



## MEETING MINUTES

### Unsaturated Soils Committee

Thursday, March 8th, 2018

8:00 pm – 9:30 pm (Eastern Time)

Room: Meyer 1 & 2 (Confirm at IFCEE 2018 Registration Desk)

1. Welcome/Introductions (McCartney)
  - *Attendees*: John McCartney (vice-chair), Sandra Houston (remote), William Likos (remote), Idil Akin, Rick Coffman, Dunja Peric, Kalehiwot Nega Manahiloh, Claudia Zapata, Zhen Liu, Aritra Banerjee, Omid Ghasemi Fare, Tugce Baser, Majid Ghayoomi, Xin Kang, Xinbao Yu, Dimitrios Konstantakos.
  - *Review of newest members (last 6 months)*: Mahsa Hedayati, Ajay Shastri, Oliver-Denzil Taylor, Morteza Mirshekari, Chao Zhang.
2. Review of Minutes from 2017 Fall Meeting at PanAm-UNSAT 2017, Dallas, TX – Appendix (McCartney)
  - The minutes from our previous meeting were unanimously approved.
3. Updates on Recent/Upcoming Conference Sessions
  - PanAm-UNSAT 2017, Dallas, TX, November 12-15, 2017.
    - i. Update on four-volume GSP proceedings: The proceedings are now in the hands of the ASCE staff and will be sent to the conference attendees by summer 2018 or sooner.
    - ii. 202 attendees with well-attended sessions.
    - iii. Sandra Houston delivered the 1<sup>st</sup> PanAmerican Distinguished
  - IFCEE 2018, Orlando, FL, March 13-17, 2018.
    - i. Session AB06/ Thermal/Energy Piles/Sustainability, Co-chairs: Omid Ghasemi Fare, John McCartney. 2 sessions with 5 papers in each
    - ii. Session E07/ Unsaturated Soils, Co-chairs: Farshid Vahedifard, Rifat Bulut. 5 papers.
  - UNSAT 2018, Hong Kong, August 3-5, 2018.
  - GeoCongress 2019, Philadelphia, PA, March 24-27, 2019.
    - i. Abstracts due March 21, 2018.
  - XVI Pan American Conference on Soil Mechanics and Geotech. Eng., Cancun, Mexico, November 17-20, 2019.
    - i. Session on Unsaturated Soil Mechanics, Co-chairs: Laureano Hoyos, John McCartney, Eduardo Rojas. (<http://panamerican2019mexico.com/panamerican/>)
    - ii. Abstracts due on March 31<sup>st</sup>, 2018
  - Asia-Pacific Conference on Unsaturated Soils. August 23 – 25 2019. Nagoya, Japan. Abstracts due May 31<sup>st</sup>, 2018.
4. Reports from Liaison Organization Contacts
  - Technical Committee Chairs Workshop (Hoyos) – See attached update from Laureano. Dimitrios K. from TCC visited the committee meeting and summarized the content of the chairs workshop as well.
  - GI Geoenvironmental (McCartney) – The committee is working on a manual of practice that focuses on all the major technical subjects related to Geoenvironmental Engineering, with a length projected to be 500 pages.

