Saitama University

Newsletter

International Graduate Program on
Civil & Environmental Engineering

Issue No. 14 2009

Our program on Civil and Environmental Engineering was awarded by MEXT (Ministry of Education, Culture, Sports, Science and Technology) with ICGP as one of the most promising and distinguished graduate program in Japan. We successfully organized the International Exchange Forum and the International Workshop on Recent Technology in Structural and Transportation Engineering on March 5th & 6th, 2008 as one of the major activities under ICGP.

In an effort to make the graduate program more international, the second year program focuses more on faculty and student exchanges with partner universities (The University of Hawaii at Manoa, USA, Thammasat University, Thailand, and The University of Moratuwa, Sri Lanka). Since the inception in November 2007 to March 2009, three visits by our faculty members and students have been carried out to Thammasat University, and two visits to each the University of Hawaii at Manoa and the University of Moratuwa. A typical visit consists of three to six faculty members and three to twelve students, respectively. Upon each visit, presentations from faculty and students, and discussions were conducted to learn the research activities of each party and to study the possibility of conducting joint research activities. Faculty members typically stay for a week and the stay for exchange students varies from one week to one month at partner universities.

From the partner universities, faculty members and students were also invited to visit our department. Up until now, five faculty members from partner universities (2 from Thammasat, 2 from Moratuwa and 1 from Hawaii) have visited our department for short term lectures and six students (3 from Thammasat and 3 from Moratuwa) have joined the exchange program for various durations of between 3 weeks and 2 months.

Dr. Archilla from the University of Hawaii sharing his research and experience

Evaluation of the implemented program is being carried out regularly as we strive to improve the quality of the program and provide better educational and research opportunities to our students.

Greetings from the Head of the Foreign Student Office

With 15 years of successfully running the International Graduate Program, our achievements were recognized by the Ministry of Education, Culture, Sports, Science and Technology with the Support Program for Improving Graduate School Education awarded to the International Collaborative Graduate Program on Civil and Environmental Engineering (ICGP). We gladly shared the information on this achievement in last year's Newsletter (Issue No. 13 2008) which also covered the initial activities conducted by the ICGP. The grant has provided our graduate students with wider opportunities to be more exposed to multidimensional research activities and multicultural educational environments through exchange programs. Qualified students have been sent on exchange programs to our partner universities in the United States, Thailand and Sri Lanka. Faculty exchanges have provided our faculty members with new learning environments and have strengthened collaboration and research activities with our partner universities. Furthermore, faculty members from our partner universities who visited us have contributed to improving the research knowledge of our graduate students through face to face discussion on various research topics. With this excellent opportunity, I would like to invite you to join our endeavor to make this program the best it can be.

Sincerely yours,

Professor Koji Tsunokawa
Head of FSO

Graduation Time Congratulations

September 2008

Mr. Eric Augustus Jacinto Tingatinga from the Philippines was awarded his PhD degree. His doctoral thesis was on the "Gravity effects on earthquake response of analytical building models" under the guidance of Prof. Kawakami.

Mr. Nguyen Hop Minh from Vietnam was awarded his PhD degree. His doctoral thesis was on the "Constitutive modeling for strain-softening behavior and microstructural anisotropy of geomaterials" under the guidance of Associate Prof. Suzuki.

Mr. Park Hyuck from Korea was awarded his PhD degree. His doctoral thesis was on the "Development of shear-flow-visualization coupling test apparatus and its application to soft sedimentary rock" under the guidance of Associate Prof. Osada.

Ms. Sasikala Shanmugasuntharam from Sri Lanka was awarded her PhD degree. Her doctoral thesis was on the "Effect of water level fluctuations on nitrogen removal, plant biomass and radial oxygen loss (ROL) in a vertical subsurface wetland mesocosms" under the guidance of Prof. Tanaka.

Mr. Subodh Dhakal from Nepal was awarded his PhD degree. His doctoral thesis was on the "Evolution of multiple collisions and micro-structures in moderately dense to dense granular shear flow" under the guidance of Prof. Iwashita.

