2008-09-01



International Conference on Engineering Education ICEE 2010 Gliwice Proposal

A. Name of conference

ICEE-2010: Engineering Education and Research for Society.

B. Conference emphases/themes

The conference will be devoted to various aspects of future cross-regional collaboration efforts in engineering education and research. The conference will focus first of all on the following topics:

- international cooperation and networking,
- current trends in engineering education,
- new teaching methods,
- e-learning and e-assessment,
- multimedia teaching tools,
- lifelong learning technologies,
- internationalization and globalization of engineering education,
- collaboration between universities and industry,
- internetworking in education,
- research and development links,
- information and communication technologies,
- sustainable development,
- new energy sources,
- biotechnology and environmental protection.

C. Dates and location of the conference

The conference hosted by Silesian University of Technology will be held in Gliwice from 18th July 2010 to 22th July, 2010. The conference will include regular sessions with oral presentations, global and technical sessions, panel discussions and poster presentations. The proposed dates conform to the standards and tradition of previous ICEE conferences and fit perfectly to the summer break in the education cycle at Silesian University of Technology which makes it possible to use fully the facilities of the hosting universities in Gliwice for ICEE-2010 purposes.

D. Venue, dates and timeline for submitting partnership report to iNEER

The partnership report will be transmitted to the iNEER Board before August 20, 2010.

E. Plans for publication of proceedings (hardcopy, CD-ROM or WWW-based)

The proceedings will be published on CD-ROM and given to each registered participant. Well before the conference the ICEE-2010 Gliwice WWW site will be opened, the site will also include the full PDF version of the proceedings after conference. It is planned to have the conference papers abstracts printed and made available to registered conference participants together with the conference program.

The Organizing Committee will work thoroughly through the ICEE-2010 contributions and will propose the authors of several papers to prepare the appropriate versions for publication in the leading journals on the conference subjects – with prior agreement and collaboration with iNEER. The Silesian University of Technology is involved in editing several journals of related scope, including the Archives of Control Sciences journal, which would make it possible to prepare special issues on topics covered by several outstanding papers to be presented during the conference.

F. Proposed schedule

- 1-1/2 year prior to Conference (February, 2009)
 Mail out first Call for papers.
- 1 year prior to Conference (at preceding ICEE, July/August, 2009):

- o Distribute brochures about Conference
- o Mail out second Call for papers
- November-December of prior year: mail out reminders / third Call for papers (December, 2009)
- During year if Conference:
 - o January 31: Abstracts due date.
 - o February 28: Notification of acceptance.
 - o April 30: Early-registration deadline
 - o May 15: Camera-ready manuscripts due date.
 - o May 15: Deadline for authors registration.

G. Hosting institution(s) or organization(s), including letter of endorsement and commitment from the head (President, Rector, Chancellor or individual of equal responsibility) of the institution

The main part of the Conference will be held in Gliwice, Poland, the main hosting institution will be the Silesian University of Technology, Gliwice, the premises of the Silesian University of Technology will be used for the Conference plenary sessions, working and panel sessions as well as working discussions.

The proper letter of endorsement and commitment from the highest authorities of the Silesian University of Technology is included with this proposal and is reproduced below.

POLITECHNIKA ŚLĄSKA

; H N I K A

Vice-Rector for International Cooperation

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Dr Win Aung

International Network for Engineering Education and Research iNEER Board Secretary General

Gliwice 08/09/2008 RW/007/08/09

Dear Professor Aung,

Herewith I kindly inform you that the Silesian University of Technology has decided to apply for the organization of ICEE/ICEER Conference – ICEE-2010 – in Gliwice, Poland. The ICEE/ICEER conferences have been organized since 1994 in various worldwide countries and representative of the Silesian University of Technology have actively participated in almost all of the conferences, as well as in the activities of the ICEE/ICEER International Steering Committees and other International Network on Engineering Education and Research bodies. The Silesian University of Technology has also been honoured to organize the ICEE-2005 conference in Gliwice, Poland, with almost 400 participants from more than 50 countries.

