

# E-Vision

*Official Bulletin of the EGPSEE-SU*

Vol. 2 No. 2

WINTER 2004



*In this issue, learn more about...*



*the history of Mongolia  
and  
the Philippine jeepney  
on International Page*



*What's more?  
EGPSEE-SU activities  
Food Corner  
The More You Know...  
Travel Diary  
What's in a Word?*

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## **Editorial**

*Warm greetings to our readers in this cold winter season!*

*Another year comes to an end but not without fond memories of worthwhile activities and wonderful friendship. This is especially true this year with an increasing number of students in our program and new activities being organized by EGPSEE-SU. Among others, this issue gives an account of what has happened recently in and around EGPSEE.*

*As another new year begins, we look forward to seeing more contribution from our valuable readers. We would like to ask for your support not just by reading our bulletin but also by being part of it. We would be very happy to receive any articles, news, stories, recipes or just about anything interesting that you would like to share with us.*

*Finally, we wish you all a new year filled with success and happiness!*

*The Editorial Board*

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# Message

From the Dean,  
Graduate School of Engineering



**W**elcome to the Graduate School of Engineering and to the English Graduate Program in Socio-Environmental Engineering (EGPSEE).

EGPSEE, which started in April 2000, is designed to provide foreign students in English with all the necessary knowledge during their study program. The first students graduated from EGPSEE in September 2002 and were awarded the Master's degree of engineering. I am pleased to know that the number of EGPSEE students increases every year. With the remarkable spread of globalization, "Cultivating international appreciation" has become even more important for our university in its mission to train future leaders for our societies. Thus, I would like to ask each EGPSEE student to act as a bridge between your country and Japan.

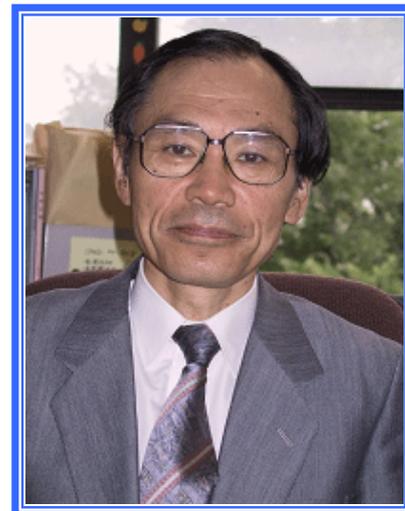
The history of Hokkaido University goes back to the Sapporo Agricultural College, established in 1876 as the first higher educational institution in Japan. The principle beliefs espoused by the university that were introduced back then were based on a pioneering spirit that cultivated international appreciation, liberalism, and applied learning. Aiming to provide highly-educated human resources as well as to play a pioneering role at the frontiers of research, we have prepared a rigorous Engineering Education Program according to internationally recognized standards.

As dean, I am proud of our achievements thus far, and encourage you to join us as we engineer our future at Hokkaido University and around the world.

Tsuneyoshi NAKAYAMA  
Dean, Graduate School of Engineering  
Hokkaido University

# Message

From the EGPSEE Head



One and a half years have passed since EGPSEE opened the program to the Japanese students. However, until now, there has been a relatively slow growth of applications from the Japanese students. It may be showing that the “Wall of English” is not that ‘low’ for the Japanese students to climb over. As a matter of fact, many Japanese people including the students find some difficulties to learn and use the English language in situations peculiar to them.

The Japanese language has only five vowels in the pronunciation, and does not have any words consisting of consonants in succession. This could be one reason why Japanese is weak in listening and pronouncing English. In addition, the English grammar is absolutely different from that of the Japanese. For example, the order of the subject, verb and object in an English sentence is changed to subject-object-verb form in the Japanese language. For that fact, Japanese people often change the order of the words to understand the meaning of an English sentence. This method is actually the same with the traditional method of translating a sentence written in Chinese characters to Japanese, which historically produced great results in introducing the advanced culture from the China continent at that time. However, the apparent shortcoming of such method is that one could not understand the English sentence in its context but only to know the literal meaning when translated in Japanese. Thus, it will be more important for Japanese students to learn English as a language by itself.

On the other hand, in the case of many foreign students in EGPSEE, not only can they speak English fluently, but also they become conversant with the Japanese language within several years. What is then the difference? There may be various reasons. But one main difference is that the foreign students feel the need to use Japanese in their everyday life, while Japanese students do not feel that necessity to use English.

In this regard, I hope that the EGPSEE-SU will provide more congenial events and opportunities for the Japanese students who want to speak English spontaneously.

Kazuyoshi HASEGAWA  
EGPSEE Head (2003-2005)

# Message

From EGPSEE-SU President



First, I would like to congratulate the September 2004 graduates and extend my gratitude to those who left EGPSEE, for their valuable efforts to make EGPSEE an active family. We are grateful for the memories we share together and we wish you all the best in your careers. Likewise, I would like to warmly welcome the October 2004 intake students. It is our hope that you will enjoy the four-season beauty of Sapporo. You probably have some questions about life and study in Japan. We are ready to support you as much as possible.

EGPSEE-SU organized various activities that helped students interact, know each other and benefit one another with the objective of promoting social interaction, cultural exchange and an excellent academic environment. Among these activities, the 'EGPSEE trip 2004' was the most remarkable endeavor to promote environmental concerns. 'EGPSEE colloquium 2004' also opened an opportunity to listen to presentations by EGPSEE students about architecture in different countries. Our sports day was a notable event that showed warm camaraderie and friendship between and among EGPSEE students and those beyond the bounds of EGPSEE. All these activities were successfully organized by the EGPSEE students with the help of EGPSEE program officer, Mrs. Werawan Manakul, professors, staff members, Japanese and international friends. Many thanks to all!

It is a good start that EGPSEE incorporated more Japanese students this year. That makes it no longer a foreigners' community but more importantly and in every sense, an *international community*. Together, let's continue to make EGPSEE-SU a strong and active organization with intellectual and entertaining activities.

Finally, I wish you all the best in your studies and take time to have fun as a break from lectures and research routines.

