Global Leadership Forum for Construction Engineering and Management Programs

2017

Los Angeles, CA
University of Southern California
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1 Message from the Organizing Chair

The 2017 GLF-CEM meeting was hosted at the University of Southern California by the Sonny Astani Department of Civil and Environmental Engineering from the Viterbi School of Engineering. I would like to thank the Astani Department students led by Eyuphan Koc for their help and dedication in helping me organize this event. I must thank all delegates that attended the event and the members of the GLF-CEM Executive Committee for their contributions to the success of this meeting. Discussions from the event are summarized in this report. I am looking forward to meeting everyone again next year in South Africa.

Dr. Lucio Soibelman
## 2 List of Attendees

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3 Event Agenda

May 27th

16:30-19:00 Introduction of New Forum Members
19:00-21:00 Cocktail Reception at the Forum

May 28th

08:30-09:15 Breakfast at the Forum
09:15-10:00 KPI and Trends Committee Progress - Dr. Hastak and Dr. Kagiloglu
10:00-10:30 GLF-CEM Collaborations - Dr. Wium and Dr. Bargstädt
11:00-11:45 Construction Engineering and Management at USC - Dr. Solbelman
11:45-12:45 GLF-CEM Membership - Dr. AbouRizk, Dr. Shen and Dr. Hastak
12:45-13:45 Lunch at the Forum
13:45-17:15 Panel on Leadership - Facilitator: Dr. Ashley

- Mr. Philip J. Stassi - Executive Advisor to the CEO and Chairman, Jacobs Engineering Group Inc.
- Dr. Jim Rowings - Chief Learning Officer and Vice President, Kiewit Corporation
- Dr. Feniosky Peña-Mora - Commissioner, NYC Department of Design and Construction
- Dr. Simaan M. AbouRizk - Distinguished University Professor, Hole School of Construction Engineering, University of Alberta

18:30-20:30 Closing Dinner

Notes:
Event check-in begins at 16:00 on Saturday.
Main Event @ The Forum at USC Tutor Campus Center - Room 405
Closing Dinner @ Shangri-La Hotel Santa Monica
4 Introduction of New Members

On Day 1, the Forum began with opening remarks from the organizing chair Dr. Lucio Soibelman and the GLF-CEM chairman Dr. Simaan AbouRizk. Dr. Soibelman welcomed forum members to the campus and walked them through the event agenda. Dr. AbouRizk briefly elaborated on the history of GLF-CEM and the progress made over the last year since the meeting at Tsinghua University in Beijing. Following his remarks, the first session began opening the floor for the new faces in the forum. Leaders from recently joined universities presented their organizations one after another. This year, the forum grew bigger in Asia, Europe, South America and Australasia.

Taking the floor first, Dr. Wilson Lu from University of Hong Kong presented the city, the school and his department while also making remarks on research laboratories he is affiliated with. He emphasized the efforts towards establishing collaborative research while blurring the traditional boundaries. He introduced his own research focuses that are international construction market with an emphasis on the Asian market, construction informatics and construction waste. Dr. Lu also mentioned outreach activities carried out in Ethiopia in which Dr. Roger Flanagan of Reading University and Dr. Dongping Fang of Tsinghua University also take part. In addition, he briefly mentioned his research collaboration with Dr. Geoffrey Shen on Building Information Modeling (BIM). Finally, he introduced the Real Estate program established at University of Hong Kong and he gave floor to Dr. Dezhi Li from Southeast University in China.

Dr. Dezhi Li started his talk with an introduction of Nanjing, the Chinese city hosting Southeast University. He followed up with information related to the university and mentioned awards won at the national level. Briefly discussing the Construction Engineering and Management education at his institution, he informed the audience on degrees and the curriculum offered. Dr. Li also mentioned his research efforts that focus on construction risk and safety, affordable housing, international construction, life cycle project management and prefabrication.
Dr. Kristen McAskill took the floor to represent Cambridge University. She started by introducing the CEM program at their department and mentioning the vision of the Laing O’Rourke Centre. Their program admits students with at least 3 years of professional experience. Dr. McAskill also provided an overview of the curriculum and degree requirements. She also voiced her intent to establish virtual learning collaborations with forum members.

Following Dr. McAskill, Dr. Carlos Formoso from Federal University of Rio Grande do Sul took the floor for his presentation. Similar to other new members, he started out by introducing his institution in Brazil, and the CEM program there. He emphasized the importance attributed to international exchange programs at UFGRS and the general effort to break traditional research silos. Also, he explained why the older structure in the university slowed them down and how the structure is being revised. They
formed a new program in construction and infrastructure, and are employing students mostly with research grants.

