Saitama University



Civil & Environmental Engineering

Issue No. 13 2008

The International Collaborative Graduate Program on Civil and Environmental Engineering (ICGP) chaired by Prof. Hiroshi Mutsuyoshi has been selected as one of the most promising and distinguished graduate programs in Japan by the Ministry of Education, Culture, Sports, Science and Technology under the ministry's Support Program for Improving Graduate School Education. Sponsored by the ministry since 2007, the three-year support program is designed to improve graduate school education by enhancing organizational and systematic activities.

Most of postgraduate programs in civil engineering in Japan have traditionally focused on introducing infrastructure development technology to Japanese students for the purpose of national development. However, balancing infrastructure development and environmental protection is now an important subject not only in Japan but also throughout Asia and the Pan-Pacific region. Students should learn about the basic and advanced engineering technologies that are associated with global environmental protection, environmental problems, and infrastructure development. Students in all countries, particularly developing countries, should receive systematic education in these areas. This masters program extends the International Graduate Program on Civil and Environmental Engineering offered by the Department of Civil and Environmental Engineering by strengthening collaborations with Thammasat University in Thailand, the University of Moratuwa in Sri Lanka, and the University of Hawaii in the United States. The goal is to produce advanced engineers and researchers who are capable of working internationally in these technical fields.

The basis of the current program is the International Graduate Program on Environmental Management and Infrastructure Development Engineering, which was established in 1992 by the Department of Civil and Environmental Engineering. This program began with



International Exchange Forum organized by ICGP

fifteen doctoral candidates, five of whom received scholarships from the Japanese government. The program was extended to include Master's degree students in 1993. In 1996, the Asian Development Bank-Japan Scholarship Program (ADB-JSP) was established to support fifteen Master's degree students in the international graduate program per year. The program also began accepting foreign students with scholarships from the World Bank and the Inter-American Development Bank. The UNESCO Chair program was established in 1996. Highly regarded in Japan and overseas, the program offered courses and research guidance in English to Japanese students as well as foreign students supported by those scholarships. Since 1993, about 300 Japanese students and about 170 foreign students have obtained Master's degrees under the program and conducted work in various countries. The program was reorganized in 2006 as the International Graduate Program on Civil and Environmental Engineering.

The ICGP successfully organized two major events including the International Exchange Forum and the International Workshop on Recent Technology in Structural and Transportation Engineering on March 5th -6th, 2008. These events were held at Saitama University in cooperation with a number of universities throughout the world such as the University of Hawaii in USA, the University of Moratuwa in Sri Lanka, Thammasat University in Thailand, Hanoi University of Civil Engineering in Vietnam, Bangladesh University of Engineering and Technology, and Mongolian University of Science and Technology. More than 100 participants attended these events. During the International Exchange Forum, many topics were discussed among partner universities to improve the graduate program such as designing the graduate program in partner universities, cultivation of human resources for international infrastructure development and environmental engineering etc. The International Workshop on Recent Technology in Structural and Transportation Engineering was also successfully organized with 13 presentations. This workshop provided an effective platform for the exchange of information and ideas on current and future issues as well as developments regarding civil engineering.

You may view the information of ICGP as well as some of the pictures taken during the events organized by ICGP at this site (http://www.civil.saitama-u.ac.jp/ icgp/). The ICGP looks forward to continued cooperation with partner universities in the future.

Graduation Time Congratulations

- <u>September 2007</u> –

Mr. Le Quoc Hung from Vietnam was awarded his PhD degree under the guidance of Prof. Asaeda.

Mr. Resurreccion Augustus Cooper from Philippines was awarded his PhD degree under the guidance of Prof. Komatsu.

Mr. Tri Basuki Joewono from Indonesia was awarded his PhD degree under the guidance of Prof. H. Kubota.

Mr. Lourenco Soares from East Timor was awarded his MEng degree under the guidance of Prof. Kazama.

- <u>March 2008</u> —

Mr. Azhar Kholiq Affandi from Indonesia was awarded his PhD degree under the guidance of Associate Prof. K. Watanabe.

Mr. Min Maung Maung from Myanmar was awarded his PhD degree under the guidance of Prof. K. Watanabe.

Mr. De Silva Gallage Sudhira Yasapriya from Sri Lanka was awarded his PhD degree under the guidance of Prof. Mutsuyoshi.

Mr. Goit Chandra Shekhar from Nepal was awarded his MEng degree under the guidance of Associate Prof. Saitoh.

Mr. Myo Thant from Myanmar was awarded his MEng degree under the guidance of Prof. Kazama.

Ms. Damdindorj Dejidmaa from Mongolia was awarded her MEng degree under the guidance of Associate Prof. Oguchi.

Mr. M. M. Younus Ali from Bangladesh was awarded his MEng degree under the guidance of Prof. Kuwano.

Ms. Hnin Wityi from Myanmar was awarded her MEng degree under the guidance of Prof. Asaeda.

