

E-Vision

Official Bulletin of the EGPSEE-SU

Vol. 2 No. 1

SPRING 2004



In this issue, learn more about...



*the world heritage city,
Kandy, Sri Lanka ...*

*and the travel destination,
Barbados*



on **International Page**

What's more?

EGPSEE-SU activities

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Travel Diary

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Editorial

*W*elcome to the second issue of E-Vision, the official bulletin of the English Graduate Program in Socio-Environmental Engineering (EGPSEE) Student Union.

We are proud to be one of the societies in Hokkaido University to regularly publish a bulletin of this kind. It is our intention to make this student bulletin a semestral effort so that members of our campus community and visitors to our website will have the opportunity to explore some of our activities and achievements.

The sections in this issue cover a wide array of topics and include: activities of EGPSEE-SU, cultures and customs of different countries, food corner, travel diary, technical articles, list of new graduates, and so on. We hope that this issue will help to expand your knowledge about geography and cultures of other countries and to get valuable experiences within an internationally oriented environment.

We encourage you to view our various activities and help us to have more interaction with Japanese as well as international students. If you want to get involved in any aspect of the bulletin, please don't hesitate to contact us. We welcome any comments or articles which you would like to share with us. Such feedback would help us to find what needs be changed and improved in the future issues.

This bulletin is distributed in hard copy to selected constituents and is also available electronically on the web being maintained by EGPSEE. Your further support, by promoting our bulletin and requesting your colleagues to contribute, will ensure our further success.

We are looking forward to hearing from you.

Enjoy the bulletin!

*The Editorial Board
EGPSEE-SU*

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Message

From the Dean, Graduate School of Engineering



Prof Hiroshi Saeki, the previous Dean wrote in his message for the inaugural issue of E-Vision that “Cultivation of Internationalism”, one of the basic academic principles of Hokkaido University has not been accomplished in our university. He asked that EGPSEE students act as bridges between your country and Japan and support the improvement of Japanese students’ communication ability in our university.

I have observed your activities since taking this office last April. I noted that the 1st EGPSEE forum on “How to Mutually Benefit Each Other” drew over 100 participants, more than half of them Japanese. At the end of the forum you were able to draw up an action plan outlining what should be done in order for Japanese and foreigners alike to live and study together in a manner that fosters understanding among different cultures and mutually benefits each other. I am delighted to see that you act according to the action plan. Your 3-day field trip in August saw an equal number of Japanese and international students travelling together. The photos on your e-notice board clearly depict how well you blended together without any regard of nationalities.

This semester EGPSEE students started a free English class twice a week. I was told that half of the 30+ students you have are secretaries. This is the first time in the history of the Graduate School of Engineering to witness such an activity. It makes me feel that Prof Saeki’s plea has not gone unheard.

Next year all national universities in Japan will become so-called “independent”. After decades of being strictly controlled by the Ministry of Education, Culture, Sports, Science and Technology gaining independence is naturally welcome. However like a totalitarian country suddenly entrusted with democracy, it requires adjustments and changes both mentally and physically by everyone. In this regard I think that our Graduate School of Engineering is fortunate to have during the past three years experienced new issues arising from having an English program. Our school is more ready to accept new challenges.

Finally, allow me to congratulate you for attempting to act as a bridge between your country and Japan and for providing a good example that study and contribution to the community can actually go hand in hand without having to sacrifice one thing or another.

Takeshi Kishinami
Dean, Graduate School of Engineering
Hokkaido University

Message

From the EGPSEE Head



This September, we could have our first doctoral graduates after the establishment of EGPSEE. The satisfactory development of our EGPSEE would be by the endeavour of individual students and by that at educating of all staff. However, I think the EGPSEE Student Union has played a vital role to ensure the development of our course. Many events such as welcome party, open forum, joining in snow festival, farewell party and so on have been planned with scrupulous preparation and with a sense of humour, which could promote friendship among our English course members. How the international students were encouraged with these supports from the union.

In my student days, students had their own council to solve various problems like scholarship award, but unfortunately, there is not any student council or union for Japanese students in present time. Does it mean they do not feel the necessity of a union, or mean they no longer have the power to establish their union? Anyway, it would be true that the students of EGPSEE who have a student union look vigorous and that the powerful activity begins to inspire not a few Japanese students.

To change the topic, the organizing system of English Graduate Program in Socio-Environmental Engineering was converted into new one by the instruction of MEXT since this October. While the master course and the doctoral course of English Graduate Program were seen to be a separate and individual organization from each other in the previous system, they become a consistent organization in the new system. However, the administrations of EGPSEE such as the admission system for doctoral students are not changed, since EGPSEE has employed the system for doctoral students to be selected from their own master graduate students as half of the fixed number with the inner rule even in the previous system.

Even if the system of organization evolved, valuable role of the union would not change. I hope that your union prospers further more.

Kazuyoshi HASEGAWA
EGPSEE Head (2003-2005)

Message

From EGPSEE-SU President



Greetings!

Some of the recent activities exclusively or jointly organized by EGPSEE-SU with the EGPSEE office involved not only those within the program but the surrounding community as well. These activities include the 1st EGPSEE Open Forum, 1st EGPSEE Field Trip and E-Class, a free English class mostly attended by Japanese students and staff. For this reason, the recent theme of EGPSEE-SU's thrust may be fittingly described as "co-existence".

We owe much of these activities' success to Mrs. Werawan Manakul, the EGPSEE program officer for spearheading some of the aforementioned activities and for her relentless effort to further improve the program. We also thank the professors, Japanese students and staff for the support and assistance they have extended to our growing organization.

We look back to the article written by the first Japanese student of EGPSEE, Nagai Kouhei, which is also featured in this issue of E-Vision entitled "*Let's create a meaningful co-existence!*" where he pondered on the significance foreign students bring to the local community. The above-mentioned activities attempt to shed some light to this question.

On the other hand, it is needless to say that the international students need the help of Japanese students to go about their everyday life especially in the university. It is in this perspective that we want to promote and build an environment where international students, which include the Japanese as well, can mutually exist and benefit each other.

All of these are embodied in the EGPSEE-SU constitution and are in line with its objective of promoting academic, cultural and other exchanges with other institutions, foremost of which is the Hokkaido University and its constituents.

With the help of everyone concerned, a truly open society will soon be at hand.

In the service of the student union and of this society, I remain.

