

ASEE Chemical Engineering Division Newsletter



IN THIS ISSUE:

MESSAGE FROM THE CHAIR

Pages 1: Conference Programming, Goals, Elections, Summer School, and more....

ELECTIONS

Pages 2-7: Please vote for one candidate for Chair-Elect (Brian Dickson or David Dixon) and one candidate for Director (Jeff Csernica, Arthur Felse, or Tom Marrero). Check your email listed with ASEE for your personal ballot link. Votes must be received by Friday, June 1st.

2012 SUMMER SCHOOL

Page 8: This unique weeklong learning experience will be held July 21-27, 2012 at the University of Maine in Orono, ME

CREATIVE SESSIONS

Page 9: See the progress that our team has made planning for this outstanding workshop.

2012 PROGRAM

Page 10-13: Program overview for the San Antonio meeting. Session moderators are noted. Please contact programming chair, Margot Vigeant mvigeant@bucknell.edu

A Message from the Chair

Dear Colleagues!

Springtime and pollen are in the air, another academic year is almost behind us, and it's time to plan your travel to the annual ASEE Conference in San Antonio from June 10-13. Our Program Chair, Margot Vigeant, has been hard at work planning an exciting line-up of CHED activities throughout the week. Our sessions will cover a wide variety of educational topics. Back by popular demand will be the panel / interactive discussion that was introduced in 2011. We'd also like everyone to think about two questions: What does the Chemical Engineer of 2020 need to know? And what are / should we be doing to educate that person? Got your answers? Good! You are the invited speaker at To Infinity and Beyond: The ChemE of 2020 starting at 12:30 on Monday in room 210A. We will have an open mic session on these two questions; be ready to stand up and have your say (using 2 slides and 5 minutes or less). Be ready for a lively discussion. Please join us for our annual banquet at Biga on the Banks (<http://www.biga.com/>, 1/4 mile from the Convention Center) on Monday night at 7:00. We encourage our members to attend the CHED Business Meeting which will be held on Wednesday June 13, 12:30 – 2:00 PM in room 007C of the Convention Center. Many thanks to Margot for her hard work as Program Chair and to Mahbub Uddin for his service as our local arrangements liaison.

The 2012 Chemical Engineering Summer School will be held at the campus of the University of Maine on July 21-27. The weeklong event is held every five years, and it offers interactive workshops that focus on teaching skills, course content, assessment, design and laboratory topics. One of the highlights will be a one-day workshop on effective teaching offered by Rich Felder and Rebecca Brent. Summer School is a family-friendly event and a variety of family-oriented activities will be offered. More information is available on the Division website at <http://www.asee-ched.org>.

Don't forget to Vote for the next leaders of the Chemical Engineering Division! We are electing a Division Chair-Elect and a Director this year. Candidates' statements and ballot instructions are provided on pages 2 through 7.

Finally, I would like to welcome our incoming Chemical Engineering Division Chair, Michael Prudich, who has served the Division for the last two years as Director. The golden wrench will be passed to Mike at the Annual Conference in San Antonio.

I look forward to seeing everyone Deep in the Heart of Texas!

Kind regards,
Stephanie Farrell, Rowan University



CHEMICAL ENGINEERING DIVISION ELECTION 2012

Your involvement in selecting the next leaders of our division is welcomed and encouraged. We have an excellent slate of candidates for two positions: Division Chair-Elect and Director. Biographical information and Candidate's statements are included on the following pages.

Choose one for Division Chair-Elect:

Brian Dickson
David Dixon

Choose one for Director:

Jeff Csernica
Arthur Felse
Tom Marrero

The online election is token-based, and each person listed in the ASEE ChED roll with a valid email address will receive an individual tokenized link to the election site.

