

**INTERNATIONAL CONFERENCE
ON ENGINEERING EDUCATION**

ICEE2005 Seoul Proposal

August 2001

International Conference on Engineering Education ICEE2005 Seoul Proposal

a. Name of Conference

ICEE2005: Engineering Education in Knowledge Based Society

b. Proposed Program Emphases/Themes

The central theme proposed is Engineering Education in Knowledge Based Society, which covers the new paradigm change in the fields of knowledge, based society and engineering education. The concept of knowledge-based society is presented compared to that of industry-based society. Along with the requirements of the job skill at the new paradigm, the new direction of engineering education is to be discussed.

The objective suggest a wide list of topics which include (but are not limited to):

- Teaching Methodology
- Technology Big Bang
- Links Between Education and Research
- Distance Learning
- Requirements for Engineers
- Current Trends in Engineering Education
- Integration of Basic Sciences
- Global Engineering Practice
- ICT and Multimedia Teaching Tools
- Accreditation
- International Cooperation

c. Plans for Publication of the Conference

The proceedings will be published on CD-ROM and on the conference Web-site. Conference proceedings will not be published in the printed form.

d. Dates and Location of the Conference

The dates will be the early of August and the location of the main Conference will be in Seoul and the workshop will be at Chonan where the Korea University of Technology and Education is located.

e. Proposed Schedule

1- 1/2 Year Prior to Conference

Mail Out First Call for Paper

Conference Web Site on Line

1 Year Prior to Conference

Distribute Brochure About Conference on Site

Mail Out Second Call for Paper

During Year of Conference

Middle of February: Abstracts Due Date

End of March : Notice of Acceptance

Middle of May : Camera Ready Manuscripts Due

Early of June : Pre-registration Deadline

f. Hosting Institution, Including Letter of Endorsement and Commitment from the Head of the Institution

KUT(Korea University of Technology and Education) will host the Conference. A letter of intention was submitted to ICEE/ISC by Dr. Kwang Sun Kim, Dean of Graduate Studies of KUT. President of KUT, Dr. Won Ki Kwon will be present at ICEE/ISC Meeting to make an endorsement to host the Conference along with his letter of endorsement.

g. Proposed Conference Chair or Co-chairs and Discussion of Past Experience and Qualification

President of the Local Organization and Scientific Committee: Won Ki Kwon, President of KUT

Conference Chair and General Supervisor: Kwang Sun Kim, Dean of KUT

Co-chairs will be determined by consultations with ICEE/ISC later.

Dr. Won Ki Kwon received his two Master degrees from Havard University and University of Paris and Ph.D. from Hanyang University in Technological Economics. He was Vice Minister of Korea Ministry of Science and Technology, and former President of Korea Science and Engineering Foundation. Before he became the President of KUT in 1996, he was a distinguished Professor of Pohang University of Science and Technology.

Dr. Kwang Sun Kim received his Master and Ph.D. degrees from University of Kansas, USA, in Mechanical Engineering. After he was graduated from KU, he was a research associate at Yale University, and worked for the Raytheon Incorporated as an engineer. He had also engineering educational experiences as a dean of planning affairs at KUT. He is currently a director of SETEC and a member of many Korean Government Scientific Boards.

h. Introduction to the Hosting Institute

The Korea University of Technology and Education(KUT) has been established with the purpose of training instructors well-versed in both theory and practice in their respective fields. These professionals will form the cutting edge of the next generation's industrial and technological innovation. With the industrial sector becoming more diversified and technological innovation happening everyday, the Korean government felt the need to train qualified instructors .

Government undertook to finance the establishment of a four year college to meet the technical needs of an ever-changing world. Thus, in March of 1992, the Korea University of Technology and Education open its door.

KUT's ambition is to contribute to national development by education creative leaders and experts in the fields of technology and also endeavors to secure the best teaching staff and the best students.

The future of the KUT is ensured by the daily effort that is made by professors, staffs, students, and the rest members of the university. The university, however, is not just a base for the cultivation and learning of new knowledge, but is also the backbone, which helps our society to accomplish an ambitious mission,

preparing men and women to build a better future.

KUT currently has 3,000 students. There are 150 teaching staff members and 100 administrative and general service staff.

Education is performed by the following schools and departments.

- School of Mechanical engineering
- School of Mechatronics
- School of Information Technology
- School of Industrial Managements
- Department of Control system engineering
- Department of Industrial Design Engineering
- Department of Architectural Engineering
- Department of Materials Engineering
- Department of Applied Chemical Engineering

The KUT is aware of its responsibility as a public service to support high social aspiration. It has therefore developed a comprehensive range of specialized courses dedicated to the technical preparation of postgraduates. Further information and the listing of these courses is available in <http://kut.ac.kr>

The KUT is firmly committed to directing its Research and Development activities towards the improvement and development of the socio-economic environment.