Mr. Jhabindra Prasad Ghimire from Nepal was awarded his PhD degree. His doctoral thesis was on the "Numerical investigation of noise generation and radiation from modular bridge expansion joint" under the guidance of Associate Prof. Matsumoto.

Mr. Nima Kelzang from Bhutan was awarded his MEng degree. His master's thesis was on the "Evaluation of measures implemented to alleviate urban transport externalities" under the guidance of Prof. Tsunokawa.

March 2009

Mr. Abdel-Rahman Mohamed Abdel-Gawad from Egypt was awarded his PhD degree. His doctoral thesis was on the "A synthesis of hydrogeochemical studies on

Research Profile Series (13)
Soil Mechanics Laboratory
(Environmental Geotechnical Engineering Research Group)

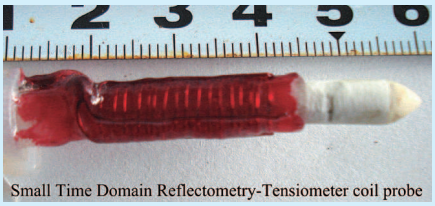
The Environmental Geotechnical Engineering Research Group endeavors to generate new knowledge and provide scientific bases for understanding, quantifying and predicting physical and chemical key-processes taking place in soils. We pursue fundamental approaches to problem solving that combine theories with experiments and emphasize quantitative and measurable solutions. The laboratory has extended its interest fields profoundly towards environmental soil physics, particularly development of predictive models for gas and solute transport in natural soils as well as in artificial systems like landfill covers and agricultural soils, contaminant transport and adsorption onto soils, soil-colloid and soil-colloid facilitated pollutant transport process in soil, and assessment of hydraulic properties of water repellent soils.

The research group is led by Professor Toshiko Komatsu and Associate Professor Ken Kawamoto. Presently the laboratory accommodates four Ph.D. students, seven masters' students and several undergraduate students.

The Environmental Geotechnical Engineering Research Group maintains an extensive suite of laboratory equipments for teaching and research purposes. In additional to traditional geotechnical test equipments and soil-water measuring equipments, the laboratory has modern analytical instruments for trace chemical and trace gas analysis. Besides, the laboratory makes and modifies equipments and devises for the use in advanced experiments, for instance, column apparatuses for gas dispersion measurements and small coil probe sensors of Time Domain Reflectometry-Tensiometer for a simultaneous measurement of soil-water content and metric potential.

Past and present students of the laboratory have achieved a great success in their research activities through team works. For instance, the study on water repellent soils is an extension to a past research. The water repellency research team estimates water-repellency characteristics of soils. In an extension to this research, persistence of water-repellency is assessed after heat pretreatment at various temperatures in an attempt to understand the effect of temperature on soil organic matter. Advancement of this research is to estimate hydraulic properties of water-repellent soils, which is a challenging task since the water movement in water repellent soils is more uneven and unstable than in normal soils. Yet, the precise guidance and close monitoring by the professors ensure the quality of research outcome that has been valued at leading scientific forums.

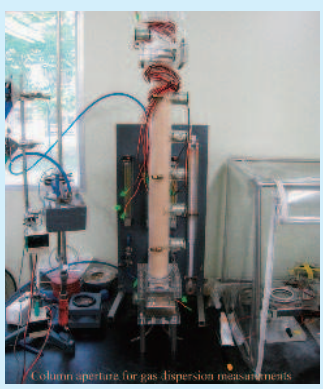
High Performance Liquid Chromatograph and Ion Chromatograph



Small Time Domain Reflectometry-Tensiometer coil probe

The laboratory conducts the research in collaboration with various local institutions such as Center for Environmental Science in Saitama (CESS), National Institute for Agro-Environmental Sciences (NIAES), and Hokkaido University, and international counterparts such as Aalborg University, Denmark, University of California, Davis, University of Philippines, Diliman, and University of Moratuwa, Sri Lanka.

The aim of the Environmental Geotechnical Engineering Research Group in soil mechanics laboratory is to prepare students as engineering professionals who will have the depth and breadth of knowledge, sense of social and ethical responsibility, commitment to a safe environment and a desire to serve the society in leadership positions.



