The future of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) in North America

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ABSTRACT
With over 18,000 members and the 75th anniversary this year, the ISSMGE is continuing to thrive and move forward. The role of ISSMGE in North America is unique to other regions because geotechnical engineering is relatively mature. Elements to ensure the viability of ISSMGE in North America, including visibility, communication, collaboration, and students and young members are also discussed. Ultimately, the future lies with students and young members. Since the ISSMGE depends on the activity of its members, this paper also describes the role of NA in ISSMGE.

RÉSUMÉ
Con más de 18,000 miembros y el 75 aniversario este año, la ISSMGE es seguir creciendo y seguir adelante. El papel de la ISSMGE en América del Norte es único a otras regiones ya que la ingeniería geotécnica es relativamente maduro. Elementos para garantizar la viabilidad de ISSMGE en América del Norte, incluida la visibilidad, la comunicación, la colaboración, y los estudiantes y los jóvenes miembros también se discuten. En última instancia, el futuro está con los estudiantes y los jóvenes miembros. Desde la ISSMGE depende de la actividad de sus miembros, este documento también describe el papel de la NA en ISSMGE.

1 INTRODUCTION

The International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) originally began in 1936 with Karl Terzaghi residing as President (ISSMGE, 2011). With over 18,000 members and the 75th anniversary this year, the ISSMGE is continuing to thrive and move forward. Its aim of international cooperation is essential to ensure more rapid dissemination of knowledge that will ultimately advance the state-of-the-practice (SOP) to the state-of-the-art (SOA) across the world.

Even though the challenges faced by geotechnical engineers are common throughout the world, the role of ISSMGE is unique to each of the 6 regions (Africa, Asia, Australasia, Europe, North America, and South America) because each region is at a different stage of development. In North America (NA), geotechnical engineering is relatively mature. To some degree, however, this is a disadvantage for NA with policies and procedures firmly in place that can often result in only incremental advancements to the SOP.

This constraint is less pronounced in other more developing regions because geotechnical engineering is not as established. Therefore, these regions have the ability to adapt quickly without the burden of strict rules limiting deployment of the SOA. In this respect, developing nations can advance at a more rapid pace with implementation of new, innovative technologies within geotechnical engineering.

While standard specifications ensure consistency and safety, a streamlined process to update guidance should be in place to move forward in the deployment of the SOA. The ISSMGE cannot specifically do this within NA, but it can work with its partners in industry and academia to achieve this goal.

2 ISSMGE IN NORTH AMERICA

The ISSMGE has several responsibilities. It should steer the direction of geotechnical engineering practice and research and foster international and interdisciplinary relationships within NA. Promotion of innovations should also be a duty of ISSMGE.

Note that while the ISSMGE serves its constituents, its progress is a function of the activity of its members. As the current President of ISSMGE, Dr. Jean-Louis Briaud, cites, in the spirit of John F. Kennedy, Jr., “Don’t ask what the ISSMGE can do for you, ask what you can do for the ISSMGE” (Briaud, 2008). It is therefore imperative that the NA member societies (Canadian Geotechnical Society, CGS; Geo-Institute, G-I; and Sociedad Mexicana de Ingeniería Geotéchnica, SMIG), along with academia and industry, collectively contribute to maintain ISSMGE’s relevance and success. The achievements of ISSMGE, however, depend on visibility, effective communication, collaboration, and students and young members (S/YMs).

2.1 Visibility

Visibility of any organization is important for membership, public appreciation, and credibility. For the ISSMGE to be considered a resource, geotechnical engineers must be aware of the role and significance of ISSMGE. In NA, this can be achieved through the member societies who should actively disseminate information to their members.

For the ISSMGE to obtain greater visibility, the image of geotechnical engineering must first be refreshed. This

can be accomplished through various mediums from simple brochures to bold moves such as interviews on scientific television programs. Other means to circulate information to our discipline include technical committees (TCs), webinars, and journal articles. The ISSMGE's International Journal of Geoengineering Case Histories is a great source of information that is freely available to everyone. Industry groups and academia within NA should take advantage of this widespread distribution and submit to this journal.

Another opportunity to improve the profession is by deploying innovative, cost-effective solutions to the problems facing NA. One common problem shared by the countries of NA is the aging transportation infrastructure where many of the region's bridges are either structurally deficient or functionally obsolete. The deteriorating infrastructure, along with reduced budgets to rehabilitate the region's roads and bridges, is the principal civil engineering problem faced in NA.

In the USA, the Federal Highway Administration (FHWA) is actively promoting the Geosynthetic Reinforced Soil Integrated Bridge System (GRS-IBS). This system will save transportation agencies between 25 and 50% in time and cost compared to conventional bridges. While the spotlight for bridges is typically reserved for structural engineers, the GRS-IBS highlights the achievements in geotechnical engineering. Similar types of innovations by geotechnical engineers not only advance the image of our practice, they also provide solutions to the problems.