TO VOTE:

- **Check your email listed with ASEE for your personal link to your online ballot.**
****If you do not receive an email ballot, please contact David Silverstein at SilverDL@engr.uky.edu.***
- **Alternatively, you may print this page, neatly print your name at the top, then neatly circle your choices and fax to David Silverstein at 270-534-6317.**

Votes must be received by Friday, June 1st, 2012



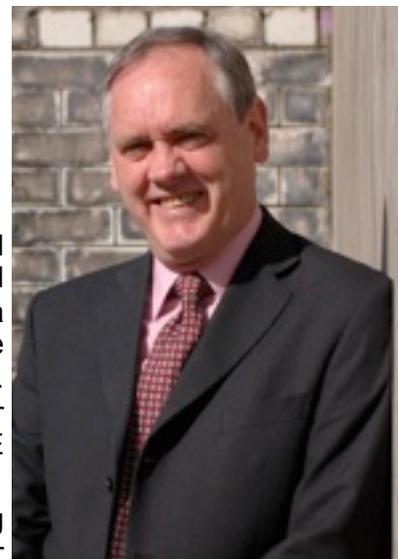
Position: Division Chair-Elect

This person would serve one year as Chair-Elect and then serve as Chair in 2013-2014.

- 1) **Brian Dickson**
- 2) **David Dixon**

Brian R. Dickson

Dept. of Chemical & Process Engineering
University of Strathclyde, Glasgow, UK
email: brian.dickson@strath.ac.uk



My main teaching interests are assisting students to be “job ready and plan their career development”. Here at Strathclyde, we are considered as a target recruitment market for Oil Majors and International Pharma and that in part is due to providing scope for students to build core business skills before graduating or as part of a Masters programme. My teaching and programme management activities has been a major contributor to that and it is an approach that I have shared in ASEE Conferences since 2002. (See below)

My involvement in this building of student skills comes from teaching responsibilities as a Senior Teaching Fellow, and Academic Selector for all pg taught full and part time courses. My teaching duties include classes in:

- Undergraduate Safety & Loss Prevention, Safety Management Systems, Technology & Business
- Managing Final year Industrial Placement Projects
- PG Masters “Project Management”
- Supervisor of Group Projects on MSc in Chemical Processing

Further involvement includes:

- During the period 1997-2008, I managed two distance learning MSc courses for industry-based students with a cohort of 65, with responsibility for the curriculum design; initial and ongoing recruitment; the specification and contracting of course material development, achieving IChemE accreditation, sponsorship and approved CPD status from the Royal Society of Chemistry.
- I have just completed a 3 year term as Director of the Graduate School of Engineering, where I was responsible for the Graduate School of Engineering and the management of its Strategy in particular: the development of new modules and flexible modes of delivery, support for funding applications for course development, the development of a multi-disciplinary Generic Soft Skills teaching programmes and the promotion of the courses to international markets including briefings to International Officers, Recruitment Agents and recruitment visits.

I have been an active member of ASEE since 2002 and normally attend Annual conferences on a minimum two year cycle. During that period, I have developed interests in both a teaching and course development and now believe that I can offer my external experiences to the Chemical Engineering Division including what a 4 year cycle undergraduate teaching and post graduate chemical engineering programme from the UK provides.

ASEE CONFERENCE PAPERS

- 2002: The Role of Masters Degrees in Technology & Business to promote CPD.
- 2002: New Approaches to Teaching and Learning for Industry-Based Engineering Professionals.
- 2004: The Engineer should be a Man of Business.
- 2008: Engineering Management Skills: The Missing Link for Technical Graduates
- CIEC 2010: Delivering CPD to industry based students: The processes, challenges, lessons learnt and thoughts on development
- 2011: A review of the need and approaches to the teaching of Safety and Loss Prevention
- 2012: Selection of effective groups in engineering projects

Division Chair-Elect cont...

This person would serve one year as Chair-Elect and then serve as Chair in 2012-2013.

- 1) Brian Dickson
- 2) **David Dixon**

David J. Dixon

Department of Chemical and Biological
Engineering

South Dakota School of Mines and Technology

email: David.Dixon@sdsmt.edu

I appreciate the opportunity to be nominated as a candidate for Chair-Elect in the Chemical Engineering Division of ASEE. The division and ASEE have folks who are passionate about chemical engineering education and I look forward to the possibility of working with these dedicated individuals through the Division.



