

### MEETING MINUTES – FALL 2015 CONFERENCE CALL

#### **Unsaturated Soils Committee**

Thursday, October 8th, 2015 11:00 am – 12:30 pm (Central Time)

Meeting attendees (9): Laureano Hoyos (chair), John McCartney (vice chair), Bill Likos (secretary), Gerald Miller, Majid Ghayoomi, Xiong Zhang, Leo Riveira, Greg Siemens, Geoff Chao

- 1. Introductions (Hoyos)
  - Laureano H. called the meeting to order at 11:03 AM EST.
- 2. Review of Minutes: 2015 Spring Meeting, San Antonio, TX (McCartney)
  - John M. moved to accept, seconded by Greg S.; minutes approved.
- 3. Updates on Recent/Upcoming Conference Sessions/Activities
  - IFCEE 2015, San Antonio, TX, March 18-21, 2015, San Antonio, Texas:
    - "Unsaturated Soil Mechanics in Geotechnical Design" (Vanapalli/Hoyos) podium session (5 papers), poster session (5 papers)
    - "Thermally-Active Foundation Systems" (McCartney/Suleiman/Olgun) podium session (10 papers), poster session (4 papers)
  - Symposium on Energy Geotechnics, Barcelona, Spain, June 2-4, 2015
    - About 100 attendees, keynote lectures, 3 days of technical presentations.
  - XVI European Conference on Soil Mechanics and Geotechnical Engineering, Edinburgh, Scotland, September 13-17, 2015
    - No update
  - 2<sup>nd</sup> International Workshop on Geomechanics and Energy, Celle, Germany, October 13-15, 2015
    - No update
  - 6<sup>th</sup> Asia-Pacific Conference on Unsaturated Soils, Guilin, China, Oct 23-26, 2015
    - Jerry and Xiong will attend the conference and TC106 meeting
  - 15<sup>th</sup> Pan-American Conference on Soil Mechanics and Geotechnical Engineering, Buenos Aires, Argentina, November 15-18, 2015
    - "Unsaturated Soils" (Marinho/Hoyos) podium/poster sessions (40+)
    - "Transportation Geotechnics" (Zapata) podium/poster sessions (30+)
    - "Geo-Engineering for Energy and Sustainability" (Sanchez) podium/poster sessions (40+)
    - Laureano has been invited to be a panelist, along with representatives from Brazil and Canada
  - 1<sup>st</sup> International Conference on Geo-Energy and Geo-Environment, Hong-Kong, December 4-5, 2015
    - No update
  - 2016 Geotechnical & Structural Engineering Congress (GeoStructures 2016), First Joint GI/SEI Annual Conference, Phoenix, Arizona, February 14-17, 2016 (Session proposals due April 7, 2015)
    - "Soil-structure Interaction in Unsaturated Soils" (Ghayoomi/Ravichandran) podium/poster sessions (TBA)

- "Performance of Foundations on Expansive Clays" (Houston/Chao/Zapata) podium/poster sessions (TBA)
- "Impact of Desiccation Cracking on Geo-Structures" (Sanchez/Miller) podium/poster sessions (TBA)
- "Energy Geo-Structures" (Abdelaziz/Sanchez/Olgun) podium/poster sessions (TBA)
- Proposal to be submitted to TCC for GSP, due Nov. 2015 Roman made suggestions on how to organize the GSP; our committee is apparently the only one pursuing a GPS. The review process will be conducted outside the MIRA system. Other papers that were not part of the conference can be invited
- GeoAmericas 2016, Miami, Florida, April 10-13, 2016
  - Papers are currently in review
- 2016 Geoenvironment & Sustainability Specialty Conference (GeoChicago 2016): Chicago, Illinois, August 14-18, 2016
  - Papers are currently in review
- 1st International Conference on Energy Geotechnics, Kiel, Germany, August 29-31, 2016
  - Abstract deadline is October 31, 2015
- 3<sup>rd</sup> European Conference on Unsaturated Soils (E-UNSAT 2016), Paris, France, 2016
  - Abstracts are currently under review
- Geotechnical Frontiers 2017, Joint GI-IFAI Conference, Orlando, FL, March 12-15, 2017
  - Call for session proposals is open (send a copy to Bill, John or Laureano)
- UNSAT 2018, August 2018, Hong Kong
  - Del Fredlund will present the Second Blight lecture
- 4. Planning discussion for PanAm-UNSAT 2017: Second Pan-American Conference on Unsaturated Soils, Dallas, TX, TBD, 2017 (hotel bids received)
  - Kick-off teleconference has been held for the organizing committee
  - 5 or 6 hotel bids have been submitted, and are currently under review
  - The dates are still being defined
  - A flyer has been developed for posting at conferences
  - Funds were requested from GI for supporting an organizational meeting in Phoenix
- 5. Reports from Liaison Organization Contacts
  - GI Geoenvironmental (Bate/McCartney)
  - GI Shallow Foundations (Zhang)
  - GI Soil Properties and Modeling (Muraleetharan)
  - GI Geology and Site Characterization (Hoyos)
  - GI Earthquake Engineering and Soil Dynamics (Ghayoomi)
  - ISSMGE Technical Committee on Unsaturated Soils (TC 106) (Miller)
  - TRB AFP60 Engineering Behavior of Unsaturated Soils (Zapata)
  - ASTM D18.04 Hydrologic Properties and Hydraulic Barriers (McCartney)
  - IBC Code Review (Arellano/Chao/Houston)
- 6. Awards (McCartney)
  - No nominations received by the committee in 2015 (our committee had successful nominations in the previous two years)

