

Chemical Engineering Division Program

June 17-19, 2002 ■ Montreal, Quebec, Canada

Technical Sessions

Monday, June 17

Session 1313 • 10:30 a.m. • Novel Classroom Environments

Moderators: *Ranil Wickramasinghe and Ann Marie Flynn*

1. "An Integrated Approach to Teaching Material Balances at University of Waterloo" • *C. Moresoli*
2. "Guilt-free Chocolate: Introducing Freshmen to Chemical Engineering" • *K. Hollar, S. Farrell, M. Savelski*
3. "Lessons with Lego - Engaging Students in Chemical Engineering Courses" • *K. Levien, S. Rochefort*
4. "Process Descriptions: An Introductory Library Research Assignment on Chemical Processes for First-Year Students" • *S.S. Moor*
5. "Expanding Our Students' Brainpower: Idea Generation and Critical Thinking Skills" • *J. Jessop*
6. "Project-Based Learning in Chemical Engineering" • *B. Marcos*

Session 1613 • 4:30 p.m. • Teaching Outside the Box

Moderator: *Melanie McNeil*

1. "A Modified Approach to Material and Energy Balances" • *D. Miller, M. Anklam, R. Artigue, M.H. Hariri, M. Misovich*
2. "Don't Waste Your Breath" • *S. Farrell, R. Hesketh, K. Hollar, M. Savelski, C.S. Slater, R. Specht*
3. "Learning 'Outside the Toy Box'" • *J. Keith*
4. "Micromixing Experiments in the Undergraduate Curriculum" • *R. Hesketh, K. Dahm, M. Savelski*
5. "The Values of a 'Hands-On' Experience in a Reactor Design Course" • *R. Lewis*
6. "Fundamentals of Fixed Bed Adsorption Processes: Analysis of Adsorption Breakthrough and Desorption Elution Curves" • *J. Beceñel, C. Holland, J. McIntyre, J. Ritter*

Tuesday, June 18

Session 2213 • 8:30 a.m. • Innovative Courses for ChE Students

Moderators: *Donald Visco and Christopher Brazel*

1. "Introduction to Chemical Engineering: A New Course for Freshman Students" • *D. Knox, B. Baltzis*
2. "The Power of Pizza" • *W. Whiting, C. Coronella*
3. "Environmental Health and Safety and Biochemical Engineering with a Chemical Engineering Foundation" • *M. McNeil, A. Diaz, M. Jennings*
4. "A New Course in Green Chemistry and Benign Processing" • *D. Miller*
5. "New Methods of Teaching and Learning for Industry-Based Engineering Professionals" • *B. Dickson, C. Grant*
6. "A Course on Engineering Entrepreneurship for Chemical Engineering Seniors" • *R. Narayan*
7. "The Effects of Physical Environment on Engineering Team Performance" • *E. Grulke*

Session 2513 • 2:30 p.m. • Panel: How are We Faring with EC2000?

Moderator: *Joseph Shaeiwitz*

1. "Before, During, and After the EC 2000 Visit" • *E. Grulke*
2. "The EC2000 System in Chemical Engineering at Washington State University" • *R. Zollars*
3. "EC2000 From Both Sides of the Fence" • *S. LeBlanc*
4. "EC2000: What to Expect/What is Expected" • *D. Briedis*
5. "Reflections on Outcomes Assessment and the ABET Accreditation Process" • *R. Miller*

Session 2613 • 4:30 p.m. • Assessment in Large and Small Programs

Moderator: *James Newell*

1. "Teaching of Thermodynamics and Fluid Mechanics using Interactive Learning Methods in Large Classes" • *W. Dempster, C. Lee*

2. "Chemical Engineering and Society - A Response to Constituency Concerns" • *R. Terry, W. V. Wilding*
3. "Assessment Methods for Engineering Programs - Too Many Choices or Not Enough?" • *D. Knox*
4. "A Senior Exam to Assess the Learning of Core Competencies in a Chemical Engineering Curriculum" • *R. Terry*
5. "Student Development of Grading and Assessment Criteria" • *V. Young*
6. "Rubric Development and Inter-Rater Reliability Issues in Assessing Learning Outcomes" • *J. Newell, K. Dahm, H. Newell*

Wednesday, June 19

Session 3213 • 8:30 a.m. • What's in Store for the ChE Curriculum?

