

## IAC News No. 13

### International Panel Discussion: Infrastructure Maintenance and Renewal

Problems of infrastructure maintenance and renewal are almost the same everywhere, i.e. lack of awareness and understanding of the importance of infrastructure maintenance, limited budget, lack of engineers' competency etc. One of the common problems among countries is the availability of allocated budget for infrastructure maintenance and renewal. To tackle this, some countries have developed tools, e.g. infrastructure report cards, that make the existing conditions of infrastructures become visible to government and decision makers. This of course will influence the priority of using the available national budget for infrastructure maintenance and renewal.



**Prof. Imran Iswandi**  
Institut Teknologi Bandung



**Int'l Panelists and Commentators**

The development of report cards requires the assessment of the infrastructures' conditions. For this kind of assessment, different approaches are basically needed for different types of infrastructures or even for different locations. It is known that different infrastructures may have different behavior and be posed to different threats. In addition, the assessment/ inspection standards, supervision and the competent inspection engineers are basically needed in order to avoid wrong assessment/ inspection results.

As the natural threats are increasing due to global climate change, the criteria for evaluating the assessment results should be updated as well. In addition, specific approach is sometimes needed for monitoring infrastructures in certain location. In some cases, early warning systems are required. For these specific requirements, the technology for infrastructures' health monitoring will be the most important tools needed for infrastructure maintenance. Japan is known as one of the leading countries in this regard. Many monitoring technologies for different infrastructures are being developed to maintain safe infrastructures.



**Prof. Imran makes comments.**

The failure to monitor and assess the condition of the existing infrastructures may lead catastrophic failures of infrastructures. In the last ten years, many examples of failures of infrastructures can be found in many places, including Indonesia. In Indonesia, the causes of the failures are not only because of aging, but also from lacking of maintenance. Decision makers are sometime not aware of the importance of maintaining the infrastructures. They are sometimes reluctant to approve the spending of big budget for maintenance.

In addition, in civil engineering field in Indonesia, the focus in design activities is still on “design to construct” and not on “design to maintain”. As a result, in many infrastructure designs, aspects of maintenance are rarely taken into account in the design process. This for example can be seen in some bridges in which no access is provided for replacing the bridge bearings. This “design to construct” approach makes the conditions of infrastructures vary significantly from one place to another in Indonesia. Because of that, several assessment approaches need to be developed to suit those different conditions of infrastructures. The infrastructures in Indonesia have many similarities with those in Japan in term of the surrounding environment. Right now, Japan has progressed significantly in coping with the problems of their infrastructures. It is interested to see how these are developing. There should be many things to observe and learn from these activities.

### Report for “The 7th JFES-JSCE-AIJ-WFEO Joint International Symposium on Disaster Risk Management”

The International Symposium associated with disaster risk management (DRM) was successfully held by the effective collaboration among several international and domestic organizations: Japan Federation of Engineering Societies (JFES), Japan Society of Civil Engineers (JSCE), Architectural Institute of Japan (AIJ), and World Federation of Engineering Organizations (WFEO), and supported by Science Council of Japan (SCJ), at Nihon University (Narashino City, Chiba) from 9:00 to 12:00 in Sep. 5, 2013 during the 2013 JSCE annual meeting. This international symposium has been sequentially running since 2007 to provide the global community the opportunity to discuss disaster restoration, better mitigation techniques and prevention plans for severe future disasters based upon experiences world-wide. In this time, we invited 8 guest speakers from domestic and foreign (Iran, Taiwan, and Philippines) universities and institutes who have the research background of DRM or disaster prevention. They had unique presentations for DRM based upon the varieties of themes through civil engineering, architecture engineering, financial policy, and legal policy viewpoints. After that, the speakers and the audiences (approximately 50 people) had useful and practical discussions.



