



CIE

Computers and Information Engineering Division Newsletter

Y. S. Kim, Editor

Summer 2000

Message from the Division Chair



Prof. Yong Se Kim

It has been two years since our last newsletter, and it is time for the division leadership to report to you, the members, on our activities during this period. We have certainly been active. This

newsletter reports highlights of the last two CIE Conferences, held in conjunction with the Design Engineering Technical Conferences in Atlanta, GA, in 1998, and Las Vegas, NV, in 1999. The status of the merger with the Engineering Information Management Program is also presented. Finally, plans for the 20th CIE Conference in Baltimore, MD in September 2000 are described, along with a call for participation in the next conference.

CIE and EIMP Merge

The most important development in the CIE Division during the past two years is the consolidation of the Engineering Information Management Program and the old Computers in Engineering Division into the Computers and Information in Engineering Division—

new name, same acronym. This effort was begun under the chairmanship of Ahmed Busnaina in 1996-97, and was continued by past chairs Kos Ishii and Peggy Bocks.

During the 1998 CIE Conference in Atlanta, as the merger was progressing, CIE Division members met to develop a clear statement of the goals of the division. As a result of this meeting, the division has new Vision and Mission Statements:

Consolidation of CIE and EIMP was fully realized at the 1999 CIE Conference in Las Vegas, where the program included the engineering information management sessions that formerly constituted a separate symposium.

The new CIE Division is a logical outgrowth of the development of CIE and EIMP, given their common interests and goals. We welcome those of you from the EIMP, and we look forward to your active participation in the division.

New Areas in CIE

The 1998 conference saw the emergence of new technical committees in the division. Harry Cheng of the University of California, Davis, coordinated a new committee devoted to Ubiquitous and Embedded Computing. During the conference, this area sponsored a paper session and a panel session. A new technical committee called Computer-Aided Product Development resulted from the merger of the artificial

intelligence and features area with the CAD/CAM/CIM area. This reorganization is a natural outcome of the changing face of computing in mechanical engineering and the continual evolution of technology. I expect these sorts of changes and reorganizations to be a common occurrence in the life of CIE, as our mission is to lead mechanical engineers to adopt emerging technologies. I invite any of you who have proposals for new technical areas that fit within CIE's mission to contact me with your ideas.

CIE Vision: The Computers and Information in Engineering Division will provide a forum for enhancing the practice of engineering by understanding the application of emerging technologies that impact critical engineering issues of representation, product design and product development, exchange, management, and integration of information throughout the entire engineering product and process life-cycle.

CIE Mission: The Computers and Information in Engineering Division will enhance the practice of engineering through the dissemination of emerging technology knowledge which will help optimize the integration of Mechanical Engineering, Software Engineering, and Computer Engineering.

Twentieth Annual CIE Conference

CIE will celebrate its 20th anniversary as a division at the annual conference in Baltimore, MD September 10-13, 2000. This year we are planning two special events to commemorate this anniversary. Past Chair Kos Ishii is organizing an "Old Guard" panel consisting of founding members of the division. They will share their experiences during the early years of the division and reflect on the changes that have occurred. The second special event is a showcase reception and demonstration meant to attract its audience from the entire DETC/CIE attendee population. Participants in the showcase will demonstrate cutting edge research and applications in the technical areas of CIE. A call for participation in this event is included in this newsletter.

1998 CIE Conference Report

The 18th CIE Conference was held at the Omni Hotel in Atlanta, GA, in conjunction with the ASME 1998 Design Engineering Technical Conferences. The conference chair was Kos Ishii, and the technical program chair was David Rosen. The conference was organized into 26 paper sessions and three panel sessions. Dr. Richard L.

Jackson of the NIST Manufacturing Engineering Lab gave the keynote address. The title of his talk was "Toward Information-Driven Intelligent Manufacturing." He outlined NIST's leadership role in advancing technology and pursuing standards appropriate to manufacturing.

1999 CIE Conference Report

The 19th CIE Conference was held at the Alexis Park Resort and Spa in Las Vegas, NV, in conjunction with the ASME 1999 Design Engineering Technical Conferences. The conference chair was Peggy Bocks, and the technical program chair was Ashwani Gupta. The conference was organized into 36 paper sessions and three panel sessions, and a total of 131 papers were presented.

Stacey Lawson of Parametric Technology Corporation gave the keynote address, entitled "Achieving Sustained Competitive Advantage through Web-based Product and Process Lifecycle Management." The conference luncheon address was given by Asa Trainer, also of Parametric. Four student travel awards were given to CIE attendees.

We are pleased to report that participation in the conference has increased by 50 percent in the past three years. This growth reflects the increasing importance of the CIE technical areas to mechanical engineers.

IMECE 1999

The CIE Division sponsored a panel discussion at the 1999 ASME Congress, held in Nashville, TN, in November. The panel, organized by Richard H. Crawford of the University of Texas, was entitled "CAD 2K: Computer-Aided Design in the 21st Century." Panelists included Ron Close of Unigraphics, Sal Lama of Solid-works, and Asa Trainer of Parametric Technology. The panelists were asked to project what problems in the CAD community would be solved in the next year, and to project what new features CAD systems will have in ten years. This was a lively panel that spawned some interesting discussion afterwards.

