2000 ASEE Annual Conference

Chemical Engineering Division Program

June 18-21, 2000 • St. Louis, MO

Pre-Conference Workshop
"Modern ChE and ME Laboratory Instrumentation"
Sunday, June 18, 8:30 am to 4:15 pm
Coordinators:
Jim Henry and Charles Knight
Workshop Cost $65

ChE Division Lectureship
Monday, June 19, 4:30-6:00 pm
Moderator Michael Cutlip
Washington University

Social Activities
ChE Division Reception
Monday, June 19, 6:30- 8:00 pm
Moderator Robert Ybarra
Washington University

ChE Division Awards Banquet
Tuesday, June 20, 6:30-8:00 pm
Moderator Michael Cutlip
Missouri Botanical Garden, Spink Pavillion
Guest Speaker Dr. Peter Raven,
Director of Missouri Botanical Garden
Cost: $48

Technical Sessions

Session 2213, "ChE Instruction in the Future"
Tuesday, June 20, 8:30-10:15 am: Co-Moderators Kirk Schulz and Christopher Wiegenstein
Paper 1: "Approaches or Learning and Learning Environments and Lecture Evironments," Donald Woods, Andrew Hrymak, and Heather Wright
Paper 2: "Lectures or Electrons: Which Works Better for Chemical Engineering Fundamentals Class?" Billy Crynes, Connie and Barbara Greene
Paper 3: "An Inductive Approach to Teaching Heat and Mass Transfer," Robert Hesketh and Stephanie Farrell
Paper 4: "Expandable Polystyrene Batch Reactor Design: An Academic/Industrial Collaboration in Teaching Reaction Engineering," Robert Barat and Ronald Gabbard
Paper 5: "The Student Consultant: Enhancing Communication Skills in the Undergraduate Laboratory," Dennis Miller

Session 2313, "Instructional Technology: The Future of ChE Instruction?"
Tuesday, June 20, 10:30 am-12:00 pm: Co-Moderators Thomas Edgar and Scott Fogler
Paper 1: "Development of an Extended Campus Chemical Engineering Program," Jimmy Smart, William Murphy, G. Lineberry, and Bonita Lykins
Paper 2: "Molecular Simulation Via Web-Based Instruction," Peter Cummings, David Kofke, and Richard Rowley
Paper 3: "Analysis of Instructional Technology Usage in the Introductory Chemical Engineeering Course," Richard Felder, Amy Michel, and Jan Genzer
Paper 4: "Information Technology and Chemical Engineering Education: Evolution or Revolution?" Thomas Edgar

Session 2513, "The Greening of the ChE Curriculum"
Tuesday, June 20, 2:30-4:15 pm: Co-Moderators Dennis Sourlas and Ashish Gupta
Paper 1: "Production of Clean Fuel: A Biochemical Experiment for Unit Operations Laboratory Developed Through Undergraduate Research Projects," Muthanna Al-Dahhan
Paper 2: "Minimizing the Environmental Impact of Chemical Manufacturing Processes," Joseph Shaeiwitz, Roger Schmitz, Mark McCready, Joan Brennecke, Mark Stadtherr, Richard Turton, and Wallace Whiting
Paper 3: "Development of an Elective Course on Pollution Prevention," Dennis Sourlas and Ashish Gupta

Session 2613. "Implementing Soft Skills Into ChE Curriculum"
Tuesday, June 20, 4:30-6:00 pm: Co-Moderators Douglas Ludlow and James Newell
Paper 1: "Integrating Soft Criteria into the Curriculum," W. Nicholas Delgass, Philip Wankat, and Frank Oreovicz
Paper 2: "Training in Multidisciplinarianism," Daina Briedis and R. Mark Worden
Paper 3: "An Industrial Internship Program to Enhance Student Learning and Marketability," Zenida Keil and Melanie Basantis
Paper 4: "An Investigation of the Communication Culture of an Introductory Chemical Engineering Class," Heather Cornell, Wade Kenny, and Kevin Myers
Paper 5: " The Business Meeting: An Alternative to the Classic Design Presentation," James Newell

Session 3313, "The Future of Engineering Education"
Wednesday, June 21, 10:30 am-12:00 pm: Plenary Session Moderator Dendy Sloan
Speakers: Donald Woods, "Intrinsic and Extrinsic Rewards of Teaching Excellence"; Richard Felder, "Teaching Methods That Work"; James Stice, "Learning How To Teach"; and Armando Rugarcia, "A Vision for A New Century."

Session 3413, "ChE Laboratories in the Next Millennium"
Wednesday, June 21, 12:30-2:15 pm: Co-Moderators Richard Gilbert and Steve LeBlanc
Paper 1: "A Laboratory for Enhancing Process Control Courses Using Real-Time MATLAB/Simulink," Babu Joseph, Deepak Srinivasagupta, and Chao-Ming Ying
Paper 2: "A Fluidized Polymer Coating Experiment," C. Stewart Slater, Robert Hesketh , and Michael Carney
Paper 3: "Enhancement of Instrumentation and Process Control Studies at the Undergraduate Level," Rebbecca Toghiani, Hossein Toghiani, Donald Hill, and Craig Wierenga
Paper 4: "Development of Unit Operations Fermentation Laboratory Experiment Using Industrial Collaboration," G. Dale Wesson, William Muth, Bryan Landen, and Egwu Kalu
Paper 5: "Introducing Freshmen to Drug Delivery," Stephanie Farrell and Robert Hesketh
Paper 6: "Incorporation of Graduate Facilities Into Undergraduate Unit Operations Laboratory," Muthanna Al-Dahhan

Session 3513, "ChE Education: How Do We Assess It?"
Wednesday, June 21, 2:30-4:15 pm: Co-Moderators Daina Briedis and Susan Montgomery
Paper 1: "Student Portfolios: Assessing Criteria 2000," Carolyne Garcia and Edgar Clausen
Paper 2: "The Process of Learning Chemical Engineering: What Works and What Doesn't," David Dibiasio, William Clark, Anthony Dixon, and Lisa Comparini
Paper 3: "Assessing Chemical Engineering Education As It Is Delivered," Joseph Shaeiwitz
Paper 4: "Principal Objects of Knowledge (POK's) in Colloquial Approach Environments," Pedro Arce

Session 3613, "ChE, Computers and the Next Millennium"
Wednesday, June 21, 4:30-6:00 pm: Co-Moderators Skip Rochefort and Valerie Young
Paper 1: "A Virtual Reality-Based Safety and Hazard Analysis Simulation," John Bell and Scott Fogler
Paper 2: "Combining High-Level Programming and Spreadsheets: An Alternative Route for Teaching Process Synthesis and Design," Jorge Gatica, Mauricio Colombo, and Marìa Hern·ndez
Paper 3: "24x7: Lab Experiments Access on the Web All the Time," Jim Henry
Paper 4: "MATLAB Application in Reactor Design and Simulation," Charles Okonkwo and Gbekeloluwa Oguntimien
Paper 5: "Professional Simulation Packages as Effective Teaching Tools in Undergraduate ChE Curriculum," David Dixon, Jan Puszynski, and Larry Bauer