For over 18 years I've been a professor at the South Dakota School of Mines and Technology (SDSMT). During the course of my career, I've received ChE degrees from SDSMT (BS 78; MS 86) and the University of Texas at Austin (PhD 92). I have also served as a combat engineer officer in Europe and AZ, been an Instructor of ChE for 3 years, worked for the Dow Corning Corporation, taught in Germany on a Fulbright Scholar grant, been department chair, and currently am a full professor of Chemical Engineering. Within AIChE I have been privileged to have served in a number of capacities, such as, working on the Special Projects committee, active in the Student Chapters Committee (including Chair for a year), Rocky Mountain Regional Liaison, ChE Car Competition committee, International Student Chapters committee, and I served as a department Student Chapter Advisor at SDSMT for over 13 yrs. I was fortunate to participate in the Group 4 (Education) programming; serving as the chair for a year. Recently, I helped host the Rocky Mt. Regional ChE meeting. I continue to have a strong passion for finding innovative ways to educate our future chemical engineers, and if elected look forward to the opportunity to contribute.

Check your email listed with ASEE for your personal link to your online ballot.

Votes must be received by Friday, June 1st, 2012

Position: Director

This person would serve as an advisor to the executive board for a term of 2 years.

- 1) **Jeff Csernica**
- 2) **Arthur Felse**
- 3) **Thomas Marrero**

Jeff Csernica

Department of Chemical Engineering
Bucknell University

email: csernica@bucknell.edu

I am happy to be considered for the open position of Director for the Chemical Engineering Division of ASEE. I have been on the chemical engineering faculty at Bucknell University since 1989, a full professor since 2003, and a member of ASEE since 1991. My chemical engineering degrees are from Lehigh (BS) and MIT (PhD), and I have held visiting positions during my academic career at MIT, Penn State (Materials Science), and the Colgate-Palmolive Company. I am a member of Tau Beta Pi and Phi Beta Kappa, and received Bucknell's Lindback Award for Distinguished Teaching in 2001.



Beyond a deep interest and commitment to the future of chemical engineering education, I believe that the breadth of roles I've had in my academic position make me well suited to provide informed insight and advice on a range of issues of potential interest to the Division. These personal experiences include: department chair since 2002, a time which included two ABET reviews, several curriculum modifications, and five new faculty hires with associated mentorship; two-time interim dean of engineering (student affairs-focused position); coordinator of our multidisciplinary first-year college engineering course; chair of our university-level promotion and tenure committee, and conference contributor (session chair, presenter, paper reviewer, etc.) for ASEE and AIChE. While my interests are broad, one area of particular importance for me is participation and mentorship of young faculty within the Division.

I appreciate the nomination and again, look forward to contributing if elected.

Check your email listed with ASEE for your personal link to your online ballot.

Votes must be received by Friday, June 1st, 2012

Position: Director cont...

This person would serve as an advisor to the executive board for a term of 2 years.

- 1) Jeff Csernica
- 2) **Arthur Felse**
- 3) Thomas Marrero

Arthur Felse

Department of Chemical & Biological Engineering
Northwestern University
email: afelse@northwestern.edu



It is a great honor to be nominated for a Director's position in the Chemical Engineering Division of ASEE.

I am a teaching faculty in the Chemical & Biological Engineering department and in the Master of Biotechnology Program at Northwestern University. I have taught courses at the freshman through graduate levels of CHE curriculum. I have also extensively taught chemical engineering to non-engineering students. I have served as an abstract and paper reviewer for the CHE division. I was honored with the Presidential Green Chemistry Challenge Award for my work on lipase-catalyzed polymerizations.

My educational research interests are in the areas of integrating regulatory compliance in engineering education, teaching CHE to non-engineers, integration of communication skills, and novel laboratory teaching methods. I have presented most of my work at ASEE conferences. As the research training adviser for the Master of Biotechnology Program, I manage a pool of over eighty faculty members spread across the schools Engineering, Sciences, and Medicine.

I will bring to this position a unique expertise in multi-disciplinary teaching and management. If elected as a Director, my primary commitment will be to work with the Division Chair to accomplish the missions of CHE division, primary of which will be to sustain the strong participation shown at our past conferences. I would like to implement an online discussion board for CHE educators to share ideas and quickly exchange opinions. I will also work to enhance our division's prominence through professional networking tools such as LinkedIn. I will strive to expand our division's activities in the areas of cross-disciplinary education, continued inclusion of industry practices, and implementation of newer technologies.

