

# Saitama University

# Newsletter

International Graduate Program for Overseas Students

Issue No. 9 2004

Civil & Environmental Engineering

Established more than a decade ago, the special program for international students on "Environmental Management and Infrastructure Development Engineering" in the Department of Civil and Environmental Engineering is expanding and becoming stronger over time. The program now has an enrollment of more than sixty-five international students coming from seventeen countries. We are very pleased to announce that twenty-one new international students joined our program in April 2004. Although most of them are supported by the Monbukagakusho and ADB-JSP (Asian Development Bank – Japan Scholarship Program) scholarships, four of them have joined the program as private students. The increasing number of private students is a welcome development, indicating a preference for our program.

As our enrollment grows, the eligibility requirements and selection procedure for scholars have been tightened both for the Monbukagakusho and ADB-JSP scholarships. To be eligible for the ADB-JSP scholarship, an applicant must have at least two years of full-time professional work-



Welcome Party in July 2003

ing experience and must not be more than 35 years old at the time of application. The new Monbukagakusho student selection guidelines now require that all doctoral candidates nominated by the department must be interviewed at least nine times by three faculty members. These changes in the eligibility criteria and selection procedure will help us to evaluate the applicants more rigorously and in turn select better students.

We strive to achieve the highest standards in the advancement of knowledge through

research and scholarly publications. To this end, we are encouraging our students to publish in the best international journals in their fields and to present their findings at major international conferences.

Our laboratories are equipped with the latest equipment to carry out experimental research of international standards. To provide our students with a pleasant working environment, the south half of the Civil Engineering building has been completely renovated and given a new look. The renovation of the north half is also in progress.

## Greetings from the Head of the Foreign Student Office




"Gathering of Students of the ADB-JSP"  
held on November 7, 2003

I am very glad to have the opportunity to reach you through this newsletter on completing one year as head of FSO. During this period, I tried to become acquainted with as many international students as possible by having informal talks at get-togethers organized by FSO, events organized by the donor agencies and day-to-day contacts during daily life on the campus. Realizing that more opportunities for social contacts are needed, more get-togethers were organized by FSO. I am glad that most of you actively participated in these activities.

I look forward to getting acquainted with more international students and to making their stay in Japan a memorable one. To this end, FSO will soon conduct a questionnaire survey to get the opinions of international students on the things to be done to improve their stay in Japan. I strongly encourage all international students to earnestly participate in the survey and give us your valuable feedback. Also, I encourage students to come forward and take the lead in organizing more social events and get-togethers apart from the ones organized by FSO. It is my great desire that all of you have a wonderful stay in Japan both in terms of academic and social aspects.

Sincerely,

  
Professor Koji Tsunokawa  
Head of FSO

# Graduation Time Congratulations

September 2003

Mr. Mohammed Fazlul Karim from Bangladesh was awarded his PhD degree. His thesis was on the “Study of Interaction Between Waves and Porous Structures by Numerical Simulation”.

Mr. Aliakbar Golshani from Iran was awarded his PhD degree. His thesis was on the “A Micromechanical Model for Brittle Failure of Rock under Compression”.

Mr. Qaiser Uz Zaman Khan from Pakistan was awarded his PhD degree. His thesis was on the “Effective Width for Crack Width Evaluation in Negative Bending Moment Regions of Continuous Composite Girder Bridges”.

Mr. Park Bae Kyung from Korea was awarded his PhD degree. His thesis was on the “Characteristics of Feeding Behavior and Energy Budget of Planktivorous Fish”.

Mr. Myint Htwe from Myanmar was awarded his MEng degree. His thesis was on the “Study of Skin Friction and Behavior of Gravel on Space System Caisson Foundation”.

Mr. Jayakody Samitha Upendra from Sri Lanka was awarded his MEng degree. His thesis was on the “Behavior and Load Carrying Mechanism of Larger Span RC Bridge Decks”.

March 2004

Ms. Mendbayar Oyunchimeg from Mongolia was awarded her PhD degree. Her thesis was on the “Seismic Wave Propagation in Actual Buildings”.

Mr. Vu Kien Trung from Vietnam was awarded his PhD degree. His thesis was on the “Effects of Flow Velocity on Feeding Behaviour and Microhabitat Selection of *Pseudorasbora Parva*”.

