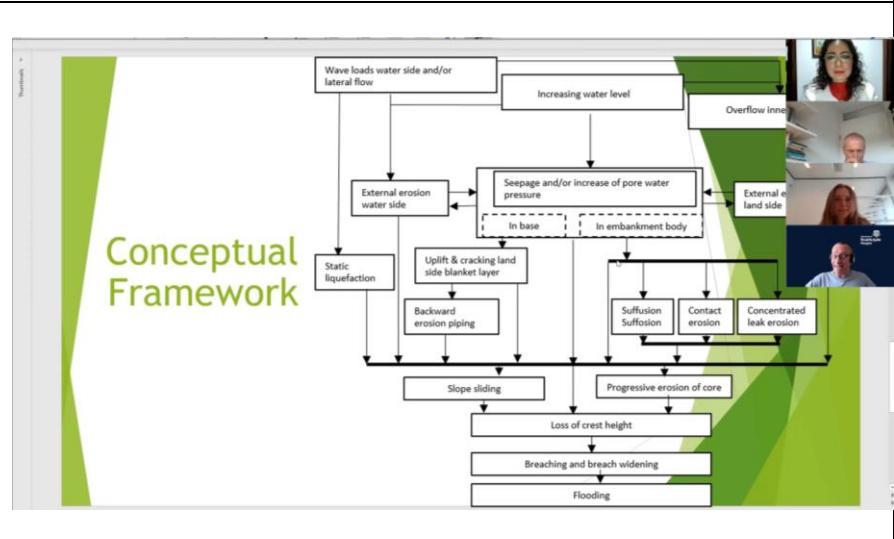
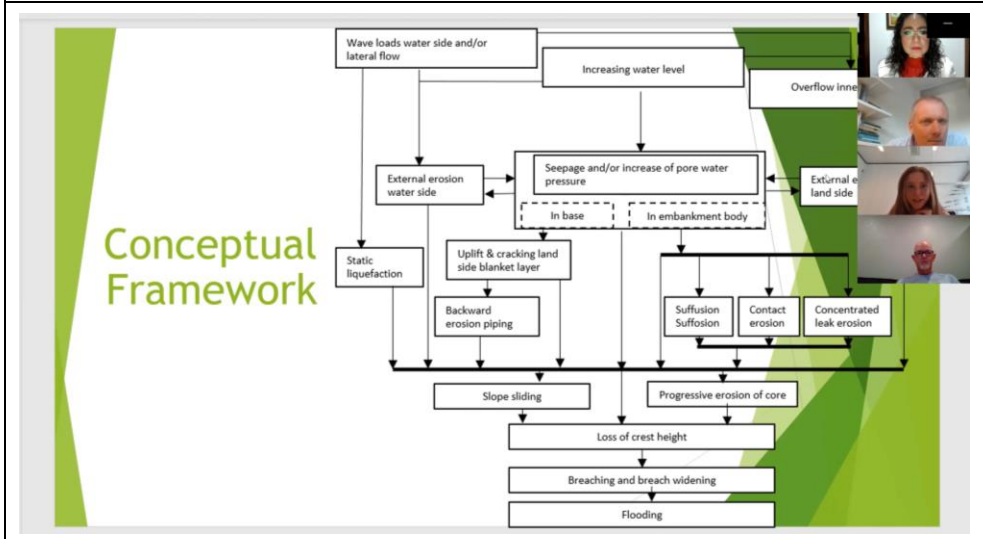
7. Closing. The chairman Cor Zwanenburg closes the meeting (8:55 h Mexico/ 15:55 h Delft/ 23:55 h Seoul).

