



UNITED ENGINEERING FOUNDATION

THREE PARK AVENUE, NEW YORK, NY 10016-5902

Tel.: +1-212-591-7836

Fax: +1-212-591-7441

engfnd@aol.com

www.engfnd.org/2bb.html

General Announcement

Call for Abstracts

Planning Deadline: March 1, 2002

E-Technologies in Engineering Education: Learning Outcomes Providing Future Possibilities

August 11-16, 2002

Davos, Switzerland

Focus of the Conference

Electronic technologies ("e-technologies") are being infused rapidly into the learning process and infrastructure of engineering education as a result of the spectacular improvements in their computing power, communications capability, ease of use, and declining cost. They also offer unique pedagogical opportunities to enhance student learning: they promote exploratory and interactive modes of inquiry, support and facilitate team-oriented collaborations, and expand the ease of access to engineering education across institutional, geographical, and cultural boundaries, among others. However, the infusion of these powerful technologies into engineering education has led to an active debate as to their benefits and limitations. Some of the unresolved challenges include questions such as:

- What new skills and experiences are students expected to bring to this learning environment?
- How should both learners and e-technologies be measured, evaluated, and assessed?
- What are effective ways to use e-technologies to enable laboratory work?
- What kinds of collaboration tools enhance team-oriented or project-based learning?
- What personnel and technical infrastructures work best in support of users of e-technologies?
- What are the critical enhancers and barriers for the creation and deployment of new e-technologies?
- How will e-technologies impact certification and accreditation of engineering education programs?
- What are effective ways to leverage interactions within the international engineering education community to produce better electronic technology-based environments and materials?

Central to the use of e-technologies is the belief that they can be used to improve student learning. Thus, the focus of this conference is to examine and discuss: *How are electronic technologies used now to improve engineering student learning and performance, and how should they be used in the future?*

Conference Objectives, Activities, and Format

The conference is organized to achieve three objectives: 1) promote an interchange among the participants of the international perspectives and current practices involving e-technologies to improve engineering student learning; 2) exhibit current and emerging e-technologies used in engineering education, and 3) develop a vision of the future and a taxonomy of performance objectives (learning outcomes) for improved engineering student learning through e-technologies, and a "road map" to achieve it.

The principal activities of the conference include keynote speakers, invited and contributed presentations, exhibits of e-technologies, and facilitated breakout sessions. Each day will focus on a major theme and

address all three objectives through keynote speakers and invited and contributed presentations in the mornings, exhibits of current and emerging e-technologies in the late afternoon, and facilitated breakout sessions in the early evening. In the final half-day, using the information and ideas shared during the conference, the results will be pulled together into an overall integrated vision. Thus, the conference can be viewed as the combination of three meetings: a “colloquium” involving presentations on the international developments and directions of e-technologies in engineering education, a “workshop” exhibiting current and emerging e-technologies, and a “retreat” of thought-provoking discussions focused on the role of e-technologies in the future to improve engineering student learning and performance.

The conference registration fee includes room and board, conference proceedings and related materials, brief morning and afternoon coffee/tea breaks, extended afternoon breaks (with at least one organized excursion), evening receptions, and conference banquet. The format employed by the United Engineering Foundation conferences allows abundant interaction, discussion, and networking among the conference participants. It is hoped that relationships initiated at the conference will lead to collaborative efforts to further develop and deploy effective e-technologies in the international engineering education community.

Participation in the Conference

The conference structure assures that each attendee has an opportunity for a participatory role. There are four principal ways to participate in the conference.

- Participants may present a *paper* in a morning plenary session of the conference during the first three days. Papers are expected to be about 2,500 to 4,000 words (approximately three to six single-spaced pages), and they will be published in both the pre-conference and post-conference proceedings.
- Participants may publish an *educational brief* of about 1,500 to 2,500 words in both the pre-conference and post-conference proceedings. While educational briefs will not be presented at plenary sessions of the conference, they provide an opportunity for participants to share their thoughts and experiences with all of the attendees and contribute formally to the conference dialogue.
- Participants may exhibit an e-technology at an afternoon plenary session. Abstracts of up to 300 words describing the exhibits will be published in both the pre-conference and post-conference proceedings. (Exhibits linked to papers and educational briefs are encouraged.)
- Participants may contribute to the conference discussions as an attendee drawing upon their interests, experiences, or expertise with e-technologies in engineering education. Abstracts of up to 300 words describing participant interests, experiences, or expertise will be published in the pre-conference proceedings to raise awareness of these participants’ interests, experiences, or expertise, and to facilitate networking among other attendees at the conference.