Another new member from China, Dr. Junna Meng of Tianjin University introduced her school and program as well. She talked about the history of both, gave details about the programs that are tailored to student groups from governmental bodies and from the industry. Some research areas that the department focuses on are construction project management, international construction management, construction project planning and investment financing management, real estate economy and management and land resource utilization and planning. She concluded her presentation with information on awards and funding received by the department, and by mentioning unique student activities carried out.

Lastly, Dr. Eric Scheepbouwer presented his institution, the civil engineering department and Christchurch, NZ. He introduced the academic staff and the professionals from the industry that are helping with the lecture load of the department. Dr. Scheepbouwer particularly elaborated on the Canterbury Earthquakes in 2010 and 2011, and the impact on the future of engineering school in the university. Key research areas in the department include big data, asset management and procurement. Dr. Scheepbouwer also draw the future of the department as international cooperation, academic staff and student exchange, research and industry collaborations.
5 KPI and Trends Committee Progress

The morning session started with the KPI and Trends Committee’s presentation. Dr. Thomas Ng talked about the benchmarking work done and the international data sources utilized by the committee. Emphasis was made on construction GDP over overall GDP as a key performance indicator. The contrast between the growth in the Hong Kong industry compared to the UK and the US was highlighted. In addition, labor resources indicator was used to investigate number of workers in construction industry versus overall employment. It was shown that Hong Kong unemployment rate was significantly lower than other industries. Dr. Thomas Ng also used accident versus construction GDP related data to distinguish between industries in Hong Kong United Kingdom and United States. The work done for Hong Kong industry used a top-down approach given limitations of finding accurate data. After Dr. Ng, Dr. Makarand Hastak talked about committee’s work related to the India industry. This work was more industry dependent. Therefore, a bottom-up approach was used to look at performance indicators at a finer resolution.

Presenters also discussed the way forward for this committee. They suggested using publicly available data to provide sustainability in these efforts. Following the presentation, other committee members joined the presenters for a panel. During the panel, committee’s priorities and the future leadership what was discussed. Members asked the reason behind tracking key performance indicators. Panelists responded by saying it is a much better way to share data any inform policy internationally. A question was asked to the panelists about International collaboration becoming a KPI. Panelists believe it should become one and the forum should do a better job in supporting dual PhD programs. Dr. Pena-Mora asked if professionalism in an industry could be another key performance indicator. Dr. Thomas NG responded by saying it might be a challenge because of lack of data and basis of comparison issues for different countries. Dr. Jan Wium thinks this is only a beginning and further efforts will make the construction industry look better. Here a discussion was stimulated about involving all stakeholders and industry in identifying and quantifying key performance indicators. Dr. Jeffrey Shen praised the idea and Dr. David Ashley added to say the success of the effort critically depends on the engagement with the industry and that micro level data should be there such as individual productivity measures. Dr. Jim Rowings pointed out that there is an abundance of data in terms of construction clinics and looking at productivity, it hasn’t improved much over the years. He argued that it is only starting to affect the design process recently and analytical methods are
needed towards quantifying the impact on the industry. Following discussions focused on the correlation that may emerge in different countries and industries. Finally, the committee thanked members for their contributions and invited wider participation from the forum.

6 GLF-CEM Collaborations

Following the presentation and panel by the KPI and trends committee, GLF–CEM collaboration committee the floor for their presentation. Within decision, dual and exchange programs were discussed. It was highlighted that keeping track of the ongoing collaborations was critical. Online courses and their setups were other focuses of discussion. Members asked the committee what do you mean challenges in establishing collaboration projects. In this context, cross-cultural management in collaboration projects was pointed out as a critical task towards success.

Dr. Jan Wium, Stellenbosch University
7 Construction Engineering and Management at USC

In the third session of the morning, Dr. Lucio Soibelman, the organizing chair of this year’s event took the floor to talk about the university, the department he is currently leading and the CEM program at USC. Providing general information about the university, he quickly moved on to talk about the department and the changes he tried to make since his appointment as the chair.

One focus in his talk was how he has been trying to destroy traditional research silos within the department to motivate interdisciplinary research. Currently, there are 4 research trusts at USC: Sustainability; Water Quality, Access, and Distribution; Disasters and Extreme Events; Coupling of Complex Systems. Dr. Soibelman also talked about the aggressive hiring strategy he assumed and introduced professors who joined the Astani department over the past few years.