Mintesnot GEBEYEHU  
President, EGPSEE-SU

## Projects and Activities of EGPSEE-SU

By Vasantha Wickramasinghe  
(EGPSEE-SU Secretary)

Aside from the regular events in the last couple of years, EGPSEE-SU 2004 calendar was filled with a number of new activities like the Snow Festival, E-lympics (EGPSEE Sports Day) and EGPSEE Colloquium. A new set of EGPSEE-SU officers was also elected by the students during the General Assembly held on March 11, 2004. Following is a summary of the events that took place since the last issue of E-Vision.

### **New Year Party (23 Jan 2004)**

EGPSEE-SU 2004 activities started with the New Year party or *shinenkai*, which was mainly organized by the new students then. The international food competition was one of the significant events in the party. There were many international dishes but the Philippine “everlasting” was the hands down favorite. Chef *Philip* got the valuable prize of the day.



### **Sapporo Snow Festival (30 Jan-3 Feb 2004)**

How can we forget that experience in the *yuki matsuri*. It was the first time EGPSEE joined the Sapporo Snow Festival. “Hands for World Peace” was the chosen theme for the sculpture. Members of the EGPSEE group, including professors and friends worked for four days to shape a giant block of solid snow into a globe held by two hands.



### **Graduation Party (24 March 2004)**

EGPSEE produced four graduates this March, *Ghimire* and three endearing ladies, *Ana*, *Mirian* and *Diane*. It was quite an emotional moment for the EGPSEE family as half of the ladies in the program have graduated at once and so as the former E-Vision editor-in-chief *Ghimire*. Also notable in this party was that *Haryadi* was regarded as a professional chef while *Ana* came to the party with her beautiful baby *Yuan*. This event ended with tears swelling in the ladies’ eyes.



### Welcome Party and General Assembly (23 April 2004)

This time five new students joined the EGPSEE family. Surprisingly three out of the five were Japanese students. All newcomers were tested with a set of tricky questions followed by creative presentation from each student. Everyone got a chance to go to Brunei with *Arshad*, to Lithuania with *Aurimas* and see the unknown side of our three new Japanese friends *Akinobu*, *Naoya* and *Hiroshi* in their presentations. General assembly of EGPSEE-SU was also held following the welcome party with the objective of presenting EGPSEE-SU activity calendar for the year 2004.



### EGPSEE E-Class

The English Class, which was started by the EGPSEE students last winter for free, was also held this summer semester. This time the class was limited only to beginner's level which was attended by some staff members of the Engineering Faculty. Classes were held once a week every Thursday during noon break.

### EGPSEE Sports Day (11 June 2004)

*E-lympics* – Annual Sports Day, was one of the new events added to the EGPSEE-SU calendar. It was an unforgettable day for the EGPSEE family. Tug-of-war (rope pulling), taira and mini-soccer were the three events included in the first *E-lympics*. This was a good opportunity to extend our friendship to non-EGPSEE members as there were many of them who wanted to join us (especially young Japanese ladies thanks to our ever-active *Withit*). It was difficult for the organizers to select the Most Valuable Player (MVP) as everyone had performed well. In the end, it was *Leo* who was lucky enough to receive the medal award. Soon after the *E-lympics*, there was a barbeque party, which was organized to welcome back EGPSEE program officer, Mrs. Werawan after her quick recovery from a medical operation.



### EGPSEE Colloquium (17 June 2004)

Another new activity added to the EGPSEE calendar this year was the EGPSEE Colloquium. The primary aim of this event was to let students listen to some presentations related to a particular area of study. The topic chosen for the first colloquium was the "Architecture in different countries". There were five presentations covering Australia, Brunei, Russia, Lithuania and Colombia. This gave the audience a chance to know more and to compare the style of living in areas with different climates, geography and ethnicities.



### Open University Day (2 Aug 2004)

This was the second straight time that EGPSEE joined this event. Because of its successful participation last year, EGPSEE was granted a separate time slot for the exhibit. This gave the participants, especially high school students, a good opportunity for deepening exchange with international students. Most of the high school students were particularly interested taking part in the quiz prepared by each division in the EGPSEE group.



### EGPSEE Trip (11-12 Aug 2004)

The focus of this year's trip was *environment*. The second EGPSEE trip covered the southern parts of Hokkaido: Tomakomai, Muroran, Tomari and Eniwa. It was a great relief from everyday studies. A group of 25 comprised of EGPSEE students, professors, program officer Mrs. Werawan, Baby Sakura (Nagano sensei's daughter) and Mrs. Hasegawa joined the trip. The group first visited the plastic waste power generation plant SANIX. Then there was that intense moment 140 meters up on the Hakutyu Bridge. Next was the visit to the Volcano Museum in Abuta village and at the end of the day, everyone got to enjoy a nice hot spring and dinner at the Grand Toya Hotel. There was also a wonderful show of *hanabi* or fireworks in the Toya Lake that night. The next day was energized with morning exercises led by EGPSEE-SU vice president, *Carolina*. The first destination that day was the Tomari atomic power plant wherein structural engineers had a chance to see such a huge construction project. After an enjoyable but exhausting trip, it was finally time for Sapporo Beer. Can still remember how Ueda sensei got the permission to enter the Sapporo Beer Factory. The field trip was a great success as usual, thanks to the efforts of Nagano and Hasegawa senseis and our EGPSEE Queen *Caro*.



(More pictures of the above events at <http://ws3-er.eng.hokudai.ac.jp/egpsee/notices.htm>)

## What's in a Word?

**Serendipity.** In philosophical thought, as well as in daily conversation, one frequently has ideas that are remote from the original subject. **One idea leads to the next, and an entirely new chain of ideas is formed. This is referred to as "serendipity" and is a useful tool in creative thinking.** The Merriam-Webster Dictionary defines serendipity as "The gift of *finding valuable or agreeable things not sought for*; a word coined by Walpole, in allusion to a tale, 'The Three Princes of Serendip,' who in their travels were always discovering, by chance or by sagacity, things they did not seek." During the consideration of a subject under study, one's mind frequently wanders to ideas which are rather removed from the problem but which turn out to have bearing on other problems. Thus while considering one problem, a solution to another problem may arise.