We are going to apply for the patronage and financial support to the Polish Ministry of Science and Higher Education with respect to the organization of ICEE-2010 conference in Gliwice. We are also planning to apply for sponsorship to industry as well as research and development oriented institutions, especially from Silesia region because it is obvious that organization of such large and prestigious international conference has stimulating influence on establishing profitable contacts with international partners and development of the organizer's country – and region in particular. Our experience from the ICEE-2005 organization justifies our conviction concerning the successful gaining of such sponsorship.

As Vice-Rector of the Silesian University of Technology I confirm financial and organizing input of my University to the organization of ICEE-2010 conference in 2010 in Gliwice.

Sincerely your

Professor Jerzy Rutkowski Vice-Rector of the Silesian University of Technology

H. Proposed conference chair or co-chairs and discussion of past experience and qualifications

It is proposed to include among the persons responsible for the Conference organization the Honorary Committee Chair, General Conference Chair, Organizing Committee Chair and Program and Scientific Chair and Co-Chairs.

It is proposed that the role of the Honorary Committee Chair will be taken by Professor Andrzej Karbownik, Rector of the Silesian University of Technology.

The General Chair of the ICEE-2010 conference will be Professor Jerzy Rutkowski from the Silesian University of Technology. Professor Rutkowski is currently the Vice-Rector for International Cooperation of the Silesian University of Technology. Professor Rutkowski is the titular professor of technical sciences and full professor at the Silesian University of Technology. In 2002-2008 he was the Dean of the Faculty of Automatic Control, Electronics and Computer Science, one of the largest faculties at the Silesian University of Technology. His scientific and research specialties include Electronics, Computer Science in general, CAD/Diagnosis of Analog Systems, Artificial Intelligence Methodologies (neural networks, evolutionary computing, fuzzy sets), Technology-based Education. Professor Rutkowski is member of several scientific organizations and committees worldwide.

Dr Jerzy Mościński will lead the work of the conference Organizing Committee and will be responsible for the general conference related activities. Dr Mościński is the Head of the Silesian University of Technology Bureau of International Cooperation in Science and Technology. His duties at SUT included the coordination of several Research and Development Programs as well as European Collaboration Programs. Dr Mościński was the ICEE-2005 Conference Organization Committee Chair and his experience in organizing ICEE conferences is especially important. Dr Mościński's professional experience and specialization concern the field of control and identification, computer controlled systems, computer networks and artificial intelligence.

Other Chairs and Co-Chairs will be taken by the highest authorities of the Silesian University of Technology. It is proposed that Prof. Wojciech Zieliński from the Silesian University of Technology will be involved in the organization of ICEE-2010 conference. Professor Zieliński is former General Chair of successful ICEE-2005 conference and iNEER Board Member. Participation of Professor Zieliński in the organization of ICEE-2010 will be an important factor concerning the conference success.

I. Members of international steering committee and national organizing committee

Members of the International Steering Committee and National Organizing Committee will be selected and assigned before May 1, 2009. It is proposed to include in the committees people who contributed towards the success of ICEE-2005 conference in Gliwice and subsequent ICEE and ICEER conferences.

J. Introduction to the hosting institution(s)



The Silesian University of Technology (Politechnika Śląska) will be honored



to host the ICEE-2010 Conference. With its main base in Gliwice in the

Upper Silesia region, this University has been playing one of the most important roles in the engineering education in Poland since its beginning in 1945. The Silesian University of Technology based in Katowice was founded pursuant to the decree of the President of the National People's Council dated May 24, 1945, following long-lasting efforts to establish a technical university in the district of Upper Silesia undertaken since the late 1920s. The final decision to transfer the university seat from Katowice to Gliwice was announced in March 1946. The basic aim of establishing the technical university in the heart of industry dense region was threefold: (1) to provide the industrial enterprises with especially well educated technical and management staff, (2) to enable the enterprises to find solutions to their research oriented problems by means of cooperation with researchers groups from the Silesian University of Technology, (3) to give the Silesian University of Technology research staff a unique opportunity of testing their research concepts in the way of cooperation with numerous and versatile industrial enterprises in the region.