Participation in the conference is extended to all individuals who are developers, publishers, users, evaluators, and supporters of e-technology in engineering education from the international community in academia, industry, accreditation bodies, and government organizations. More specifically, this includes the following groups:

- university faculty, staff, and administrators involved with developing, deploying, and using e-technologies in engineering education;
- industry leaders, developers, and users involved with and concerned about distance learning and life-long education;
- experts in the technical development of e-technologies, and experts in the assessment of the effectiveness of e-technologies;
- members of government agencies that fund or facilitate the development and use of e-technologies; and
- representatives of accreditation bodies with interests in the impact of e-technologies on the quality of engineering education.

Submission of Abstracts

In order to ensure meaningful interaction and networking among all the participants, attendance at the conference will be limited. Persons wishing to participate in the conference need to register their interest by completing the online application form at <http://www.engfnd.org/2bb.html> and submit separately on the same site an abstract of up to 300 words for either a paper, an educational brief, an exhibit of an e-technology, or a participant statement of interests, experiences, or expertise in e-technologies in engineering education.

The planning deadline for the submission of biographical sketches and abstracts is **March 1, 2002**. Notification of the acceptance of abstracts will begin about March 15, 2002. Submissions after the planning deadline will be considered as received, but acceptance to participate in the conference will depend on the availability of openings. Authors of an abstract accepted for a paper or an educational brief will be provided detailed guidelines for the submission of their manuscripts. The deadline for receipt of all manuscripts is **May 31, 2002**.

Conference Presentations and Proceedings

All presentations require a paper published in the pre-conference proceedings; similarly, all e-technology exhibits require a description of the demonstration published in the pre-conference proceedings. All presentations and e-technology exhibits must be made by at least one of the authors. Further, participants must register for the conference no later than **June 28, 2002** to guarantee the publication of their biographical sketches, papers, educational briefs, abstracts of e-technology exhibits, or abstracts of participant statements in the pre-conference proceedings. Participants must also attend the conference for their materials to appear in the post-conference proceedings.

Both pre-conference and post-conference proceedings will be provided to all participants. The pre-conference proceedings will be made available no later than the beginning of the conference and it will include the manuscripts submitted (and their abstracts), abstracts of e-technology exhibits, abstracts of participant statements of interests, experiences, and expertise, and all participant biographical sketches. The post-conference proceedings is expected to be made available within four months after the conference and it will include the material from the pre-conference proceedings, the speakers' presentation materials, and a report of the shared vision, taxonomy, and "road map" developed. The report on the future of e-technologies in engineering education will be developed by the conference organizers and other interested attendees and shared with the participants for comments and suggestions before publication in the post-conference proceedings.

Overhead projection and computer projection will be provided for presentations at the plenary sessions. Participants exhibiting e-technologies should anticipate bringing all the necessary equipment for their exhibit, especially computer equipment. If some non-computing equipment is desired at the conference site (e.g., VCR), those needs must be made known and worked out with the conference co-chairs before the presentation or exhibit will be accepted for inclusion in the conference. Internet connections are available, but they are limited.

Conference Organizers

Co-Chairs:

Jack R. Lohmann, *Georgia Institute of Technology, USA*

Michael L. Corradini, *University of Wisconsin-Madison, USA*

Organizing Committee:

Neal E. Armstrong, *University of Texas-Austin, USA*; **Chris C. Bissell**, *Open University, United Kingdom*;

John E. Berndt, *Sprint (Retired), USA*; **Ivan Gibson**, *National University of Ireland, Galway, Ireland*; **Randy**

J. Hinrichs, *Microsoft Research, USA*; **Wayne C. Johnson**, *Hewlett-Packard, USA*; **Kinshuk**, *Massey*

University, New Zealand; **Piet Kommers**, *Twente University, Netherlands*; **Itsuo Ohnaka**, *Osaka University,*

Japan; **Joseph G. Tront**, *Virginia Polytechnic Institute and State University, USA*

Persons interested in helping to develop the conference or serve on the Organizing Committee should contact one of the conference co-chairs at either [<corradini@engr.wisc.edu>](mailto:corradini@engr.wisc.edu) or [<jack.lohmann@coe.gatech.edu>](mailto:jack.lohmann@coe.gatech.edu).