Adapted from Thomas L. Saaty's *Mathematical Methods of Operational Research* (1959)

## International Page



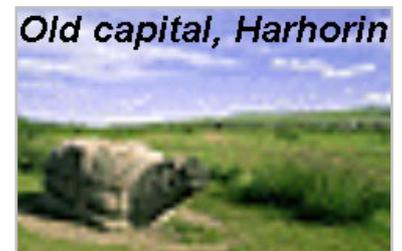
### AN INTRODUCTION TO THE HISTORY OF MONGOLIA

*By Sarandulam Dashdorj\**



It would be no exaggeration to say that Mongolia is the only one of the ancient nomadic states to retain the tenets of its original nomadic civilization, including the classic migration of livestock and closeness to nature. If you visit Mongolia you will feel the beauty of nature, where forest-covered mountain ranges and hills meet desert and steppe. You will also meet Mongols just like those who have been building traditional 'ger' since olden times, hospitable

cattle-breeders breeding throughout the four seasons traditional kinds of livestock (horse, camel, cow, sheep, goat), as well as the half-settled inhabitants of cities, who develop the industry and culture of the country. Specialists on the history of Mongolia from many countries have proved that it goes back over 2000 years. In 1991 Mongolia celebrated the anniversary of the establishment of the first Hun State in 209 BC.



Mongolian archaeologists have discovered 500,000 year-old stone implements that are the remains of Mongolia's earliest inhabitants. Since the early primitive communal era, Mongols had lived independently in the neighborhood of such nomadic tribes as Turk and Khamnigan.

In 209 BC, the Huns, who were by origin from ancient nomadic tribes such as Xianyu, Xianyung, Hun yi and Di, set up the first state in Central Asia. The Hun State was equal in power to the Chinese states of Tsin and Han. The territory of the Huns was vast and extended to the Great Wall in the South, the Lake of Baikal in the North, Hingan Hills in the East and Erchis River in the West. The state maintained wide diplomatic, cultural and trade relations with the neighboring countries. In the middle of the first century AD the Hun State split into North and South. The Southern Huns established within the Great Wall the states of Han and Xia, which existed until the 10th century, while the Northern Huns migrated to East Europe and settled down there by the 4th-5th centuries AD.

Between the 3rd-6th centuries the territory of the Hun State was occupied successively by the states of Xianbi and Jhou Jhan, and Chinese historians noted the power of these states was equal to that of the Huns.



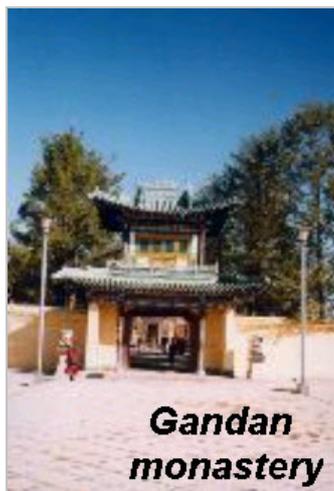
During the 7th-10th centuries, the present Mongolian territory was inhabited by the Turkic, Uighur and Kirghiz tribes. But there is little historic documentation about the life of the Mongols at this period.

During the 9th-10th centuries, the Kidans, who were a Mongolian speaking tribe, established in the north of China a Great Liao State. At this time of the Kidans (Liao), the Chinese tribal states for the first time submitted to foreign supremacy, and the Chinese Khan officially recognized the Kidan Khan as "his father", and thus himself as "a son".

During the 11th-12th centuries, the Mongol tribes came into history under the names Whole Mongolia, Tatar, Kerait, Jalair. These neighboring tribes had their own rulers and were constantly fighting with each other. At this time of intertribal struggle, a Mongol chieftain called Temujin gathered various tribes under his leadership, named his state "Mongolia", and renamed himself "Genghis Khan". The difficult process of establishing the Mongolian State was finely described in the famous

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Mongolian document "Nuuts Tovchoo" (Secret History of the Mongols). In the 13th century Mongolia was one of the most powerful states in the world. All major world trade and political relations went through the capital of Mongolia of that time, Kara Khorin (which is situated in the present territory of the Mongolia), and the flow of ambassadors from France, sons of Georgian and Armenian sovereigns, Russian princes, and Chinese officials was unceasing. After having established the state, following the custom of the ancient nomads, Genghis Khan undertook campaigns against the neighboring states. As a result of the wars undertaken by Genghis Khan and his successors with the purpose of "conquering the whole world" Mongolia became a powerful empire, extending from the East China Sea to Western Europe, covering vast areas of Europe and Asia. After the death of the last Mongolian Emperor Mongke in 1259, the Mongol Empire broke up into the Golden Horde of Batuu Khan (Genghis Khan's grandson), inhabiting the Russian Kipchak steppe; the Kingdom of Tsagadai (Genghis Khan's son), who had conquered East Turkestan and Uzbek, and the Yuan State of Khubilai Khan, which included the Mongolian and Chinese territories.



**Gandan  
monastery**

The wars waged by the Mongols resulted in the dispersal of the Mongolian tribes, a considerable reduction in the size of the Mongolian population, and the destruction of a lot of cities and villages in the conquered countries. But on the other hand, these wars precipitated the process of unification of various Asian and European tribes, and drew East and West nearer together, something that had never been done before.

After the defeat in 1367 of the Mongolian Yuan State by the Chinese Min State, the Mongolian Khans returned from Beijing to their native territory. At this time Mongolia ceased to be the center of world trade and culture, but the Mongols retained their home territory.

During the 14th and 15th centuries, the Mongols lost their previous unity and were divided into Eastern Mongols and Western Mongols (Oirat Mongols). Then in the 16th century the Eastern Mongols split up into Outer Mongolia (Khalh Mongolia) and Inner Mongolia. The Mongols waged war on each other, and dominance went first to Oirat Mongolia and then to East Mongolia. East Mongolia was the more powerful. At the beginning of the 17th century, the Zurchid tribe of Manchurians became powerful and established the State of Chin. The Manchurians subdued Inner Mongolia in the 1630s, Khalh Mongolia in 1691 and Oirat Mongolia in 1757.