**Nobuaki Kimura,**  
**WFEO-CDRM**  
**Deputy Secretary**



**WFEO Symposium is ongoing.**

The detailed presentations and discussions are the followings. In opening remarks, Dr. Ishii (WFEO Committee on DRM [CDRM], Chair) emphasized the importance of the DRM to prevent economical loss and human damage. Sequentially, the guest speakers' presentations about (1) Development of a forecast system for guerrilla-type heavy rain (Prof. Yamada, Chuo Univ.), (2) Example of typhoon-induced severe damage in Taiwan (Dr. Lai, Cheng-Kung Univ.), (3) Resistant tests for the higher buildings under huge earthquake (Prof. Nakajima Kyoto Univ.), (4) Gap between reality and ideality in the recovery processes from damage due to the Great East Japan Earthquake (Prof. Ubaura, Tohoku Univ.), (5) How to handle trans-boundary disaster risk management (Prof. Ali, Iran University of Science and Technology), (6) Spatial mapping of economic loss against disaster vulnerability (Prof. Kazama, Tohoku Univ.), (7) Development of the investment model for disaster prevention used in the world-wide political framework (Dr. Takeya, JICA), and (8) Example of the legislation about disaster prevention and risk management in Philippines (Prof. Pacheco, Univ. of the Philippines Diliman) were conducted. After that, Q & A between speakers and audiences resulted in the valuable discussions, such as gaps between civil engineering viewpoint and architecture one on DRM and political problems in Tohoku (Japan) reconstruction processes. Finally, Prof. Komatsu (Subcommittee on CDRM leader) closed the symposium by addressing the importance of DRM again.



WFEO Symposium Speakers and Secretariat Members

This symposium, held by several engineering associations, offers multi-faceted examples and ideas about DRM. We are planning to have a new symposium in the next year in AIJ 2014 annual convention (Kobe City, Japan).

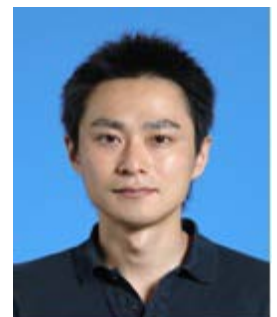
(Note) WFEO (a professional group for engineering) has a mission that they world-widely provide some solution for poverty problems and for sustainable development in stable social infrastructure and economics through appropriate technology and innovation. CDRM is one of the committees of WFEO and working for disaster risk management.

※ For further details, please visit [The 7th WFEO Joint Int'l Symposium](#).



### Report on the International Workshop for Young Engineers: JSCE 2013 Annual Meeting International program

After last year's success, International Students Network Group, the International Activities Center (IAC) held the 15th International Summer Symposium at College of Industrial Technology, Nihon Univ., as one of the international programs of JSCE 2013 Annual Meeting. This year, the International Workshop for Young Engineers was jointly held with the Symposium, co-hosted by IAC and the JSCE 100th Anniversary Planning Committee International group



**Kohei Nagai**  
Int'l Student Network  
Group Leader



Participants enjoy exchanging opinions with each other.

The theme of the workshop was, "Your Career as a Civil Engineer and Our Future Society". 35 participants were mainly international students and young engineers who submitted their papers to the Summer Symposium, and the others were the nominees whom JSCE chapters had recommended. The workshop included group discussion that the participants discussed possible tasks due to changing society and environment expecting the future in the next 40 years, the roles of civil engineering, and their prospective career. At the end of the workshop, each participant made a presentation.



The workshop began with the opening remarks by Prof. Yozo Fujino(the University of Tokyo), the 100th Anniversary Planning Committee Chair, regarding the history of civil engineering in Japan and hopes for young engineers. As a representative of former international students working for Japanese company, Dr. Phan Huu Duy Quoc (Shimizu Corporation) made a presentation about his experiences and information on working in Japan, and attracted the audience's attention.

In group discussion section, the participants were divided into groups of about six people. They expressed their opinions that each had prepared in advance, and deepened the ideas through discussing similarities or differences between them. The opinions of the participants from variety of countries were different according to the country's development or maturity, and there were active exchanges of ideas in various fields such as education, technical development, the global environment and international cooperation. Every participant made a one-minute-presentation with a handwritten poster of A2 size then. Unique and colorful posters were created within a limited time, and spiced up the presentations. The poster session enhanced mutual exchanges between participants. The workshop provided young engineers a great and meaningful opportunity to consider their future tasks and career plans, and supported the participants networking each other.



**Participants present their research projects.**



**All workshop participants are relaxed after the workshop.**

The upcoming workshop will be held on a large scale inviting young engineers from overseas, as a part of JSCE's 100th anniversary celebration events, during JSCE 2014 Annual Meeting (at Osaka University).

### **International Communication and Collaboration (ICC) Group Meeting**

During the JSCE Annual Meeting 2013, International Communication and Collaboration (ICC) Group Meeting was held on September 4th at Nihon University Tsudanuma campus. Since International Activity Center (IAC) has founded at JSCE, it was the second meeting with JSCE president, IAC Senior Director, Board Directors, and Group members of International Section from overseas to discuss about latest project and future plans.