- The committee has been asked to write a letter of support for a nomination of a paper by Iraj Noorany on lateral expansion of compacted canyon fills, which is being nominated by CalGeo for the Middlebrooks award.
- Discussion of new nominations
  - Thomas A. Middlebrooks Award (due on November 1st): http://www.asce.org/Content.aspx?id=12884905634
  - Norman Medal/J. James R. Croes Medal (due on October 1st): <a href="http://www.asce.org/Content.aspx?id=12884905656">http://www.asce.org/Content.aspx?id=12884905656</a>
  - ASCE State-of-the-Art of Civil Engineering Award (due on October 1st): <a href="http://www.asce.org/Content.aspx?id=12884905850">http://www.asce.org/Content.aspx?id=12884905850</a>
  - Arthur M. Wellington Prize (due on October 1st): <a href="http://www.asce.org/Content.aspx?id=12884905875">http://www.asce.org/Content.aspx?id=12884905875</a>

## 7. Progress on Webinar Series (Hoyos)

- Xiong has agreed to lead the webinar subcommittee in the future, and is taking over from the efforts from Sandy Houston over the past 8 years.
- Previous webinars (11)
  - i. Introduction to Unsaturated Soils (Fredlund) Jan. 2010
  - ii. Laboratory Testing (Likos/Padilla) Apr. 2010
  - iii. Collapsible Soils (Houston/Miller) Dec. 2010
  - iv. Foundations on Expansive Soils (Briaud/King) Apr. 2011
  - v. Constitutive behavior of unsaturated soils (Hoyos/Zhang) September 2011
  - vi. Estimating Unsaturated Soil Properties for Shear Strength and Volume Change (Vanapalli/Houston, W.) January 31, 2012.
  - vii. Design and analysis of water balance covers (Benson) April 13, 2012.
  - viii. Measurement of Soil Suction in the Field for Geotechnical Engineering Applications (Puppala/Fredlund) March 21, 2013
  - ix. Unsaturated Soil Mechanics in Slope Stability (Lu/Godt) April 8, 2013.
  - x. Slope Stability Numerical Modeling and Impacts of Surface Flux Conditions (Rahadjo/Fredlund, M.) October 2013.
  - xi. Thermal Behavior of Unsaturated Soils (McCartney) March 10, 2015.
- Future webinars (3)
  - Climate-Suction Flux Boundary Conditions (D. Fredlund/Wilson)
  - Slope Stability: Impacts of Surface Flux Conditions (Rahardjo/M. Fredlund)
  - Foundations on Expansive Soils (Chao)
- Other proposed webinar topics
  - Geosynthetics as Capillary Barriers
  - From Lab to Analysis
  - Foundations for Dynamic Loading of Unsaturated Soils
  - Forensic Evaluations for Foundations on Unsaturated Soils
  - Design of Foundations for Unsaturated Stiff Cemented Soils
  - Site Characterization and Foundation Design for Intermediate Soils
  - Unsaturated Soils Aspects of Landfill Design
- 8. Progress on Special Issues in Journals
  - Special issue of Geotechnical and Geological Engineering (Elsevier) on "Thermohydro-mechanical Behavior of Soils, Rocks, and Energy Geostructures," Guest Editors: McCartney and Olgun- 15 papers published (March 2015, vol. 33, iss. 2)
  - Special issue of International Journal of Geomechanics (ASCE) on "Experimental and Computational Geomechanics for Unsaturated Soils," Guest Editors:
    Muraleetharan, Hoyos & Ge 27 papers submitted, 22 have been accepted or in revision, and 5 have been declined

- Special issue of Indian Geotechnical Journal (Springer) on "Application of Mechanics of Unsaturated Soils in Conventional Geotechnical Practice," Guest Editors: Vanapalli & Hoyos - 13 papers are in review
- Special issue of Journal of Performance of Constructed Facilities (ASCE) on "Unsaturated Soil Related Geo-Hazards," Guest Editors: Zhang & Bate call still open
- Special issue of Journal of Engineering Mechanics (ASCE) on "Mechanics of Unsaturated Porous Media," Guest Editors: Lu & Buscarnera call still open

# 9. Other Special Projects in 2015 (Hoyos)

- Reaching out to local ASCE and/or GI chapters through 1-day traveling short courses (support requested in our 2015-16 budget request to the TCC)
- Special Issue of GEO-STRATA on "Energy Geotechnics" (to be considered by the GEO-STRATA's editorial board at their meeting in Phoenix next year)

## 10. Website Update (McCartney)

- Committee website housed on new GI website
- http://committees.geoinstitute.org/people/unsaturated-soils/
- http://unsaturatedsoils.geoinstitute.org/

# 11. Other Business (Hoyos)

Laureano was invited to attend the annual GI Board of Governors meeting in Phoenix (10/5/2015), where the GI's annual operating plan (AOP) was discussed. He offered the BOG a brief overview of the PanAm-UNSAT 2017 conference.

## 12. Adjourn

- The meeting was adjourned at 12:15 pm Central time.