The 17th-20th century period was the most tragic for the Mongols. In fact, the Manchurians cut off the Mongolian State from world civilization for many centuries, and the Mongols remained as if on the inside of an inverted copper pot. At the beginning of the 20th century, the movement for the renaissance of the Mongolian State led by Bogdo Khan spread widely like a fire, but was suppressed in 1911 by the Manchurian colonial domination. The Mongolian people led by Khalh Mongolian Javzandamba Khutagt (Bogdo Khan) established the Khanate uniting religion and state, and intended to unite all Mongolian-speaking people. But this aim remained unfulfilled because of the expansionist policy of the Tsarist Russia and China. In 1919 the Chinese government grossly violated the Russian, Chinese and Mongolian tripartite treaty of 1915, and with the aid of armed forces conquered the Mongolian State. This precipitated again the upsurge of the national liberation movement in the country, and so in 1921 Khalh Mongols under the direction of S. Danzan, D. Bodoov, and D. Sukhbaatar liberated our territory from the foreign conquerors and won our freedom. From 1921-1924 Mongolia was a republican Monarchy. In 1924, however, it became an independent state with one-party system that lasted until 1990.

The winds of the European democratic changes of the late 1980s also came to the country. New democratic and freedom parties were created, and a peaceful, democratic revolution changed the country's political system. In July of 1990, the first democratic general election took place in Mongolia, and it has become, finally, a parliamentary republic with president and multi-party system. During past 15 years, Mongolia is making a transition progressively from a centrally planned economy to the free market economy system.



**Palace Museum**

## International Page



### THE PHILIPPINE JEEPNEY

By Jacqueline Satur<sup>†</sup>



If subway is the most common mode of transportation in Japan, the jeepney, on the other hand, is the most popular public utility vehicle in the Philippines.

The Philippine jeepney is actually a longer version of “jeep” that was commonly used as army vehicles during WWII and at present, is the same family as the “jitney”, the taxi/minibus that travels along a fixed route found in many countries. The first jeepneys were actually the army jeeps themselves but were modified externally by repainting and scraping to the metal, and adding various decorations such as paintings, moving horse metal figurines, and flags, making each jeepney different from each other in appearance. Ford Fieras were also then used for jeepney production. Later on, however, the companies that did these remodeling jobs started making much bigger bodies running on surplus diesel engines (which are cheaper on the long run for the jeepney driver), thereby increasing the overall capacity of jeepneys. In time, the army jeeps and Ford Fieras were all displaced by the Philippine-made jeepneys with bodies entirely assembled and designed locally, but with machine parts obtained from surplus shops throughout the country. The Philippine jeepney industry was thus born, and later on, it spread to the different provinces from Metropolitan Manila where it all started, making the jeepney the most common vehicle in the Philippines.

The unique thing about jeepneys is that they are personalized; each jeepney speaks of the identity and background of the family who owns it, as shown by the designs outside and inside. (Usually, the jeepneys are privately-owned from which the Filipino families sourced out their income). Local companies build jeepneys in painstaking individual production and their designers apply the designs specified by the buyer. Work on the vehicle itself sometimes takes much shorter than work on the design and decorations on the vehicle, as the former has become almost mechanical, but the latter requires repetitive planning, and sometimes, mistakes can put back the designing effort by one or two weeks behind. It is a matter of joy and pride both for the jeepney owner and the jeepney designer to come up with a jeepney pleasing to the eye and furnished with useful devices for a comfortable and an enjoyable ride. Outside, the Philippine jeepney invites commuters with its festive and colorful appearance: shiny stainless metal sheets decorated with paintings, flags, moving horses metal figurines, numerous headlights, and striking word captions at the front and sides that add character to the jeepney such as “King of the Road”, or that speak about the owner’s family such as “Three Brothers, One Sister.” Inside, most of the Philippine jeepneys nowadays have comfortable cushion to sit on, stereo, mirrors, colorful lights at night, and blinker lights that come on when passengers who have to get off press a button or pull a string. These pleasures are not only for the passengers but also for the driver himself who have to endure the heat of the day plus the traffic and air pollution.



Basically, the Philippine jeepney is a two-row seater vehicle with capacity of 20 to 30 people. The destination route of the jeepney is indicated at the front and also at the sides and people could ride on and get off at any point as usually there is no specific jeepney stops assigned except in organized communities. The passenger pays his transportation fee (standard is 5.50 pesos or about 11 yen for 4 kilometers) by saying “Ma, bayad po” (Mr. Driver, this is my payment) and passing the money from one person to

<sup>†</sup> Laboratory of Mineral Processing and Resources Recycling, Graduate School of Engineering, Hokkaido University

another until it reaches the driver. Doing this creates a special atmosphere of kindness among the commuters. Payment is usually on honesty basis with the driver just hoping that his passengers pay and at the right amount for the distance traveled before getting off. The driver has little way of knowing who among his passengers has not paid yet as they are many and they just come and go. During rush hours, the people sit next to each other like sardines in a can and some hang up on the reel (“sabit”) at the entrance of the jeepney just to be able to go to work or get home. Gentlemen would kindly offer their seats to the elderly or ladies.

However, riding a jeepney is also funny in many ways and also risky. One has to accept that after a day, his hair would not be clean as after taking a bath due to air pollution caught while riding a jeepney. One has to be careful of their wallets or bags as some people because of poverty might have interest on them. Nevertheless, the Philippine jeepney is still the most favorite vehicle for transportation and it signifies the life and warmth of the Filipino culture.

## PUZZLES

### 1. Alphametic

Given: **DONALD + GERALD = ROBERT**; if  $D = 5$ , then what are the rest?

### 2. Magic Square

Magic square is a square matrix of numbers of distinct positive integers  $1, 2, \dots, n^2$  arranged such that the sum of the  $n$  numbers in any horizontal, vertical, and main diagonal line is always the same number. For example, a  $3 \times 3$  matrix also known as ‘Lo Shu’ square is shown below:

8	1	6
3	5	7
4	9	2

Can you make a **5 x 5 magic square** containing the distinct positive integers from 1 to 25 such that the horizontal, vertical, and main diagonal sum is 65?

?	?	1	?	?
?	?	?	?	?
?	?	?	?	?
?	?	?	?	?
?	?	?	?	?

### 3. Anagram

An anagram is a word spelled out by rearranging the letters of another word such as ‘tool’ and ‘loot’. Based on the clues given in the sentence below, figure out what the two (anagram) words are:

*I love fruits, especially \_\_\_\_\_ (6) and sour \_\_\_\_\_ (6)!*

The numbers given in the sentence indicate the number of letters in each word.