Philip de Guzman
EGPSEE-SU President

Interview:

"I ask them to gain a deeper understanding of modern Japan"

An interview with the former dean of Faculty of Engineering, Prof. Saeki Hiroshi, conducted by the Editorial Board members: Sanjay Giri and Mintesnot Gebeyehu.



Professor Saeki Hiroshi is the Vice president of Hokkaido University and the professor of Coastal and Offshore Engineering Laboratory. He was born in Changchung, China on July 1st 1941. He graduated from Department of Civil Engineering, Hokkaido University in 1964 and the Graduate School of Engineering, Hokkaido University in 1966. After his graduation he joined the Ministry of Transport Second Regional Port Construction Bureau. After two years, he joined the Hokkaido University as an associate professor and eventually became a professor in 1984.

Prof. Saeki has served Hokkaido University in different positions. He was the dean of Faculty of Engineering from 2001 to 2003. Now he is serving as the vice-president of the university.

He is interested in mountain climbing and is fond of collecting top.

Q. In your view, what else is supposed to be done for the improvement of this program?

A. Student's exam results and their effort should be evaluated fairly. Therefore fair evaluation method should be adopted by all academic staff.

Q. What is your general impression on overseas students? What do you expect from overseas students? Are you satisfied with their performance so far?

A. EGPSEE students study special subjects very well. I ask them to gain a deeper understanding of modern Japan.

Q. What is your opinion regarding EGPSEE-Student Union? How could it be beneficial for student community and program as well?

A. I hope the EGPSEE Student Union grasps completely the movement of students who have graduated from EGPSEE and construct the network of alumni by using internet.

Q. Can you give a brief message to EGPSEE student community?

A. The principal belief of our university is frontier spirit, cultivation of international way, liberalism and applied learning. I hope you understand these four principal beliefs while you are in our university.

Projects and Activities of EGPSEE-SU

By Surajate Boonya-aroonnet
(EGPSEE-SU Secretary)

This year, we congratulated 11 graduates and welcomed nine fresh excellent students to our EGPSEE program. We, as usual, had many activities this year, not only activities that we regularly arrange, but also special events like the “EGPSEE Open Forum”. This is the first time that Japanese and foreigners were gathered together to find out how to live in this community in a mutually beneficial way. This gives a summary of events that happened since the last issue.

1. **EGPSEE Open Forum** (May 16, 2003) – To create an environment in which everyone (Japanese and foreigners) live and study together in a manner that fosters understanding among different cultures, the 1st EGPSEE Open Forum, "How to mutually benefit each other" was successfully held with more than 100 participants. In this significant event, students had chances to freely express their feelings and ideas regarding how to benefit each other. Compared to the other graduate schools in Hokkaido University, the Graduate School of Engineering has the highest number of international students. Although some foreign students have a deep understanding of the Japanese language, many do not. This is especially true in the case of the English program where students enrol directly into their respective research group. Some action plans drawn up from the forum which include the EGPSEE field trip and free English class will also be discussed in the succeeding sections.



(More information about the summary at <http://ws3-er.eng.hokudai.ac.jp/egpsee/private/forumssummary.htm>)

2. **EGPSEE Trip** (August 19-21, 2003) – Aside from studying, we also went out to see the engineering application in the actual field. The first EGPSEE field trip, which reached up to Obihiro-Kushiro, had 32 participants and included Japanese students, professors and staff together with the EGPSEE family. In addition to the knowledge gained by the participants, the trip also served as a temporary relief from pressure in the research work. Up on the first day was the visit to the Northern Regional Building Research Institute (NRBRI) for briefing on its current research activities. The participants then went to the Asahi Bridge in Taushibetsu and finally enjoyed Nukabira hot spring in Fujimi Kanko Hotel. On the second day, we travelled from the hotel to Lake Akan, Lake Mashu, Lake Kussharo, and then Kushiro Mire which was being administered by the Hokkaido Development Bureau. The next leg of the trip was the construction site at the Kushiro Ring Road, and from there we spent the second night at Escal Kushiro. The last day was allotted for the Tokachi River Museum, New Chiyoda Channel, Shikari Bridge, and finally came back to Sapporo with lots of fond memories to remember.



(More photos at <http://ws3-er.eng.hokudai.ac.jp/egpsee/fieldtrip/antoni.htm>)

3. **The Second EGPSEE Graduation Party** (September 12, 2003) – The second graduation party featured the first batch of doctoral students to graduate in the EGPSEE program. The party was successfully organized, mainly by the Indonesian students in the program, to celebrate the completion of the studies of seven students from the doctoral program and four from the masteral program.



(More photos at <http://ws3-er.eng.hokudai.ac.jp/egpsee/grad03/album1.htm>)

4. **EGPSEE Welcome Party 2003** (October 10, 2003) – As we are growing, nine new students from Indonesia, Philippines, Mongolia, Colombia, Vietnam, Ethiopia, Thailand and Sri Lanka have joined our family in the autumn semester of 2003. The party was held at the Hokkaido University International Plaza and was mainly organized by the Thai students in the program. Delicious Thai dishes were served during the party. In this fourth batch of new students, a warm and funny welcome party again made everyone laughing, especially with the “Go...Go Minus” game. Three teams composed of the new students and professors competed in the game and the winner was the team with the most negative score. The professors also had a lot fun during the game. Look! What they were doing?



(More photos at <http://ws3-er.eng.hokudai.ac.jp/egpsee/welcome03/album1.htm>)

5. **EGPSEE E-Class** – The English class was one of the resolutions drawn from the EGPSEE Open Forum to meet the needs of the Japanese who are willing to improve their English language ability. The class was offered free of charge to Japanese students and staff and a few foreign students. There were basically two levels, the beginners (level 1) and the advanced (level 2). The class was highly demanded by many Japanese students in the Engineering Faculty. The E-Class sessions were held twice a week from November 5, 2003 to February 5, 2004 with 16 students enrolled in the level 1 class and 14 in level 2.

