

**Soil Properties and Modeling (SP&M) Committee
Geo-Institute, American Society of Civil Engineers
Memorandum**

To: Soil Properties and Modeling (SP&M) Committee Members

From: Michelle Barry, Vice Chair, and Brina Montoya, Chair

Date: Wednesday, March 17, 2021

Re: Committee Meeting Minutes from Wednesday, March 17, 2021 2:00 – 4:00 PM ET, Spring Committee Meeting (Teleconference)

Committee Meeting Minutes

Call to Order, 2:01 PM ET (Montoya)

1. Welcome and Introductions (Montoya)

Members attending:

Brina Montoya, Michelle Barry, Nick Hudyma, Khalid Alshibli, Jose Andrade, Robert Bachus, Landon Barlow, Chris Baxter, Ryan Beemer, Giuseppe Buscarnera, Qiushi Chen, Michael Coryell, Sheng Dai, Don DeGroot, Chadi El Mohtar, Matt Evans, Aaron Gallant, Mike Gomez, Yazen Khasawneh, Melissa Landon, Hai (Thomas) Lin, Bret Lingwall, Alejandro Martinez, Kanthasamy Muraleetharan, Juan Pestana, Nadarajah (Ravi) Ravichandran, Richard Regueiro, Cassandra Rutherford, Marika Santagata, Karl Schwartz, Radhey Sharma, Oliver Taylor, Cumaraswamy Vipulanandan, Hamza Jaffal

Guests and other GI-staff/liaisons attending: *Ghada Ellithy, Gavin Gautreau, Jeff Greenwald, Brad Keelor, Roy Kshama, Jennifer Nicks, Armando de la Rocha, Mohab Sabry, Krystina Scott, Anh Tuan Tran*

2. Approval of Meeting Minutes from December 2020 meeting

Motion to approve (Rhady Sharma), second (Marika Santagata) – approved by all at 2:09 PM

3. Reminder/Announcement: ISSMGE TC105

- Please let Kenichi know if there is any information or questions needed and if you are interested in learning more

4. Update from GoeTechTools (Jeff Greenwald)

- Portal available on the G-I website, access and take a look there
- 1st year GeoTechTools is within G-I, good sponsorship year so free for users, continue to look for sponsors to support development and updates
- Good initial information for designers, good training tool for students
- Deep Foundations (drilled shafts), Embankment and Slopes (future use), Rock mechanics (rock slope stability and stabilization), Soil Improvement (Update process is well coordinated with new technologies and review with structure at G-I), sustainability committee (stand-alone sustainability module)
- We may be able to contribute to sustainability committee project
- Committee volunteers needed, check in with Vern Schaefer or Jeff Greenwald and see how our committee might support GTT

5. Update from Geo-Institute (Krystina Scott)

- Looking forward to another web-conference in 2021 after a successful 2020 web-conference, topic: continuing education, looking for 4 speakers if the committee wants to contribute to a session, proposals due in June
- ASCE looking for webinars and short courses, all year long offered on-demand

- GeoExtreme – moved to Nov. 7-10 to remain an in-person event
- Trying to match the student participation fund, goal of \$125,000 matching a gift from Ed Kavazanjian, prizes available depending on the amount donated, goes for student events
- Content for GeoStrata needed! Contact Krystina and send a paragraph, image, or something of interest to present.

6. Update from TCC Meeting (Hudyma)

- Virtual speaker series this year, TCs provide a list of speakers, titles, and short presentation abstracts, groups looking for certain topics or information areas and they will search for this specifically
 - Sending this info out to local chapters and local involvement committee, post this to the website
- 6th annual G-I web-conference, last year (389 participants, 37 speakers from universities, 21 from professional practice)
- Special Projects Recap: 3 proposal themes, GeoTechTools, DIGGS, Committee initiated projects
 - 13 total proposals submitted, funded 6 proposals (3 GTT funded)
 - Our proposal for GTT did not get funded, but review committee hoping we will revise and submit and it will get funded in the next round
 - Grouting – DIGGS proposal funded,
 - Committee initiated projects - Student virtual tunnel tour program funded, laboratory shear testing proposal funded
 - Same format for Special Projects this year, 3 same focus areas (GTT, DIGGS, committee initiated projects), give committees longer time frame to put together proposals, align start of project with start of Fiscal Year
- TCC working to develop Technical Committee Handbook
 - Provide guidance and information to members and leadership of committees
 - Hopefully the handbook will be available on the G-I website by the end of 2021
- New format for Annual Reports
 - Online form or GoogleDoc that can be pre-populated with committee data and then updates can be simply added throughout year as a living document, available soon
- New policy to ensure diversity and inclusion in G-I
 - Modeled after USUCGER policy
 - Make procedure for award nominations, etc. much more transparent