## Featured Article

### A CELL PHONE IN THE HOLSTER CAUSES MEN TO SHOOT BLANKS

*Japan Times, Nov. 15, 2004*

Cell phones reportedly cause miscarriage and childhood leukemia. They interfere with pacemakers. They have been blamed for traffic accidents and have sparked altercations between train passengers. What further harm could they possibly do? Perhaps wipe out the Japanese nation, frets Shukan Gendai.

Dr. Imre Fejes, of the Department of Obstetrics and Gynecology at the University of Szeged in Hungary, analyzed sperm from 221 men and found the count in cell phone users was 59 million per milliliter as opposed to 83 million per milliliter in non-users. Moreover, Fejes and his team discovered that cell phone users also had poor quality sperm. They speculated electromagnetic waves from the phones adversely affected sperm production.

Even some elementary school pupils carry cell phones, notes the magazine, and the cell phone is a vital necessity for young studs.

Well, what if you carry a mobile but seldom use it? Fejes says even in standby setting a cell phone emits electromagnetic waves.

Henry Lai, of the Department of Bioengineering at the University of Washington, bombarded rats with electromagnetic radiation of nearly the same frequency to that emitted by cell phones. He showed the radiation damaged the DNA in the rats' brain cells. Lai claims his experiment corroborates the Hungarian team's findings. Damage to sperm's DNA will have a negative effect on sperm production, depriving sperm of the vigor to reach the egg, he concludes.

Shukan Gendai reports 83.84 million Japanese had subscribed to cell phones as of September, a 5.6-fold increase in eight years, and foresees a day when all Japanese own one. As if the eschatological implications were not already clear, the magazine trots out the findings of a Teikyo University study of 94 healthy males conducted from 1996 to 1998. The study showed men in their 20s had a sperm count 40 percent lower than those in their 40s. The ringing conclusion: the sperm count was down in the generation using cell phones 24/7.

"But I'm too old to beget children." Questions a skeptical reader, "why should I care?"

You should care if you ever again want to rise to the occasion. A study by Rajavithi General Hospital in Bangkok showed that men who keep cell phones in their pants pockets are susceptible to erectile dysfunction (ED). The electromagnetic radiation increases the surface tension of blood, making it thicker. The thicker blood

flows slowly and fails to swell the erectile tissue in the penis, according to the Thai researchers.

Shukan Gendai asks cellular giant NTT DoCoMo for an assessment of the risk of the mobile phone to male fertility.

"It's impossible for us to investigate the findings of all the different research conducted around the world," huffs an unnamed NTT spokesperson. "We are adhering to government guidelines and keeping electromagnetic waves within limits mandated by law."

The magazine pursues the buck to the Internal Affairs and Communications Ministry. The ministry has adopted internationally recognized electromagnetic emission standards, says a spokesperson, and is not conducting research into cellular effects on sperm or ED.

What should a man suppose to do? "The best protection from a cell phone is not to own one," says Lai. "If you must use one, hold it as far from your body as you can."



## Article

### DIFFERENCE BETWEEN ENGLISH & JAPANESE PROGRAM

By Werawan Manakul<sup>‡</sup>

When EGPSEE started in October 2000, two major differences between EGPSEE and the Japanese program were (i) EGPSEE students are selected based on academic record, not entrance examination, and (ii) most of EGPSEE students are scholarship recipients. Four years have passed and although (ii) remains unchanged, with the cooperation from students, professors and university staff, EGPSEE is different from the Japanese program in various ways.

(1) Admission – While the application to admission ratio in the Japanese graduate program is below 2.6, the EGPSEE is above 10. This can be partially attributed to a limited number of scholarships available and professors' reluctance to accept students without scholarship. International students whose academic records do not meet the minimum requirement must pass an entrance examination. Since the number of Japanese students each Division is allowed to accept is set, Japanese students must pass an entrance exam. After that, they can choose to either join EGPSEE or the Japanese program. All students must obtain satisfactory TOEFL, TOEIC or other internationally administered English test score.

(2) Registration – For master's program, Japanese students register for the courses they plan to take for the whole program right after their enrolment. It does not matter whether they take their courses during the 1<sup>st</sup> or 2<sup>nd</sup> year. Any change must be approved by their supervisor and subsequently reported to the academic affairs office. EGPSEE does not follow this rule because some of the courses are not offered due to unavailability of course instructors and occasionally special lectures or intensive courses are offered. To provide flexibility, EGPSEE students (in master's and doctor's degree) are required to register at the beginning of each semester. In contrast, doctoral students in the Japanese program do not need to register. Why is there a difference? See the reason in (3) below.

(3) Final grades – Japanese students do not receive their grades at the end of each semester. Right before graduation, Division heads are supposed to obtain the final grades from each course instructor according to the students' registration after their enrolment. The main concern is whether or not students have obtained enough credits to graduate and not the grades themselves because more than 90% of the students get A for all the courses they took. On the other hand, EGPSEE requests course instructors to submit the final grades in numeric percentages instead of the usual letter-grading system at the end of each semester. These numeric grades are part of the criteria used in choosing EGPSEE master's students for continuation to the doctoral program, as well as, for monitoring their quality as scholarship holders. Another difference between the Japanese program and the EGPSEE is that for the Japanese doctoral program, the 4 courses which a student took are grouped into an 8-credit course titled "Advanced Exercise in (subject group name)" with a single grade given by his supervisor. In the case of EGPSEE, all the courses that a student took are listed along with the grades he received.

(4) Course evaluation – Except students who took the courses, no one knows what is going on in each course. EGPSEE requires students who took the course to fill out an on-line course evaluation form at the end of the semester. From these submitted forms, we learned various aspects about the courses and tried to rectify any inappropriateness as much as we can. Since the forms are forwarded to respective course instructors, students' frank feedback helps course instructors to adjust their course content or the way they carry out their lecture. In the case of the Japanese program, course evaluation is conducted in the undergraduate program only.

(5) Thesis defense examination – In some laboratories, many Japanese students have not yet finished writing

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<sup>‡</sup> Program Officer, English Graduate Program in Socio-Environmental Engineering, Graduate School of Engineering, Hokkaido University

their thesis when their oral presentation is held. What they usually do is to prepare a 4-page abstract for distribution during the presentation day, and then finish the write-up of their thesis later. Due to a large number of graduating students, the presentation time including the deliberation (Q&A) for each student is between 12 to 15 minutes. On the other hand, EGPSEE students must finish writing their thesis and circulate a copy to each examination committee member one week before the presentation day. At the same time, their thesis abstracts are made available for download so that interested attendees can read these abstracts in advance. The presentation time including the Q&A is 30 minutes.