Column aperture for gas dispersion measurements

the fluoride-rich groundwater in Mizunami Area, Japan" under the guidance of Prof. K. Watanabe.

Ms. Ei Ei Mon from Myanmar was awarded her MEng degree. Her master's thesis was on the "Irreversibility of 2, 4-Dichlorophenoxyacetic Acid Sorption onto a Volcanic Ash Soil and Kaolinite" under the guidance of Prof. Komatsu.

Ms. Gansukh Nyamdavaa from Mongolia was awarded her MEng degree. Her master's thesis was on the "Mobilization and deposition of soil colloids extracted from a volcanic ash soil in saturated sand" under the guidance of Associate Prof. Kawamoto.

Mr. Mohammad Nurul Islam from Bangladesh was awarded his MEng degree. His master's thesis was on the "Effect of intermediate principal stress on the shear behavior of granular materials using 3D-DEM" under the guidance of Associate Prof. Suzuki.

Mr. Tamrakar Aswain Bir Singh from Nepal was awarded his MEng degree. His master's thesis was on the "Effects of nonlinearity in soil upon optimal radius of single piles subjected to kinematic interaction" under the guidance of Associate Prof. Saitoh.

Mr. Munir Sarfraz from Pakistan was awarded his MEng degree. His master's thesis was on the "Techniques of parallel computing to accelerate engineering computations" under the guidance of Prof. Kawakami.

Mr. Lam Quang Huu from Vietnam was awarded his MEng degree. His master's thesis was on the "Shear behavior of reinforced concrete and prestressed reinforced concrete beams using high-strength concrete" under the guidance of Prof. Mutsuyoshi.

Mr. Surawi Karyadi from Indonesia was awarded his MEng degree. His master's thesis was on the "CPOM quantity and quality differences in both magnitude and timing in a forested stream: a case study of Nakatsugawa River, Saitama, Japan" under the guidance of Associate Prof. Fujino.

Mr. Ahn Changwan from Korea was awarded his MEng degree. His master's thesis was on the "Evaluation of the fracture area by using image analysis based on Hessian matrix" under the guidance of Associate Prof. Osada.

Ms. Vu Thao Thi Phuong from Vietnam was awarded her MEng degree. Her master's thesis was on the "Study on nitrogen removal efficiency and biomass harvesting of *Spirodela polyrhiza* by using mathematical dynamic growth model" under the guidance of Prof. Tanaka.

Welcome New Students

October 2008


Amarasinghe Sajeewani Rajika
Sri Lanka, Doctor


Anu Sharma
Nepal, Doctor


Azmeri Rahman
Bangladesh, Doctor


Imma Widyawati Agustin
Indonesia, Doctor


Perera S. V. Thilanka Janaka
Sri Lanka, Doctor


Rama Mohan Pokhrel
Nepal, Doctor


Samarakoon T. M. Walawwe R. Methsiri Bandara
Sri Lanka, Doctor


Praneeth Nishadi Wicramarachchi
Sri Lanka, Doctor


July Win
Myanmar, Master


Muhamad Budi Saputra
Indonesia, Master


Rouf Md. Abdur
Bangladesh, Master


Sayeed Md. Abu
Bangladesh, Master

April 2009


Ahn Changwan
Korea, Doctor


Shah Prem
Nepal, Doctor


Zhang Tiantong
China, Master


Mustafizur Rahaman
Bangladesh, Master


A. M. N. M. Adikaram
Sri Lanka, Master


Cao Dung Vu
Vietnam, Master


Malik Adnan Anwar
Pakistan, Master


Muhammad Naveed
Pakistan, Master


Nay Myo Nyunt
Myanmar, Master


Qazi Asif Nawaz
Pakistan, Master


Rahman Md. Zahedur
Bangladesh, Master


Gombo Nyamsuren
Mongolia, Master

News

New Appointments

Dr. Djoen San Santoso was appointed as an assistant professor of Design and Planning Laboratory in December 2008. His research interests are travel demand analysis, transportation planning, public transportation, travel behavior and built environment.