Moderators: David Miller, Nada Assaf-Anid

1. "Chemical Engineering: Professionally Ignored?" • *F. Sharifi*
2. "Cooperative Engineering Education Program" • *W. Krantz, K. Cedercruz, A. Dardy*
3. "Incorporating Biotechnology in the Chemical Engineering Curriculum" • *N. Assaf-Anid, H. Hollein*
4. "Communication Without Borders: Collaborative Expression Within and Across Disciplines" • *L. Bullard*
5. "Preparing International Students to Become Effective Teaching Assistants" • *B. Baltzis*
6. "The Core Graduate Chemical Engineering Curriculum: Does It Exist?" • *D. Kauffman*
7. "Why Settle for an MBA?" • *J. Reynolds, A.M. Flynn, L. Theodore*

Session 3413 • 12:30 p.m. • The Computer, the Web, and the ChE

Moderator: David Silverstein

1. "A New Method to Calculate Phase Coexistence" • *D. Visco, J. Russum*
2. "ChE's Teaching Introductory Computing to ChE Students - A Modern Computing Course with Emphasis on Problem Solving and Programming" • *D. Clough*
3. "An Improved Distance Learning Environment for the Material and Energy Balances Course" • *D. Silverstein, G.T. Lineberry*
4. "Heat Transfer OnLine" • *W. Baratuci, A. Linse*
5. "No Food Allowed - The Latest Virtual Reality Laboratory Accident" • *J. Bell, S. Fogler*
6. "Using the Modern Chemical Engineering Laboratory at a Distance" • *J. Henry*

Session 3513 • 2:30 p.m. • Control in the Classroom

Moderators: Stephanie Farrel and S. Scott Moor

1. "A WEB Site to Support Active Learning in Process Control" • *M. Thomas, E. Wood, M. Hough, S. Yip*
2. "Incorporation of Process Stimulators in Teaching Separations" • *A. Serbezov*
3. "Use of Process Stimulation and McCabe-Thiele Modeling in Teaching Distillation" • *K. Dahm*
4. "Introducing Process Controllers Throughout the ChE Laboratory" • *D. Dixon, J. Puszynski*
5. "Simple Modules that Illustrate Dynamic Matrix Control" • *C. Nippert*
6. "Team Learning and Individual Accountability: A Case Study from a Senior Year Process Dynamics and Control Course" • *B. Baltzis*
7. "The Missing Link in Process Control Education - Incorporating PLC's into the ChE's Control Course" • *D. Clough*

Session 3613 • 4:30 p.m. • The Modern ChE Laboratory

Moderators: Kathryn Hollar and Jim Henry

1. "AIChE's New Student Chapter Competition: The Chem-E-Car Competition" • *D. Dixon, M. Abraham, C. Coronella, R. Hesketh, W. Rochefort, R. Zollars*
2. "In Pursuit of the Perfect Potato Chip" • *J. Smart*
3. "Integrating Team Laboratory Experiments Into a Senior Biochemical Engineering Course" • *C. Brazel*
4. "Introducing Students to Lab Safety in Chemical Engineering: The Safety Scavenger Hunt" • *K. Hollar, K. Dahm, M. Harris*
5. "Making 'Modern' Undergraduate Labs 'Old'" • *M. Cline, G. Powers*
6. "The Role of Experiments in Inductive Learning" • *R. Hesketh, S. Farrell, C. S. Slater*

**Society-Wide
Picnic**
Sunday, June 16, 6 p.m.
Windsor Station

ChE Division Banquet
Monday, June 17, 6:30 p.m.
Gibby's Restaurant
Speaker to be announced

**Meet the Board
Breakfast**
Tuesday, June 18, 7:00 a.m.
Wyndham Montréal

**ChE Division
Business Luncheon**
Tuesday, June 18
12:30 p.m.

**ASEE
Annual Awards Banquet**
Wednesday, June 19
7:00 p.m.