In order to disseminate the results obtained through R & D, the KUT has established Industrial Cooperative Research Center.

In addition the KUT has very unique institution so called Human Resources Development Institute.

This institute is a specialized educational organization, which plays the role of a firm stepping stone for the development of domestic industry by providing opportunities to learn the knowledge of new technology required in the industrial site. With the state-of-the-art educational training programs designed by prominent specialists having field-experience, this institute actively pursues practical education.

Because the institute is located in the great natural environment with the area of 66,000 m² suitable for both residence and leisure activities, it offers the best educational ambience for the trainees in terms of utmost educational efficiency and ideal space for rest. According to the philosophy of life-long education, the institute makes endless efforts in order to contribute to the development of domestic industry, particularly adopting up-to-date re-training system designed to improve the competitiveness of individual and that of the country as well. The institute provides trainees with the widely open educational space in which they can further develop their talent and creativity. Enjoy the time with the Human Resources Development Institute complete with the state-of-the-art technical equipment of educational training.

i. Introduction to the Hosting City/Region of Seoul



Location: 126o59' east longitude and 37o34' north latitude

Climate: Seoul belongs to the temperate zone featured by four distinctive seasons of spring, summer, autumn and winter. The yearly average temperature of Seoul is 12.9 degrees C. Temperatures in Seoul tend to fluctuate a great deal, reaching as high as 36.1 degrees C in the summer and dropping as low as -13.7 degrees C in the winter.

Influenced by the north Pacific high pressure system, Seoul has hot and humid summers with average temperatures above 20 degrees C from June through September.

During the midsummer period the city often records daily highs of over 30 degrees C. In winter, Seoul is topographically influenced by the expansion of the Siberian high pressure and prevailing west wind with temperatures dropping lower than other regions on the same latitude. The rise and fall of the high pressure system causes a typical cycle of three successive cold days followed by four warmer days, relieving people from freezing temperatures.

The annual precipitation in Seoul averages 1,210.2 mm, which is more than the average amount of rainfall across the peninsula. Most of the rainfall is concentrated in the rainy months (monsoon period) of June through September when downpours account for about 70 % of the total annual precipitation. Except for those rainy spells, however, Seoul boasts fine weather throughout the year and is especially famous for its azure autumn skies.

Area: The area of Seoul as of the end of 1997 is 605.52km², or 0.6% of the entire country. The Hangang bisects the city into two parts, northern and southern Seoul. Northern Seoul totals 297.97km² (49.2 %) while the southern part is 307.55 km² (50.8 %).

Among the 25 autonomous "gu" or wards of Seoul, the largest is Seocho-gu (47.13km²) and the smallest is Jung-gu with an area only one fifth (9.97km²) that of Seocho-gu.

The expansion of the city has been curbed since the last administrative reorganization in 1973. The lifestyles of Seoul citizens, however, have been influenced since the 1970's due to the rapid growth of satellite cities around the capital area.

Bordering Cities & Counties: Gyeonggi-do: Goyang-si, Yangju-gun (county) and Euijeongbu-si to the north; Namyangju -si, Guri-si and Hanam-si to the east; Seongnam-si, Gwacheon-si and Anyang-si to the south; Gwangmyeong-si, Bucheon-si and Gimpo-si to the west.

Population: Seoul has a population of 10,321,449 individuals and 3,458,511 households as of the end of 1999. This accounts for about a quarter of the total national population. As for the proportion of male to female excluding foreigners, men (5,141,141) slightly outnumber women (5,123,119).

Five out of the 25 "gu" or wards have more than 500,000 residents. Songpa-gu has the biggest population of 668,421. In contrast, Jung-gu has a population of only 129,061. In the past 600 years since Seoul became the capital of the nation in 1394, the population of Seoul has grown 110 times.

It has one of the highest population densities in the world of 17,157 persons/km².

The number of foreign residents in Seoul as of the end of 1999 is 57,189 or about 0.55 % of Seoul's total population. They include 18,763 Americans, 12,283 Chinese, and 6,332 Japanese. There are people of more than 90 different nationalities currently residing in Seoul, forming a small global village.

Origin of Name: Seoul derived from the ancient word Seorabeol or Seobeol, meaning "capital"

Administrative Organization: Mayor, 3 Vice Mayors, 3 Offices, 8 Bureaus, five Director-Generals, & 63 Divisions

Legislative Organization: Seoul Metropolitan Council

Administrative Districts: 25 Gus consisting of 522 Dongs

Budget: 9,924,504 billion won

Per Capita GRDP: 8.5 million won, 23.7% of the GNP of 388 trillion won

Mountains: 8 consisting of 4 inner mountains: Mt. Bugaksan in the north, Mt. Naksan in the east, Mt. Inwangsan in the west and Mt. Namsan in the south; 4 outer mountains: Mt. Bukhansan in the north, Mt. Yongmasan in the east, Mt. Deogyangsan in the west, and Mt. Gwanaksan in the south.