Today the SUT is a self-governing state university offering various engineering courses (leading to BSc, MSc and PhD degrees) at 12 basic faculties based in Gliwice, Zabrze, Katowice and a subsidiary Engineers' Education Center in Rybnik. Employing over 1600 academics, the University trains almost 32,000 day-time students and offers also evening and extramural courses. Industry of the whole country and in particular branches presented in Upper Silesia region benefit from our graduates and from the research work carried out here. Thanks to the wide co-operation with other educational and research institutions all over the world, including vivid participation in many international programs and staff & students exchange with many academic centers, the Silesian University of Technology is one of the leaders in the field of engineering education and research in Poland with wide recognition abroad.

The Silesian University of Technology has 12 faculties. Nine of them are located in Gliwice. The Faculty of Materials Science, Metallurgy and the Faculty of Transport are in Katowice (25 km from Gliwice), and the Faculty of

Organization and Management is in Zabrze (10 km from Gliwice). All faculties at Silesian University of Technology are like follows:

- Faculty of Architecture,
- Faculty of Automatic Control, Electronics and Computer Science,
- Faculty of Civil Engineering,
- Faculty of Chemistry,
- Faculty of Electrical Engineering,
- Faculty of Mining and Geology,
- Faculty of Energy and Environmental Engineering,
- Faculty of Mathematics and Physics,
- Faculty of Mechanical Engineering,
- Faculty of Material Science, Metallurgy and Transport,
- Faculty of Organization and Management,
- Faculty of Transport.

Typical they studying at Silesian University of Technology lasts 5 years and the courses are run in Polish language and exceptionally in English language. Entrance conditions include: secondary school certificate, one year preparatory course of Polish language for the abroad applicants, health certificate.

There are several interfaculty units in the structure of the Silesian University of



University of Technology,

Technology including among other the following ones:

- Central Library,
- Publishers of the Silesian



- Foreign Languages Teaching Center,
- Sports Center,
- Geometry and Engineering Graphics Center,
- Research Center for Teaching Techniques,
- Career Guidance and Student Promotion Center,
- Computer Center.

It should be pointed out that the main aims of the Silesian University of Technology operation are now very similar to the ones mentioned above and formulated at the time of establishing the Gliwice University. The main point of the mission of the Silesian University of Technology is to be one of the best technical universities in Poland. The achievement of this aim is measured by means the number and quality of students as well as taking into account the activeness and successful examples of cooperation with industrial enterprises, especially with the ones operating in the Upper Silesia region. Therefore the strategic development plan items for the Silesian University of Technology could be formulated as follows: (1) the University staff should constantly improve the quality of their research capabilities in order to become more and more successful in winning the domestic and international research oriented grants and to better serve the region-based industrial enterprises with respect to their research-oriented problems; (2) the realisation of item 1 would enable the teachers/researchers groups to initiate and maintain close cooperation with leading European and other universities and research centres thus making it possible to develop joint work on research problems as well as exchange of staff between cooperating institutions; (3) the realisation of items 1 and 2, together with the adoption and bringing to operation the quality control system in the university, would result in constantly growing popularity and confidence in the quality of the Silesian University if Technology teaching activities among young people in Upper Silesia region and potentially other regions of Poland.

The strategic development plans formulated above included the need for establishing close contacts with European, USA and other countries universities with respect to research and teaching groups cooperation. The authorities of the University believe that such international contacts should be maintained and broadened with at least the following three aims in mind: (1) the researchers groups from cooperating universities would be involved in the realisation of research projects, especially the ones involving the industrial enterprises from the Upper Silesia region; (2) there will be the exchange of teachers between cooperating universities thus making it possible to improve the contacts between the teachers from different countries universities which in turn would make it possible to work on the common curricula and special seminars and summer schools and prepare the ground for students exchange; (3) there will be a constantly growing exchange of students between cooperating universities thus enabling the students to become more open-minded with respect to university studying and living out of Poland; such exchange would also improve the popularity of the Silesian University of Technology among young people in the Silesia region and possibly cause that there will be better students at Gliwice University, better PhD students, better research workers, more successful grant winners, more successful research groups working on industry originated problems. All above arguments justify the fact that the internationalisation of the Silesian University of Technology is one of the most important aims in Gliwice. It should be also mentioned that Polish National Strategy for integration with other countries assumes growing role of science and education in that process. Therefore it is the basic element of the University strategy to promote collaboration between Silesian University of Technology and Members States universities in the field of education, research and development as well as vocational training.