Ms. Munira Sultana from Bangladesh was awarded her PhD degree. Her thesis was on the “Effects of Light, Nutrient and Epiphyton on the Growth and Production of Submerged Potamogeton spp.: Laboratory Approach”.

Mr. Perez Jeffrey Somintac from Philippines was awarded his MEng degree. His thesis was on the “Seismic Response Analysis of a Ground with Irregular Topography Using

Research Profile Series (8)

## Hydraulic and Environmental Engineering Laboratory

The Hydraulic and Environmental Engineering Laboratory is part of the Department of Civil and Environmental Engineering at Saitama University. The laboratory has recently been concentrating on hydraulic and environmental studies. The areas of research can be roughly divided into two major subjects. One is *coastal engineering*, the other *river and estuary hydraulics and environmental engineering*. Indeed, there are two research groups within the Hydraulic and Environmental Engineering Laboratory. The Coastal Engineering Group is led by Professor Tanimoto Katsutoshi and the River and Estuary Hydraulics and Environmental Engineering Group is led by Associate Professor Tanaka Norio. Other members of the two groups include Research Associate Yutani Kentaro, one laboratory technician, six (6) doctoral students, nine (9) master's students and eight (8) undergraduate students.

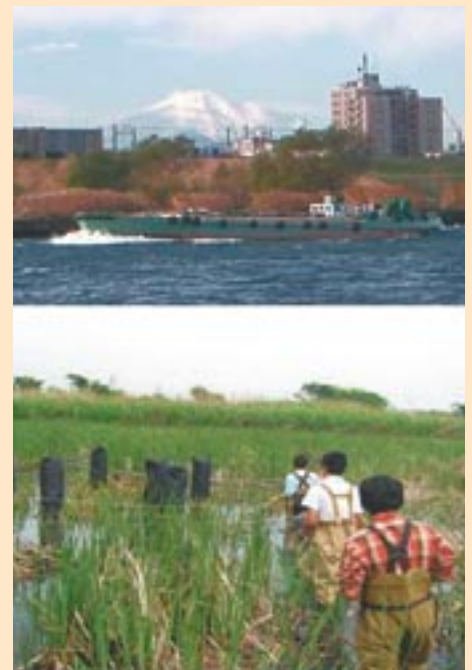
Research in the field of coastal engineering covers wave-structure interactions, including numerical simulations of wave breaking and wave overtopping over coastal structures based on the Navier-Stokes Equations and the VOF method; investigations on the influence of porous structures on the wave reflection, wave transmission and wave energy dissipation; work on the optimization of breakwaters in preventing waves from entering a harbor; numerical simulations of waves generated by sailing ships, and their propagation.

The environmental research group provides a unique combination of environmental skills across many disciplines. The major fields are aquatic ecology, river flow, riverbed topography and strategies for the enlargement of river vegetation, effects of plants on river bank protection, wastewater treatment, constructed wetlands, etc. The research is, in particular, on the population and nutrient dynamics of aquatic vegetation and on how vegetation interacts with the aquatic ecosystem, the decomposition of emergent macrophytes, model studies of emergent plants and river flow simulation. Extensive field and laboratory experiments are carried out frequently with a group of young, energetic and bright students. The results of these studies are used to validate the growth dynamic and decomposition models of macrophytic plants.

The laboratory is well equipped with different instruments for field and laboratory measurements which include a water quality meter, a push and pull gauge, a photosynthetic evapotranspiration meter, and a cohesivity meter. These instruments are used regularly during the field and laboratory experiments.

Recently the Hydraulic and Environmental Engineering Laboratory has begun a collaborative research programme with the University of Peradeniya, Sri Lanka. The aim of this programme is to develop management guidelines for creating wetlands for wastewater treatment in tropical conditions. This will enable the sharing of scientific knowledge and experience, and both universities stand to benefit from the research output, with research students studying wetlands in both countries.

The aspiration of the Hydraulic and Environmental Engineering Laboratory Educational Programme is to develop leaders in education, industry, and government who can use their acquired knowledge to improve society. The program provides a comprehensive framework of courses in the broad field of civil and environmental engineering with opportunities to develop specialized expertise. It emphasizes the development of integrated teamwork abilities, leadership, and creative research skills.





Boundary Element-Perturbation Method”.