Check your email listed with ASEE for your personal link to your online ballot.

Votes must be received by Friday, June 1st, 2012

Position: Director cont...

This person would serve as an advisor to the executive board for a term of 2 years.

- 1) Jeff Csernica
- 2) Arthur Felse
- 3) **Thomas Marrero**

Thomas R. Marrero

Department of Chemical Engineering
University of Missouri
email: MarreroT@missouri.edu



May I thank you for your consideration to be a Chemical Engineering Division Director, ASEE.

Currently, I am a professor in the Chemical Engineering Department, University of Missouri. In the past, I have been an officer of several professional organizations and continue to serve with the American Institute of Chemical Engineers and the International Freight Pipeline Society.

Since 1979 I have taught in Columbia; my teaching has been dominated by elective courses in the Department's environmental options. Namely, Environmental Chemodynamics, Air Pollution Control, Hazardous Waste Management, and (now) Sustainable Energy. I have also taught the Undergraduate Laboratory, Thermodynamics, and Design. In addition, I teach a one-credit discussion course in the Honors College.

Prior to my tenure at the University of Missouri, for one-year I was Visiting Professor at Texas A & M University, College Station.

I received my BS in Chemical Engineering from the Polytechnic Institute of Brooklyn in 1958, my MS from Villanova University in 1959, and my Ph.D. in Chemical Engineering from the University of Maryland, College Park. I am a Professional Engineer in Missouri and a Fellow of the American Institute of Chemical Engineers.

After my MS I worked in design engineering for the Martin-Marietta-Nuclear Division and researched with the W. R. Grace-Research. In 1967 I returned to the graduate school on a full time basis. After earning my PhD, with a minor in Chemical Physics, I held a post-doctoral opportunity for one-year then returned to industry, first with Babcock-Wilcox Company- research, and then with the General Electric Company-Nuclear Division.

With regard to the ASEE, I have been a member since 1987. This spring, my second article was published in Chemical Engineering Education. This article, as the previous one (published in 1994), were about instruction in the undergraduate chemical engineering laboratory.

If elected to be a ChE Division Director, I look forward to applying my broad experience to serve the ASEE leadership. My career is an example of the value of ChE education. As a director in the ChE division, I would try to enhance opportunities for faculty, students, and youth in chemical engineering careers.

Check your email listed with ASEE for your personal link to your online ballot.

Votes must be received by Friday, June 1st, 2012

2012 SUMMER SCHOOL



The Chemical Engineering Summer School will be July 21-27, 2012, at the University of Maine, Orono, ME.

Rich Felder and Rebecca Brent will present a one-day teaching workshop on Saturday, July 21. Other highlights include the Chemstations, Inc., Award Lecture, international participation, family-oriented activities, and outstanding workshops.

Workshop topics include:

- Engineering education research
- Course content, especially in emerging areas
- Teaching skills (active learning, problem based learning, instructional technology)
- Career development
- Assessment
- Design
- Laboratory



The ASEE ChE summer school consists of hands-on workshops instead of lectures. Each ChE program in the U.S. was able to nominate one participant, preferably an early-career faculty member, and local expenses will be covered for that participant.

The University of Maine is in Orono, just a few miles from Bangor and its airport. It is about one hour or so from Acadia National Park and Bar Harbor. There are hiking and biking trails throughout the area, including many in Bangor. One of the goals of this summer school is to provide an environment for the whole family. The program includes group/family events including movie nights and free time for the above mentioned activities.

Organizing Committee: Joseph A. Shaeiwitz, West Virginia University, joseph.shaeiwitz@mail.wvu.edu, Jennifer S. Curtis, University of Florida, jcurtis@che.ufl.edu, Randy S. Lewis, Brigham Young University, randy.lewis@byu.edu, Gregory Ogden, University of Arizona, gogden@email.arizona.edu, Kimberly L. Ogden, University of Arizona, ogden@email.arizona.edu, Sundar V. Madihally, Oklahoma State University, sundar.madihally@okstate.edu, John J. Hwalek, University of Maine, hwalek@maine.edu

Links to activities in the vicinity of the University of Maine:

<http://cityforest.bangorinfo.com/>

<http://www.bangorinfo.com/parks.html>

<http://www.nps.gov/acad/>

<http://www.acadia.national-park.com/>

http://en.wikipedia.org/wiki/Mount_Katahdin

<http://www.sunkhaze.org/>

<http://www.acadia.net/anp/>

<http://www.baxterstateparkauthority.com/>

<http://www2.cemr.wvu.edu/~wwwche/ASEE/>

Special ChE Sessions at ASEE 2012

Hello colleagues – Here are some of our special sessions this year that we want to call your attention to!