7. Update from Committee Chairs Workshop (Montoya)

- New technical committee – Innovative Technologies and Tools in Geotechnical Engineering, collect share and promote development of novel technologies and foster growth of the geo profession
 - Priorities - bring info to G-I audience, bring innovation, excite and grow young members,
 - Contact Anand Puppala
- Update from Donna from ASCE publications branch - produce new line of publications that are ebooks, shortbooks lean towards practice and are 30-50 pages
 - No deadline for publications
 - Recently published examples are available (Construction in the time of COVID-19, Engineering claims and insurers reductions)

- GSPs not related to conferences are options for committees to produce these ebooks
8. Nominations for State of the Art (SOA) and State of the Practice (SOP) speakers for Geo-Congress 2022
 - 8.1. Need to submit 1 SOA and 1 SOP nominee to conference organizers; need to submit names by April 30, 2021
 - 8.2. Organizing committee has requested topic for SOA/SOP and possible speaker
 - 8.2.1. Consider technical expertise, and diversity of speakers as well as diversity of topics
 - 8.2.2. try to avoid the 2012 Geo-Congress SOA/SOP lecture topics which can be found here: <https://ascelibrary.org/doi/book/10.1061/9780784412138>
 - 8.3. Solicit nominations and voting
 - 8.3.1. Follow committee procedure for awards nominations
 - 8.3.2. Solicit nominations for both SOA and SOP by March 29th 11:59 PM PT Submit by March 29th with voting to follow by April 12th
 - Nominations should include 1) Name of Speaker, 2) Topic, 3) Brief Description of the reasons for nominations
 - 8.3.3. Voting of nominees by members
 - Chair will announce the nominees and share the brief descriptions
 - The committee will have 2 weeks to vote on their SOA and SOP choices (April 12th)
 - Chair will submit the nomination materials to Geo-Congress 2022 organizing committee after votes are cast
 - 8.4. Discussion regarding formatting of lectures/topics and nominations (Alejandro Martinez), Similar style to previous talks, 30-35 minutes or so
 - Suggest multiple nominations if we have them in case more speakers are needed (Chadi El Motar)
 - Nominee does not have to be a current member of SP&M, but the nominator does
 9. G-I and ASCE Awards
 - 9.1. Awards Subcommittee
 - 9.1.1. New subcommittee consists of Mike Coryell (chair), Mustafa Al Saleh and Alejandro Martinez (more volunteers welcome)
 - 9.1.2. Subcommittee will begin reviewing papers and soliciting input from committee for paper awards in July; see committee guidelines on our committee website if you have any questions or need clarification
<https://www.geoinstitute.org/committees/technical-committees/soil-properties-andmodeling/subcommittees-and-initiatives>
 - 9.2. Individual Awards
 - 9.2.1. The committee led the nomination, in conjunction with the Unsaturated Soil Mechanics Committee, of Giuseppe Buscarnera for the Huber award. Currently awaiting announcement of recipient.
 - 9.2.2. I encourage everyone to think of colleagues worthy of nomination for ASCE Awards: <https://www.geoinstitute.org/about-us/awards>
 - Please email nominations directly to Brina. Following the committee guidelines (link below), we will need to get started on the nomination process started as soon as possible.
<https://www.geoinstitute.org/committees/technical-committees/soilproperties-and-modeling/subcommittees-and-initiatives>

- Need nominations by Jan. 7, but can still get this together quickly if we have nominations
- Email Brina with any nominations or questions
- Links for our committee guidelines are provided on the SP&M website