Mr. Vu Dang Hai from Vietnam was awarded his MEng degree. His thesis was on the “One-dimensional Numerical Model of Wave Breaking and Runup based on Boussinesq Equation”.

Mr. Md. Kumruzzaman from Bangladesh was awarded his MEng degree. His thesis was on the “Anisotropic Stress-Strain and Strength Behaviors of Soft Clay”.

Ms. Jayakody Chamani Sadhana from Sri Lanka was awarded her MEng degree. Her thesis was on the “Seasonal Variations of Emergent Macrophytes in the Littoral Zone”.

Mr. Trinh Quang Xuan from Vietnam was awarded his MEng degree. His thesis was on the “Growth Dynamics and Morphological Characteristics of Zizania Latifol”.

Mr. Shrestha Subir Kumar from Nepal was awarded his MEng degree. His thesis was on the “Application of Rock Mass Integration Method (RMIM) with DDA modeling in Rock Slope Stability”.

Mr. Munkhtogoo Erkhembayar from Mongolia was awarded his MEng degree. His thesis was on the “Experimental Study on Time-Dependent Crack Growth in Inada Granite”.

Mr. Wanninayake Ajitha from Sri Lanka was awarded his MEng degree. His thesis was on the “Characteristics of Stress-Strain, Dilatancy and Elastic Shear Modulus of Toyoura Sand”.

Mr. Aung Banyar from Myanmar was awarded his MEng degree. His thesis was on the “Experimental Study on Water Retention in Water Repellent Volcanic Ash Soil”.

Mr. Thant Zin from Myanmar was awarded his MEng degree. His thesis was on the “Heat Resistant Characteristics of RC Members Reinforced with FRP Bar”.

Ms. Toktoralieva Mira from Kyrgyzstan was awarded her MEng degree. Her thesis was on the “Effect of Cable Safety Factors on Load-Carrying Capacity of Composite Cable-Stayed Bridges”.

Mr. Ghimire Jhabindra Prasad from Nepal was awarded his MEng degree. His thesis was on the “An Investigation of Model Validation and Updating of Existing Structure for Vibration-Based Structural Change Identification”.

Ms. Cao Xue Fei from China was awarded her MEng degree. Her thesis was on the “Study on Wave-Dissipating Characteristics of a Vertical Porous Seawall”.

Mr. Nguyen Huu Trung from Vietnam was awarded his MEng degree. His thesis was on the “Interspecific Competition between Zizania Latifolia and Phragmites Australis”.

## Welcome New Students

### October 2003



Gupta Vivek Kumar  
Nepal, Doctor



Khakimov Aziz  
Uzbekistan, Doctor



Sodikov Jamshid  
Uzbekistan, Doctor



Tuladhar Rabin  
Nepal, Doctor



Rai Sohail Ahmed  
Pakistan, Doctor



Jinadasa K. B. Shameen  
Sri Lanka, Doctor



Soe Aung Ko Ko  
Myanmar, Master



Zaw Naing Win  
Myanmar, Master

### April 2004



Adhikary Kamal Babu  
Nepal, Doctor



Shamal Chandra Das  
Bangladesh, Doctor



Cao Xue Fei  
China, Doctor



Chandragopal Balaji  
India, Master



Li Shouzhu  
China, Master



Guades Ernesto Jusayan  
Philippines, Master



Karunarathna A. Kumara  
Sri Lanka, Master



Mahmood Zafar  
Pakistan, Master



Thidar Aye  
Myanmar, Master



Nguyen Hoang Huy  
Vietnam, Master



Sazzad Md. Mahmud  
Bangladesh, Master



Pantha Bhoj Raj  
Nepal, Master



Shoovdor Enkhtur  
Mongolia, Master



Shrestha Santa Man  
Nepal, Master



Velez, Flores Jose Alberto  
Honduras, Master



Vu Trinh Duy  
Vietnam, Master



Ngo Mau Duc  
Vietnam, Master



Zaman Md. Mashrur  
Bangladesh, Master



Naser Tarek Mohamed  
Egypt, Master



Nguyen Thi Hai  
Vietnam, Master



Regmi Gyanendra  
Nepal, Master

## News

### New Appointments

Dr. Chiaki Oguchi was appointed as an associate professor of Geosphere Research Institute in June 2004. Her research field is weathering rates and mechanisms of geosphere materials such as rocks and soils.