To Infinity and Beyond – The ChemE of 2020

Our kick-off session this year is an invited talk, and the invited speaker is you! We want to have a semi-structured discussion of two questions, and we want to know what you think: What knowledge, skills, and attitudes will the ChemE of 2020 need? And: What are we doing (or should we be doing) right now to educate this person? Bring a computer/ tablet, your brain, and your willingness to talk. On a volunteer basis, you can each have 5 minutes and 2 slides to share your thoughts on one of the questions. After everyone's had their say, we will discuss as a group, and then move to the next question. Please come and participate in our novel working group session! Remember, you are the invited speaker, so we're counting on you to be there.

Award Speaker

Please come out to the special session featuring division award honorees, from 4:30-6:00pm on Monday. We are thrilled to be featuring talks by Dr. Stan Sandler, this year's CACHE award honoree and Dr. Keisha Walters, this year's Fahien award winner. Please plan to make this the stop on your schedule before we all head to the ChED Awards Banquet.

ChED Awards Banquet: 7:00pm. Biga on the Banks

Come join our collegial celebration of another year of successful ChemE education and help us honor this year's award winners. Biga on the Banks is just down-river (or down-street) from the convention center at the corner of Market and South St. Mary St., and is known for its atmosphere and highly rated fresh, locally sourced cuisine.

DON'T FORGET ABOUT THE INTERNET!

By David Silverstein, Webmaster



With the busy lives that faculty members lead both professionally and personally, it is easy to forget about a critical resource that has the potential to impact your life. They call this resource THE INTERNET. And on the internet you will find one resource with particular potential to influence your educational life—the ASEE Chemical Engineering Division Website, <http://www.asee-ched.org>!

The Division website is updated frequently with not only news from the ChE Division, but also with links to the newest sites with information you can use. Examples include nomination resources for Division awards; and as always the most current edition of this newsletter.

Consider using the ASEE Chemical Engineering Division Website for dissemination of your latest educational project, news item of interest to the chemical engineering education community, or anything else you'd like to see made visible to others with a passion for chemical engineering education. Submissions should be made to David Silverstein, ChED Webmaster, SilverDL@engr.uky.edu.

<http://www.asee-ched.org>

2012 Annual Conference: San Antonio, TX 10-13 June



Monday June 11, 2012

M112-Chemical Engineering Division Executive Committee Meeting

Monday, 7:00 AM - 8:30 AM, Henry B. Gonzalez Convention Center , 007D

Moderators: Stephanie Farrell (Rowan University)

A closed meeting of the ChED Executive Committee.

M412-To infinity and beyond: The ChemE of 2020

Monday, 12:30 PM - 2:00 PM, Henry B. Gonzalez Convention Center, 210A

Moderator: Margot A. Vigeant (Bucknell University)

This session seeks to answer the question: what knowledge, skills, and attitudes will the Chemical Engineer of 2020 need? And: what are we doing right now to educate this person?

In this unique session, the discussion will be lively and the invited speaker is *you*. Bring a laptop and a thumb drive and be ready to share your thoughts in 5 minutes or less. No pre-registration required.

1. **Invited speakers: YOU – please come, ready to share your thoughts!**

M512-New ideas for the ChemE Core

Monday, 2:15 PM - 3:45 PM, Henry B. Gonzalez Convention Center , 214C

Moderator: Vassilios Tzouanas (University of Houston)

Session focuses on new additions to the Chemical Engineering core curriculum, looking at both new topics and new approaches for existing topics in this area.