10. Update from Special Projects Subcommittee

10.1. This year's special project will be similar to last year's

10.1.1. Proposals need to be a larger effort (~\$10k/project). See slide presented by Brina

10.1.2. Proposals need to focus on (1) GeoTechTools, (2) DIGGS, or (3) Committee initiated projects

10.1.3. We can submit more than one proposal as a committee

- Open discussion of ideas/topics
- Volunteers for a subcommittee
- Proposals due around end of August (date to be announced)

10.2. As reference: Proposed Project for 2020: "Solidifying" Bio-mediated Soil Improvement in GeoTechTools

10.2.1. Project objectives included thoroughly characterizing bio-mediated soil improvement into GeoTechTools to expand the dissemination of the technologies to practitioners and potentially lead to new applications

10.2.2. Two-year project, \$10,000 budget (support student time)

10.2.3. Project chaired by Hai Lin, and advisory subcommittee consisted of: Jason DeJong, Leon van Paassen, Michael Gomez, Alejandro Martinez, and Brina Montoya

10.2.4. This proposal was well reviewed, but was not chosen for funding; can be submitted again.

- Discussion regarding feedback from previous proposal (Michelle Barry): Jeff Greenwald will figure out how to get us feedback, Vern Schaefer had a comment about some general soil properties analysis, and model something like the sustainability committee submitted

10.2.5. If you have an idea and/or desire to work on a committee project, please let me know. Can develop a subcommittee/team(s) to work on proposal(s).

10.3. Past Special Project (Barry & Khasawneh): Objective of project: provide a series of lectures, geared towards practitioners and students, on the characterization of soil properties and modeling of their associated uncertainty

10.3.1 Discussion of draft presentations (Barry)

- Presentations developed by committee members have been modified towards a standard committee template with additional slides added by presenter

10.3.2. Volunteers for disseminating presentations

- Google form will be used to help gather committee contact info, expertise, and availability to present. Used to advertise/communicate our available expertise with local chapters and information will be posted on our website
- Opportunity to network while providing service to the community through this project

11. New Initiative from the G-I, "The Big Question" Web Show (Montoya)

11.1. Short (5-7 min) web episodes addressing a key concept of geotechnical engineering

- TCs are coming up with these videos that are aimed at providing content online by the experts in these areas
- Topic ideas: what are things that got you interested in Geotech, what are the "big questions you had", what are you curious about?

- Audience – General public, how many people see geotech things in their communities and are curious or need to find content about it?
 - Discussion on soil and rock properties (Bachus), is there anything that is super interesting that someone needs to do related to this topic? Blast densification example of a topic that was successful at grabbing a young student's attention
- 11.2. Every technical committee will be asked to do at least one episode
- Don't worry about making it perfect and keep it simple for the first one
- 11.3. Solicitation of "Big Questions" (and volunteers for presenter)
- 11.3.1. We had some discussion of utilizing resources from committee members (e.g., Micro-Macro, DEM models, micro CT, microscopic images, etc.)
- 11.3.2. Clarify our "Big Question"
- Volunteers for a subcommittee to organize (describe question, solicit resources, someone to articulate it, etc.)
 - Discussion on technical video help (Khalid Alshibli), GI can help, but it is also an opportunity to get students involved
 - Cassie Rutherford, Bob Bachus, Diane Moug, Brina Montoya, Melissa Landon, Michelle Barry, Khalid Alshibli and others offering to provide ideas, pictures, content, etc.
 - Think of big, fun, exciting topics and then think about how the answers need some understanding of the soil properties and/or require modeling
- 11.3.3. GI currently has 2 submissions from TCs
- Slopes & Embankments - Limit equilibrium factor of safety for slopes
 - Shallow Foundations - 2D vs 3D bearing capacity
12. Committee Website (Lin & Montoya)
- 12.1. Our new website is up and running: <https://www.geoinstitute.org/committees/technical-committees/soil-properties-and-modeling>
- 12.2. Resource for committee procedures (e.g., award nominations)
- 12.3. We look to the committee to populate the website with News and Events
- 12.3.1. We have 176 (and growing) people signed up to receive our committee news, so it's another avenue to reach an audience for events, news, etc. Please contact me or Hai Lin (hailin1@lsu.edu) to add news and events to the website
- Share exciting news on website, automatically populates it to the GI news website
 - Related short course, symposium, conferences attending, send quick sentence or two and picture if available to Thomas and it can get featured
 - ASCE Geotechnical Engineering on LinkedIn – join and post information and events
13. Upcoming transition of leadership (Montoya)
- 13.1. Michelle will become Chair in June 2021, and the election of the Vice Chair will take place next week (according to committee-established procedure; attached to the end of this agenda for reference).
- 13.2. Nominations for Vice Chair are now open, and will close **Monday, March 22nd**
- Self-nominations are appropriate and encouraged
 - Each nominee will provide a short vision statement and biography to Brina Montoya (Election Organizer). (One page max)
- 13.3. Vision Statements and biographies will be distributed to the committee after March 22nd
- 13.4. Voting window will remain open one week after distribution of candidate material
- 13.5. Voting will be conducted through Qualtrics; will be asked to vote for Primary and Alternative (see attached procedure for more info)

