

Message from Board-level committee

CAPG Plenary Session - The 16th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering, Taipei

The Corporate Associates Presidential Group (CAPG) is a Board level committee to develop actions and activities to enhance the commercial section of the ISSMGE. It provides a home and a voice within the ISSMGE for the commercial section of the international geotechnical community.

A question was raised “Are we overdesigning?” in XVI Danube European Conference (Skopje Macedonia, June 2018). Thus, CAPG, together with Young Members Presidential Group (YMPG), Technical Committees TC205, and TC304, launched a global survey to assess the consistency of calculation models and design methods for a variety of geotechnical structures, and where possible, to compare the results with full-scale tests and reliability analyses (this survey is open till Dec 2020, please refer to <https://www.issmge.org/news/are-we-overdesigning-a-survey-of-international-practice>). The CAPG also intends to create platforms to discuss, debate, and promote issues relating to geotechnical engineering, that are perceived to have a significant impact on the commercial section of the ISSMGE. In the CAPG Plenary Session in 16th ARC, CAPG had a 1hour theme session on the subject of ‘Overdesign’ and presented the initial results of the global survey.

The CAPG session was held on 15th October 2019, the second day of the Conference and was attended by a large number of over 900 participants of the conference. The format of the plenary session took the format of a panel and open floor discussion. The CAPG Chair (2013 - 2019), Sukumar Pathmanandavel opened the session, and the Vice President of the Asia Region of ISSMGE, Professor Eun Chul Shin introduced ISSMGE and CAPG.

We had five panelists from different parts of Asia, including Professor Paulus P. Rahardjo from Indonesia, Mr. Ravi Sundaram from India, Professor Za-Chieh Moh from Taiwan, Dr. Johnny Cheuk from Hong Kong, and Dr. Hiroyasu Ishii from Japan. They shared their views on the topic of ‘overdesign’, such as how to define ‘overdesign’, how site investigation, codes and standards, instrumentation/ monitoring, impact the design, and whether the designers tend to over- or under-design. Then, Dr. Peter Day (incoming Chair of the CAPG) discussed the interim results of the global survey.



Figure 1. Sukumar Pathmanandavel opened the session



Figure 2. Professional Eun Chul Shin introduced ISSMGE and CAPG

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Figure 3. Professor Paulus P. Rahardjo talked about the overview of the theme ‘overdesign’



Figure 4. Professor Za-Chieh Moh discussed the role of standards play in overdesign

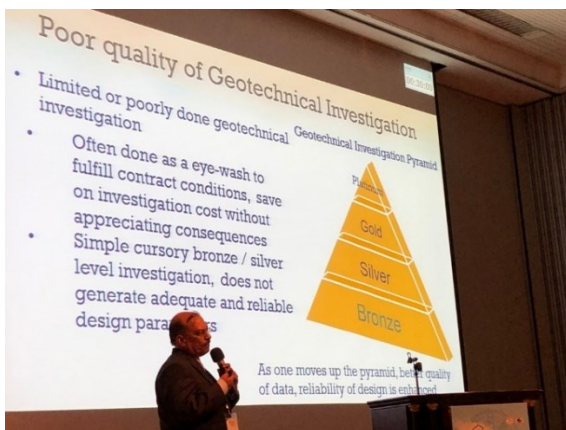


Figure 5. Mr. Ravi Sundaram shared his views on how site investigation impact overdesign

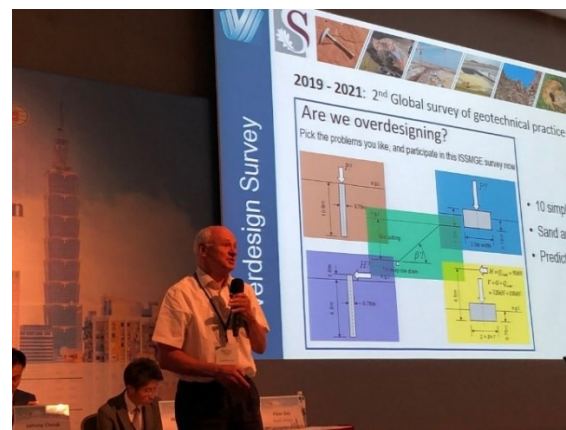


Figure 6. Dr. Peter Day discussed the interim results of the global survey “Are we overdesigning?”

The panel discussion generated active floor discussion. Participants from different sectors of the industry, including academia, consultants, contractor, shared their views on overdesign, and suggestions on improving the design. Besides traditional floor discussion, an app “Slido” was used to receive responses and questions from the participants. In addition, a poll on “Which area do you think will have the biggest impact on overdesign if it is improved” was held via “Slido”, and good number of responses was received.



Figures 7 and 8. Participants gave their views during the open floor discussion

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Figure 9. Poll results via “Slido”

As there were overwhelming responses in the open floor discussion, and not enough time for all the delegates who wanted to contribute, a further lunch session was held next day on 16th October 2019 at the hall where the conference lunch was served, again with a large number of delegates present.



Figures 10 and 11. More discussion during the lunch time session on 16th October

Some of the questions and comments being raised in the open floor discussion, lunch time session and via “Slido”:

- The concept of overdiseign is a relative one, it requires a probabilistic requirement, not a deterministic answer.
- Will industry collaboration make designs more competitive?

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- Engineers' liability, contractual issues, impact on society have impact on over or under-design. Hence, engineers are usually on the side of conservative, and innovation might not be encouraged.
- Education on client on project specification and requirements are important, clients may be required to share the risk in some cases to generate a more innovative design
- Observation method, with good monitoring may be adopted to modify the design from time to time. Assumptions can be wrong, when more information is obtained in the field during construction, mitigation measures may be required to rectify or better design could be adopted.

The CAPG Plenary Session in 16 ARC is only the beginning of the discussion on the topic of 'overdesign'. We would like to continue the discussion and have your responses and comments. Please join our discussion in Geoworld: <https://www.mygeoworld.com/groups/corporate-associates-presidential-group-capg>

Also, don't forget to participate our Global Survey on "Are We Overdesigning? - A Survey of International Practice". More information can be found here: <https://www.issmge.org/news/are-we-overdesigning-a-survey-of-international-practice>. The results and findings of the survey will be presented in 20th International Conference on Soil Mechanics and Geotechnical Engineering in Sydney.

Ceres Chung
Secretary of Young Member Presidential Group