- GI Shallow Foundations (Zhang) – No update
  - GI Soil Properties and Modeling (Muraleetharan/Hoyos) – No update
  - GI Soil Dynamics Committee (Ghayoomi) – Did not meet, will be holding the GEESD V conference in Austin, TX
  - GI Geology and Site Characterization (Puppala) – Zhen Liu attended, this committee is working on the web conference in August.
  - ISSMGE Technical Committee on Unsaturated Soils (TC 106) (S. Houston/Miller) – See attached update.
  - ISSMGE Technical Committee on Energy Geotechnics (Sanchez) – 2<sup>nd</sup> Symposium on Energy Geotechnics will be held in Lausanne Switzerland in September, 2018. Bids are currently being sought for the next International Conference on Energy Geotechnics in 2020.
  - TRB AFP60 Engineering Behavior of Unsaturated Soils (Zapata) – Met in January, 40 people attended. John Siekmeier will be the next chair of the committee, and starts a 6 year term this year. 3 papers were accepted for publication in TRR, 3 sessions for presentation were held.
  - ASTM D18.04 Hydrologic Properties and Hydraulic Barriers (McCartney) – No update.
5. Awards (McCartney)
- Nominations for TC106 awards (Sandy and Jerry). See comments above.
  - Request for Nominations for ASCE/GI Awards. Please send nominations to John one month before the deadline online.
6. Progress on Webinar Series (Zhang)
- Webinars offered:
    - i. Introduction to unsaturated soils (Fredlund). January 2010.
    - ii. Laboratory methods for unsaturated soils (Likos/Padilla). April 2010.
    - iii. Collapsible soils (S. Houston/Miller). December 2010.
    - iv. Design of stiffened slabs on grade on shrink-swell soils: A new approach (Briaud/King). April 2011.
    - v. Unsaturated soil applications to pavements (Siekmeier/Zapata). August 2011
    - vi. Constitutive behavior of unsaturated soils (Hoyos/Zhang). November 2011.
    - vii. Estimating Unsaturated Soil Properties for Shear Strength and Volume Change (Vanapalli/W. Houston). January 2012.
    - viii. Design and analysis of water balance covers (Benson). April 2012.
    - ix. Measurement of Soil Suction in the Field for Geotechnical Engineering Applications (Puppala/Fredlund). March 2013.
    - x. Unsaturated Soil Mechanics in Slope Stability (Lu/Godt). April 2013.
    - xi. Thermal Behavior of Unsaturated Soils (McCartney). March 2015.
    - xii. Foundations on Expansive Soils (Chao/Murthy). March 15, 2017.
    - xiii. Stiffened Slab on Grade on Shrink Swell Soils (Briaud). May 31, 2017.
  - Recent/Future webinars (Zhang)
    - i. Foundations on Expansive Soils (Chao/Murthy). To be offered again on March 2, 2018.
    - ii. Stiffened Slab on Grade on Shrink Swell Soils (Briaud). To be offered again: Date TBD.
    - iii. Climate-Suction Flux Boundary Conditions (D. Fredlund/Wilson).

- iv. Slope Stability: Impacts of Surface Flux Conditions (Rahardjo/M. Fredlund).
  - v. Design of Capillary Barriers for Mitigation of Frost Heave (Stormont).
  - vi. Others?
7. Progress on Special Issues in Journals
- Special issue of *Journal of Performance of Constructed Facilities* (ASCE) on “Unsaturated Soil Related Geo-Hazards,” Guest Editors: Zhang and Bate. Should be published now.
  - Special issue of *Geosciences* (MPDI) on “Behavior of Expansive Soils and Shrinkage Cracking,” Guest Editor: Rifat Bulut. Seeing submissions.
8. Update on Special Projects (Hoyos)
- Reaching out to local ASCE and/or GI chapters (funded: \$3,000). TCC funding for last two years has helped increase committee membership.
    - i. Each presenter is budgeted up to \$750 to support airfare, per diem, and associated expenses to travel to local ASCE or GI chapters and deliver their presentations.
    - ii. One (1) funded presenter in FY2018: John McCartney (Nebraska GI Chapter).
    - iii. Funding still available for 2-3 more presenters this year: contact Laureano ASAP with a brief abstract. (*Presenter should coordinate with local ASCE/GI chapter directly after approval from Laureano.*)
  - Special Issue of GEO-STRATA on “Energy Geotechnics” (Sanchez).
  - ASCE’s On-Demand Webinar Series (Zhang).
    - i. Webinars recorded will be considered for ASCE’s on-demand series.
    - ii. For those not yet recorded, a repeat will be considered so that a recording could be made.
9. Website Update (McCartney)
- Committee website housed on GI website, and it is currently only partially functional.
  - Waiting for GI to continue development on the website to be able to upload files (past minutes/agendas, announcements, etc.).
  - The GeoInstitute may start a new website platform, but they are debating whether to give access to the committee webmasters.
  - Our committee should now decide whether we should rebuild our old website (that was taken down after the first iteration of the GI website) on an independent platform.
10. G-I Web Conference (Hoyos)
- Planning for the G-I web conference in August 2018 is underway – date to be confirmed by IFCEE.
    - i. Great opportunity for engagement from the broader community with practical issues and case histories. Abstracts will be needed the first week of April.
    - ii. Web conference is to present geotechnical case studies (as opposed to technical/engineering instruction) with 4 to 6 presenters.
    - iii. Web Conference content should be reviewed/vetted by members of the technical committee.
    - iv. Web Conferences will be for G-I members and nonmembers (PDHs will be provided).
    - v. Volunteers needed for Web Conference sub-committee.