The Silesian University of Technology makes every effort to ensure that any possible additional grant for the realisation of the internationalisation cooperation would be obtained. Several activities concerning the international cooperation are funded through the central budget of the University for which the main source of funds is the State Committee for Research. The amount of money granted to the University faculties depends heavily upon the staff activity with respect to making research and publishing their results by means of books and journal papers.

The University is also successful in obtaining funds from local Upper Silesia authorities as well as from regional industrial enterprises. This is the policy if the Silesian University of Technology to increase the number and importance of such international cooperation funding resources.

K. Introduction to the hosting city/region

The Conference will be held in southern Poland, situated in the heart of Europe forms an open bridge between the East and the West. Poland and its people are keen on new perspectives and opportunities of better life - both professional and private ones. This includes also our big interest in new trends in engineering education, new technologies and research work.

Gliwice is an old town dating back to the XIII century. Located almost in the middle way between Wrocław and Kraków, almost on the edge of the most industrialized parts of Upper Silesia, it is a nice academic town with 220.000 inhabitants. It may be



reached easily from main Polish cities and from the

neighboring Czech Republic as

well. With its long interesting history, high intellectual potential, effective city management system and nowadays' policy open to education, research and investment, Gliwice is on the top of the list of Polish cities being the most interesting for new investments.

Gliwice used to be a capital of small duchy of Gliwice. In 1596 the town bought the civic rights from the duke and became a free royal town. It was possible due to great income from famous local brewery that existed here in those days. In the end of 18th c. the town became a big metallurgic and industrial center.

After the Upper Silesia was divided into Polish and German parts (in 1921), the town became unofficial capital of the German part. Nearly everybody heard the story about local broadcasting station: The Nazi's soldiers dressed in Polish uniforms attacked and captured the station, and broadcasted a message in Polish. It happened on 31st of Aug 1939, just as a pretext to begin the II World War

Gliwice is situated on the western border of the Upper Silesia, by the Kłodnica River. It comprises an area of 134 square kilometers and is the greenest city in the Upper Silesian Conurbation - parks and green sites constitute 12% of the area of the city. The location of the city on the junction of important routes is a great advantage. It greatly influences the development and attractiveness of Gliwice. Gliwice is a city of young people. Over 132 thousand out of 213 thousand inhabitants are between 18 and 59 year old. The city may be proud of a great potential of people with higher and secondary education, especially technical. It is not a coincidence that many new technologies and designs - utilized not only in Poland but also abroad - come from Gliwice.

A process of restructuring of heavy industry and closing down unprofitable companies have not disturbed the decreasing tendency of the unemployment rate in the city during the last few years. Local authorities create favorable conditions for establishing new jobs, as well as for education, supplementary education, or changing people's qualifications. They achieve it through the pro-investment policy and a continuing cooperation with local organizations supporting small and medium-size businesses, like Employment Assistance and Professional Orientation Bureau for Gliwice, Zabrze, Knurów, and Pyskowice, Silesian Entrepreneurship Development Foundation, and Regional Chamber of Industry and Commerce.

A business incubator was created within the structures of Local Development Agency (earlier functioning under the name of Gliwice Economic Development Agency). In 1998 the organization gathered 26 business in newly modernized office building. The incubator, apart from low rents and full access to phone lines and Internet connection, provides the companies with administration, office, accounting, legal, promotion, and marketing services. It also organizes training courses on running businesses and provides access to conference rooms.

The most important scientific center in Gliwice is the Silesian University of Technology. Gliwice is also proud of its numerous research institutes, which develop new technologies and solutions.

The ICEE-2010 Conference is going to take place in July, 2010. This is the time in Poland that is supposed to be the middle of very nice summer weather, with temperatures around +25 degrees Celsius which is equivalent to +77 degrees Fahrenheit, a lot of sun and rather dry with occasional thunder storms.