Mr. Nandasena Napayalage Aruna Kithsiri from Sri Lanka was awarded his MEng degree under the guidance of Prof. Tanaka.

Ms. Tran Trang Huyen from Vietnam was awarded her MEng degree under the guidance of Prof. Tanaka.

Ms. Mandadige Samintha Anne Perera from Sri Lanka was awarded her MEng degree under the guidance of Prof. Komatsu.

Research Profile Series (12) Vibration Engineering Laboratory

The Vibration Engineering Laboratory is a part of the Department of Civil and Environmental Engineering at Saitama University. The Vibration Laboratory provides students with both courses and research programs on earthquake engineering which are very interdisciplinary. The laboratory is being run by Professor Kazuyoshi Iwashita and Assistant Professor Hisashi Taniyama. Currently, there are 10 students (8 Japanese and 2 foreign students) including 2 doctoral students, 4 master's students, and 4 undergraduate students.

The research activities of the vibration laboratory cover a wide spectrum of disciplines in topics related to geomechanics and earthquake engineering. The main areas of research activities for the laboratory consist of: methodology on seismic response analysis of soil-structure systems; advancement of earthquake resistant design for dams, underground structures, energy facilities and so on; mechanism for the occurrence of strong motion earthquakes nearby faults; fault structure and process of fault formation; analysis of dynamic collapse of ground: mechanics of granular materials and numerical experiments on them; and the deformation of surface soil layers due to seismic faulting.

The laboratory's current research projects include, e.g. influence of particle shape on strain localization and anisotropy of quasi-static granular materials using discrete element based numerical simulations; experimental study on the structural changes in the granular assembly when varying the particle concentration and shear-deformation rate in the transitional regime of granular flow; numerical analysis about source process of the year 2000 Tottori-ken Seibu earthquake considering the effect on surface soil layers; and the development of shear fracture in unconsolidated ground materials using discrete element based numerical simulations.

The laboratory remains well equipped. The laboratory has developed a shear flow apparatus to study the transitional and rapid granular flows. The laboratory owns a high speed digital camera, particle tracking software, and two shaking tables. The laboratory has developed many advanced computer programs which are used for the research work.



The main goal of the vibration laboratory is to develop leaders in education, industry and government who are able to use their acquired knowledge to improve society. The program provides a comprehensive framework of courses in the broader field of civil and environmental engineering with opportunities to develop specialized expertise. It emphasizes the development of integrated team work, leadership, and creative research skills.



Mr. Phan Huy Dong from Vietnam was awarded his MEng degree under the guidance of Associate Prof. Osada.

Mr. Deepagoda T. K. K. Chamindu from Sri Lanka was awarded his MEng degree under the guidance of Associate Prof. Kawamoto.

Mr. Bari Md. Wasiul from Bangladesh was awarded his MEng degree under the guidance of Associate Prof. Suzuki.

Mr. Manalo Allan Capilar from Philippines was awarded his MEng degree under the guidance of Prof. Mutsuyoshi.

Mr. Rauf Asim from Pakistan was awarded his MEng degree under the guidance of Prof. Mutsuyoshi.

Mr. Awall Md. Robiul from Bangladesh was awarded his MEng degree under the guidance of Prof. Yamaguchi.

Mr. Jongkittipong Wachira from Thailand was awarded his MEng degree under the guidance of Prof. H. Kubota.

Mr. Liang Hsun Fu from Taiwan was awarded his MEng degree under the guidance of Prof. H. Kubota.

Welcome New Students

Mr. Nimer Fahid Assad from Syria was awarded his MEng degree under the guidance of Prof. K. Watanabe.

Ms. Wah Wah Han Su Yin from Myanmar was awarded her MEng degree under the guidance of Prof. Tanaka.

Ms. Thanda Thatoe Nwe Win from Myanmar was awarded her MEng degree under the guidance of Associate Prof. Osada.



