



Japan Society of Civil Engineers

International Activities Committee

Newsletter

No. 19 February 2007

Message from President



JSCE President Masanori HAMADA

The natural environment is changing in the world: global warming, deforestation, desertification, river erosion and urban heat island phenomena. These occurrences are causing torrential rainfalls, huge storms, high tidal waves, drought and abnormally high temperatures.

While, our social environment is also changing: it is becoming more susceptible to natural disasters: rapid increase in population, densely populated urban areas, depopulated rural areas, human habitation on fragile ground, lack of cooperation and communication between urban communities, and shortfalls in funds for infrastructure developments for the purposes of disaster mitigation and environmental restoration.

Due to these changes, frequency of natural disasters has drastically risen for the last two decades, particularly in the Asian countries; about eight hundred thousand people were killed by earthquakes, tsunami, floods and storms, and of those victims, 90% were found in the Asian region. In almost all developing countries, poverty is the major factor contributing to environmental destruction and natural disasters. The farther poverty deepens, the more seriously the environment is damaged and more widely natural disasters attack the environment, making another impact on the people's lives. This is a vicious poverty-environment-natural disasters spiral, which goes on and on.

Taking into account the impacts of the natural disasters and environment destruction on the human society, we, civil engineers should pursue a professional goal of contributing to the people's welfare on the globe by means of building a safe and secure society. Our responsibility and duty evolve more diverse and heavier as time goes on.

JSCE has put its efforts into obtaining that goal through various activities on several occasions. Organizing seminars, workshops and symposiums in cooperation with overseas engineering societies and academic institutions is one example.

Another is assisting post-disaster relief activities. The Society has dispatched technical teams formed with skilled engineers, scholars and researchers of its members several times: Soon after the Indian Ocean earthquake and subsequent tsunamis and the Pakistan earthquake, technical teams entered into disaster-afflicted areas and joined local engineers in reconstruction and recovery activities. These teams have visited the areas repeatedly since then. Meanwhile, Student members have engaged in disaster education in the earthquake-stricken areas in Indonesia through conducting workshops, lectures and drill for elementary- and junior high school students in cooperation with college students from the local areas.

In 2006, together with the members from Architectural Institute of Japan (AIJ), our members established the NPO Engineers without Borders, Japan (EWOB). Its mission is to transfer civil engineering knowledge and technologies for disaster mitigation and environmental recovery to person to person and place to place, to offer technical assistance to disaster-afflicted areas for their smooth recovery and reconstruction, and to provide disaster education to those areas and continue it until it is rooted in them. Through participating in the EWOB's activities, the Society will further expand its arena so that it would work on creating a safe, secure and healthy society more dynamically.

2006 JSCE Annual Meeting

The 2006 JSCE Annual Meeting was held on September 20 through 22 at Ritsumeikan University, Biwako-Kusatsu Campus in Shiga Prefecture. International programs were officially announced in the Annual Meeting program and drew attention from attendees at the event.

The international programs, consisted of Roundtable Meeting as a main event, Panel Discussion, English Session and so on. There were 25 participants from abroad including 6 from JSCE's overseas sections. The details are given in the next page.

The aim of the Roundtable Meeting is to share information and to find out future issues under a specific topic through information exchanging and discussions. This year's theme was "Restoration and Reconstruction from Natural Disasters." Prof. Hamada President opened the meeting with greetings and introduced that aim. Then the overseas participants gave a presentation in turn and exchanged opinions with each other. In the ending, the opinions exchanged were summarized in a form of "Shiga Resolution for Restoration from Natural Disasters" with the unanimous approval from the participants. The resolution is as follows:

We, civil engineers assembled in Shiga on the occasion of the Roundtable Meeting on "Restoration and Reconstruction from Natural Disasters" in the JSCE 2006 Annual Meeting on September 20th, 2006. Through extensive discussions, we have reaffirmed the common responsibility, mission and goal, and agreed unanimously as follows:

1. We, civil engineers, have committed to the welfare of humanity and reaffirmed that we are of one mind in pursuing a better, safer, healthier environment of society.
2. We have recognized international cooperation as a vital force to fulfill the responsibility to people.
3. We have resolved to further strengthen mutual cooperation and to offer immediate assistance at the events of natural disaster on any part of the Asian region to minimize the impacts of natural disasters and to assuage people's afflictions.
4. We will develop a network to wider areas for sharing common understandings and for exchanging information and experiences.
5. We will promote and advance the science and practice of Civil Engineering and related professions for sustainable developments in the Asian region.