L. Comments on conference facilities

Silesian University of Technology, Gliwice, is the third largest technical university in Poland, with almost 32,000 students this academic year. The University is therefore very well prepared to perform and conclude various challenging tasks concerning delivering lectures and organizing meetings during the Conference. The various size halls of the Silesian University of Technology will be used as well various technical facilities necessary for efficient presentations – like overhead projectors, networked computers, videoprojectors.

It is proposed that main working sessions, including the plenary sessions, regular lecture sessions as well technical sessions, possible poster sessions and panel discussions will be held in the premises of the Silesian University of Technology in Gliwice, including the large and well equipped Education and Congress Center, with halls capable of hosting simultaneously 500 people and 250 people, three other halls each for 120 people and several smaller halls and computer centers. It is planned also to involve other faculties of the Silesian University of Technology placed in Gliwice campus with respect to the conference. The faculties are placed very close one to the other, which makes it easy to perform simultaneous sessions during the conference with the possibility of changing the sessions being attended by people interested in various aspects covered by the ICEE-2010 presentations.

There are several modern lecture halls at the Faculty of Automation and Robotics, Electronics and Communication and Computer Sciences. All lecture halls are well prepared for hosting ICEE-2010 authors and audience with all necessary technical, audiovideo and computer facilities. The typical capacity of these halls is about 150 guests which is perfect for simultaneous technical sessions as well as for panel discussions.

Several large and modern lecture halls and seminar halls of capacity around 150-200 guests, suitable for running technical sessions and panel discussions, are available at the Faculty of Mining and Metallurgy, which shares the building with the Rectorate of the Silesian University of Technology. Once again it should be stressed that all mentioned faculties with the proposed ICEE-2010 sessions halls are **very close** one to the other in the Gliwice campus.

There are two very large students and staff canteens in the Gliwice campus of the Silesian University of Technology, close to the faculties buildings and students' dormitories. It is proposed that lunches and special common meetings will be held either in the Education and Congress Center or in the above mentioned canteens thus making it another possibility for the perfect socialization of all ICEE-2010 participants.

Gliwice is the town of approximately 220,000 inhabitants in the Upper Silesia region with more then 3 millions of people in the central part of it. There are more than 20 hotels in Gliwice and several more in the directly neighboring town of Zabrze, of various sizes, standards and prices. The hotels like Diament, Diament Plaza, Sezam, Royal, Silvia, Ibis and several other are of walking distance from the Silesian University of Technology campus, thus making it ideal from the point of view of the ICEE-2010 Conference logistics. In case of the interest expressed by the ICEE-2010 participants it would be perfectly possible to adapt the Silesian University of Technology guest and students houses for the Conference participants accommodation purposes – these houses are placed within the university campus. In general hotel prices in Poland are not vary high and typically should not exceed significantly \$100 per person per night, and could be significantly lower. There are much more hotels in the neighboring towns in the Upper Silesia, especially in Katowice, the capital city of the region, which is only 35 km away from Gliwice.

M. Social/cultural programs and technical visits

Except all these key aspects of the conference and reasons of attending this event, the special social and cultural program will be offered to all interested participants and

accompanying persons. For those interested in country oriented trips we would offer a lovely visit to Polish Beskidy Mountains, including famous Wisła and Szczyrk resorts. Close to the Conference location there are Polish highest mountains – Tatra Mountains, with the town Zakopane – the capital city of winter sports in Poland and the competitor in the race for the Winter Olympic Games organization. Even closer to Gliwice one can find the extraordinary Pieniny mountains with the possibility of wild rafting along the Dunajec river and visiting the huge and magnificent Niedzica castle towering above the waters of the Czorsztyn Lake. Some shorter trips around Gliwice could result in the visiting of beautiful Reneissance castle in Pszczyna, medieval fortified castle in Będzin, several interesting architecture pieces in Częstochowa and Wrocław, as well as the famous and tragic places in Oświęcim (Auschwitz).

The sightseeing of Kraków and visit to the magnificent Wieliczka salt mine nearby would be also optionally suggested to the participants, having in mind the highly successful trip to Kraków during the ICEE-2005 conference. Kraków is a lovely town and former capital city of Poland which is full of monuments, beautiful castles, churches and other architecture masterpieces, the city of the world cultural heritage.