### Faculty on Move

Dr. Yoji Arakawa of Geosphere Research Institute resigned his position as Associate Professor in March 2004. He is currently working as Professor at the Institute of Geoscience University of Tsukuba.

Dr. Takemura resigned his position as Research Associate of the Soil Mechanics Laboratory in March 2004. At present, he is working for Rock Physics Team, Research Center for Deep Geological Environments, AIST.

### Alumni Information

Dr. Thiru Aravinthan, who graduated from Saitama Univ. in March 1999 and now is a lecturer of the University of Southern Queensland, received the 2003 USQ Award for Excellence in Research (Early Career) at the graduation ceremony held in April 2004, which is a prestigious award. His major is Concrete Engineering.

Dr. Riaz Ul Islam, Dr. Aliakbar Golshani, Dr. Mohammed Fazlul Karim, Mr. Govinda Raj Pandey and Ms. Pa Pa Win were honored by the JSCE with the Excellent Presentation Award in the Fifth International Summer Symposium held on July 26, 2003 in Tokyo. Mr. Govinda Raj Pandey and Ms. Pa Pa Win are currently Doctoral students of the Structural Materials Laboratory.

Research Associate Kunihiro Sakamoto was awarded the Annual Incentive Award in May 2004 by CPIJ (City Planning Institute of Japan) for his paper entitled "Development and Application of Traffic Simulation Model as a Supporting Tool for Transportation Planning of Local Scale Area". The award is to honor young researchers for outstanding research publication on city planning.

### Message from Alumni

I joined the special program of Civil and Environmental Engineering Department of Saitama University in October 2000. Soon, I found the environment very helpful for doing research and I was glad I made the right decision in joining this program. Due to the valuable guidance of the professors, I have gained much knowledge and experience in the civil engineering field during my study.



Furthermore, studying in Japan gave me a chance to learn the Japanese language. By learning Japanese, I was able to get along well with the Japanese people and familiarize myself with their culture and customs.

I obtained my Ph.D. degree in September 2003 and got a postdoctoral fellowship from the Japan Society of the Promotion of Science from April 2004. I believe this is a golden opportunity for me to continue my research for two more years.

Lastly, I would like to express my appreciation for the kind efforts of the Foreign Student Office (FSO) members in supporting foreign students. Please keep in touch and let us support the program by introducing it to other friends.

Best wishes,  
Aliakbar Golshani

## Message from the Foreign Student Office

The new Building of Research and Project (Sougou Kenkyu Tou in Japanese) was completed in December 2003. This building is ten stories high and has many experimental facilities for research and projects as well as a place for symposiums and academic conferences.

Some of our faculty members and foreign students of the civil and environmental building have moved there. They are now able to spend time on their research in a comfortable room.

Our newsletter reaches you annually. In order to make the newsletter more

informative, we are looking forward to hearing good news from our graduates anytime.

We wish you good health and continued success in your career.

The Foreign Student Office (FSO)  
Department of Civil & Environmental Engineering  
Saitama University 255 Shimo-Okubo Sakura-ku, Saitama-shi, Saitama Japan  
338-8570  
Phone/Fax: +81-48-858-3555  
Email: [fso@sun.civil.saitama-u.ac.jp](mailto:fso@sun.civil.saitama-u.ac.jp)  
<http://www.civil.saitama-u.ac.jp/fso/fso.html>

## Condolences

Prof. Hiroyuki Watanabe passed away on February 9, 2004. His research field was seismic response analysis for structures. We would like to express our condolences to his family.

## Awards

Research Associate Takeshi Maki was awarded the Annual Incentive Award by JSCE (Japan Society of Civil Engineers) for his paper entitled "Nonlinear Response and 3-Dimensional Finite Element Analysis on Reinforced Concrete Pile - Soil System" co-authored with Prof. H. Mutsuyoshi and Prof. K. Maekawa (Univ. of Tokyo) in May, 2003. The award is to honor young researchers for outstanding journal papers published within the JSCE publications.

### Editorial Board for this issue

*Chief Editor:* Professor K. Tsunokawa  
*Design and Layout:* K. Nakazawa

### Contributors:

Dr. Jagath Manatunge  
Dr. Riaz Ul-Islam  
Dr. Aliakbar Golshani  
Mr. Shamal Chandra Das