The JSCE Agreement of Cooperation societies and organizations that have agreed on this resolution: Please visit the website: <http://www.jsce-int.org/>

Panel Discussion was carried out under the theme of "Future of Civil Engineers' Challenges to Environmental Issues," chaired by Mr. Osamu Takahashi, Chair the International Activities Committee. 5 panelists presented their views and opinions and exchanged with the audience.

Besides, the English Session and Panel Discussion organized by the ACECC Committee of JSCE and the Joint Seminar hosted by KSCE and JSCE Concrete Committees completed successfully.

A welcome reception for our overseas guests was held at the first night of the Annual Meeting. The participants enjoyed meeting with international colleagues in a friendly atmosphere.



At the welcome reception



Roundtable Meeting

Now that a series of the international programs are recognized as a part of Annual Meeting officially, we have to make more effort than before to enhance the programs to be welcomed and satisfy foreign guests as well as Japanese participants.

Finally, we would like to express our sincere thanks to all the participants, and especially to the Organizing Committee of Annual Meeting, Kansai Chapter of JSCE and Ritsumeikan University and all of the staff members who kindly supported us.

Venue: Ritsumeikan University, Biwako-Kusatsu Campus, Main Conference Room
Date: 20th to 22nd September, 2006

Program

- (1) Roundtable Meeting
Topic: "Restoration and Reconstruction from Natural Disasters"
Overseas Organizations: IEB, PII, KSCE, MACE, CICHE, TCCE, ACECC, EIT
Participants: 60
- (2) Panel Discussion
Topic: "Future of Civil Engineers' Challenges to Environmental Issues"
Panelists: Dr.Lee, Tai Sik (KSCE), Mr.Choibalsan Nomdag (MACE), Dr.Yeong-Bin Yang (CICHE), Dr. Yoshihisa Shimizu (JSCE), Dr. Syunsuke Ikeda (JSCE)
Participants: 56
- (3) International/English Session
Topic: "Projects in Developing Countries – Problems, Solutions and Achievements-"
Presenters: 5
Participants: 26
- (4) KSCE-JSCE Concrete Joint Seminar (Hosted by KSCE & JSCE Concrete Committees)
Topics: "Maintenance and Management Strategy of Infrastructures in Japan and Korea"
Participants: 39
- (5) Panel Discussion (in Japanese)
Topics: "Towards the harmonization of design codes in Asian region"
Participants: 30

*By Katsuji FUKUMOTO
(Secretary General
International Activities Committee,
Obayashi Corporation)*

JSCE Study Tour Grant 2006



Taweep Chaisomphob

*Recipient of
JSCE Study Tour
Grant, 2006*

The Engineer
Institute of
Thailand

Japan Society of Civil Engineers is increasingly gaining popularity due to its active participation in the promotion of civil engineering discipline in national as well as international arena.

It's creative and diverse activities in the field of civil engineering have enabled it to stand as the most active professional societies in the world. JSCE has just completed its 90th birthday and it is obvious that one will expect a lot from the pioneer institution like JSCE for the betterment of mankind in the years to come. Among the varieties of cooperation with other like minded institutions, 'Study Tour Grant' is

one that comes under "International Scientific Exchange Fund" which is awarded to enhance mutual understanding and co-operation between JSCE and overseas societies of the civil engineering discipline. It was my good luck that I was awarded the highly reputed JSCE study tour grant for the year 2004. Indeed, it was a great honor to Nepal Engineers' Association and personally me. I am very much grateful to International Affairs Section, JSCE for its incredible support in designing a perfect study tour schedule considering my subject of interest, i.e. disaster related activities and organizations, on high level. I am quite hopeful that this award has at least paved a way for the amicable relationship between our two professional organizations.