Having discussed the new research directions and the new academic staff at USC CEE, Dr. Soibelman took a few moments to provide information on the construction engineering and management at the Astani department. At USC, MSCE (Master of Science in Construction Engineering) began in 1978 and MCM (Master of Construction Management) began in 1994. In his presentation, Dr. Soibelman provided facts and figures about the programs together with their degree requirements. He also elaborated on the recently established Aramco master’s program in Saudi Arabia.
8 GLF-CEM Membership

After the session on CEM at USC, GLF-CEM membership session followed up. Dr. Makarand Hastak captured a history of the organization and the story of the first forum together with the initial objectives. He reiterated the membership procedure and reminded members about the previous forums talk about the journey until this year’s event. Then, Dr. Simaan AbouRizk took the floor highlight the mission for once again. He emphasized the lack of progress and exchange programs and reminded the forum about the opportunity that is not being captured at the moment. Also in this session, new members were elected and the discussion on expanding the membership base was made. Based upon a question from the members extending the events in terms of their length was discussed.

New members of the GLF-CEM.
9 Panel on Leadership

9.1 Opening Presentations by Panelists

On Day 2, the main attraction was the leadership panel. According to the format designed by the moderator Dr. David Ashley of USC, the panel began with presentations of the panelists. Phil Stassi (Executive Advisor to the CEO and Chairman, Jacobs Engineering Group Inc.) took the floor first and delivered a very influential talk. Within the first few moments of his talk, he introduced Jacobs Engineering Group and provided key facts related to the company. Then, he switched gears to talk about leadership. According to Mr. Stassi, leaders are people who tap the passion within us and lead by things they do rather than things they say. He used the *pebble in pond metaphor* to emphasize how the impact of good leadership radiates like a wave within an organization. Mr. Stassi quoted Colin Powell on force multipliers, and highlighted enthusiasm and optimism in leadership. He then asked, “Can leadership be taught?” and stimulated a discussion around the education of leadership. Some points he made here: leadership is not a birthright and all leaders have been influenced by other leaders which indicates teach-ability. Following these points, he argued that leadership is not being taught today at all despite the unquenched thirst of students. According to Mr. Stassi, there is an obvious gap in construction education in teaching leadership. Listing basic tenets of leadership, he said leaders must have vision and competency, be authentic, driven and visible, be committed and decisive, listen and learn, surround with the best, encourage and empower, take blame and give credit. His last slide on takeaways mentioned the essential nature of leadership for progress, argued we can do more to educate leaders, pointed out that leadership education should be a part of master programs, and we are missing opportunities and cannot wait longer.

Following Mr. Stassi, Dr. Jim Rowings (Chief Learning Officer and Vice President, Kiewit Corporation) took the floor to deliver his take on leadership. He broke down leadership of Kiewit into different areas such as safety, equipment innovation, and training. Providing examples in all these areas, he moved on to talk about educating leaders within their organization and the key competencies they are looking for. Kiewit is well-known for their in-house schools where they train their human resources on a wide variety of subjects. Dr. Rowings emphasized it is critical to understand the relationship between the career timeline and the types of skills employees can gain.
Similar to Mr. Stassi, he listed foundational leadership traits for his organization: unwavering integrity, self-discipline, initiative, communication, listening, emotional intelligence, coaching skills. He then talked about various types of leadership they teach at different levels. For instance, at superintendent level, they aim to teach innovation, change management and agility. Whereas at project manager level, team building and teamwork becomes more important skills. Dr. Rowings also listed a set of do’s and don’ts when it comes to leadership. His do’s include talking about leadership successes and failures, mentoring student leaders, bringing leaders into classes to share experiences, starting a dialog with students about experiences with good and bad leaders, creating learning moments for students to get experience with leadership. His don’ts are: do not ignore setting clear leadership expectations for class projects, do not teach a leadership class, do not be a poor role model, and do not try to predict who will be future leaders. Dr. Rowings made his concluding remarks on the future of the industry and construction education. He believes the industry should expect impacts from numerous game changers (virtual/augmented reality technology, artificial intelligence and machine learning, advanced sensing and control, collaborative contract arrangements and risk sharing). He also expects curriculum changes in construction education due to a number of influencers (higher level “touch” learning and experiential situational analysis flipped classrooms – use of distance learning and blended approaches modern analytical skills and applications use of “big data” for decision-making competency based educational attainment models vs credit hours).