- 13.6. Currently have 4 nominations: Khalid Alshibli, Giuseppe Buscarnera, Yazen Khasawneh, Alejandro Martinez
 - Discussion about ability to have 2 Vice Chairs (Radhey Sharma), or add a Secretary back into the cycle, previously there was a Secretary that progressed to vice chair then chair or Secretary went to Chair and there was no Vice Chair (Don DeGroot), decision reached to continue as is with voting for Vice Chair now and then open discussion about a Secretary Role as a volunteer role or a voted/committed role in future

14. Upcoming Committee Activity
 - 14.1. Sessions for IFCEE 2021
 - Emerging topics in geotechnical engineering (Martinez and Nafisi)
 - Others?
 - 14.2. Submitted Session Proposals for Geo-Congress 2022
 - Foundations for Clean Energy Harvesting Systems (Khasawneh & Ghasemi-Fare)
 - Thermo-hydro-mechanical processes in soils (Ghasemi-Fare & Sanchez)
 - Characterization and Modeling of Mine Tailings: from Risk Assessment to Early Warning (Buscarnera & Santagata)
 - Geotechnics of Coastal Dune Erosion: Mechanisms and Mitigation (Evans & Yazdani)
 - Bio-inspired geotechnics themed session proposed (Martinez)
 - 14.3. Mach 2021 (April 7-9, 2021) – Virtual and Synchronous; Symposium, “Multiscale mechanics and machine learning for porous and particulate materials” (Regueiro)
 - 14.4. EMI 2020 -> EMI 2021 / PMC 2021 (May 25-28, 2021) – Virtual
 - 14.5. Geo-Extreme 2021; currently scheduled Aug 15-18, 2021, may be moved to Nov. 2021
 - 140 papers on extreme event impacting geo-structures; very interdisciplinary authorship, 10 plenary speakers planned
 - 14.6. International Conference on Scour and Erosion (ICSE-10) – rescheduled from Oct 2020; Now virtual, October 17-20, 2021
 - 14.7. International Symposium of Frontiers in Offshore Geotechnics (ISFOG 2020) November 8-11, 2021, Austin TX
 - Moved to 2022
 - 14.8. Others?

15. Updates from Other Committees
 - 15.1. IFCEE update (Brad Keelor)
 - IFCEE is happening as a hybrid event, in-person and virtual, virtual attendance is encouraged if you cannot travel
 - Can present only for free, still need to register, but there will be no fee for those not attending other sessions
 - 15.2. GeoCongress 2022
 - Almost 900 abstracts (2nd most abstracts received), notice of acceptance has gone out
 - Short courses and special sessions still under review
 - SOP and SOA speaker nominations, get those in!

16. Other Business
 - 16.1. Interest in participating in 6th Annual Geo-Institute Web Conference (December 2021)
 - Following discussion in Dec meeting, anyone interested in presenting for the web-conference or webinars?
 - Committee suggestion: case study spot-lighting high-end modeling
 - Presentations: could use some content from special projects presentations
 - If you are interested in presenting, please contact Brina

16.2. Geo-Institutes Virtual Speakers Series

- Continuing to support into 2021-2022
- G-I is contacted often by local chapters for speakers
- If you have a presentation that can serve our larger geotechnical community, and want to be contacted occasionally to give presentation, please contact Brina

16.3. G-I Birthday video

- IFCEE welcome video and will be posted on our website
- "Happy 25th birthday G-I!"
- If you any photos or video of past G-I events, please send to Brad Keelor (or me and I will forward to him)

17. Adjourn