2.2 Communication

Effective communication is essential for the global exchange of information and ideas. Currently, the ISSMGE is employing the Bulletin, listservs, and a website to disseminate important news and material. While these modes of communication are helpful, they are only as good as their distribution and outreach.

The ISSMGE's Innovation and Development Committee (IDC) offers a promising solution to modernize the ISSMGE website and generate collaboration between different groups through the development of Geo-World. This enhanced website will improve the current, more static version. Through Geo-World, ISSMGE content will be incorporated with an aspect of social networking that will propel the website and guarantee its use by many.

TCs are another avenue of information exchange. Unfortunately, the work of many TCs is internal and largely unknown to the general community. ISSMGE needs to actively circulate and promote the efforts of TCs. Geo-World can provide the forum for TCs to share their agendas and solicit feedback. An additional method is for NA member societies to include special sessions at their annual conferences.

Webinars can also be used to distribute information and promote technologies to a widespread audience on various geotechnical engineering topics. The ISSMGE has access to top subject matter experts who can deliver these webinars. The prevalence of webinars in NA makes this option easily implementable and accessible.

2.3 Collaboration

For the ISSMGE to have an impact on NA, it must establish solid connections with industry, academia, professional organizations, and students and young members (Figure 1). Industry is important because, for the most part, it works within the SOP while academia works to develop the SOA. ISSMGE can be the link between the two to help make the SOA the SOP.

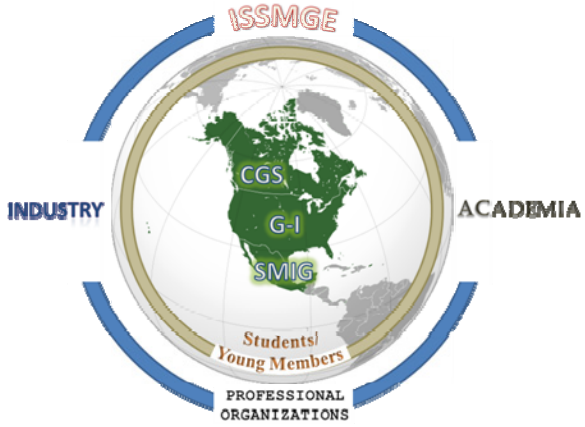

Figure 1. Relationship between ISSMGE and its partners

The ISSMGE recently created the Corporate Associates Presidential Group (CAPG) to promote issues directly related to the practice of the profession. The number of corporate associates will increase as the ISSMGE gains greater visibility. Hopefully the CAPG will assist in bridging the gap between the SOP and the SOA. Their insights on the deficiencies of the SOP will encourage not only academia, but students and young members, to become more engaged in the issues facing geotechnical engineering.

The field of geotechnical engineering, however, interacts with many other disciplines of civil engineering. For example, scour is an issue related to both geotechnical engineering and hydraulics; intelligent compaction is a technology related to both geotechnical and pavement engineering. While the ISSMGE already has close relationships and affiliations with several international organizations related to geotechnology, it needs to form relationships with professional organizations associated with other disciplines. This will ensure cross-collaboration and efficient technology transfer without competing efforts.

2.4 Students and Young Members

The future of ISSMGE and NA member societies largely depends on the next generation of geotechnical engineers (i.e. S/YMs). They have a fresh perspective on the problems facing geotechnical engineering. S/YMs are also adept with various forms of communication, social networking, and learning. Their activity must be cultivated. Supporting ISSMGE membership fees is one way for NA member societies to increase participation by S/YMs. In the long term, this investment will reap great rewards not only nationally, but globally.

NA is the only continental region that does not have its own Young Geotechnical Engineers Conference (YGEC). While the CGS has a national YGEC conference, cooperation between all NA countries is needed to unite the bright, open minds of our region. It will also connect S/YMs to establish personal and professional relationships that can last a lifetime.

Youthful insights on trends in the field should also be encouraged by the ISSMGE through involvement in TCs and ISSMGE events. This exposure is mutually beneficial to ISSMGE and S/YMs who will learn from more established professionals. The ISSMGE is reaching out to S/YMs through the recently created Student and Young Member Presidential Group (SYMPG) whose mission is to promote ISSMGE to the next generation. Ultimately, S/YMs will be responsible for the future needs in geotechnical engineering.

3 SUMMARY AND CONCLUSIONS

Realizing that all parts of the world are at a different stage of geotechnical practice helps define the role of ISSMGE in each region. For NA, geotechnical engineering is mature and the gap between the SOP and the SOA can be large. While the aim of the ISSMGE is to promote the use of innovative technologies, it can work with its partners in industry, academia, and other professional organizations to create change and close the gap.

Change is more easily accomplished with S/YMs. While the established professionals in ISSMGE recognize the needs, involving energetic S/YMs early on will help effectively address the solutions to these problems. S/YMs have the ability to learn from the collaborative relationship between the ISSMGE and its partners while bringing a fresh perspective that is less inhibited by current policies and procedures. This will lead to more rapid deployment of innovative technologies in NA and help bring the SOA to the SOP. The future of ISSMGE in North America is, therefore, very promising.

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