Current Conference Co-Sponsors

Educational Research and Methods Division, *American Society for Engineering Education*; **Learning Technologies Task Force**, *IEEE Computer Society*; **Working Group on Information and Communications Technologies**, *Société Européene pour la Formation des Ingénieurs*

United Engineering Foundation Conferences

United Engineering Foundation Conferences were established in 1962 to provide an opportunity for the exploration of problems and issues of concern to engineers from many disciplines. The format of the Conference provides morning and evening sessions in which major presentations are made. Time is available during the afternoons for ad hoc meetings and informal discussions and is designed to enhance rapport among participants and prompt dialogue on the developments of the meeting. We believe the Conferences have been instrumental in generating ideas and disseminating information to a greater extent than is possible through more conventional forums. All participants are expected to contribute actively to the discussions.

United Engineering Foundation Conference Fellowship Program

The United Engineering Foundation sponsors a Conferences Fellowship Program. Applicants are limited to those currently active in engineering or related professions with a direct interest in the conference topic. They must be within ten years of their first professional degree at the time their application is submitted. The stipend is sufficient to cover the conference registration fee and on-site room and board. Transportation expenses are not included. Application information may be obtained by fax from UEF or at [<http://www.engfnd.org>](http://www.engfnd.org). The deadline for the fellowship application is May 31, 2002.

Davos Conference Center and Cresta Sun Hotel

The conference will be held at the Davos Conference Center (Kongress-zentrum). The Conference Center has complete conference facilities and ample room for exhibits and posters. Conference participants will be housed at two or three hotels (Cresta Sun, Cresta and Kongress) close to each other. All are only a two-minute walk to the technical session and Congress Center. All participants will enjoy meals together at the Cresta Sun Hotel.

Davos

Davos, the highest town (1560 m) in Europe, is a well-known ski resort and summer hiking and climbing center in the eastern Swiss province of Graubünden. It is not far from the Austrian border, southeast of Zurich, and north of St. Moritz. All hiking trails should be open. Three mountain passes are located within approximately one hour of Davos -Fluela Pass, Bernina Pass, and Julier Pass. Historic Chur, originally a Roman town, is full of excellent museums and Davos boasts a renowned art gallery housing many of the works of Ernst-Ludwig Kirchner.

More information on Switzerland and the Davos area in particular can be obtained from the Swiss National Tourist Office (NY: +1-212-757-5944; fax: +1-212-262-6116) or the Davos Tourist Office: +41-81-415-2121; fax: +41-81-415-2100; [<www.davos.ch>](http://www.davos.ch)). The Tourist office prints a list of current events weekly and inserts their brochure "Davos Information" which can be obtained both at the hotels and Tourist Office. There are a wide variety of activities in the area including hiking, windsurfing, mountain biking, horseback riding, golf, tennis and sailing, and visiting the art museum, art galleries, cheese factory, microbrewery, and medicinal herb garden. The brochure also includes information on excursions by post bus and coach (e.g., to Wiesen-Lenzerheide, Scuol, Via Mala, Chur, St. Moritz) and Rhaetian Railway. Guests may be particularly interested in these excursions. An optional conference excursion is planned one afternoon. Three mountain passes are located within approximately one hour of Davos: Fluela Pass, Bernina Pass, and Julier Pass.

Transportation to Davos

The nearest airport is Zurich-Kloten. There is also an efficient and picturesque train service from the airport to Davos that takes less than three hours. The hotel will provide pick-up service at the train station. Once in Davos, each participant will receive a transit pass that will allow free transportation within Davos and three stops in either direction. This is ideal for visiting the local area.

Conference Fees

The conference fee is all-inclusive. It includes registration, conference publication, accommodation, meals, taxes and gratuities from dinner on Sunday through breakfast on Friday. The fees are tentatively set at:

Participant (single occupancy)	\$US 1365.00
Participant (sharing a room with another participant)	\$US 1245.00
<i>Bona fide</i> graduate student (sharing a room with another participant)	\$US 810.00
Guest (sharing a room with participant, all meals included)	\$US 450.00

For further information, please contact:
Engineering Foundation Conferences
3 Park Avenue, 21 Floor, New York, NY 10016-5902
engfnd@aol.com - www.engfnd.org

13/2/02