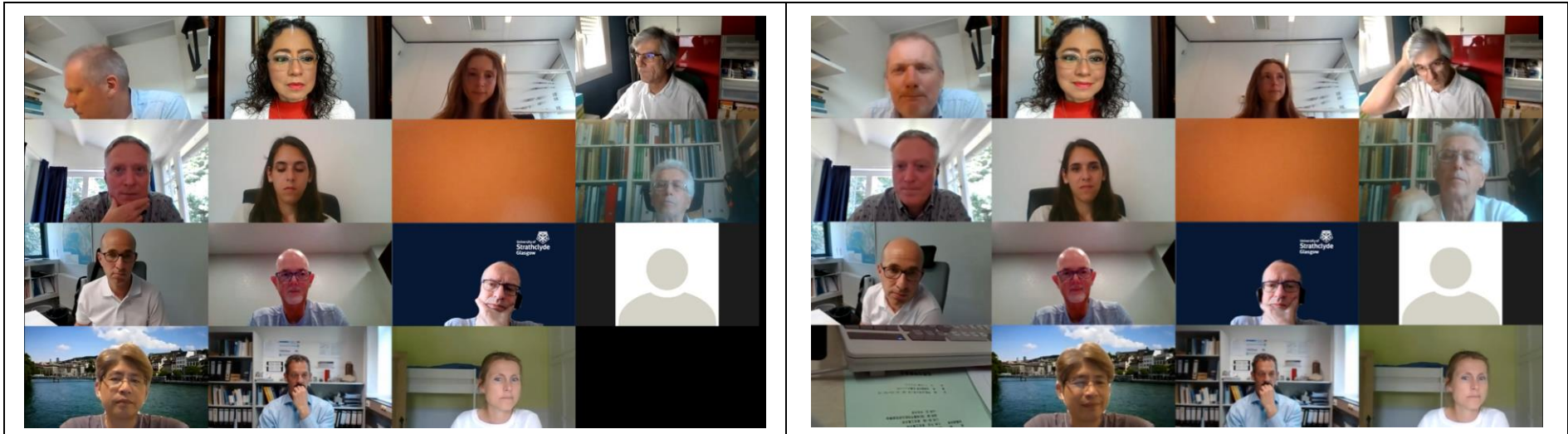
PHOTO GALLERY




Report on Failure Paths

Esther Rosenbrand,
Philip Smith, Rémy Tourment,
Meindert Van, Cor Zwanenburg

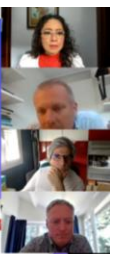


5. The time capsule project





Cor Zwanenburg
Chairman TC201


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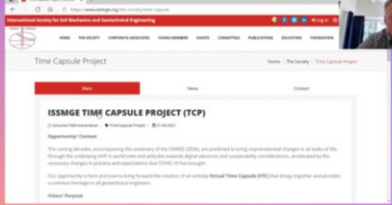
TCP DESIGN TEAM


Ceres Chung


Charles MacRobert


Emilio Bilotta


Sukumar Padmanabandavel




Many paths to communicating with individual members already exist

- Web site/ App
- Library (open source)
- Bulletin
- Geoworld
- Virtual University
- **Technical Committees**
- Member Societies
- Young Members (YMPG)
- Corporate Associates (CAPG)
- Time Capsule blog

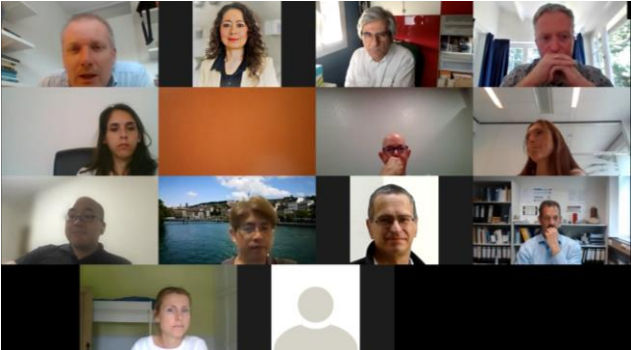
ISSMGE affiliated Conferences

- 4 year international
- 4 year regional
- **Individual technical committee**
- Local / sub regional



SUMMARY

Exploit the ISSMGE Time Capsule 2022 initiative to strongly connect with ALL individual members. Geotechnical engineering, now and in the future, will be better for your efforts.



a) New TC201 members

The **Hungarian Geotechnical Society** has nominated three members to TC201 (since Jan 2021)

Corresponding member:	Nominated members:
László Nagy lacsagy@mail.bme.hu	Edina Koch koche@sze.hu
	Emoke Imre imreemok@hotmail.com

The **Chinese member Society** has nominated the following two members (since May 27, 2021)

Nominated members:
Xu Li Jianhong.Zhang
Jian Ji Jianhong.Zhang

We warmly welcome all these new TC201 members