1. **An Instructional Module on Hybrid Separations for Undergraduate Chemical Engineering Separations Courses** Dr. Rebecca K. Toghiani (Mississippi State University), Dr. Priscilla J Hill (Mississippi State University), and Dr. Carlen Henington (Mississippi State University)
2. **Making their Brains Hurt: Quick and Effective Activities for Thermodynamics** Dr. Margot A Vigeant (Bucknell University), Dr. Michael J. Prince (Bucknell University), and Dr. Katharyn E. K. Nottis (Bucknell University)
3. **Novel Chemical Reactors in the Curriculum: An Instructional Module** Dr. Rebecca K. Toghiani (Mississippi State University) and Dr. Carlen Henington (Mississippi State University)
4. **Modeling and Control of Heat Integrated Distillation Columns: A Case Study** Fabiana Manzo, Dr. Vassilios Tzouanas (University of Houston - Downtown), and Dr. Enrique Barbieri (University of North Texas)

M612-Special Session: Chemical Engineering Division Award Honorees

Monday, 4:30 PM - 6:00 PM, Henry B. Gonzalez Convention Center, 214C

Moderator: Margot A. Vigeant (Bucknell University)

Prof. Stanley I. Sandler, University of Delaware, winner of this years' CACHE Award for Excellence in Computing in Chemical Engineering Education, will present a talk on **Computational Quantum Mechanics in Thermodynamics**. This award, sponsored by the CACHE Corporation, is presented for significant contributions in the development of computer aids for chemical engineering education. The award consists of a plaque and a \$1,000 honorarium and is presented at the Chemical Engineering Division awards banquet held at the ASEE Annual Conference.

Prof. Keisha Walters, Mississippi State University, winner of this years' Fahien Award for outstanding teaching effectiveness and educational scholarship, will present a talk on **Building Skills Towards Independent Undergraduate Research**. This award is sponsored by Chemical Engineering Education and given in honor of Ray Fahien, who was editor of the journal from 1967-1995, and who was effectively the founding father of the journal, establishing it as a premier publication vehicle in the field of chemical engineering education. Professor Fahien selflessly gave his time and talents to advance pedagogical scholarship, particularly in the careers of young educators, through his dedication to the journal and the profession. The award is given annually to an educator who has shown evidence of vision and contribution to chemical engineering education, consists of a \$1,500 honorarium and a commemorative plaque presented at the Chemical Engineering Division Banquet of the ASEE Annual Conference.

2012 Annual Conference: Tuesday, 12 June



ChE Division Awards Dinner

Monday, 7:00 PM - 9:00 PM, Biga on the Banks, <http://www.biga.com/>

Moderator: Mahbub Uddin (Trinity University, Local Arrangements Liaison, mahbub@engr.trinity.edu)

Ticketed event: \$75.00 advanced registration and \$85.00 on site registration.

Yummy regional cuisine! Come meet your colleagues, have fun, and sample some of San Antonio's excellent regional cuisine. Winners of all divisional awards will be announced and celebrated.

Tuesday June 12, 2012

T112·Chemical Engineering Chairs Meeting

Tuesday 7:00 AM to 8:30 AM, Henry B. Gonzalez Convention Center, 006C

Come meet your fellow chairs and discuss topics of interest.

T412·Chemical Engineering Poster Session

Tuesday 12:30 PM to 2:00 PM, Henry B. Gonzalez Convention Center, Exhibit Hall C

Moderated by Dr. Polly R. Piergiovanni (Lafayette College)

This is the poster session for the Chemical Engineering Division.

1. **Increasing the Spirality of Material and Energy Balances** Dr. S. Patrick Walton (Michigan State University) and Ms. Amanda Portis Malefyt (Michigan State University)
2. **Material and Energy Balances Taught in a Multidisciplinary Course** Dr. Michael A. Collura (University of New Haven) and Dr. W. David Harding (University of New Haven)
3. **Introductory Adsorption Laboratory Experiment** Dr. Polly R. Piergiovanni (Lafayette College)

T512·New Classrooms, New Challenges 1: Novel Approaches to Courses

Tuesday 2:15 PM to 3:45 PM, Henry B. Gonzalez Convention Center, 214C

Moderator: Dr. Milo Koretsky (Oregon State University)

Session focuses on new and not-yet-widely-adopted approaches to ChemE education, including classroom approaches, technological tools, and studio learning environments.