I experienced the Study Tour extremely inspiring and fruitful as it offered an opportunity to observe Japanese technology. What I noticed minutely was the geo-physical features of Japan that is manifested by its dynamic tectonic activities. Japan has been involved in the war against natural disasters for hundreds of years in the name of floods, typhoons, earthquakes, landslides and other hazards. These sorts of disasters have compelled the Japanese people to cope up with such adverse situations. Moreover, high seismic activities, poor topography along with complicated soil conditions and high population density have coerced Japan to devise advanced civil engineering constructions to adapt suitably. Japan faced the most devastating earthquake of the century named Kobe earthquake, 1995. It is believed that if the disaster of the same scale would have occurred in other regions besides Japan, the loss would have been beyond our imagination.

I was highly impressed when I was taken to pay an observation visit to Kansai International Airport. It is indeed a revolutionary civil creation that is also recognized as one of the ten great civil engineering achievements of the 20th century for its construction technologies as well as environmental conservation efforts and social and economical contributions. Regarding the Weighted Equivalent Continuous Perceived Noise Level (WECPNL), 70 are kept within the sea area, which meets the environmental standards of surrounding areas. Likewise, Kansai International Airport Land Development Co. Ltd. has been certified ISO 14001, an international standard for environmental management. Approximately 160,000 take-off and landings per year of the first phase airport is expected to reach a level

of 230,000 take-off and landings after the completion of second phase construction.

The next remarkable feature of Japanese society that I noticed about is its fascinating culture, social norms and values. It was a great pleasure to meet so many interesting and kind people during my stay in Japan who really have a genuine mutual respect for others. The most attractive part that one can observe about the modern Japan is its research-oriented culture. It was found that majority of universities, construction companies, consultancies; government development organizations have their own research wings that enhance the standard of civil engineering and construction business in Japan. The civil engineering profession is getting more challenging in the context of Japan as they are directing their efforts towards above and under the water surface as they are lacking the ground space for civil constructions.

CCES-JSCE Joint Seminar Report

-The 2nd Japan / China Joint Seminar on Urban Development and Intelligent Transport Systems for the Future of Asian Cities (SUDITS 2006) was held in Harbin, China

On July 30, 2006, the above joint seminar, co-hosted by Civil Engineering Academy of China (Urban Road and Transportation Engineering Committee) and Japan Society of Civil Engineers (Committee of Infrastructure Planning Research), co-organized by Harbin Institute of Technology, Toyota Transportation Research Institute (TTRI), Nagoya University and Urban Transportation Centre (UTC) of the Ministry of Construction, and sponsored by Toyota Mapmaster Incorporated, was held in Harbin Institute of Technology.

In the Asian big cities where the population increases rapidly and the

motorization goes, the urban traffic & transportation problems, such as city sprawl, environment and energy problem, traffic accident, a poverty layer, poor mobility of handicapped people, are aggravating increasingly. On the other hand, as the development of information and communication technology, the intelligentization of the traffic & transportation system (ITS) is advanced. The new view of these problem solving is also appearing. To exchange information and ideas continuously, between the researchers in the field of the traffic & transportation and the urban study from Japan who have experienced these problems and the researchers from China who faced to these problems promptly, is considered to be very effective for the sustainable development of the cities in Asia in the 21st century.

Aiming at building a place for such exchange, Japan / China Joint Seminar on Urban Development and Intelligent Systems for the Future of Asian Cities, organized by Nagoya University (Morikawa and the Yamamoto laboratory), co-sponsored by ITS Japan, Toyota Transportation Research Institute (TTRI) and Tsinghua University (Transportation Research Institute), was successfully held in July 2005. The Japanese and Chinese researchers working actively in this field met together and confirmed the necessity for exchanging information about the result of research and the project relative with the traffic & transportation and the urban study. The subsequent seminar was decided to be held periodically in 2006 and after.