Chotesuwan Anawat Thailand, Doctor



Thidar Ave Myanmar, Doctor



A. K. Karunarathna Sri Lanka, Doctor



Mahmood Zafar Pakistan, Doctor



Korea, Doctor



Nguyen Thuy Ba Vietnam, Doctor

April 2008



Kim Kyung Hwan Nguyen Giang Hoang Rashid Md. Harun Or Vietnam, Doctor



Aung Kaythi Myanmar, Master



D. A. Gayan Gunaratne Sri Lanka, Master



K. G. I. D. Kumari Sri Lanka, Master



Razzaq Muhammad Kashif Pakistan, Master



Zhang Han Bing China, Master



Bangladesh, Doctor



Uangudom Aussanee Thailand, Master



Shrestha Santa Man Nepal, Doctor



Uddin Md. Nazim Bangladesh, Master



Gull Jawad Hussain



Nguyen Tung Hoang Vietnam, Master



Ke Wenjun China, Master



Phyo Min Htet Myanmar, Master



Sazzad Md. Mahmud Bangladesh, Doctor



Hasan Mohammad Mahadi Bangladesh, Master



Rabbi Abu Taher Md. Zillur Bangladesh, Master



Sakunwanich Wiwat Thailand, Master



Chhoden Tshering Bhutan, Master



I. M. T. N. Illankoon Sri Lanka, Master



Rafdinal Rahmita Sari Indonesia, Master





Dissanayake Amila Prasanna Sri Lanka, Master



Mulmi Sagar Prasad Nepal, Master



Tariq Kh. Adeel Pakistan, Master



Nag Mitali Bangladesh, Master



Pakistan, Master







News

-<u>New Appointments</u> -

Dr. Kenji Harada was appointed as an assistant professor of Environmental and Hydraulic Laboratory in April 2008. His research field is Hydraulic Engineering. Especially, his research theme is tsunami and coastal engineering by field survey, hydraulic experiment and numerical analysis. One of his research topics is tsunami prevention countermeasure by using coastal forest.

Dr. Shinya Tachibana was appointed as an assistant professor of Geosphere Research Institute in April 2008. His research field is mathematical modeling of mechanical behavior of geomaterials and numerical simulation of ground deformation associated with geotechnical and environmental problems.

- Faculty on Move -

Prof. Fumio Tsunoda of Vibration Engineering Laboratory retired from Saitama University in March 2008, where he had served in the field of structural geology and geo-environments and seismo-tectonics.

Prof. Hidehiko Kazama of the Geosphere Research Institute retired from Saitama University in March 2008. At present he has gone to East Timor as a JICA expert.

-Faculty Promotion

Dr. Kazuyoshi Iwashita was promoted to Professor of Vibration Engineering Laboratory in April 2008. His research field is mechanics of granular materials, dynamic properties of soil materials, seismic soil structure interaction.

Awards

Prof. Hiroki Yamaguchi was awarded in June 2008 by JSCE with the best paper award of the 54th Structural Engineering Symposium (J. of Structural Eng., Vol. 54A, 2008), for the paper entitled "A study on the vibration characteristics change of the steel truss bridge by the real damage of diagonal member", co-authored with Mr. Yoshioka, T. (Doctoral student), Mr. Ito, S. (Master student) and Mr. Harada, M. (Nippon Engineering Consultants Co.).

Ms. Samintha M. A. P. was honored by the American Geophysical Union 2007 Fall Meeting Outstanding Student Paper Award (Hydrology section) for her paper entitled Chamindu of Soil Mechanics Lab, Mr. N. "Solute diffusivity of repacked volcanic ash soil: Effect of changes in pore size Ms. S. Sasikala (a Monkasho scholar) distribution due to soil compaction." at the of Hydraulic and Environmental Eng. conference held on December 10 to 14, 2007 at the Moscone Center in San Francisco, Excellence from the Japan Society of California, USA.

Dr. Rabin Tuladhar (a JSPS Postdoctoral fellow), Mr. Manalo Allan Capilar of Structural Material Lab, Mr. D. T. K. K. in September 2007.

A. K. Nandasena (ADB scholars) and Lab were awarded the Certificate of Civil Engineers for the distinguished presentation of his/herself research achievements in the 9th International Summer Symposium held in Yokohama

Message from Alumni

I was enrolled in the Department of Civil and Environmental Engineering at Saitama University in October 2002 and obtained my Ph.D. degree in September 2005.

My teachers and colleagues taught me how to work hard and be effective. The education I received here was excellent, practically oriented, and quite different from my previous studies. I was work-



ing as a Research Assistant in the Geosphere Research Institute of Saitama University. Since returning back to my home country, I have been working at the World University of Bangladesh (WUB) as an Assistant Professor in the Department of Civil Engineering. I introduced advanced research based knowledge and teaching methodology to the World University of Bangladesh and students are getting a more well-rounded utilitarian education enabling their economic freedom.

I had various opportunities to learn about Japanese culture and staying in Japan was a wonderful and memorable experience. I will never forget the hanabi (fireworks), hanami (flower viewing) or the mikoshi omatsuri (religious festival) in Japan. I would like to extend my sincerest thanks to the Foreign Student Office for always supporting us and giving special guidance to the foreign students. My greatest desire is that many foreign students will be able to come to Saitama University for advanced research and knowledge and that it contributes to the future development of their countries.

With best regards, Sharif Moniruzzaman Shirazi

Message from the Foreign Student Office

The spring term for the 2008 graduate program started in April. This year one doctoral student and eighteen master's students have come to our department. We hope this will be a great opportunity for them to broaden their research and learn about Japanese culture.

Last September, we enclosed a questionnaire on an alumni directory when we sent you the 2007 Newsletter. We would like to express our thanks for your cooperation in answering the questionnaire. Here, we are pleased to inform you that we have recently issued the alumni directory.

Editorial Board for this issue Chief Editor: Professor K. Tsunokawa Design and Layout: K. Nakazawa

If you notice any corrections, please feel free to contact the FSO anytime. We are looking forward to hearing from you. We wish you continued success in your career.

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