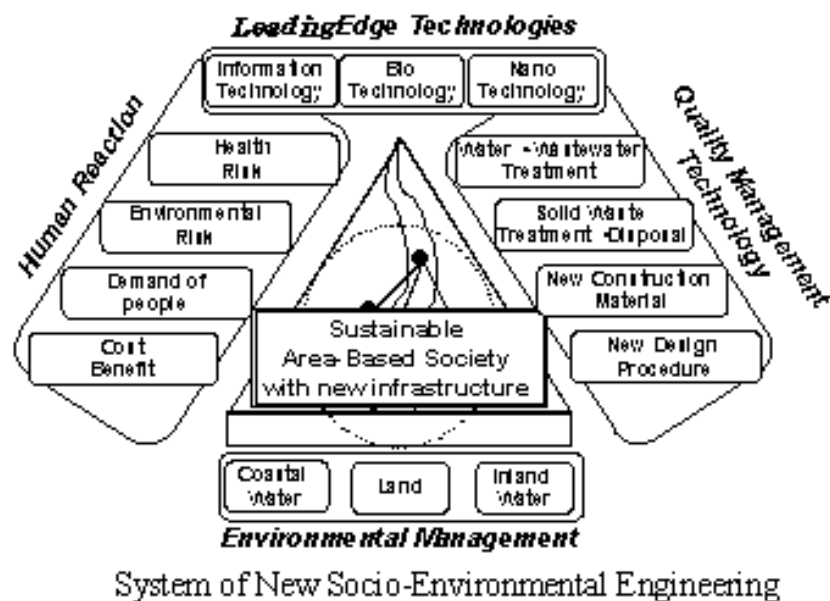


CENTER OF EXCELLENCE PROGRAM

As part of the Government of Japan policy to increase competitiveness among universities and as a result raising the academic standard especially in research, in 2002, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) launched the 21st Century Center of Excellence (COE) Program. The program supports universities establishing discipline-specific international centers for education and research in order to become internationally competitive in the specific research areas. Over 600 proposals were submitted by national, public and private universities in 2003, out of which 113 were selected to receive a special budget under the 21st Century COE Program to carry out their research. Six projects from Hokkaido University are among the successful candidates and one of them is the “Sustainable Metabolic Systems of Water and Waste for Area-Based Society.”

Sustainable Metabolic Systems of Water and Waste for Area-Based Society

In order to establish the sustainable metabolic systems of water and waste in the area-based society, the following new technological developments are required: leading edge water and wastewater treatment systems using membrane filtration, resource recovery technology from waste material, appropriate final disposal system for solid waste, construction material with long life, repairing method of infrastructure to keep its long life. There is also a need to develop new management procedures of infrastructure considering reduction of the environmental/health risk, consumption of resources/energy and demand of the people. This project aims to produce researchers and engineers who can build up the sustainable area-based society with new infrastructure based on the concept of the holonic path which creates the whole system by integrating autonomous sub-systems. On the basis of the research outcomes, an international center for education and research of New Socio-Environmental Engineering will be established as shown in the figure below.



Group 3: System for Sustainable Infrastructures

One of the three groups established under the above-mentioned project is the group on “Systems for Sustainable Infrastructures.” In order to build a sustainable area-based society with conservation of resources and energy and metabolic infrastructure system, this group attempts to develop highly durable materials, rehabilitation/retrofitting technology with new materials and construction methods for prolonging service life of structures, and recycling/reusing technology of industrial waste as construction materials. The group also seeks to improve prediction methods for structural performance during service life through construction material deterioration models and then propose a rational system for structural design, materials, construction and maintenance. In order to establish a holonic path, a new management method for water, waste and infrastructure will be developed based on risk management and method for consensus-building measures.

Concrete plays a critical role on building up the infrastructure system in our society because concrete is the most commonly used construction material which is considered economical and maintenance-free. However,

with unexpected deterioration of existing concrete structures built in the last century, the durability of concrete structures becomes a key issue for concrete technology recently. To achieve “a sustainable infrastructure system”, there is an inevitable need for us to formulate standards for concrete materials, design and construction with consideration of the aggressive loading and negative environmental factors throughout the service life. As a prerequisite, a good understanding of the deterioration processes, which is strongly related to the microstructure of concrete, should be achieved. In view of this, Group 3 had organized an intensive course and international workshop, which are discussed below, in order to gain better understanding of the microstructure of concrete and its durability.

Intensive English Course for Young Researchers – Microstructure of Concrete and Durability

The objective of the intensive courses was to strengthen the knowledge of young researchers on deterioration mechanisms and deformation behaviors of deteriorated concrete during construction and service life with emphasis on its microstructure and guide them on how to use the microstructure based analytical tools to predict the behaviors of concrete structures throughout the service life.

Invited lecturers from various institutions included Prof. F. H. Wittmann (Aedificat Institute Freiburg, Germany), Prof. M. J. Setzer (Universitat Duisburg-Essen, Germany), Prof. H. Mihashi (Tohoku University, Japan), Dr. T. U. Mohammed (Port and Airport Research Institute, Japan), Dr. T. Ueda (Hokkaido University, Japan), Dr. T. Nawa (Hokkaido University, Japan), and Dr. Y. Sato (Hokkaido University, Japan). The intensive course was held from January 8 to February 9, 2004 at the Hokkaido University and a total of 21 people from within and outside Hokkaido University attended the course.



Workshop on Microstructure and Durability to Predict Service Life of Concrete Structures

The workshop focused its discussions on modeling the deterioration mechanisms of concrete microstructures under various deterioration factors such as freezing and thawing cycles and fatigue and the methodology of predicting the time-dependent behaviors of concrete structures from the microstructure viewpoints.

The invited speakers who presented some of their research studies during the workshop included Prof. F. H. Wittmann, Prof. M. J. Setzer, Prof. H. Mihashi, Prof. B. H. Oh (Seoul National University, Korea), Dr. T. Ueda, and Dr. T. Nawa. The workshop was held on February 10, 2004 at the Sun Plaza Hotel, Sapporo. Participants consisting of researchers, engineers and students from 10 countries took part in the workshop.



International Page



BARBADOS – JUST BEYOND YOUR IMAGINATION

By Diane Riley*



The island of Barbados lies in the Caribbean Sea 13°N 59°W and is the most easterly of the Caribbean islands which stretch from Cuba in the north to Trinidad & Tobago in the south. The island gets its name from the Portuguese *Los Barbados* meaning “the bearded ones” which refers to a type of tree native to the island, which caught the attention of the Portuguese explorers when they came to the island en route to Brazil. Archeologists presently record that there were inhabitants on the island from the time of circa 1623 BC and these native Amerindians lived on the island until the late 15th century when they were eradicated through the rigors of slavery and a lack of resistance to diseases. Both of these issues were brought to the fore by the Spanish explorers who first came to Barbados in 1492. The Spanish soon left Barbados in search of the larger and more fertile islands in the northern Caribbean and the island was once again stumbled upon in 1625 by the British and remained a British colony until 30th November 1966, the independence day of Barbados.

