

Civil Engineering Conference in the Asian Region CECAR 8

Hotel Metropolitan Ikebukuro, Tokyo, Japan

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M2 student

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M2 student

CECAR8 was held at the Hotel Metropolitan Tokyo, on 16<sup>th</sup>-18<sup>th</sup> April 2019. This is a civil engineering conference in the Asian Region, held by The Asian Civil Engineering Coordinating Council (ACECC). 14 countries were represented and about 250 papers, from both companies and students were presented. From the conference, we learnt about the global vision of Civil Engineering, the infrastructure state in different countries and its effect on economic growth, disaster risk management, and other technical issues in Civil Engineering. Indah and Vivian, both M2 students, participated in the conference and discussed with the other participants on oral sessions. This report summarizes what we discussed.

**Indah (M2)**

**\* Contents of Q&A**

**TS3-2:** Experiences and Challenge in Construction and Management of Underground Infrastructures.  
April 16, 16:00 – 17:30

**Dongming Zhang; Tongji University.**

**Case study on recovery of over-deformed metro tunnel in Shanghai by soil grouting.**

**Q1:** Because of the unexpected extreme surface surcharge, tunnel was over-deformed; side wall deformed outward and top of tunnel deformed inward. The pressure of soil grouting is expected to push the tunnel into its initial condition (without deformation). It is relatively understandable to push the side wall by grouting pressure. How about the top part of the tunnel, will the grouting give more loads in the case of normal grouting on the surface of tunnel lining?

**A:** The grouting is not the common grouting. There is pipe installed from the surface until reach the depth of tunnel. The pipe is installed a distance from the tunnel. The grouting is in the horizontal direction, the area of length of the grouting is same with the distance from the bottom to the top of tunnel. The horizontal grouting will give pressure to the side wall and make it deform inward. Along with inward deformation of side wall, the top part of tunnel will deform inward, and they will go back to the initial condition (un-deformed). However, the efficiency of grouting volume to the deformation of tunnel shape is relatively low.

**TS6-7: Infrastructure Development and Economic Growth.**

April 17, 11:00 – 12:30

**Maria Catalina E. Cabral; Philippine Institute of Civil Engineers, Inc.**

**Disaster risk reduction through resilient public infrastructure.**

**Q2:** Philippine is a country that has big risk of disaster. In the presentation stated, many of Philippines are poor and expose to the hazard. The highlight of the presentation is about Philippines need to build the resilience public infrastructure. I don't understand how the resilience public infrastructure can help poor people, because in my understanding they don't have asset because they are poor, or their assets are destroyed by disaster. In the example, for a resilient bridge will not make the poor people safe when typhoon comes, if they have to build an earthquake resistance house, they don't have money. How can resilience public infrastructure help them directly?

**A:** Philippine government will build a safe housing. In the case for poor people, a subsidized price house may be used.

**TS6-4: Developing a More Relevant Program for Civil Engineering Education.**

April 17, 14:00 – 15:30

**Prof. Hironori Kato; The University of Tokyo.**

**Engineering education for civil engineers in Asia: lessons from International Engineering Program of the University of Tokyo, Japan.**

**Q3:** Recently there is more awareness for Sustainable Development Goals (SDG). Is there any particular program related to SDG in the civil engineering education of the University of Tokyo?

**A:** For now, there are many subjects point out the awareness of SDG, but the explicit program for SDG is not yet applied. In the Vietnam Japan University, they also try to develop the program related to SDG.

### **\* Impression**

This conference gave me an opportunity to meet and interact with many great people from many countries, such as ASCE President, Professors, engineers and students. It was very interesting to gain more knowledge related to civil infrastructure engineering in many different countries. I was impressed with many presentations, especially about infrastructure, investment and economic growth, which is a new knowledge for me. This conference motivated me to study more about infrastructure development and sustainable development goals. In the last day of conference, I joined the tour of the Great East Japan Earthquake Restoration, it was also a good opportunity to visit the damaged area. In addition, I also had the opportunity to widen my connections, I made some new friends. Overall, I am grateful to Professor Kimura for giving this opportunity and this conference has been an amazing experience.

## **Vivian (M2)**

TS3-1: Applications of Geo-synthetics for Various Civil Engineering Disciplines.

April 16, 16:00 – 17:30

**Motsa Thabo: National Pingtung University of Science and Technology**

**RECP installation on vegetation growth, soil erosion and Manning coefficient in channel flow.**

**Q1:** You mentioned that the RECP used as a cover material is both a natural organic product hence degradable and another is artificial. Have you conducted any test on the degradable one to calculate its long-term performance as a cover material?

**A:** I did some research and from a few studies they've mentioned that the RECP has a life-span of about 15 - 20 years. However, I haven't yet carried out any test to prove this information. I will consider putting this as a recommendation on my thesis.

TS6-8-3: Innovative Construction Technologies and Management in Infrastructure Projects.

April 17; 9:00 – 10:30

**Ong Ai Bin: Penta Ocean Construction Co., Ltd.**

**Design and construction of 6m diameter segmental tunnel in NIPE Contract C4, Singapore.**

**Q2:** How do you control the water seepage during the deep excavation?

**A:** We use visual grouting technique during excavation as well as conduct other soil improvement techniques to control the water seepage.

TS6-16: Women in Civil Engineering.

April 17; 11:00 – 12:30

**Kiko Yamada Kawai: Tokyo Institute of Technology.**

**SWCE's influence and expectations in Japanese construction industry.**

**Q3:** In Kenya, we have a Lady Engineers forum/society, where all female Engineers in Kenya from all the Engineering sectors are welcomed to join. The problem is there is a condition that you are required to be registered by the Engineers Board of Kenya (EBK) for you to be a part of the group. However, we are facing a challenge with some of our Universities being accredited by the EBK so the female Engineers affected by this cannot join the society. Is there any sort of restrictions in joining SWCE?

**A:** In SWCE, we don't have any restrictions. All female Civil Engineers including students, those in Academia or in industries, are welcome to join. We partner with the JSCE to broaden our research knowledge as well as get new ideas to improve the society, but it is not a requirement to be a member.

## \* Impression

Attending the conference was a great privilege to me. I experienced a rich academic exchange through discussions, as well as the questions and answers that followed the presentations of research and innovative works done by researchers in the civil engineering discipline from different fields. My interest mainly lied on the ground water leakage control techniques during construction and I was very honored to receive information of many techniques used in actual sites. I also had an opportunity to attend a presentation on the Japan Society of Women in Civil Engineering and was very amazed by the ideas shared by the female Engineers from Japan as well as from the ASCE President herself. I am very grateful to Professor Kimura for granting us this opportunity.

## Photo Gallery



Indah (left) and Vivian (right) at the CECAR8 Symposium.