Dr. Junji Yagisawa was appointed as an assistant professor of Environmental and Hydraulic Laboratory in April 2009. His research field is hydraulic engineering, especially river flow analysis with vegetation. One of his research topics is to develop method for classifying the possibility of forestation in rivers.

Faculty on Move

Prof. Masanobu Oda of Soil Mechanics Laboratory retired from Saitama University in March 2009 and became an emeritus professor. He is currently working as a visiting professor at Saitama University.

Dr. Kentaro Yutani of Environmental and Hydraulic Laboratory resigned from Saitama University in March 2009. He is currently working as a Lecturer at Kisarazu National College of Technology.

Dr. Ha Minh of Structural Material Eng. Laboratory resigned from Saitama University in March 2009. He is currently working for Hanoi University of Civil Engineering in Vietnam.

Faculty Promotion

Dr. Yoshiaki Okui was promoted to Professor of Structural Engineering Laboratory in April 2009. His research field is applied mechanics and bridge engineering.

Dr. Hidenori Mogi was promoted to Associate Professor of Foundations and Earthquake Engineering Laboratory in April 2009. His research field is earthquake engineering.

Dr. Kunihiro Sakamoto was promoted to Associate Professor of Design and Planning Laboratory in April 2009. His research field is transportation planning.

Awards

Prof. Hiroshi Mutsuyoshi received the JCI (Japan Concrete Institute) Award for distinguished service in 2009.

Assoc. Prof. Kiichi Suzuki was awarded IJOG Excellent Paper Award in October 2008 by the International Association for Computer Methods and Advances in Geomechanics.

The following students were awarded the Excellent Presentation Award in the 10th International Summer Symposium, JSCE, 2008: Takako Matsunaga, Giang Hoang Nguyen, Dinh Van Hiep, Anurudda Kumara Karunarathna, Abdur Rahman Bhuiyan, Sharif Moniruzzaman Shirazi, Sanjay Kumar Jha.

The following students were awarded the Excellent Presentation Award in the 63rd JSCE Annual Convention in 2008: Keiko Kawana, Yusuke Suzuki, Kyosuke Kato.

Message from Alumni

In April 2006, after fierce competition, I was enrolled in the International Graduate Program on Civil and Environmental Engineering at Saitama University for my Master's degree, a two year course. The two years passed quickly, but at the same time, it was a valuable two years of my life in terms of academic achievement.

With the unique blend of Japan's tradition of elegance, strong sense of commitment, current state of the art facilities and practical oriented teaching in a friendly atmosphere, the Department of Civil and Environmental Engineering at Saitama University stands as one of the best places to study at, from which I have been hugely impressed.

Aside from the core engineering education at the department, I benefited from learning the Japanese language, which not only made my life easier in Japan but also helped me understand Japanese culture and society, paving the way to know and make Japanese friends which I believe to be an asset. In addition, studying with students from various countries provided me with the opportunity to get to know them and learn about their cultures too, and this will remain with me as a pleasant memory for a long time.

The education I received in this program has been crucial to my career. Along with continuing research in the earthquake engineering field, I am able to fully utilize the knowledge and skills acquired in my present occupation as a tunnel design engineer.

The International Graduate Program on Civil and Environmental Engineering must surely be the right choice for anyone who is seeking to excel as a researcher or an engineer in the Civil and Environmental Engineering Field.

Best Wishes,
Chandra Shekhar Goit

Message from the Foreign Student Office

How are you doing these days? We hope all of you are working very hard. We are happy to send you the 14th issue of the Newsletter.

At this time, we would like to introduce a new reliable FSO member to you. Dr. Djoen San Santoso, one of our alumni, has joined us as one of our FSO members in April 2009. At present, he is working as an Assistant Professor at Saitama University.

In addition, we are pleased to inform you that we have issued the prospectus 2009. Dr. Santoso has made a great contribution to the renewal of the prospectus for our department.

Lastly, we would like to thank all of you for your cooperation in issuing the Newsletter 2009. We might be sending you an email to request an article for the next Newsletter. We eagerly wait for your reply.

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