The island is a prime destination for tourists from all over the world who are looking for the ideal vacation in the tropics – sun, sea and sand. However beyond these three attributes (which are plentiful in Barbados) there lies a vibrant culture, excellent cuisine and a certain *joie de vivre* in the people, which many tourists are also quite lucky to enjoy.

Many aspects of Barbadian culture are derived from the rituals of the peoples of Western Africa who were brought by the British to the Caribbean as slaves. The most important cultural festivals are the National Independence Festival of Creative Arts (NIFCA) and Crop Over. NIFCA is held annually around Independence Day with competitions held in the areas of music, singing, dance, drama, writing, fine art, photography and arts and crafts. The festival culminates in a grand gala at the end of November where all the finalists are featured. The Crop Over festival dates back to the 1700s when Barbados was a large sugar producer in the world hence after the sugar cane was harvested a large festival was held to celebrate the end of collecting the crop (Did you know that rum was invented in Barbados!). This festival has survived through the centuries and is today one of the most exciting events on the Barbados social calendar and attracts thousands of visitors from all over the world. There are many events making up this festival and it climaxes in a huge road party on “jump up day” where revelers go into the street and dance to the rhythmic sounds of calypso.



The national dish (food) of Barbados is *coucou and flying fish*. Coucou is a delicious mixture of okras and ground corn and it is served with steamed flying fish that will be seasoned with peppers and spices. Other culinary favorites are dishes made from sweet potatoes, yams, breadfruits and being one of the largest poultry consumers per capita in the world, chicken. Beef, pork, lamb and fish are also very popular. The island also has an excellent selection of restaurants that cater to any taste serving Mexican, Japanese and Italian food etc.

Any talk about Barbados will have to mention the people. Barbadians are renowned to be one of the friendliest peoples in the world! Whether this has been proven or not I am not sure but certainly one visit to the island (or any Caribbean island) will show you a warm, friendly people that make you feel like you have come home. So whenever you need a short vacation I recommend Barbados because even though you may dream about what it is like it is indeed just beyond your imagination.



* Laboratory of Environmental Risk Engineering, Graduate School of Engineering, Hokkaido University

International Page

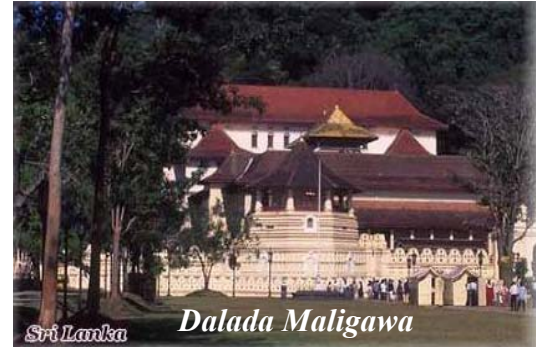


KANDY, WORLD HERITAGE CITY – SRI LANKA

By Vasantha Wickramasinge[†]



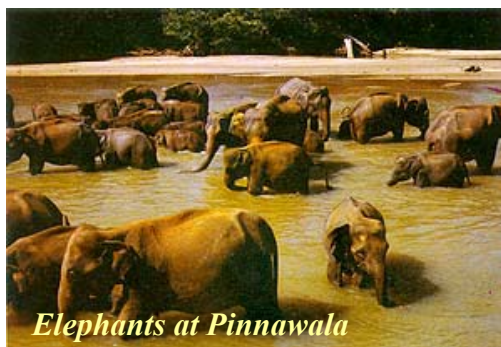
Sri Lanka has been a treasure trove for the tourists, archaeologists and sight-seers from the time immortal. Kandy, the hill capital has been one of the leading attraction for its splendour of both historical and traditional heritage. The focal point of Kandy is the golden roofed “*Dalada Maligawa*”, the sacred temple of the tooth containing the Tooth Relic of the Lord Buddha, Sri Lanka’s most important religious relic. The annual



Dalada pageant is the crowing climax of our ancient splendour. The ten successive days and nights ending on the full moon day of the month of “*Esala*” (July/August) a spectacular procession with hundreds of elephants with the Maligawa tusker carrying the Golden Casket containing the Sacred Tooth Relic, exotically costumed dancers, drummers, trumpeters, torch bearers with all the pomp and glory of the past, parade the streets of Kandy.

Peradeniya Botanical Garden

Just four kilometres away from Kandy, Peradeniya is the home of the world famous Royal Botanical garden, located in a beautiful setting with the longest river of Sri Lanka, *Mahaweli* boarding on one side. This attractive laid out garden displays many varieties of floral and green plants. Special features are the *Orchid House* which displays a fine collection of Sri Lankan orchids, spice garden and the trees planted by distinguished visitors to the island.



Pinnawala Elephant Orphanage

This 24 acre large elephant orphanage is situated in between the capital city Colombo and Kandy in the hills of central Sri Lanka. This was established in 1975 to afford care and protection to baby elephants found in the jungle without their mothers. Presently, there are more than 70 elephants roaming freely on this land and they are backed by well trained staff. Every evening, the elephant concert fascinates the visitors.

University of Peradeniya

The world famous Peradeniya University, which is surrounded by range of mountains and the Mahaweli River, is situated 4 km from the Kandy city. This university consists of seven faculties, namely Engineering, Medicine, Science, Agriculture, Veterinary, Dentistry and Arts. Students can enjoy all aspects as all the necessary facilities (accommodation, sports, library, etc.) are located as a unit. The sunny weather condition and beautiful surrounding add value to this university.

Kandy is a paradise on earth that everyone should visit at least once. The Sri Lankan hospitality in addition to the beauty of the city makes it much more famous.

[†] *Laboratory of Traffic Facility Engineering, Graduate School of Engineering, Hokkaido University*

Featured Articles

LET'S CREATE A MEANINGFUL CO-EXISTENCE!

By Kohei Nagai[‡]

The Graduate School of Engineering of Hokkaido University established a special program called "English Graduate Program in Socio-Environmental Engineering (EGPSEE)" in 2000. I am the first and only Japanese student in this doctoral program.

In daily school life, I often ponder, "What significance does the presence of foreign students have to the Japanese students?" because I feel that communication between international and Japanese students is not enough to comprehend each other. I think most Japanese students are missing out on their chance to learn from them.