1. **Evaluation of DyKnow in a Chemical Engineering Curriculum** Dr. Allen Hersel (Trine University)
2. **Implementing Problem-Solving Learning Environments in a Kinetics and Homogeneous Reactor Design Course** Prof. Ramirez Apud Zaira (Universidad de las Américas Puebla), Dr. Nelly Ramirez-Corona (Universidad de las Americas Puebla), Prof. Aurelio Lopez-Malo (Universidad de las Americas Puebla), and Dr. Enrique Palou (Universidad de las Americas Puebla)
3. **Incorporating ScreenCasts into Chemical Engineering Courses:** Dr. Janet L. de Grazia (University of Colorado, Boulder), Dr. John L. Falconer (University of Colorado, Boulder), Dr. Garret Nicodemus (University of Colorado, Boulder), and Dr. Will Medlin (University of Colorado, Boulder)
4. **Regulatory Compliance Training in Bio/Chemical Engineering Courses** Dr. Arthur Felse (Northwestern University)

T612·New Classrooms, New Challenges 2: Assessing Non-Traditional Approaches

Tuesday 2:15 PM to 3:45 PM, Henry B. Gonzalez Convention Center, 214C

Moderator: Dr. Lisa G. Bullard P.E. (North Carolina State University)

In this session, we will discuss the implementation of some novel educational approaches and their educational and technical efficacy.

1. **A New Assessment Method to Easily Identify Areas Needing Improvement in Course-level Learning Outcomes** Prof. Thomas Allen Knotts IV (Brigham Young University), Dr. W. Vincent Wilding (Brigham

2012 Annual Conference: Tuesday, 12 June



- Young University), Dr. William G. Pitt (Brigham Young University), and Prof. Morris D. Argyle (Brigham Young University)
- 2. Interactive Simulations Coupled with Real-Time Formative Assessment to Enhance Student Learning**
Dr. Tracy Q Gardner (Colorado School of Mines), Susan E. Kowalski (Colorado School of Mines), and Prof. Frank V. Kowalski (Colorado School of Mines)
 - 3. The Impact of Studio-based Learning on the Delivery of Course Information** Dr. Richard L. Zollars (Washington State University), Mr. Adam Scott Carter (Washington State University), and Dr. Christopher Hundhausen (Washington State University)
 - 4. Using Studios as a Strategy to Respond to Increasing Enrollment** Dr. Milo Koretsky (Oregon State University), Dr. Kenneth J. Williamson (Oregon State University), Dr. Jeffrey A Nason (Oregon State University), Prof. Goran Jovanovic PhD (Affiliation unknown), Dr. Chih-hung Chang (Oregon State University), Adam Z. Higgins (Oregon State University), Mr. Craig M. Gates (Oregon State University), and Dr. Richard Mark Roehner (Oregon State University)
 - 5. Application of Plagiarism Screening Software in the Chemical Engineering Curriculum** Dr. Matthew Cooper (North Carolina State University), Dr. Lisa G. Bullard P.E. (North Carolina State University), Dr. Steven W. Peretti (North Carolina State University), and Dr. David F. Ollis (North Carolina State University)

Wednesday June 13, 2012

W212-ChemE Potpourri

Wednesday 8:45 AM to 10:15 AM, Henry B. Gonzalez Convention Center, 214C

Moderator: Dr. Joshua A Enszer (University of Maryland Baltimore County)

Talks on various topics of interest to chemical engineering faculty, students, and friends.