Concerning the more typical social/cultural events during the ICEE-2010 conference the organizers plan to arrange the conference banquet, the reception with the attendance of the town of Gliwice authorities as well as a conference concert.

There is a large newly built GM-Opel car factory in Gliwice and there are several Fiat car factories in the Silesia region, with good research and education connections with the Silesian University of Technology. It is assumed that during the ICEE-2010 conference the participants will have an opportunity to pay the technically oriented visit in these industrial enterprises.

N. Proposed budget for the conference, including proposed funding by the iNEER Board

The proposed estimated conference budget is included below. Corporate sponsorship will be sought and will be used to offset costs of conference registration and professional tours.

Expenses

4 EUR per coffee break x 7	28 EUR	per participant
16 EUR per conference lunch x 4	64 EUR	per participant
Welcome party	9 EUR	per participant
Conference banquet	35 EUR	per participant
18 EUR per conference reception x 2	36 EUR	per participant
Conference dinner	9 EUR	per participant
Concert	4 EUR	per participant
Transport services	16 500 EUR	
Editing and authoring	10 500 EUR	
Printing and media production	9 500 EUR	
Conference bag	16 EUR	per participant
Conference badge	2 EUR	per participant
Equipment rental	6 000 EUR	
Conference services (professional and student assistance)	4 500 EUR	
Brochures, banners, visual identification	8 000 EUR	
IT and web services	15 000 EUR	
Banking costs	3 000 EUR	
iNEER and ICEE/ISC support (including web site)	38 550 EUR	for 400 participants
iNEER book	45 EUR	per participant
	=======	
	210 750 EUR	for 400
		participants

Income

Support from the sponsors	20 750 EUR	
Regular conference registration fee	550 EUR	per participant, 250
		participants
Reduced conference registration fee	350 EUR	per participant, 150
		participants
	=======	
	210 750 EUR	for 400 participants

O. Proposed dates and venues for International Steering Committee Meeting(s)

It is proposed that International Steering Committee meets in 2009, according to the Steering Committee Meeting members preferences, in order to review the conference planning and resources. It should be stressed that ICEE-2010 conference will follow the ICEE-2005 conference that has been organized in Gliwice in 2005, with generally very positive opinions concerning the conference planning and organization.

P. Commitment by the National Organizing Committee to adhere to the ICEE Guidelines as provided herein, including any reasonable future modification thereto

The ICEE-2010 Organizing Committee adheres fully to the ICEE Guidelines as provided with this document with all future reasonable modifications.

Q. Proposed call for papers

There are going to be three versions of Calls for Papers, distributed approximately 1-1/2, 1 and 1/2 year before the conference. The proposed format and contents of the calls for papers will conform to the standards for past ICEE Conferences, an early specimen is included below:

International Conference on Engineering Education ICEE-2010

Gliwice, Poland, July 18-22, 2010

CALL FOR PAPERS

Engineering Education and Research for Society

Papers are solicited broadly on the subject of modern methodologies and techniques of education that make use of linking possibilities provided by means of computer and telecommunication networking in order to globalize the education process and thus enhance the possibilities of students and teachers exchange among universities all around the world. The fields of interest include but are not restricted to:

- international cooperation and networking,
- current trends in engineering education,

- new teaching methods,
- e-learning and e-assessment,
- multimedia teaching tools,
- lifelong learning technologies,
- internationalization and globalization of engineering education,
- collaboration between universities and industry,
- internetworking in education,
- research and development links,
- information and communication technologies,
- sustainable development,
- new energy sources,
- biotechnology and environmental protection.

The conference emphasizes development of international partnerships in education and research and serves as a forum for establishing new contacts and discussing new projects to work on in the future. For more information on iNEER, one of the principal sponsors of the conferences, visit: <u>http://www.ineer.org</u>.

IMPORTANT DATES:

January 31, 2010	Submission of abstracts
February 28, 2010	Notification of acceptance
April 30, 2010	Early-registration deadline
May 15, 2010	Camera-ready manuscript due date
May 15, 2010	Deadline for authors registration

Organizing Committee:

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