For international students, support from Japanese students is vital to conduct research in the laboratory because their supervisor cannot support everything. Furthermore, the University's system is not designed for non-Japanese, for example, most documents in the University are written in Japanese. On the other hand, what international students can do for the laboratory is limited as a result an equal relationship between international and Japanese students in the laboratory work cannot be established. Japanese students who often have to help them may think, "Why do I have to help them?" This is not what international exchange activity is supposed to be.

More international students will come to Japan under "internationalization". To make it meaningful to both, I think the way of thinking of Japanese students should be changed -- from a mere provider or host to an equal partner, needless to mention the improvement of the University system.

We Japanese students can learn many things, English, foreign cultures, ways of thinking and so on from having these international students in our country. In my case, though I often help them in my laboratory, I believe our relation is on an even term. We should recognize this fact and develop an international mind.

(This article was also published in JSCE Newsletter No.9, December 2002)

20% OF WORKER ANTS IDLE LAZYBONES: STUDY

The Japan Times: Nov. 16, 2003

SAPPORO (Kyodo) Contrary to popular belief, 20 percent of worker ants are not particularly hardworking, researchers said Saturday.

The discovery is the result of observations of three separate 30-strong colonies of black Japanese ants (*Myrmecina nipponica*), according to Eisuke Hasegawa, an assistant researcher in evolutionary biology at Hokkaido University's graduate school of agriculture, and his research team.

The team transferred three colonies of ants to a man-made nest and marked them for observation. Hasegawa and his team said they observed the ants three hours a day for about five months from May last year.

Hasegawa said they discovered that about 80 percent of the ants engage in some sort of work, such as cleaning the nest or gathering food, but that the rest are mostly idle.

The situation remained the same when the researchers removed six busy ants from one colony; the busy ants that remained had to work even harder while the lazy ants continued to do little or no work.

Scientists have suggested that some ants may avoid working due to old age or inherent laziness. Hasegawa said the idle ants could be contributing something to the colony that they have not yet determined.

[‡] *Laboratory of Hybrid Structure Engineering, Graduate School of Engineering, Hokkaido University*

Food Corner

INDONESIAN GADO GADO

By Antoni[§]

Speaking of Indonesian food, one thing always comes to mind, that is 'nasi goreng'. However, there is also a very famous Indonesian salad called 'Gado Gado' which means to mix. So the essence is you can mix any type of vegetable and top them with peanut sauce and Indonesian prawn crackers called *kerupuk* and there you have it, the *Indonesian Gado Gado*.



Gado Gado Indonesian vegetable salad. The vegetables used below are only a suggestion. You can use nearly anything that is available to you but do use at least three different vegetables.

Ingredients:

white cabbage, diced
green beans
bean sprouts
2 eggs, hard boiled
tofu, fried
tempeh*, fried
peanut sauce
tomatoes
prawn crackers

Preparation:

Separately boil all the vegetables lightly. Drain and arrange in layers on a dish. Pour the peanut sauce over the vegetables. Decorate with the sliced egg, tofu, tempeh and tomatoes. Just before serving, sprinkle the crackers over the sauce. Best enjoyed when salad is cooled down.
* Tempeh is a fermented food made by the controlled fermentation of cooked soybeans into a compact white cake.

Peanut sauce Aside from Gado Gado, the peanut sauce can also be used for other Indonesian foods, such as Satay (Indonesian barbecue).

Ingredients:

1 onion
3 tablespoons peanut butter
30 g dark brown sugar
20 ml kecap manis
1 teaspoon coriander
1 teaspoon cumin
1 stalk lemon grass (crushed)
1 tablespoon lemon juice
1 tablespoon cooking oil
1 teaspoon sambal ulek
coconut milk or water

Preparation:

Finely dice a small onion. Put the oil in a small saucepan and soften the onion, add all other ingredients except coconut milk/water. Slowly heat on low flame adding liquid as required making it into a smooth sauce. Remove lemongrass before serving.



[§] Laboratory of High Performance Concrete Engineering, Graduate School of Engineering, Hokkaido University

Travel Diary

TRINIDAD CARNIVAL 2003

By Diane Riley**

I once asked a Trinidadian friend why there was a carnival in Trinidad. Granted it was not the most enlightened of questions but I was curious to know what prompted the start of the “greatest show on earth” - so coined by the carnival authorities. She was a bit stumped at first, having never been asked such an imbecilic question but then she shook her head in clarity and replied “Trinidad is carnival, without one there would not be the other”.

Well that is the patriotic Trini (Trinidadian national) viewpoint. Let me at least tell some more slightly legitimate reasons. The history of the inception of carnival is traced back to several origins. First there is throwback from the rites of Bacchus in ancient Greece, then a farewell to flesh as the Christian calendar approaches the beginning of the Lenten season and finally a show of shrouded (not quite) mockery of the colonial authorities by the working class and slave workers during the times of imperialism. Out of this maelstrom has grown a festival that represents the pinnacle of the Trinidadian spirit, a demonstration of their creativity and indeed the life of the country. Carnival information can be found on many internet websites hence this article is devoted to a more personal carnival experience.

I had the opportunity to study in Trinidad for three years during which I religiously attended carnival annually. However when I returned to Trinidad this year for carnival after being in Japan for 18 months, I had the opportunity to rediscover a festival that I had grown to love and also to see Trinidad through *ryuugakusei* eyes.



Day 1 - Saturday

I arrived in Trinidad on a steamy Saturday morning, 4 days before the carnival climax. Entering Piarco airport, there was the sound of steel pan from the on site local musicians and the ceiling was vibrantly decorated with streamers of every conceivable color with carnival costume attired mannequins lining the walkways. It was impossible not to get a feeling of anticipation because you knew something big was happening and it was happening now! A quick hustle through the immigration and I was outside to see the clear blue skies and the bleary shaded eyes of my friend who had come to collect me. She had been in the carnival mode for weeks, which manifested itself with a certain sluggishness in movement and not quite accurate hand to eye coordination.



