Welcome to San Diego!

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Ron Miller  
Special Sessions, Panels, and Workshops Chair  
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MESSAGES FROM THE SPONSORING SOCIETIES

Educational Research and Methods Division of ASEE

On behalf of the Educational Research and Methods (ERM) Division of the American Society for Engineering Education (ASEE), welcome to San Diego and to FIE 2006!

ERM is proud to join with the IEEE Education and Computer Societies to sponsor the FIE conferences. Frontiers in Education is a unique and very special experience. A great deal of work goes into producing a consistently high quality conference. The FIE Steering Committee, chaired by Jane Prey, deserves our deep appreciation for their commitment and extensive contributions to this conference. We particularly express our thanks to this year’s General Co-Chairs, Susan Lord of the University of San Diego and David Hayhurst of San Diego State University. We also appreciate the contributions of the Program Chairs Ann Gates, Melinda Piket-May, and Elizabeth Eschenbach; Exhibits Chair Robert J. Hofinger, Special Sessions Chair Ronald Miller, Publications Co-Chairs Dan Budny and Goranka Bjedov, Awards Chair Joe Hughes, New Faculty Fellows Chair Russ Meier, and Conference Historian and Photographer Ed Jones. We are especially grateful for the many contributions of Mary Heberling to the success of this and prior FIE conferences. Finally, thanks to all of the reviewers, presenters, volunteers, and attendees for making FIE 2006 another great success.

This year’s theme is particularly timely: Borders: International, Social and Cultural. Borders may define geographic, social, and psychological barriers that limit us and our interactions. Or we may choose to transcend them so we can understand, appreciate, and learn from our diversity. This year as we are addressing Borders, our international co-chairs Manuel Castro, Melany Ciampi, and Javier Quezada and our many international guests have much to contribute. Please seek them out and engage in discussing the conference themes.

We have twelve pre-conference workshops, eight special sessions, nine panels, and seven tracks of technical papers and Works-in-Progress. Please note the track on Monday devoted to an Exhibitors Showcase, and be sure to visit the exhibits. Three technical sessions are devoted to each of the topics: globalization, distance learning, and K – 12 Outreach. Many interesting sessions cover an array of critical topics: diversity, women in engineering, technology in education, engineering education research, student perceptions of engineering, retention, first year courses, ethics, design, and of course accreditation and assessment.

One of the workshops is focused on the conference theme Classroom Border Crossings: Incorporating Feminist and Liberative Pedagogies in Your CSET Classroom, and four panels and three special sessions directly address overcoming barriers and valuing diversity.
The Tuesday afternoon plenary session is a panel devoted to the *Future of FIE: Where are we and where we are going.* I encourage everyone to attend and to participate in the discussion. This is our chance to appreciate what is great about FIE, assess what can be improved, and plan where we want to take the conference in the future. I hope to see you there!

Welcome to San Diego and another great Frontiers in Education conference!

Larry G. Richards  
Chair, Educational Research and Methods Division, ASEE

**IEEE Computer Society**

On behalf of the IEEE Computer Society, I am pleased to welcome you to the 2006 Frontiers in Education Conference. We are proud to be a long-term sponsor of FIE, which is regarded internationally as a leading venue for exploring the state of the art in computer and engineering education. The conference organizers have worked hard this year to develop yet another outstanding FIE program.

The Computer Society is involved in a variety of projects of interest to this conference and important to the computing profession: accreditation; curriculum development in software engineering, computer science and engineering, information systems and information technology; international collaborations; ongoing education and distance learning programs for professionals; K-12 initiatives; and encouraging the participation of women, minorities, and developing nations in computer science and engineering. Several of these deserve specific mention.

In cooperation with the ACM, the IEEE Computer Society has undertaken the Computing Curriculum project, CC2001. The Computer Science, Information Systems, Software Engineering and Computer Engineering volumes have been completed and an additional volume on Information Technology is nearing completion. An overview volume also is available. A brochure describing the computing disciplines for use by high school students, parents, and counselors is also complete. We hope to mail this brochure to all high schools in the United States.

The society’s stellar student competition, the International Design Competition (CSIDC), has reached thousands of students world-wide and has given them the opportunity to participate in real-life, team-planned hardware and software development projects. In the 2006 competition, 133 teams from 92 schools in 28 countries participated, with exciting final presentations by the top 10 teams in Washington, D.C. The top three teams received awards of $20,000, $15,000, and $10,000. In addition, seven teams received honorable mention awards of $4,000 each. We can assure you that many of the coming generation of students are exceptionally prepared and eager to take their places as computer and engineering professionals! Please encourage your students to participate in CSIDC 2007.

One of the premier events taking place during the Computer Society’s 60th Anniversary Year is a student competition, CHC60, which encourages students to create a website that illustrates key aspects of the history of computing. We are grateful to Northrop Grumman Corporation for sponsoring the first prize in the amount of $10,000.

The Society’s Certified Software Development Professional examination program (CSDP) for software engineers formally recognizes professionals who have achieved a high level of proficiency. This examination, which is based on the Software Engineering Body of Knowledge (SWEBOK), tests core software engineering competencies and is targeted at mid-level software engineers with at least five years of experience. The CSDP credential differentiates engineers from others in the field by demonstrating their understanding of all aspects of software engineering knowledge and practice. Future plans include the design of a CSDP examination directed at entry level software engineers. For complete information about the program, visit [www.computer.org/certification](http://www.computer.org/certification)

We encourage and welcome your comments and suggestions on any of these programs. We also welcome you to volunteer your time and talent to make our programs more diverse and effective.

Murali Varanasi  
Vice President Educational Activities  
IEEE Computer Society
IEEE Education Society

The IEEE Education Society welcomes you to the 2006 Frontiers in Education Conference! This year’s meeting continues the vision of educational innovation and application in engineering, technology, and computer science that has made this the premier international conference in this area. Both the theme and location of FIE 2006 make this 36th annual meeting especially exciting.

The world is simultaneously expanding and shrinking. Global population has increased to its current estimate of over 6.5 billion people. The population of the United States is predicted to exceed 300 million by the month of our meeting in October 2006. But the time to communicate to anyone around the planet or to travel within a day almost anywhere has decreased rapidly. The globalization of science and technology and the development of knowledge-intensive economies continue as public and private organizations reach out for new partners and markets. Cross-cutting technologies blur the boundaries of traditional disciplines.

Yet there are still challenges to be met in linking and cooperating globally as we are reminded by this year’s theme Borders: International, Social, and Cultural. Here we have a broad spectrum of information and colleagues enrich our experience. The invited speakers, papers, works in progress, and workshops provide an opportunity to present, discuss, and build upon our understanding in order to prepare ourselves for the emerging global meta-structure. The Education Society continues to be a vital part of this international educational community with a majority of its members outside of the United States and a growth rate that is among the highest in the IEEE. Our growth in society chapters continues to be an unparalleled success with 56 chapters worldwide and 12 additional under development.

The IEEE Education Society would like to thank Susan Lord and David Hayhurst who are the General Co-chairs for this year’s conference, and the FIE Steering Committee for their dedication and outstanding preparation for the conference. Special thanks go to Melinda Piket-May, the IEEE Education Society Program FIE Co-chair, Joseph Hughes, Vice President of the IEEE Education Society and the Awards Chair for the FIE Conference, and all the reviewers who devoted much time and talent to making the paper presentations reflect the best current work available.)

We welcome you to the great city of San Diego and thank you and all the participants who will make the 2006 Frontiers in Education Conference an outstanding experience for all.

Daniel M. Litynski
President, IEEE Education Society