The 1999 panel was part of a growing presence of CIE at IMECE. For the 2000 Congress, we are organizing a paper session around the conference theme, "Beyond Traditional Boundaries." For more information, see the call for participation below.

Participation

Anyone interested in participating in CIE Division activities is encouraged to contact me or any other member of the division's executive committee. Contact information is included elsewhere in this newsletter. And I look forward to seeing all of you in Baltimore in September.

The Computers and Information in Engineering's 20th Anniversary (CIE@20)

The Executive Committee of the CIE Division is seeking special presentations that review and reflect upon the past 20 years of CIE Conferences and the evolution of the CIE Division. As CIE reaches its 20th Anniversary, perspectives are sought that envision new roles for computers and information technologies in mechanical engineering.

CIE@20 Organizer:
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Special Showcase 2000 Demonstration

The Computers and Information in Engineering Division is planning a special reception/exhibition as part of the 20th Anniversary Commemoration of the Division during the ASME DETC/CIE 2000 Conferences to be held in September 2000. This special event will allow researchers and practitioners to demonstrate the results of their efforts in the technical areas of the CIE Division using computers and related hardware and software. The demonstration will be a featured event during the conference and thus should attract large attendance from the mechanical engineering community (including researchers, educators, and engineers from industry). The intent of this event is to showcase innovative solutions to the rapidly evolving product realization process in light of emerging technologies and solution concepts and initiatives (e.g. mass customization, e-commerce, design and build anywhere, etc.). Presentations in this showcase event will be actual implementations of research efforts and innovative uses of existing technologies.

Showcase 2000 Organizers:

S. Jayaram
Washington State University
e-mail: jayaram@mme.wsu.edu

Ravi Rangan
SDRC/Metaphase Enterprise Solution Center
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Plamen Bliznakov
Parametric Technologies
e-mail: plamen@ptc.com

Complete Call for Intent to Participate in Showcase 2000:
<http://www.asme.org/divisions/cie/conts/cie2k/showcase/showcall.html>

20th Computers and Information in Engineering (CIE) Conference

September 10-13, 2000

Baltimore, Maryland

The Computers and Information in Engineering (CIE) Conference provides a forum for enhancing the practice of engineering by understanding the application of emerging technologies that impact critical engineering issues of representation, product design and product development, exchange, management, and integration of information throughout the entire engineering product and process life-cycle.

Conference Chair:

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Local Committee Chair:

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Papers are solicited for presentation and discussion in the following technical areas:

Enterprise Information Management (EIM)
Computer-Aided Product Development (CAD/CAM/CAE/CIM)
Internet-Aided Design, Manufacturing and Commerce (IADMC)
Virtual Environments and Systems (VES)
Embedded and Ubiquitous Computing (EUC)
Non-Traditional Computing (NTC)
Energy Systems (ES)
Computational Technologies and Finite Elements (CTFE)
Computers in Education (CIE)

Related sessions in CIE, DAC, and DFM, and DTM conferences will be coordinated and cosponsored as joint symposia.

Note: This CIE Call for Papers is also available as a PDF file at: <http://www.asme.org/divisions/cie/confs/cie2k/cie2kcfp.pdf>
Authors are encouraged to submit abstracts and papers following ASME paper guidelines (preferably via e-mail) to the following review coordinators:

Engineering Information Management

Dr. Ravi Rangan
SDRC/Metaphase Enterprise Solution Center
600 108th Ave, Suite 340
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Internet-Aided Design, Manufacturing and Commerce

Dr. Raj Veeramani
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Computer-Aided Product Development (CAD/CAE/CAM/CAx)

Dr. Richard H. Crawford
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Virtual Environments and Systems

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Note that 2000 VES Technical Committee Call for Papers and Demonstrations is posted on-line at:
<http://ime.ucla.edu/~cieves/cie2k/ves2kcfp.html>

Embedded and Ubiquitous Computing

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Non-Traditional Computing

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Call for Participation (continued)

Energy Systems

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Finite Element Techniques and Computational Technologies

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Computers in Education

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Call for Participation

ASME International Mechanical Engineering Congress and Exhibition

The highlight topic for the 2000 Congress is "Beyond Traditional Boundaries." In support of this topic, the Computers and Information in Engineering Division will sponsor a paper session to highlight leading-edge technologies that expand beyond traditional boundaries in computer/information technology. Send manuscripts to Richard Crawford, Department of Mechanical Engineering, ETC II 5.160, The University of Texas at Austin, Austin, TX, 78712-1063, phone: 512-471-3030, fax: 512-471-7682, e-mail: rhc@mail.utexas.edu. Manuscripts are due by March 20, 2000. Authors will be notified of results by May 15, 2000.

CIE Division Executive Committee

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Member: David Lee, TRW Corp., david.e.lee@trw.com
Past Chair: Peggy Bocks, EDS, peggy.bocks@eds.com

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