Soon we were blazing down the highway heading not for home but for the *doubles* shop. Doubles? What is that? Hmmmm, where do I start? Trinidad is always described as a melting pot of cultures and races and as such the food is a reflection of this diversity. Doubles are East Indian food- 2 fried corn pastries (hence the name doubles) filled with curried channa, pickles, pepper and other sometimes unidentifiable herbs. It is a popular breakfast food in Trinidad and can be picked up in most towns and cities from roadside vendors selling from facilities that though not visibly sanitary have assuredly been approved by health authorities. While in the line at the doubles shop it is advisable to think about how much pepper is to your taste. The unadventurous tourist will say “one everything no pepper” which translates to one doubles with everything but no pepper and from there you can go to “one everything slight” and if you are really looking for a challenge “one everything plenty” meaning one doubles with everything and slight pepper and a lot of pepper respectively. Notice in these phrases the omission of certain critical parts of speech – no bother, it is perfectly understood!!

After consuming several of these delicacies, we were once again on the highway and heading into Port of Spain (POS), the capital. Like Sapporo, P-O-S, as it is affectionately called, is on a grid and easy to navigate however unlike Sapporo it is all year a scene of extreme heat with the almost habitual mid afternoon

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convectional showers. Currently the main landmarks in the city are the “Twin Towers” which house the Ministry of Finance, the “savannah” which is reportedly the largest roundabout in the world and “City Gate” which is the main terminus for public transport. A walk through Port of Spain on almost any day will yield some things for certain: noise pollution from the roadside vendors selling all kinds of pirated music on cassette and advertising their product at excessive volumes; the food vendors on the street selling delicacies from portable stands; the coconut vendors with cool sweet water straight from the nut; the nuts man, with head tied in an incomprehensible swath of cotton which rises majestically to a peak, chanting “nuts, nuts, nuts” as he winds his way through the streets; and, if you are a woman, the calls of appreciation from the men that will be standing on the side of the street which can range from the flattering to the

obscene!

Arriving at my friend’s house I was treated to the traditional Trinidadian hospitality for which they are known throughout the Caribbean. You enter anyone’s home and it becomes your home with endless patience and kindness extended to you. It is amazing to experience!! An afternoon of shopping was the preface to my carnival experience, which was starting late that night and it was a fete. Fete – a critical part of carnival where musicians gather and perform for a massive crowd (usually out of doors) and you spend the time dancing, talking, drinking and doing anything else that feels right! The particular fete I was attending (there may be over 3 large fetes all over the island on any night during carnival) was named “Insomnia” because it started at 10 pm and did not conclude until the following day in the early afternoon – 14 hours of partying through the night. This cannot be approached lightly as adrenaline must be dispensed at such a rate that it is available right up to the last second otherwise you will burn out. It is really a kind of test that thousands of people try to pass every year. The inside of the fete becomes a world in itself, with makeshift restaurants, bars and bathrooms it is designed to support life for long periods!



Day 2 – Sunday

Dance, dance, dance. Fete, fete, fete. It was 12:30pm when we finally decided to go home. The sun was blazing and people straggled out of the fete some with only enough energy to collapse on the grass and have a short rest. We managed to make it all the way home. During carnival, the body no longer operates on standard time because it becomes infused with a rush called “carnival fever”. This condition allows you to party all night and day with minimal or no sleep at all. As such we only required a few hours to regenerate and be up and ready once again.

I decided to hit the road alone and see what had changed since I had last been. Public transport in Trinidad is mainly by bus and taxi. In the category of buses there are government buses, and private maxis. These maxis can be large, seating 30 or small, seating 15 and can be identified by the colored stripe down the side of a white vehicle with the color indicating the route. Taxis can be “short drop” or “long drop” depending on how far one is going and even some Trinidadians are not too sure about which are which but what is certain is that anywhere you need to go you can get there. I walked to the main road outside my friend’s house and stopped a maxi, which is done by waving your hand when you see one approaching. I have made no mention here of bus stops because even though there are bus stops in Trinidad unlike Japan they are not actually where the bus stops. A bus will generally pick you up and drop you off anywhere you wish so long as it is on its route. Hence driving behind one of these maxis can be a bit of a risky business with them stopping constantly anywhere along the road. I headed into POS and then took a short drop taxi to St. James. This is a town that lies



just on the suburban border of POS and is called “the place that never sleeps”. Indeed any hour any day, this is the place to go to find an open bar with music or to just stand and watch people walk by. The heart of St. James is the main street, which is straddled by bars and vendors of all types. My mission was to find “the corn soup woman”.

Corn soup is truly one of the delights of the Trinidad culinary experience. It is usually sold on the roadside from a large pot on a roaring flame. You order a soup and the huge vat is opened and your share dispensed with a large ladle into a white Styrofoam cup. It is a thick soup made from boiled corn and peas with delicious dumplings, and corn chunks mixed up. In such a hot climate why would anyone want anything that hot? Well the spicy pepper in corn soup causes a sort of spontaneous sweating and body cooling and that is the answer. Oh, and it tastes good!! My friend and I went off in search stopping occasionally along the way to have a beer, talk a bit and chat with anyone we met. This is probably the perception of the Caribbean that many people have, everyone moving at their own speed, not too fast, and enjoying the life. During carnival this is absolutely true with the aim everyday to enjoy every moment and at times have no schedule. We found the corn soup woman on a sidewalk and quickly got our cups of this elixir. Then it was standing and eating while we watched the parade of characters that went by.

Day 3 - Monday

Well not day actually, because we woke at 2 am to prepare for j'ouvert which began at 4am. J'ouvert is literally the *jour ouvert* or the opening of carnival where revelers dance from the early morning into the dawn. We were in a band, which is an organized group of people who wear similar T- shirts and stay together during the event. Our band was called the “yellow devils”. We all gathered at three in the morning in one of the streets of Port of Spain sporting yellow horns atop our heads and a devil's staff as well and there we received our indoctrination. Young men with large buckets of yellow paint went from person to person covering them from head to toe until they became a yellow haze against the early morning sky. Paint I said? Yes,



paint. The kind you would redecorate your walls with but this is not the only form of covering. There are other bands of people that cover themselves with axle grease, mud, sauce etc. Now imagine thousands of people, all covered in some foreign substance in the night, behind a large truck with huge speakers pumping out calypso and soca, all dancing and gyrating in one huge rhythm – if you can imagine that you can imagine j'ouvert morning.

J'ouvert morning runs straight into Carnival Monday and *playing mas*. *Mas* is the shortened form of *masquerade* and *playing mas* involves dressing in elaborate, vibrantly coloured costumes and parading through the street in groups. These groups are judged as they follow the carnival route. For two days (Carnival Monday &

Tuesday) masqueraders revel in all their splendour accompanied by large music trucks and steel pan bands and eventually a winning group is chosen and the designer of the costumes will receive a substantial monetary prize. These two days are the climax of carnival and a great time to laugh and dance with your friends in the streets.