## 11. Other Business

- US Russia Workshop may focus on unsaturated soils, May 2018
- Social media – A volunteer is sought from the committee to manage the social media for the committee, mainly on LinkedIn. Please contact Laureano.
- Dunja Peric was interested in proposing an international workshop as a special project in the future.
- John McCartney suggested that a potential special project could be a manual of practice similar to the one being prepared by the Geoenvironmental Engineering committee.

12. Adjourn

March 6, 2018

### **Highlights from TCC and Chair Workshop**

Technical Committees are encouraged to spend their allotted funds for their special projects. There are addition funds if more are required. Last year only \$45k out of \$75k was spent on special projects.

Technical Committee Chairs need to identify ISSMGE committee liaison to represent the GI committee to appropriate ISSMGE committee(s). The liaison must provide a report to both the Technical Committee and the TCC regarding the ISSMGE activities. There is money available through the International Secretary (Bob Holtz) to provide travel subsidies (\$500-\$1500) to help offset the cost of travel.

Technical Committees are encouraged to produce publications through ASCE. This helps promote the GI and provides funding revenue to GI. Publications can include:

- Geotechnical Special Publications (GSP) can be more than conference proceedings
- Manual of Practice (MOP) is an ASCE publication
- ASCE Standard is another type of publication
- Geotechnical Practice Publication (GPP) designed to make the review process lighter because it requires one peer review (instead of two in a GSP) and is more practice oriented. GPP goes through technical publications committee (another level of review).

For the GI to stay the technical resource we need to make sure that older publications are updated/revised and new publications are generated.

Technical Committees are encouraged to contribute to Geo-Strata

- Collaborate effort from a committee or multiple committees to produce articles
- Articles from committees are eligible for a "Article of the Year" award which will provide up to three authors a free Geo-Congress registration
- Committees are encouraged to submit technical activity updates to Geo-Strata

Technical Committees are encouraged to participate in the annual web-conference

- Tentative date is August 20-24, 2018
- Diane Swecker will be following up next week with details

Technical Committees are encouraged to engage in cross-committee collaborations

Technical Committees are encouraged to provide outreach via various social media outlets

Technical Committee Speaker Programs:

- Will be funded as special projects
- Diane Swecker can provide local GI Chapter contacts
- Are an excellent venue for outreach and attracting new members

#### TC 106 Award Information 2017-2018

- nominated K.K. Muraleetharan (Muralee) for the TC 106 International award for innovation in unsaturated soil mechanics
- nominated Majid Ghayoomi for TC 106 Young Member Presidential Group (YMPG) Lecture at The 7th International Conference on Unsaturated Soils (UNSAT 2018), Hong Kong, 3-5 August, 2018, made the short list
- Sandra Houston was nominated, awarded and delivered the TC 106 First Pan-American Distinguished Lecture on Unsaturated Soils.

#### TC 106 Meeting at Pan-Am Conference in Dallas (Minutes not out yet)

- 3<sup>rd</sup> PanAmerican Conference on Unsaturated Soils will be in Rio de Janeiro, Brazil in March or November 2021 Prof. Tácio de Campos, PUC-Rio, Prof. Fernando Marinho, EPUSP, Prof. Gilson Gitirana Jr, UFG
- UNSAT2018 The 7th International Conference on Unsaturated Soils, August 3-5, The Hong Kong University of Science and Technology (HKUST) Hong Kong
- AP-UNSAT2019, The 7th Asia-Pacific Conference On Unsaturated Soils, August 23 – 25 2019, Nagoya Japan, The Japanese Geotechnical Society, **Abstracts due May 31, 2018**
- 4th E-UNSAT, 2020, Portugal.

#### Other Information:

- Call for abstracts: Special issue in the ISSMGE International Journal of Geoengineering Case Histories (<http://geocasehistoriesjournal.org>) titled 'The state of practice in unsaturated soil mechanics', **The deadline for abstract submission is 28 February 2018**. Please send the abstracts to me ([a.russell@unsw.edu.au](mailto:a.russell@unsw.edu.au)) and cc David Toll and Bernardo Caicedo ([d.g.toll@durham.ac.uk](mailto:d.g.toll@durham.ac.uk) and [bcaicedo@uniandes.edu.co](mailto:bcaicedo@uniandes.edu.co)). **The deadline for full paper submission for peer review will be 30 June 2018.**