**Satoru Kobayakawa**  
**Information Networking**  
**Group Leader**

Prof. Tamon Ueda (IAC Senior Director) opened the meeting, and the participants made brief self-introductions. Then, Mr. Tamio Shimogami (a Board of Director, Leading Director of Int'l Affairs of JSCE) and Prof. Kiyohiro Ikeda (a Board of Director, Director of Int'l Affairs of JSCE) delivered opening speeches. Then, Prof. Ueda presented the overview of IAC, and Mr. Yamakawa (IAC Director, Int'l Cooperation & Collaboration Group Leader) introduced the ICC outline. The member of International Section from Indonesia, Korea, Mongolia, Taiwan, USA, and Vietnam were participating and reporting their project, joint-seminar and meetings with JSCE. Moreover, the ICC secretariat reported their activities from the members from Myanmar, the Philippines, and Thailand groups who could not attend this meeting.



**Prof. Ueda delivers an overview of IAC.**



**Int'l Sections reps make reports on their activities.**

After reports from each section, we discussed about IAC's future activities. In the discussion, many proposals were delivered to improve the membership service for non-Japanese speaking members and information to attract new members. These discussions became the future subjects to build a student network independently and to provide the information about Japanese University for the foreign students.

The time was limited for this meeting but it was a good opportunity to share the information with IAC and International sections. I was realized the importance of corporation with International sections to continue IAC activities.

# Technical Tour

Technical Tour in the 2013 JSCE Annual Meeting International Program visited Keiyo Junction on Tokyo Outer Ring Road and Hamacho-Minami Elevated Bridge on Higashi-Kanto Expressway with the cooperation of East Nippon Expressway Co., Ltd.

## 1. Site Visits



**【Keiyo Junction】**  
Tour participants listen to a project supervisor.



**【Keiyo Junction】**  
A construction site in bird-view.

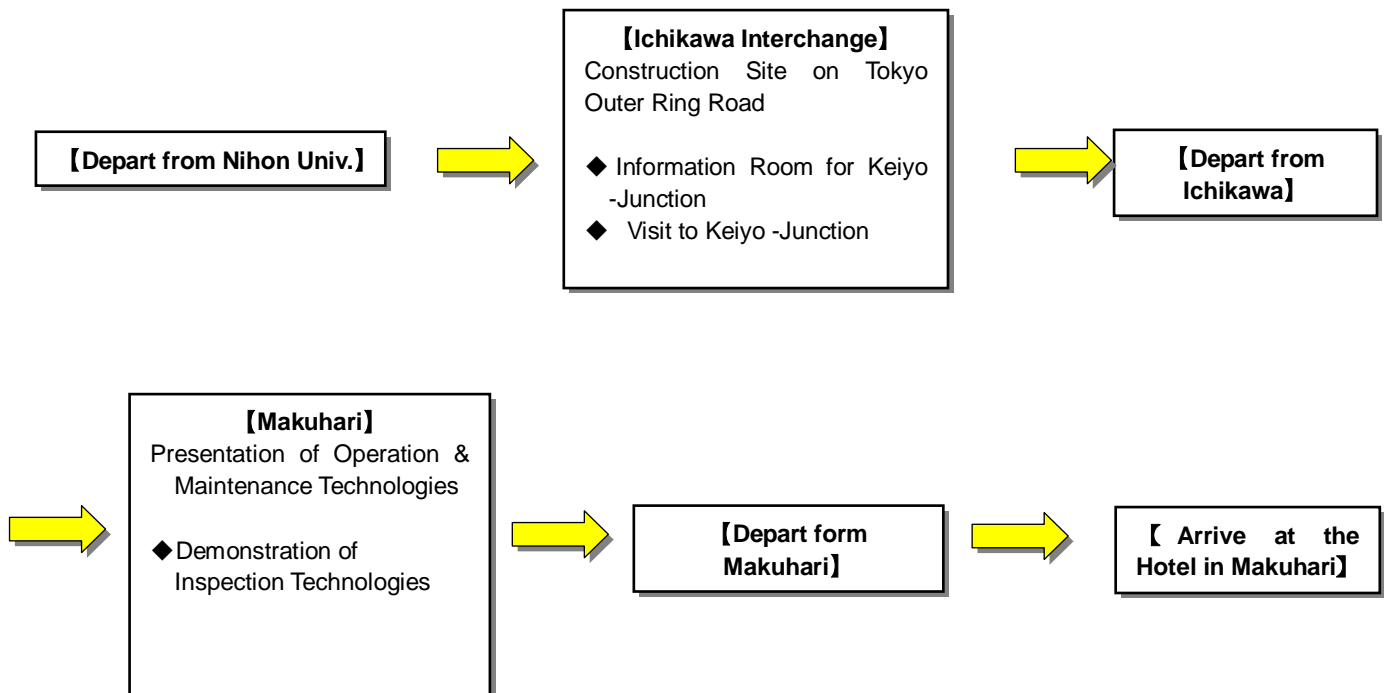


**【Hamacho-minami Elevated Bridge】**  
An inspector explains state-of-art inspection equipment and machines that are used there.