Day 4 – Tuesday (at the airport)

It was time to go back to Barbados and then Japan. I was a little sad to leave the excitement of Trinidad but I was comforted by one thought – I would probably be back in 2004!

For more information on Trinidad & Tobago and Carnival please visit <http://www.visittrinidad.com>

The more you know...

PROUD TO BE A HYDRAULIC ENGINEER

By Sanjay Giri^{††}

My professor often says, “The 21st Century is the era of *water*.” It is indeed likely to be so as one of the most sustainable resources. The significance of water is obvious to everyone - it is life, it is nature, it is beauty, it is poem and so on. On the contrary, water-induced catastrophes may inflict harm to mankind. A hydraulic engineer should deal with the contradicting sides of this force of nature. Hydraulic engineers attempt to solve the problems related to hydrology, but on other hand, his decisions may lead to unforeseen consequences which are detrimental to the environment. Consequently, a hydraulic engineer is supposed to create a proper balance between nature and mankind.

Background

Hydraulic engineering is one of the broad and dynamic fields in civil engineering. It is the profession that deals directly with the natural processes and how to adopt to it for the benefit of mankind. If defined concretely, hydraulic engineering deals with the liquid element of the earth applying the science known as fluid mechanics and its interaction with the solid phase as two-phase motion (water and sediment) applying the theory of sediment transport (fluvial hydraulics). A number of terminologies associated with this profession are quite common, viz. hydropower structures, river structures, flood control, river restoration, river environment, irrigation, navigation, and so on.



Disaster caused by flood (Hokkaido, 2003)



The decades of 1940's and 50's constituted the heydays of hydraulic engineering where it formed the foundations for the development of most of the countries already developed at present. Until then, the great grandfathers of hydraulics made great attempts to explain various sophisticated natural phenomena in terms of physical and mathematical formulation. Due to the complications associated with the phenomena and solution mechanism, several physical explorations were made to achieve physical insight into the problem. Such attempts have brought a number of useful contributions to this field. These days, being one

of the leaders in the application of state-of-the-art technology among other civil engineering fields, this hydraulic engineering is being highly regarded with its cutting-edge technological innovations. Consequently, solutions to a number of problems associated with the same seem to be within grasp.

The significance

The interaction with the natural processes using means of science and technology has made this profession more challenging. One decision of a hydraulic engineer might prevent damage and save lives. For example, one can design a stable bridge pier or abutment to resist external loads, however once it is located on a riverbed, its stability appears to depend on its interaction with the water flow and river bed materials around it, which in turn may produce unexpected behavior in the base of structure that may cause failure of whole structure itself as well as other



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environmental consequences. This should be within the competence of a hydraulic engineer.

When one witnesses a submerged or eroded land and ruinous consequences of this disaster, then the roles of a hydraulic engineer becomes important. The most important responsibilities of a hydraulic engineer comprise assessment of the problem, setting forth the solution, and last but not the least, proper interpretation and implication of the result obtained considering the complexity of the problem.

As cited by a well-known hydraulic engineer, "The world is filled with meaningful, interesting, and economically important problems, and we are gaining the means to solve them."

Wrap-up

Unfortunately, multi-dimensional problems associated with water-induced disasters will always exist. Such disasters may cause fatalities due to the lack of reliable information. Hydraulic engineers should therefore promote a general vision that promotes the well-being of the people with scientific judgment as well as social considerations. Similarly, hydraulic engineers should remain abreast with the other specialists (ecologist, biologist, meteorologist, morphologist, etc.) as well during the decision-making process in order to protect nature and mankind.



"Mankind's strength and ultimate survival depends not upon the ability to manipulate and control, but on the ability to harmonize with nature." - Rolling Thunder

HOW BUILDINGS RESPOND TO EARTHQUAKE

By Bikram Mangal Joshi^{‡‡}

When the ground shakes, the base of building moves with the ground and the building swings back-and-forth. If the building were rigid, then every point in it would move by the same amount as the ground. However, most buildings are flexible, and different parts move back and forth by different amounts.

To illustrate this point, take a fat coir rope and tie one end of it to the roof of a building and its other end to a motorized vehicle (say a tractor). Next, start the tractor and pull the building; it will move in the direction of pull (Fig. 1).

For the same amount of pull, the movement is larger for a more flexible building. Now, cut the rope! The building will oscillate back-and-forth horizontally and after some time come back to the original position; these free oscillations are periodic (Fig. 2).

The time taken (in seconds) for each complete cycle of oscillation (i.e., one complete cycle of motion) is the same and is called the fundamental natural period T of the building. The value of T depends on flexibility and mass of the building; the more flexible (or less stiff) the structure is, the longer is T . Similarly, the more mass is, the longer is T . In general, taller buildings are more flexible and have larger mass, and therefore have a longer T . On the contrary, low-to-medium-rise buildings generally have shorter T (less than 0.4 sec).

The fundamental natural period is an inherent property of a building. Any alterations made to the building will change its T . The fundamental natural period of normal single to 20-story buildings are usually in the range of 0.05-2.00 sec.

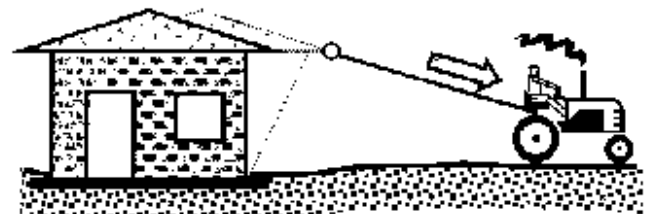


Fig. 1 Building pulled with a rope tied at its roof.

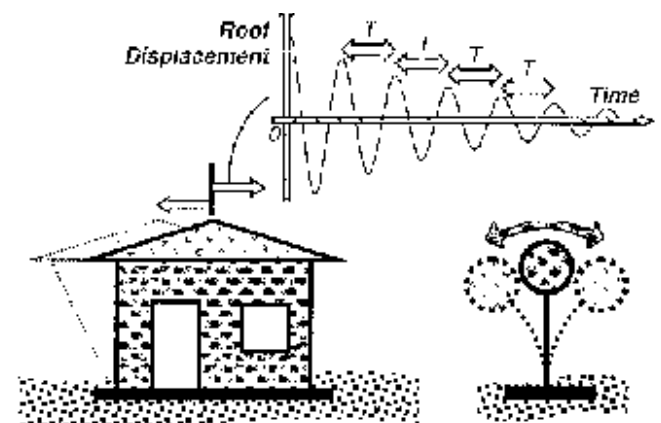


Fig. 2 Oscillation of building on cutting the rope.