River: Hangang

j. Introduction to the Hosting City, Chonan

The KUT is located in Chonan city.

Chonan City is 83.6 kilometers away from Seoul (by expressway). The Kyongbu line runs north and south and the Changhang line extends from south to west. A number of roads radiate in all directions toward Seoul, Chinchon, Asian (Onyang), Kongju, Pyongtaek and Taejon.

Basin type; Inland mountain type

- * The hub of the city: The center of transportation, commerce and education.
- * North/west (inland plains): Fruit, farming.
- * South/east (middle mountains): High-profit crops, tourist attractions.

The nucleus of the country

- * Supports the Metropolitan area. The boundary gate of the western part of Chungchongnam-do Province.
- * An important spot in communication as the junction of the three southern provinces, with national highways/railroads and express highways/railroads.

k. Proposed Cultural Visits

In Seoul - 1) Gyeongbokgung



Gyeongbokgung Palace (Historic Site No. 117) was built in 1395 by King Taejo the founder of Joseon Dynasty as the primary residence for the royal family. Among the five palaces in Seoul, it is the largest and most beautiful in architectural style. There are elegant pavilions such as Gyeonghoeru and Hyangwonjeong and other refined wooden and stone structures such as Geunjeongjeon Hall.

In Seoul - 2) Changdeokgung and Biwon

Changdeokgung Palace (Historic Site No. 122) was originally constructed in 1405 as a detached palace after Gyeongbokgung Palace was constructed. However, since the period of the ninth monarch of the Joseon Dynasty, King Seongjong, it was used as the main palace.



This palace was burnt down during the Japanese invasion of 1592 and rebuilt in 1611 during the reign of Gwanghaegun. With the man-made structures in harmony with the beautiful natural surroundings, it is one of Seoul's most frequently visited sites. One can find here many important cultural assets such as Injeong-jeon, Daejo-jeon and Seonjeong-jeon halls, and Nakseonjae Villa. Changdeokgung Palace is one of UNESCO's World Heritage Sites.

Biwon (Secret Garden) is located behind Changdeokgung Palace. A serenely exquisite garden, Biwon was used by the king and royal family during the Joseon Dynasty as a place for relaxation. It features many ponds, pavilions and wooded areas containing thousand-year-old trees. Pavilions such as Buyongjeong, Yeonghwadang, Juhapnu and Eosumun Gate are located in and around the garden, all displaying traditional Korea architectural excellence. Biwon is considered the best representative garden to view Korea's distinct natural beauty.

In Seoul - 3) Jongmyo (Joseon Dynasty Shrine)

Dongmyo Shrine, Treasure No. 142, was built to honor General Gwanuo of the Han Dynasty of China. It was called "Donggwan-wang-myoo" originally. Gwanu is one of the main characters in the Chinese classic "SamgukJi" (Story of the Three Kingdoms).



Of the three shrines of Dongmyo (east shrine), Seomyo (west shrine) and Bukmyo (north shrine), **which** were constructed in 1601, during the reign of King Seonjo of the Joseon Dynasty, but only Dongmyo Shrine remains today. This shrine is surrounded by a wall of stone and mud, and covers an area of 9,315 square meters. With its trees and benches, it serves as a good resting place for Seoulites.

In Seoul - 4) National Museum

We at the National Museum are committed to preserving the precious cultural assets of Korea, which embody the spirit and wisdom of our ancestors and are constantly working to ensure the museum is a place that can give dreams, hope and enjoyment to the people.



In 1986, the National Museum of Korea moved to Jungangcheong, the former Japanese colonial government building. Expanded and reorganized, the museum came to have 24 galleries and 13 storage rooms. Scientific and computerized management of the collection was gradually pursued. Education programs were also activated with establishment of new social education programs: Museum Class for Youth, Saturday Public Lectures, Cultural Education Course for Seniors, Cultural Education Course for Housewives, Training Course for School Teachers,

Training Course for Tour Guides, Museum Tour for Mothers and Children, and the Traveling Museum.

1st Floor Exhibition rooms - archeological history, modern art, and natural history.

2nd Floor Exhibition rooms - anthropological folklore and traditional art.

In Seoul - 5) National Center for Korean Traditional Performing Arts

The National Center for Korean Traditional Performing Arts is an organization, which began more than 1400 years ago. Its forerunners can be traced back to the institute called Eumseongseo during the reign of Queen Chindok of the kingdom of Silla.