- 1. How We Teach: Material and Energy Balances** Dr. David L. Silverstein (University of Kentucky), Dr. Lisa G. Bullard P.E. (North Carolina State University), and Dr. Margot A Vigeant (Bucknell University)
- 2. An Undergraduate Educational Module on Thermodynamic Analysis of Petroleum and Bio-based Fuels in Internal Combustion Engines** Dr. Jeffrey R Seay (University of Kentucky) and Dr. David L. Silverstein (University of Kentucky)
- 3. Preliminary Development of the AIChE Concept Warehouse** Mr. Bill Jay Brooks (Oregon State University), Ms. Debra Gilbuena (Oregon State University), Dr. John L. Falconer (University of Colorado, Boulder), Dr. David L. Silverstein (University of Kentucky), Dr. Ronald L. Miller (Colorado School of Mines), and Dr. Milo Koretsky (Oregon State University)
- 4. Improvements in Computational Methods Courses in Chemical Engineering** Dr. Joshua A Enszer (University of Maryland Baltimore County), Dr. Victoria E Goodrich (University of Notre Dame), and Dr. Rachel B Getman (Clemson University)

W412-Chemical Engineering Division Business Meeting

Wednesday 12:30 PM to 2:00 PM, Henry B. Gonzalez Convention Center, 007C

Moderators: Stephanie Farrell (Rowan University), Michael Prudich (Ohio University)

An open business and planning meeting for all members and potential members of the Chemical Engineering Division. Stop in and help plan our work for the coming year!

W512-Best. Class. Ever.

Wednesday 2:15 PM to 3:45 PM, Henry B. Gonzalez Convention Center, 214C

Moderator: David B. Thiessen (Washington State University)

A session devoted to new and improved courses and laboratory experiences.

2012 Annual Conference: Wednesday, 13 June

1. **DNA to Go: A Do-it-Yourself PCR Thermocycler Lab** Dr. Victor M Ugaz (Texas A&M University), Mr. Aashish Priye (Texas A&M University), and Prof. Yassin A. Hassan (Texas A&M University)
2. **PACT: A Course in Particle and Crystallization Technology** Dr. Priscilla J Hill (Mississippi State University)
3. **Process Safety Management Course Development** Mrs. Linda S. Davis (Purdue University, School of Chemical Engineering), Ms. Deborah Lynn Grubbe PE (Operations and Safety Solutions, LLC), Mr. Ronald Lee Cutshall Sr (RLCutshall Sr, Consulting), Dr. Steven J Swanson (Affiliation unknown), Dr. Michael T. Harris (Purdue University, West Lafayette), and Dr. Arvind Varma (Purdue University, West Lafayette)
4. **Multi-Disciplinary Hands-on Desktop Learning Modules and Modern Pedagogies** Prof. Bernard J. Van Wie (Washington State University), David B. Thiessen (WSU), Dr. Marc Compere (Embry-Riddle Aeronautical Univ., Daytona Beach FL), Ms. Ximena Toro (Affiliation unknown), Dr. Jennifer C Adam (WSU), Dr. Shane A. Brown P.E. (WSU), Mr. Andrew P Easley (WSU), Ms. Xuesong Li P.E. (WSU), Mr. Kevin Lee (University of Idaho), Mr. Mert Colpan (WSU), Mr. Kevin Tyler Gray (WSU), Mr. Benjamin Garrett (WSU), Shane Riley Reynolds (WSU), Dr. Paul B Golter (WSU), and Dr. Olusola Adesope (WSU)

W612-Adaptive and Supportive Learning Environments

Wed. 4:00 PM to 5:30 PM, Henry B. Gonzalez Convention Center, 204B

Moderator: Brian Robert Dickson (University of Strathclyde)

A session to discuss appropriate classroom approaches and structures to accommodate and celebrate the increasing cultural, economic, and neurological diversity in our classrooms, and to prepare all of our learners for what lies beyond graduation.

1. **Perspectives of Teaching a Deaf Student in the Material and Energy Balances Course** Miss Shiran Zhavian (Affiliation unknown) and Dr. James P Abulencia (Manhattan College)
2. **Effect of senior-sophomore mentoring on student-perceived integration in an engineering discipline** Eric C. Huang (Manhattan College)
3. **Developing and Assessing Leadership in Engineering Students** Dr. W. Vincent Wilding (Brigham Young University), Prof. Thomas Allen Knotts IV (Brigham Young University), Dr. William G. Pitt (Brigham Young University), and Prof. Morris D. Argyle (Brigham Young University)
4. **Behavioral Interview Training in Engineering Classes** Julie E. Sharp (Vanderbilt University)
5. **Selection of Effective Groups in Engineering Projects using Management Theory Practice** Mr. Brian Robert Dickson (University of Strathclyde)

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