It was Dr. Feniosky Pena-Mora’s (Commissioner, NYC Department of Design and Construction) turn to make his presentation after Dr. Jim Rowings. Having practiced leadership in both academia and government positions, Dr. Pena-Mora had a lot to say. He began his talk with facts and figures from both NYC DDC and Columbia Engineering school. Switching gears after these introductory remarks, he emphasized the lessons learned in his career with regards to leadership. He first summarized key requirements for successful leadership in 6Ps: passion, purpose, preparation, perspiration, perseverance, people. Walking around the room and keeping the audience very alive, he moved to a list of lessons learned. To him the following are of key importance: listening and
learning, constantly checking in, being accessible and visible, being humble, understanding that everyone is important, identifying influencers, identifying allies, understanding that it takes time, and being open to change course. Dr. Pena-Mora also followed up these lessons with the following statements. “Decision Making Meetings is to Reaffirm a Decision not to make a decision. Successful outcomes do not fully carry the day. Having a majority of groups agreeing on a path (Tyranny of Majority) does not necessarily create a sustainable journey.”

Following Dr. Pena-Mora, Dr. AbouRizk (Distinguished University Professor, Holcim School of Construction Engineering, University of Alberta) took the floor for his talk titled “Developing Leadership in Academia”. He began with asking the question “What defines effective leadership?”. According to him, effective leaders communicate clearly and respectfully, engage and motivate individuals and teams, and adapt to various situations and individuals. Dr. AbouRizk then talked about leadership development. Two (main) approaches he mentioned in developing student leadership in academia are 1) formal leadership training and 2) creating leadership experiences for students. For the latter, he outlined a few options such as: graduate student supervision of undergraduate summer research students, encouraging participation in student societies, increasing project responsibility of students over time: avoid micro-managing students and allow them to make mistakes, and establishing industrial-academic teams. He placed a high emphasis on experiential learning through collaboration. About why academics should motivate leadership development, he said effective leaders who appreciate the benefit of applying academic research in industry can become effective advocates and facilitators of academic-industrial collaborations.
Upon completion of the first round, the panelists sat down and Dr. David Ashley moderated the interactive panel discussion.

9.2 Panel Discussion

With the questions raised by the moderator Dr. David Ashley and GLF members, the panel discussion turned out to be a great opportunity to learn and reflect for everyone in the room. We present some highlights from that afternoon on Day 2.

Upon a question raised about the moments in panelists’ careers that they can now relate to developing leadership within themselves, Dr. Simaan AbouRizk said his interview at University of Alberta stands out among other experiences. Dr. Pena-Mora explained it was not moments for him, but a general attitude based learning and teaching of leadership. Mr. Phil Stassi, on the other hand, went back to his childhood and said he was raised by his family to always work hard. A job was never simply a job for him, rather a way of life. He said he received a lot of taps on the shoulder for this attitude, and always took advantage of supportive mentorship. Being open and receptive played the key role in his development. Dr. Jim Rowings emphasized the role of seizing opportunities that arise: “You get opportunities, someone asks you something. I always knew when I had to take that seriously, else you’ll blew it up.”
Another question was towards the panelists’ willingness to lead. Were they ever forced to lead or did they seek it? Mr. Stassi responded first to say he never questioned it and he was never forced by other people or circumstances to become a leader. Dr. Pena-Mora said being a leader was not a key aspiration in his career, and conceptually he thought about opportunity more often. Panelists were also asked about what makes a good leader. Most of them already touched upon similar understanding in their presentations, but there were things to add. For Dr. Jim Rowings, credibility among peers is an essential ingredient of the process. He also talked about the role of the capability to inspire others. According to Dr. Simaan AbouRizk, leaders float and show themselves in the crowd. Dr. Rowings added and said a good way to measure leadership skills is to put one at risky situations and see how they handle. Mr. Phil Stassi argued that it is often tough to answer this question because the required skill set might change depending on circumstances. He said one common attribute to look for is pride instead of arrogance.

The panelists were also asked about the role of crisis situations in identifying leadership. Dr. Jim Rowings responded by saying one will certainly see potential leaders will be able to handle crisis situations much better. Dr. Pena-Mora added that scouting the talents within an organization is the critical task here. Then it is the responsibility of current leaders to identify and support potential ones. Switching contexts Dr. Rowings said there are so many leadership roles and there are many different mixes required. For instance, leadership in the industry, in public sector and in education differs significantly from one another. Dr. Pena-Mora elaborated more on risk-taking in leadership.
He argued encouraging risk takers by not penalizing errors may be a good practice. Because then that is the risk of penalizing the leadership development process itself.

Another question was about e-learning in the construction industry. Dr. Jim Rowings said we have to try it out and see if it works, and have to stand up for the consequences.

10 Closing Dinner

At the end of Day 2, the members met again at Shangri-La Hotel Santa Monica. Thanks for the good weather and wonderful hospitality, the members had a chance to mingle and reflect on this year’s event.

As the Sonny Astani Department of Civil and Environmental Engineering at University of Southern California, we thank all the participants once again. Please be reminded that next year’s event will be hosted by Stellenbosch University in South Africa.