In 2006, Harbin Institute of Technology and Toyota Transportation Research Institute (TTRI) worked together as secretariats to prepare the joint seminar. In order to heighten the influence of such activity, the secretariats called the joint sponsorship of Civil Engineering Academy of China (Urban Road and Transportation Engineering Committee)



and Japan Society of Civil Engineers (Committee of Infrastructure Planning Research) and made it realize as stated in the above.

This seminar began from the welcome reception in the night of July 29, and finished by the Banquet in the night of July 30. The number of participants was about 100 (see Photo). The speeches and presentations which were made by dividing into seven sessions on July 30 were 41 in total. Moreover, number of papers including which could be presented as the limiting time is 65. All papers were published, together with 6 presentation materials, in both the paper version and the CD-ROM version.

At the opening ceremony, Prof. Sun Heyi, the vice-president of Harbin Institute of Technology, addresses welcome speech. Continually, Prof. Takayuki MORIKAWA from Nagoya University, Prof. Liu Guisheng, the director of Urban Road and Transportation Engineering Committee of Civil Engineering Academy of China and the president of Beijing General Municipal Engineering Design and Research Institute, and Prof. An Shi, the dean of School of Transportation Science and Engineering of Harbin Institute of Technology addressed speech respectively.

As the representatives of Japan, Prof. Noboru HARATA from University of Tokyo and Prof. Takayuki MORIKAWA gave the keynote speech entitled by "transport and social exclusion: quantitative index and application results" and "a dynamic guidance system (DRGS) using probe vehicle data" respectively. Moreover, at the closing ceremony, Prof. Shoji Mizokami from Kumamoto University, the former Secretary-General of Committee of Infrastructure Planning Research of JSCE gave a speech promising the realization of the 3rd joint seminar in Japan and appealed for the participation from China in 2007.

Besides above-mentioned Prof. Harada and Prof. Morikawa, Prof. Mizokami, Dr. Jiangqian YING, Associate Professor of Gifu University, Dr. Junyi ZHANG, Associate Professor of Hiroshima University and Dr. Ryosuke Ando, Research General Manager & Chief Research Engineer of Toyota Transportation Research Institute (TTRI), made the presentations respectively on the research results and projects in Japan.

Last but not least, gratitude is expressed for various organizations and individuals who supported and took part in the joint seminar. Especially, I deeply appreciate Prof. PEI Yulong, Director of

Also available on web: www.jsce.or.jp

Traffic & Transportation Research Lab of Harbin Institute of Technology, and the staff in Harbin Institute of Technology who did their best for the joint seminar preparation, operation, making of proceedings and so on. Furthermore, the great gratitude is deeply expressed to Japan Society of Civil Engineers, Toyota Mapmaster Incorporated and Harbin Institute of Technology for their financial supports.

This seminar was supported by the Scientific Exchange Fund of JSCE.

By Ryosuke Ando
(Toyota Transportation Research Institute)

KSCE-JSCE Joint Seminar Report



Key members in the seminar

The KSCE (Korean Society of Civil Engineers)-JSCE (Japan Society of Civil Engineers) Joint Seminar on Recent Progress of Concrete/Steel/FRP Hybrid Structures was held in Gwangju, Korea, in conjunction with the Annual Meeting of KSCE on October 13, 2006. This seminar was proposed by JSCE in the wake of the publication of English Edition of the Guidelines of Verification for Steel-Concrete Hybrid Structures by JSCE. A very strong relationship has recently been developed between the two countries in the field of steel and concrete structural engineering. To enhance further collaboration, the seminar was planned on the basis of the agreement of cooperation between KSCE and JSCE.

The seminar began with the opening speech by Professor Sung Wo Lee, Chairman of Structure Committee of KSCE. Then, Professor Tamon Ueda, Chairman of Committee on Hybrid Structures gave opening address including the introduction of JSCE activities on hybrid construction. After the opening ceremony, six lectures were provided with very active discussion.