(6) Theses/dissertations – Binding of doctoral dissertation, for both the Japanese and EGPSEE students, is handled by the respective laboratories. In the Japanese program, most laboratories let their Master's students handle the binding of the theses themselves. On the other hand, EGPSEE takes care of the Master's thesis binding with a sequence number and uniform cover.

(7) Thesis/dissertation abstracts – A book compiling the abstracts of the master's and doctor's theses for Japanese graduates is printed once a year, i.e. after the March graduation. Since EGPSEE students graduate in both March and August, a separate publication compiling abstracts of the EGPSEE graduates in each year is printed in September. These abstracts are available on the EGPSEE alumni homepage.

(8) Doctoral program committee – In the Japanese program, a doctoral student carries out his research under the supervision of his supervisor alone. After he finishes writing his dissertation, an evaluation committee consisting of three to four professors is set up to evaluate the quality of the dissertation and to give some comments for revision. In the case of EGPSEE, a doctoral Program Committee consisting of at least three members, one of whom from outside the Division or School, is set up within the first two semesters after enrolment. Committee members are expected to provide guidance to the student from an early stage and throughout his study program. Students' progress assessment is done once a year in an open presentation.

(9) Student Union – There is no student union in the Japanese program. In my opinion, EGPSEE Student Union (EGPSEE-SU) is something indispensable. Without an organized student body, EGPSEE is just a (dull) serious academic program. Without the EGPSEE-SU, there is no occasion, in which students from different fields of study can work together, travel together, eat together, laugh together and ..... freeze together.

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## Announcements

**PRESENTATION BY M2 STUDENTS WISHING TO CONTINUE TO THE DOCTORAL PROGRAM**  
Wednesday 19 January 2005, Rm. A101, 1030~

### **COE WORKSHOP AND INTENSIVE COURSE**

A workshop on "Service Life of Concrete Structures - Concept and Design" will be held on 4 February 2005.

*Workshop lecturers:*

Prof. Dr. Andreas Gerdes, U of Applied Science, Karlsruhe, Germany

Dr. Steen Rostam, COWI A/S, Denmark

Dr. Yasuhiko Sato, Hokkaido U, Japan

Prof. Ha-Won Song, Yonsei U, Korea

Dr. Koji Takewaka, Kagoshima U, Japan

Prof. Somnuk Tangtermsirikul, Sirindhorn Institute of Technology, Thailand

A related 2-credit intensive course will be offered in 2 periods: 31 January -3 February and 14-18 February 2005. A syllabus and timetable are being finalized.

*Intensive course lecturers consists of the above workshop lecturers plus*

Prof. Toru Nawa, Hokkaido University

Dr. Manfred N Partl, EMPA, Switzerland

## Food Corner

### COLOMBIAN COFFEE CAKE

By Carolina Blanco Chaparro<sup>§</sup>

#### Ingredients:

4 tablespoons ground 100% Colombian coffee  
3/4 cup milk  
1 cup flour  
1 teaspoon baking powder  
1/2 teaspoon cinnamon  
1/2 teaspoon salt  
1/2 teaspoon nutmeg  
1/4 teaspoon ground cloves  
3 eggs  
1 cup sugar  
1 teaspoon vanilla  
1/4 cup warm melted butter



#### Preparation:

##### **The coffee base**

Combine coffee and milk in a saucepan, bring to a boil. Steep over low heat for 10 minutes. Strain through several layers of cheesecloth into a measuring cup. There should be 1/2 cup flavoured milk. Keep milk warm over low heat.

##### **The flour mixture**

Stir flour, baking powder, salt, cinnamon, nutmeg, and cloves. Set aside.

##### **The liquid mixture**

In a large bowl, beat eggs for about two minutes at high speed until thick. Slowly add sugar and beat for 4-5 minutes until very light. Set aside. With a mixer at low speed, slowly beat in flavoured milk until just blended. Then add vanilla.

##### **All together**

With a mixer at a low speed, or by hand, fold in the flour mixture with the liquid mixture, just until blended. Do not over beat. Gently fold in melted butter.

#### Baking:

Pour into two greased and floured cake pans. Bake in preheated 350 degrees oven for 20-25 minutes until cake tester inserted in center comes out clean. Let cool for 10 minutes and then turn out onto racks to cool completely.



<sup>§</sup> Laboratory of Urban Planning and Design, Graduate School of Engineering, Hokkaido University

## Travel Diary

### THE WEDDING OF THE YEAR

By Arshad Baharudin\*\*



The media called it the wedding of the year. Multinational news corporations such as the BBC, CNN, Al-Jazeera and NHK broadcasted the event live throughout the world. For a few minutes, this tiny oil-rich fairy-tale kingdom nestled on the island of Borneo caught the eye of the world. On the ninth of September, one of the world's most eligible bachelors, Crown Prince Al-Muhtadee Billah, heir to the throne of Brunei Darussalam, married Sarah Abdul Rahman, a local high school girl of minor nobility and mixed Bruneian – Swiss parentage.

And I was there to witness it. Nearly every night for the two weeks prior to the main wedding various traditional pre-wedding ceremonies were conducted. I won't go through them since I don't really know much about them myself

being happily single and all - but suffice to say there was plenty of food involved! After being in Japan and Britain for so many years, the sudden infusion of my own culture was overwhelming – the colorful costumes, the unfathomable protocols and customs whose origins are lost in time, the rarely heard usage of traditional royal palace language – all this made me feel like a gaijin in my own country. As I consider myself to be well traveled, it is but ironic that one of my more interesting journeys would be to a palace not more than a short walk from where I was born...

