



Report on  
Study Tour Grant 2011

by

Japan Society of Civil Engineers



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I am grateful to the authorities of the Institution of Engineers, Bangladesh (IEB) and the Japan Society of Civil Engineers (JSCE) for giving me the opportunity to take part in the STG program 2011, which is one of the prestigious grants under the Fund for the International Cooperation and Exchange of Engineers. The Grant gave me indeed an opportunity to visit Japan for five days to have a first hand experience on the latest civil engineering technologies practiced in Japan. The program occurred during 26 August to 30 August 2011 mentioned in Table 1.

Table 1: Itinerary of visit

<b>Date</b>	<b>Time</b>	<b>Itinerary</b>
26August 2011	9:00 hrs - 19:00 hrs	Attending the13th international Summer Symposium at Kyoto University (presentation, Lecture, party)
27August 2011	8:00 hrs - 15:00 hrs 16:00 hrs - 19:00 hrs	Kyoto sight seeing (Nijo Castle and the golden pavilion) move to Tokyo (Hotel Sunlite- Shinjuku)
28August 2011	9:00 hrs - 19:00 hrs	Shinjuki Gyoen National Garden
29August 2011	11:00 hrs - 14:00 hrs 16:00 hrs - 19:00 hrs	Saitama University Tokyo Metropolitan Government
30August 2011	10:00 hrs - 11:00 hrs 13:00 hrs - 16:00 hrs	Visiting JSCE Headquarter Visiting PWRI

### **August 26, 2011**

I arrived at 7:30 am at the Kansai International Airport, Osaka. I went directly by train to the Kyoto University to attend the 13<sup>th</sup> International Summer Symposium”. Upon arrival, I met Mr. Yanagawa (International Affairs Section, JSCE) at 10:00 am. In the meantime, he introduced me with three other participants of the STG program (Ms. Sushma Chaudhury - School of Civil Engineering and Architecture - Nepal, Ms. Chua Yie Sue - University Science of Malaysia- Malaysia, Ms. Anjenine Mae S.Guaniao - University of Philippines - Diliman- Philippines) and Dr. Kazunori Wada (Secretary General - International Scientific Exchanging Fund Committee - JSCE). The symposium was divided into a number of sessions. My presentation took place at Seminar Room 5 at 2:30 pm. I presented my paper on the “Confinement effect of fibre reinforced polymer wraps in circular and square concrete columns”. I was the last presenter of this session, chaired by Dr. Takashi Yamamoto, Professor of Kyoto University. At 5:00 pm, a reception party was arranged. After the reception party, we (Dr Wada, Mr. Yanagawa and the participants of STG programme) returned to the hotel. There Mr. Yanagawa introduced me with Dr. Jun Itoh (Waseda University).



At the reception party from left Dr Wada, Chua Yie Sue, Anjenine, Sushma, Abdulla



I am presenting my paper at the seminar room no.5

### August 27, 2011

In the morning 7:00 am, we (Dr. Wada, Dr. Jun Itoh, Mr. Yanagawa & the participants of STG programme) visited Nijo Castle and Golden Pavilion with a tourist guide.

Nijō Castle is a flatland castle located in Kyoto, Japan. The castle consists of two concentric rings of fortifications, the Ninomaru Palace, the ruins of the Honmaru Palace, various support buildings and several gardens. The surface area of the castle is 275,000 square meters, of which 8000 square meters is occupied by buildings. Nijo Castle is one place to seek while in Japan. The castle has tons of history to it, and a short excursion inside proves that Japan has lot of things to show off for their history. After indulging in the fascinating history of this castle, there are many paths to choose from to get a great look of what was going on inside these walls 400 years ago. I really enjoyed Nijo Castle. I had been a little apprehensive about going, since it was supposed to be rather crowded with tourists. Indeed, there were quite a few people there, but it really did not feel all that crowded. I was by no means rushed through the sight. The artwork inside was fantastic (though I couldn't take pictures). In addition to the castle itself, there were some amazing gardens too. There weren't many other sights in that part of Kyoto, but I definitely think this one is worth going out of your way for. In 1994 Nijo Castle was registered by UNESCO on the list of World Heritage Sites.