**【Hamacho-minami Elevated Bridge】**  
Inspectors do inspection on the deck and piers on a lift

## 2. Technical Tour Schedule



### ◆2013 JSCE Annual Meeting Report

It was a successful Annual Meeting, which was held at Nihon University Tsudanuma Campus, Narashino City, Chiba on September 4 to 6 this year. We welcomed the Mr. Kensaku Morita the Chiba Prefecture governor at the banquet. About 19,000 members participated and 2,919 papers were presented during the three days. Under the main theme "Civil Engineering-Past Achievements towards Future Challenges," which was a precursor of the 100th Anniversary Celebration events next year, we held a special meeting focusing on infrastructure maintenance. Mr. Akihiro Ota Minister of Land, Infrastructure, Transport and Tourism delivered the speech "Future Public Works" and shared his views and opinions with the audience.

In the International Program, International Chapter Meeting, International Panel Discussion on Infrastructure Maintenance and Renewal for Achieving Sustainable Society, International Summer Symposium for international students, which was offered as part of regular sessions in the annual meeting, WFEO-JFES-AIJ-JSCE Joint Symposium on natural disaster management, International, Workshop on Your Career as a Civil Engineer and Our Society were held as main meetings by IAC. Over 100 participants including international students from 15 countries participated and exchanged ideas and views with each other in these meetings. We are very thankful to those participants, and Mr. Gregory E. DiLoreto ASCE President and Prof. Jongsung Sim KSCE President particularly who have not only participated in these meetings and offered kind support and cooperation with us.

Completing the annual meeting successfully, we keenly realize the importance of cooperation with our overseas counterparts, and will strengthen our network with them.

Thank you very much.

### What's Happening

- Nov 7-9 : 39th PICE National Convention (2013), (Davao, Philippines)
- Nov 8-9 : Symposium of 40th Year Celebration of Diplomatic Relationship Japan between Vietnam (Hanoi, Vietnam)
- Nov 22 : 2013 CICHE Annual Meeting (Taipei, Taiwan)
- Nov 28 : Joint Seminar of PICE and JSCE-Philippines: Civil Engineering Responses to Environmental Issues (UP-Diliman- National Center for Transportation Studies, Manila, Philippines)

### Updates

- The summary of feature articles in the JSCE Magazine is available on the JSCE website.  
<http://www.jsce-int.org/pub/magazine>
- Concrete Committee International Newsletter No. 34  
<http://www.jsce.or.jp/committee/concrete/e/newsletter/Newsletter.htm>

## IAC News Subscription

The IAC News is one of the communication tools to share information and ideas with the members. We would like to invite you, your friends and colleagues to join the communication and to subscribe the IAC News. Please register online: ([http://committees.jsce.or.jp/s\\_iad/iac\\_news\\_e](http://committees.jsce.or.jp/s_iad/iac_news_e)). We look forward to meeting you.

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- **English for those who have studied/ graduated from Japanese colleges and universities** : (<http://committees.jsce.or.jp/kokusai/node/30>)

## Y's Murmuring

Do I know how old the bridge that I cross every day is? Do I check how sturdy the roads that I walk on every day are? Do I ask civil engineers how strong the tunnels that my train runs through every day? The answers are “no.” I assume that the bridges, roads, and tunnels that I use every day are healthy. I never expect in a million year that they fall down, cave in, or collapse. Out of the blue, they do, though. Two weeks ago I attended ASCE’s annual conference in Charlotte, and had chance to listen to some members who work on the Idaho State infrastructure report card. They said that they had interviewed professionals, public officers, scholars, young researchers and others in order to complete the report card, and then, analyzed collected data and released their evaluations to the public. Not only publicizing the evaluation, but also interviewing those local people can raise awareness and interests of structures that they use daily. I hope to see and work for such report card here in Japan.

### 【Comments and Questions】

Please send us your feedback and comments to help us improve the IAC news. We look forward to hearing from you. JSCE IAC: [iac-news@jsce.or.jp](mailto:iac-news@jsce.or.jp)