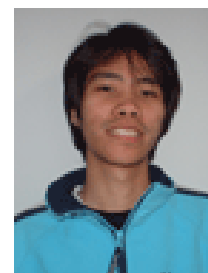
^{‡‡} *Laboratory of Structural Performance, Graduate School of Engineering, Hokkaido University*

The Graduates

THIRD GRADUATING CLASS (SEPTEMBER 2003)

Chumchoke Nanthawichit

Country: Thailand
Subject group: Urban and Environmental Engineering
Degree: Doctor of Philosophy
E-mail: chumchoke@yahoo.com
Thesis title: Dynamic Evaluation of Traffic States on Expressway for Advanced Traffic Surveillance Systems



Dai Jianguo

Country: China
Subject group: Structural Engineering
Degree: Doctor of Philosophy
E-mail: dai@eng.hokudai.ac.jp
Thesis title: Interfacial Models for Fiber Reinforced Polymer (FRP) Sheets Externally Bonded to Concrete

Haryadi Gunawan Tjitradjaja

Country: Indonesia
Subject group: Structural Engineering
Degree: Master of Engineering
E-mail: haryad1@yahoo.com
Thesis title: A Method to Analyze Cylindrical Shells Partially Buried in Elastic Foundation



"Hi guys, Now I am continuing my doctoral research, I have been in Sapporo for 2 years, and I always look forward to every single joyful moment during my study here"



Jan Michal Pstragowski

Country: Poland
Subject group: Urban and Environmental Engineering
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E-mail: jan.pstragowski@softhome.net
Thesis title: The Structure of the Man-Made Environment - Image and Meaning

Jang Chang-Lae

Country: Korea
Subject group: Hydro-science and Environmental Protection Engineering
Degree: Doctor of Philosophy
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Thesis title: Study on the Morphological Behaviour of the Channel with Erodible Banks





Kedar Nath Adhikari

Country: Nepal
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Degree: Master of Engineering
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Thesis title: Experimental Study on the Time-Dependent Deformation and Failure of Mortar

Life is a journey where you need to work for completing it. There will be many things around you positive and negative, you need to cope with all and make yourself available to face anything that comes in your way, without distress but optimism. With best regards to everybody for success.

Muttaqin Hasan

Country: Indonesia
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Thesis title: Modelling of Stress-Strain Relationships for Concrete Damaged by Freezing and Thawing Cycles



Philip De Guzman

Country: Philippines
Subject group: Structural Engineering
Degree: Master of Engineering
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Thesis title: Assessment of Seismic Response of Reinforced Concrete Structures Using Damage Index

I am presently continuing with my doctoral studies and I'm hoping to further improve my technical knowledge as well as to gain a lot more experience during my extended stay here in Japan. I'm also glad to have met many wonderful friends here.

Sang-Ho Cho

Country: Korea
Subject group: Mineral Resources Engineering
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Thesis title: Dynamic Fracture Process Analysis of Rock and Its Application to Fragmentation Control in Blasting



Shehata Eldabie Abdel Raheem

Country: Egypt
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Degree: Doctor of Philosophy
E-mail: shehata@eng.hokudai.ac.jp
Thesis title: Tower Nonlinear Dynamic Response of Cable-Stayed Bridges under Great Earthquake Ground Motion

Thambiah Muraleetharan

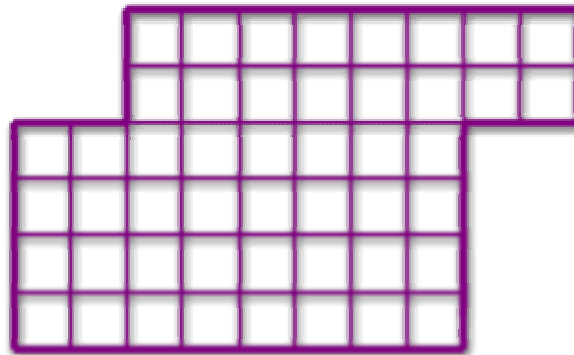
Country: Sri Lanka
Subject group: Urban and Environmental Engineering
Degree: Master of Engineering
E-mail: artmurale@yahoo.com
Thesis title: A Study on Evaluation of Pedestrian Level of Service along Sidewalks and at Intersections using Conjoint Analysis



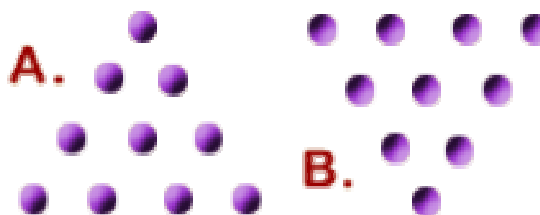
"I did my masters in the field of Transportation Engineering and just beginning my doctoral study here. One of my future goals is becoming a specialist in my field. Besides study I enjoy exploring the outdoors, watching birds and eating delicious Japanese foods."

Puzzles

1. Cut the figure below to make two identical parts.

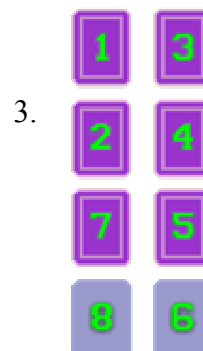
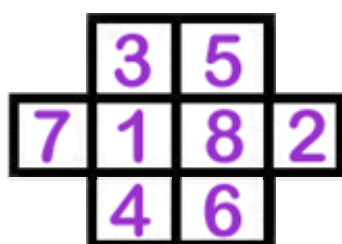
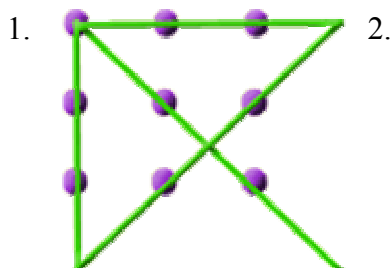


2. Convert Diagram A - to Diagram B. Do it by moving only 3 circles.




See next issue for the answers.

The answers to last issue's puzzles:



You need only make the 8 and 9 change places.
 First turn the 9 upside down to become a 6.
 Then switch the 8 and the 6.

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