Well, first, the setting. Quoting the Guinness book of records, it is set in the largest residence in the world, with an area over 200,000 square meters. Of course, being there is another matter – I can safely say that if there is really a place that deserves the clichéd labels of 'grandeur', 'opulence', 'majesty' and 'magical', the Istana Nurul Iman would be it. Such a lavish wedding of course, could not be complete without the attendance of equally prominent guests. The various leaders of neighboring nations, royalty, highly ranked politicians and the odd rock star – all were in attendance. I even ended up being an interpreter for the Japanese TV and news reporters that were covering the wedding, especially with Crown Prince Naruhito in attendance. The colorful batiks of the Indonesian attendees, the flowing robes of the Arabian Emirs, the smart medalled uniforms of European and Japanese royalty, our own graceful Malay bajes – it all combined to give a sense of being back in the time of a bygone era, with the only reminders of the present age being the incessant camera flashes from the reporters and the crowd as the dignitaries traversed the open hallway before the grand throne room to pay their respects to the newly wed royal couple.

Respects paid, prayers incanted, solemnizations read, the wedding ceremony itself was at an end, a sudden climax to some weeks of preparation and celebration. Heralds throughout the nation announced the completion of ceremonies and a 21-gun salute was fired from the traditional royal cannon. In a strange occurrence that only served to add to the mysticism of the ceremonies, at the end of the salute the heavens opened with great thunder and torrential rain, a shock, as it had been such a fine morning.

Rumor had it that the rain and thunder only fell within the palace grounds. Evidence of the magical powers of the Sultans of Brunei, as was written in the histories? Perhaps...



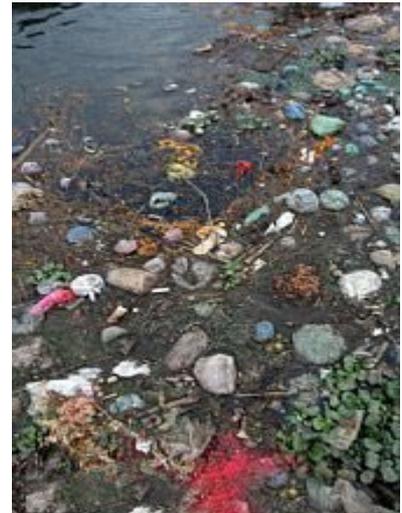
\*\* Laboratory of Transportation and Traffic Systems Planning, Graduate School of Engineering, Hokkaido University

## The More You Know...

### ENVIRONMENTAL ENGINEERING

By Jacqueline Satur<sup>††</sup>

Protection of the environment became one of the main concerns of the global community in the past decades as environmental problems such as water, air, and solid waste pollution, global warming, etc. became worse. As a result, people have become more conscious of the consequences of their actions to the environment. Interest in pursuing courses in the field of environmental engineering has been developed.



#### History

Environmental engineering is a field of broad scope that draws on such disciplines as chemistry, ecology, geology, hydraulics, hydrology, microbiology, economics, and mathematics. It was traditionally a specialized field within civil engineering and was called “sanitary engineering” until the mid-1960s, when the more accurate name “environmental engineering” was adopted. It began in the United States in the 1830's with the design of water supply systems and developed from the need to solve water and air quality problems that resulted from industrialization and urbanization in the late 18<sup>th</sup> and 20<sup>th</sup> century following the US Civil War. By the time of World War II, supply of safe drinking water was the norm throughout the United States. Continued industrialization during and after World War II resulted to an increase in all forms of environmental pollution but the accompanying economic boom also produced pollution control technologies and gave rise to the experts who applied and advanced them. Environmental engineering had thus become a recognized specialty of engineering practice. In 1955, an organization was created to implement a certification process for environmental engineers that encompassed all areas of environmental practice such as water supply engineering, air pollution control engineering, wastewater treatment, etc.

#### Air, Water, and Solid Waste

Environmental engineering deals with the distribution of safe drinking water; collection, treatment, and disposal of wastewater; water quality modeling (e.g. the fate of water contaminants); management of solid waste and hazardous waste; cleanup of hazardous-waste sites; prevention of contamination of soil by contaminated waters; monitoring and control of air contaminants; researches on indoor air quality, air toxics, global climate change, and stratospheric ozone depletion. Basically, environmental engineering aims to solve air, water, and solid waste pollution problems. Noise pollution control is also included.

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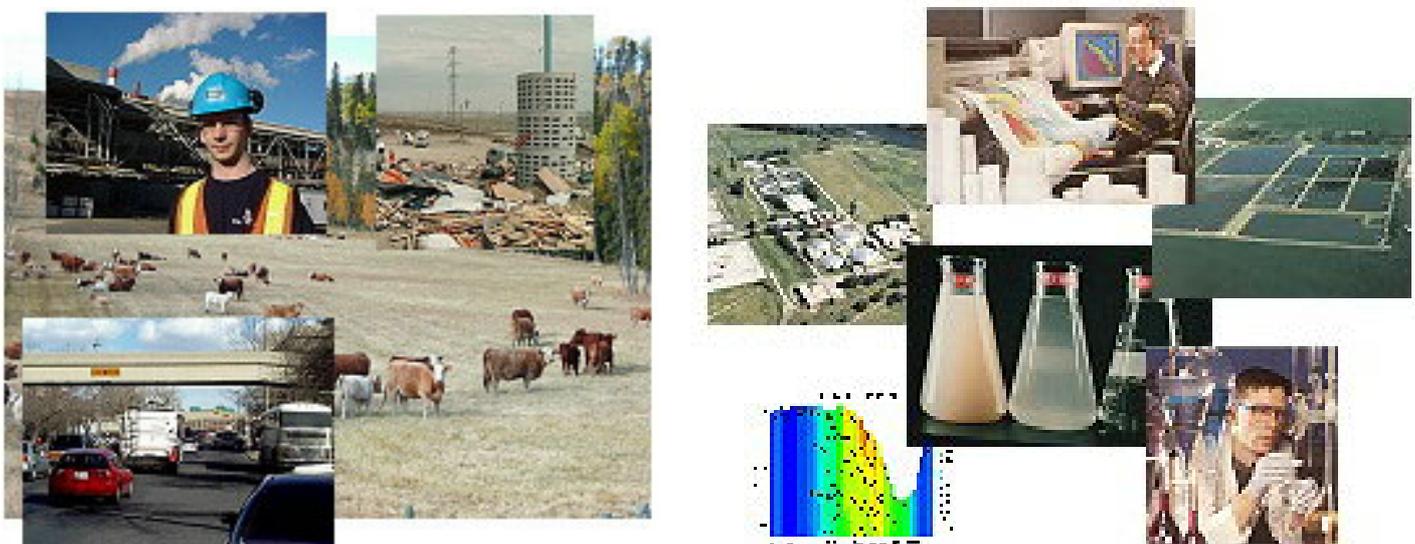


### Environmental Assessment

An EIA or “environmental impact assessment” is used to identify the environmental and social impacts of a project (e.g. construction of a plant, dam, airport, highway, etc.) prior to its implementation. It aims to predict environmental impacts at an early stage in project planning and design, find ways and means to reduce adverse impacts, shape project to suit the local environment, and present the predictions and options to decision-makers. By using EIA, both environmental and economic benefits can be achieved, such as elimination of some treatment/clean-up costs and minimization of time and cost of project implementation and design. For environmental assessment of plans, programmes, and policies, the term used is “strategic environmental assessment”.