The front gate of the Nijo Castle



Me with Dr. Jun Itoh (left) and Dr. Kazunori (right) in Nijo Castle

The Golden Pavilion (Kinkakuji) is literally covered in gold - gold leaf. The Golden Pavilion is World Heritage listed and surround by beautiful gardens. Golden Pavilion is the popular name for one of the main buildings of a Buddhist Japanese temple in Kyoto Japan. The name Golden Pavilion comes from the Japanese term Kinkakuji, which literally means the temple of the Golden Pavilion. Rokuon-ji is the formal name of the temple complex in which the Golden Pavilion can be seen. The name of the pond is Kyoko-chi (Mirror pond). The pond contains many large and small islands. Climbing a few steps, you stand at the edge of another small pond, An-min-taku. The small stone pagoda on the island is called Hakuja-no-tsuka (the mound in memory of the white snake).



Dr. wada and STG participants in the Golden Pavilion



The interior of the first floor of the Golden Pavilion



Coin Toss



The head priest's former living quarters (hojo)

### August 28, 2011

In the morning, I went to Shinjuku Gyoen National Garden. Shinjuku Gyoen National Garden is one of the best gardens in Tokyo and a popular location for viewing cherry blossom. Shinjuku Gyoen National Garden contains Japanese and European style sections. Shinjuku Gyoen National Garden is a large park with an eminent garden in Shinjuku and Shibuya (Tokyo, Japan). It was originally a residence of the Naito family in the Edo period. Afterwards, it became the garden under the management of the Imperial Household Agency of Japan. It is now a park under the jurisdiction of the national Ministry of the Environment.

**August 29, 2011**

In the morning, Mr. Yanagawa took me to Saitama University. There we met Dr. Hiroki Yamaguchi (Dean, Graduate School of Science and Engineering, Saitama University) and Dr. Yoshiaki Okui (Professor, Graduate School of Science and Engineering, Saitama University). Dr. Hiroki Yamaguchi took us for a lunch. Dr. Yoshiaki Okui took me to various laboratories (Structure Lab, Concrete Lab, Geotech Lab) and Research Centres. He also introduced me with many research students. He informed me of his current research activities. To have a first hand view on the research activities can act really as a source of inspiration for my future studies in Japan, particularly in the Saitama University. Professor Okui also encouraged me much for my higher studies. I was delightful because my thesis supervisor in BUET, Dr. A.F.M Saiful Amin also studies in this University about 10 years ago for getting a PhD degree. I would like to express my sincere thanks to Dr. Hiroki Yamaguchi and Dr. Yoshiaki Okui who spent their valuable time with me.



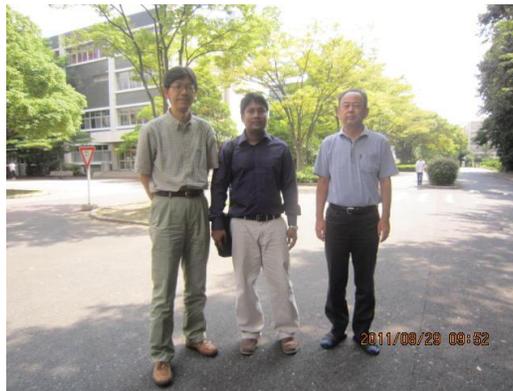
Observing UTM with Dr. Yoshiaki Okui



Observing plantation inside a dam



Observing FRP composite materials



With Dr. Hiroki Yamaguchi (left), Dr. Yoshiaki Okui (right) in the Saitama University Campus

In the afternoon, Mr. Yanagawa took me to Tokyo Metropolitan Government. The Tokyo Metropolitan Government Building also referred to as Tokyo City Hall or Tocho for short, houses the headquarters of the Tokyo Metropolitan Government, which governs not only the 23 wards, but also the cities, towns and villages that make up Tokyo as a whole. Located in Shinjuku, it held the title of the tallest building (by

roof height) in Tokyo, at 243 meters (799 feet), from 1991 to late 2006, when it surrendered its title upon the completion of Midtown Tower. The two panoramic observation decks, one in each tower on floor 45 (202 meters high), are free of charge to the public and contain gift shops and cafes.