The succeeding kingdom of Goryeo had two national music institutes, which were combined in the early part of the Joseon Dynasty into Jangakwon, or "Music Affairs Institute", which continued to be responsible for all music, song, and dance performed at major national celebrations, and for the training of musicians and the composition of new music.

This institute managed to survive the order of the Japanese occupation. During the Korean War, on April 10, 1951, the present center was opened in Busan. Now, the National Center for Korean Traditional Performing Arts works toward preserving, researching, and transmitting traditional music and dance.

Around Chonan - 1) Independence Hall of Korea

The Independence Hall of Korea is a place dedicated to display Korean history from past to present, focusing on the independence movement from the Japanese colonial period. This Independence Hall encompasses the full range of Korean history to offer a better understanding of Korean cultural heritage and to enrich knowledge, patriotism, and sheer enjoyment of Korean people. Devoted to collect, preserve, exhibit, study and research the materials and resources about Korean history, visitors can learn the wisdom of Korean ancestors in overcoming a national crisis, and to remind Koreans of their national consciousness.



The collections in the Independence Hall have been managed and categorized into contributed, entrusted and duplicated materials. Entrusted materials are the ones that an individual or organizations entrust to the Independence Hall temporarily or permanently. Duplicated materials are the ones that have possibility of being damage or disappear so it has limited in the use and has been copied from the original data.

Around Chonan - 2) Sudeoksa Temple

Located on Mt. Deoksungsan (495 m), this historic temple was first built in 599 by Jimyeongbeopsa, a revered monk, during the Baekje Kingdom and was later rebuilt by the great monk Wonhyodaesa (see Borim Temple).



Daeungjeon, the main hall of this temple, was built in 1308 and is the oldest wooden structure in the country (designated as National Treasure No. 49). Located around the temple site are Iljumun Gate, Jongnu Pavilion, Gwaneum Rock, Mangongtap Pagoda, and Geumgangmun Gate.

On the premises are a three-story stone pagoda which was built during the Silla Kingdom and Gyeonseongam, a Buddhist nunnery.

Surrounded by lush forests and unique rock formations, this large temple is famous for its scenic setting.

Around Chonan - 3) Donghaksa Temple

Located in Sangbong Valley, 25 km from Gongju, Donghaksa Temple was built by Priest Hoeuihwasang in 724, the 23rd year of King Seongdeok-wang's reign during the Silla Kingdom. It was later expanded by Priest Doseonguksa during the reign of King Taejo in the Goryeo Dynasty.



nuns.

The temple contains Daeungjeon (main hall), a three-story stone pagoda, Samungak Pavilion, Sungmojeon (an altar dedicated to the six patriots loyal to King Danjong, who died refusing to serve Sejo), and Donggyesa Temple (an altar for Bak Jesang, a Silla patriot).

Two kilometers north of this temple are the Twin Pagodas on the site of Cheongnyangsa Temple, and the Nammaetap Pagodas. The Nammaetap Pagodas consist of two pagodas, one seven stories and the other five stories high.

These two pagodas were constructed during the Silla Kingdom, following the architectural style of the Baekje Kingdom. Today the temple is used as an institute for Buddhist

Around Chonan - 4) Hyeonchungsa

Hyeonchungsa is a shrine dedicated to Admiral "Chungmugong" Yi Sun-Sin. It is located on Mt. Banghwasan, 4 km from downtown.



It was built in 1706, the 32nd year of King Sukjong's reign. One year later, King Sukjong bestowed the shrine the name "Hyeonchungsa".

It was rebuilt in 1932 during the period of Japanese colonization by the Chungmugong Relics Preservation Association. In 1966, the government expanded the shrine's compound to 547,297 square meters, and declared it a national shrine.

I. Proposed Costs and Budget and Method of Funding (subject to modifications)

An Estimated budget is included below. KOSEF and corporate sponsorships will be sought and will be used to offset costs of conference registration and professional tours.

1. Expenses

\$10 coffee breaks 6	\$60 per participant
\$20 per conference lunch 4 lunches	\$80 per participant
\$30 per conference dinner	\$120 per participant
Transportation	\$10,000
Travel of KUT delegates to give status reports	\$7,500
CD-ROM proceedings	\$4,000
Audio/Visual equipment rental	\$5,000
Conference services(professional and student assistance)	\$7,000
Conference bag	\$5,000
Representing and publicity expenses	\$10,000
Conference building fee	\$15,000
ICEE/iNEER	\$25,000

Total	\$166,500 (300 participants)
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2. Income

Support from KUT and Government Funding	\$20,000
Conference registration fee for iNEER registered delegate	\$500 per participants

Total	\$170,000 for 300 participants
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