### Studying Environmental Engineering

Environmental engineering subjects are usually being taught during undergrad as a component in civil engineering, and also in chemical engineering, mechanical engineering, public health, or in an independent department. A more detailed study of environmental engineering is being offered as a graduate study. Environmental engineers work in water/wastewater treatment facilities, industrial plants, air quality monitoring stations, landfill stations, consulting firms, universities, and the like. We may not all be environmental engineers in our jobs but we can help protect and save our environment through our simple ways such as minimizing our daily garbage, reusing scratch papers, not littering, separating wastes, etc.



## The Graduates

### FOURTH GRADUATING CLASS (MARCH 2004)

#### **Mirian Noriko Hiraiwa**

**Country:** Paraguay  
**Subject group:** Air, Water and Environment  
**Degree:** Master of Engineering  
**E-mail:** norihiraiwa@hotmail.com  
**Thesis title:** Microbial Community Analysis in Membrane Bioreactors Treating Municipal Wastewater



#### **Ana Mitanoska**

**Country:** Macedonia  
**Subject group:** Urban and Environmental Engineering  
**Degree:** Master of Engineering  
**E-mail:** amitanoska@wildmail.com  
**Thesis title:** A Study on Evaluation and Improvement on Bicycle-Friendly Environment in the Inner CBD of Sapporo

#### **Diane Faye Riley**

**Country:** Barbados  
**Subject group:** Air, Water and Environment  
**Degree:** Master of Engineering  
**E-mail:** frd1@hotmail.com  
**Thesis title:** Effectiveness of UVA260 (E260) as a Surrogate Parameter for the Rapid Estimation of Contaminant Removal Efficiency by Alum Coagulation



#### **Hem Nath Ghimire**

**Country:** Nepal  
**Subject group:** Geotechnical Engineering and Materials  
**Degree:** Doctor of Philosophy  
**E-mail:** hemghimire@hotmail.com  
**Thesis title:** Development of Stress Measurement System by Overcoring Method Suitable for Soft Rock

### FIFTH GRADUATING CLASS (SEPTEMBER 2004)

#### **Bikram Mangal Joshi**

**Country:** Nepal  
**Subject group:** Structural Engineering  
**Degree:** Master of Engineering  
**E-mail:** bmj1000@hotmail.com  
**Thesis title:** Experimental Study on Repair and Strengthening of Reinforced Concrete Framed Structural Walls with Carbon Fiber Grids and Rod





### Withit Pansuk

**Country:** Thailand  
**Subject group:** Structural Engineering  
**Degree:** Master of Engineering  
**E-mail:** withit@eng.hokudai.ac.jp  
**Thesis title:** Shear Resisting Mechanism of RC T-Beam

### Jacqueline V. Satur

**Country:** Philippines  
**Subject group:** Solid Waste Resources Engineering  
**Degree:** Master of Engineering  
**E-mail:** jvs\_02798@yahoo.com  
**Thesis title:** Carrier-Microencapsulation for Preventing Pyrite Oxidation



### Sofren Leo Suhaendi

**Country:** Indonesia  
**Subject group:** Geotechnical Engineering and Materials  
**Degree:** Master of Engineering  
**E-mail:** sofren@hotmail.com  
**Thesis title:** Residual Strength and Permeability of Hybrid Fiber Reinforced High Strength Concrete Exposed to High Temperature



### Tran Tuan Anh

**Country:** Vietnam  
**Subject group:** Geotechnical Engineering and Materials  
**Degree:** Master of Engineering  
**E-mail:** ttanhce@yahoo.com  
**Thesis title:** Prediction on Behavior of Deep Peaty Soil Deposit during Vacuum-Embankment Preloading



### Mintesnot Gebeyehu Woldeamanuel

**Country:** Ethiopia  
**Subject group:** Urban and Environmental Engineering  
**Degree:** Master of Engineering  
**E-mail:** minte@eng.hokudai.ac.jp  
**Thesis title:** Diagnostic Evaluation of High School Location and Accessibility from the Perspective of Existing Public Bus Route Networks



**Antoni**

**Country:** Indonesia  
**Subject group:** Geotechnical Engineering and Materials  
**Degree:** Doctor of Philosophy  
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**Thesis title:** Chloride Penetration into Fiber Reinforced Concrete under Loading

**Sanjay Giri**

**Country:** Nepal  
**Subject group:** Hydrosience and Environmental Protection Engineering  
**Degree:** Doctor of Philosophy  
**E-mail:** girisanjay@hotmail.com  
**Thesis title:** Flow, Turbulence and Erosion Induced by River Structures

**Preda Pichayapan**

**Country:** Thailand  
**Subject group:** Urban and Environmental Engineering  
**Degree:** Doctor of Philosophy  
**E-mail:** predap@hotmail.com  
**Thesis title:** A Study on Evaluation of New Expressway Projects using Real Option Approach

**Prakash Ranjitkar**

**Country:** Nepal  
**Subject group:** Urban and Environmental Engineering  
**Degree:** Doctor of Philosophy  
**E-mail:** pranjitkar@yahoo.com  
**Thesis title:** Experimental Assessment of Microscopic Traffic Flow Models Based on RTK GPS Data

**Benno Rahardyan**

**Country:** Indonesia  
**Subject group:** Solid Waste Resources Engineering  
**Degree:** Doctor of Philosophy  
**E-mail:** Benno.Rahardyan@gmail.com  
**Thesis title:** Study on Citizen's Concerns and Attitudes towards Solid Waste Management Facility in Japan





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