The KSCE and JSCE published the proceedings of the joint seminar, in which three papers each from JSCE and JSCE are

included. There were 37 participants in the seminar. It is expected that this seminar promote future collaboration and development among engineers and researchers of Japan and Korea.

Finally, we would like to express our sincere thanks to Prof. H. W. Song and the other staffs of KSCE who kindly organized the seminar.

By Hiroshi YOKOTA
(Port and Airport Research Institute)

The JSCE/JCI-VIFCEA/VCA Tokyo Workshop in 2006



Key members in the workshop

Japan Society of Civil Engineers (JSCE)/Japan Concrete Institute (JCI) – Vietnam Federation of Civil Engineering Associations (VIFCEA)/Vietnam Concrete Association (VCA) Tokyo Workshop was held at JSCE Headquarters on 14th and 15th September 2006, based on the conclusions of the JSCE – VIFCEA Workshop, which was held in Ho Chi Minh City University of Technology on 9th December 2005 (See Concrete Committee website).

The purpose of this workshop is to exchange the information on Concrete Standard Specifications in Japan and Vietnam and to discuss the direction of future collaboration. Eventually, the following Tokyo Resolutions were passed:

- (1) JSCE/JCI – VIFCEA/VCA Tokyo Workshop participants confirm the importance to continue our collaboration and to develop Concrete Standard Specifications for Vietnam as a Japanese Technical Cooperation Project (JTCP).
- (2) JSCE/JCI – VIFCEA/VCA Tokyo Workshop participants agree to prepare the framework of JTCP by organizing a committee co-chaired by Koji Sakai, JSCE and Tran Ngoc Hung, VIFCEA.

According to the report by VIFCEA, Vietnam would like to develop a set of building codes and standards by 2010 and to

have the cooperation of the Japanese partners for their completion. JSCE also would like to contribute to the Vietnamese challenge based on our experience. It is expected that the Tokyo Resolutions will work.

By Koji SAKAI
(Kagawa University)

Publications

ARTICLES (From Apr. 2005 to Jan. 2007)

JSCE Guidelines for Concrete No.5:

STANDARD SPECIFICATIONS FOR CONCRETE STRUCTURES –2002 “Seismic Performance Verification”, April 2005, Pages 47, Price: JPY1,470-, ISBN4-8106-0485-3

JSCE Guidelines for Concrete No.6:

STANDARD SPECIFICATIONS FOR CONCRETE STRUCTURES –2002 “Materials and Construction”, November 2005, Pages 443, Price: JPY2,520-, ISBN4-8106-0513-2

JSCE Guidelines for Concrete No.7:

RECOMMENDATION OF ENVIRONMENTAL PERFORMANCE VERIFICATION FOR CONCRETE STRUCTURES (DRAFT), June 2006, Pages 28, Price: JPY1,260-, ISBN4-8106-0576-0

JSCE Guidelines for Concrete No.8:

RECOMMENDATIONS FOR SHOTCRETING (DRAFT), September 2006, Pages 303, Price: JPY3,360-, ISBN4-8106-0559-0

JSCE Guidelines for Concrete No.9:

RECOMMENDATIONS FOR DESIGN AND CONSTRUCTION OF ULTRA HIGH STRENGTH FIBER REINFORCED CONCRETE STRUCTURES (DRAFT), September 2006, Pages 106, Price: JPY1,680-, ISBN4-8106-0557-4

Journal of Global Environmental Engineering vol.11:

August 2006, Pages 73, Price: JPY6,000-, ISSN 1341-1268

Structural Engineering Earthquake Engineering vol.23:

No.1 April 2006, Pages 179, Price: JPY2,039-, No.2 October 2006, Pages 149, Price: JPY2,039-, ISSN 0289-8063

Journal of Hydrosience and Hydraulic Engineering Vol.24:

No.1 June 2006, Pages 176, Price: JPY3,150-, No.2 November 2006, Pages 102, Price: JPY3,150-, ISSN 0912-2508

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