### August 30, 2011

I met Mr. Yanagawa at JSCE headquarter at 10:30 am. He took me to the Public Works Research Institute (PWRI). We were four visitors together. A schedule was made for us. We were guided by Chief Staff Mr. Takahashi. The programme was specially arranged by Mr. Kazunori Wada. I am grateful to him. Chief Staff Mr. Takahashi informed me about PWRI through a DVD video session. He took me to a Test track. It was under an experimentation of PWRI. That was to test high speed driving in a 27 degree inclined roadway. I enjoyed it a lot. Then we went to earthquake engineering laboratory. Researcher Mr. Cho briefed about their current research activities. Then we were taken to the Vibration Laboratory. There we observed three dimensional shaking table. I am thankful to Chief Staff Mr. Takahashi for sending me some memorable pictures.



Watching DVD video session in PWRI



Outside PWRI



Mr. Cho briefed about Bridge Reinforcement System



Mr. Takahashi briefed us about Shaking Table



A model to compare EQ resistant road & a normal road



A road with 27 degree inclination to test high speed

After visiting PWRI, Mr. Yanagawa and me went back to my hotel. Taking my luggage, we take a cab and went to the bus stand. There he bade me goodbye. Thanks to Mr. Yanagawa, for his continuous help throughout my journey. At around 7:30 PM, I was in the Haneda Airport. At 31 august 2011 I took off from Haneda Airport at 00:20am for Bangladesh.

### Reflection

I am really amazed with the grandness and beauty of the Nijo Castle and Temple of the Golden Pavilion that portrays the rich cultural heritage of Japan. These two heritages reflect the creativity and interest of Japanese in civil engineering construction in another Bygone Era.

It was a golden opportunity to visit one of the most reputed Japanese Universities, Saitama University, Civil and Environmental Faculty of Engineering. Saitama University is one of the respected national universities for higher education and research in Japan. The university holds a total of five faculties: Faculty of Liberal Arts, Faculty of Education, Faculty of Economics, Faculty of Science and Faculty of Engineering. There are also five graduate schools in the university: Graduate School of Cultural Science, Graduate School of Education, Graduate School of Synthetic Science of Economy, Graduate School of Science and Engineering, and Graduate School of Policy Science. University's faculty members are currently engaged in a wide spectrum of research in the field of civil and environmental engineering. They are recently exhibiting interest on Design method for steel and composite structures, Research on safety factors for structural design, Mechanical model of laminated rubber bearings for seismic design, Redundancy and vulnerability assessment of steel structures for bridge maintenance, Development of super long-term deterioration prediction models for crystalline rocks. Finally, the study tour gave me the chance to see my options to study my Master's Degree in Japan, particularly in Saitama University. The professional bodies and organizations such as Japan Society of Civil Engineers (JSCE) which actively conduct learned society activities such as conferences, seminars, symposium, STG tour, workshops. These shows the keen interests of Japanese civil engineers is acquiring new knowledge and continuing professional development.

I trust my visit to Japan will further strengthen cooperation between members of the engineering profession in both Japan and Bangladesh and between the JSCE, IEB and BUET. It has benefited greatly a young civil engineer like myself in many ways. The lessons learnt will be disseminated to fellow engineers to further promote and develop civil engineering in Bangladesh to benefit both engineers and society. In my opinion, the key success of the development of civil engineering in Japan is mainly due to the vast pool of very hardworking, innovative, technically competent and responsible Japanese civil

engineers. From my observation, Japanese civil engineers generally have the attributes stated above that can be the role model of civil engineers in Bangladesh and other parts of the world. I would like to express my deep appreciation to Dr. A.F.M Saiful Amin, BUET, IEB and JSCE Authorities and all other persons concerned for this extraordinary opportunity.