A Message from the Chair

Dear Colleagues:

The ASEE meeting in Austin, TX was a great event! The Chemical Engineering Division had several sessions that covered a wide range of topics. Thank you to all of you who participated in giving presentations. A special thanks is given to Sundar Madhally from Oklahoma State University for organizing all of the sessions. For those of you that missed the meeting, I encourage you to look at the proceedings to discover the exciting wisdom that was conveyed during the sessions. Please plan on attending and presenting your work at the 2010 ASEE meeting in Louisville, KY next June. Your unique contributions can help us all enhance our abilities as engineering educators. Please note the emails recently sent to you requesting abstract submissions for the next meeting– due October 9th, 2009.

For the coming year, the Executive Committee has identified five goals.

1. Enhance the effectiveness of disseminating ASEE ChE Summer School information to faculty (including new faculty) and graduate students.
2. Enhance recognition of ASEE ChE members via increasing resources for awards.
3. Enhance the interaction with new faculty and Chemistry faculty-- the future of ASEE.
4. Assess potential for increased involvement in section meetings.
5. Optimize Executive Committee and Business meetings.

I will update you on the progress of these goals as the year progresses. If any of you have insights regarding any of the goals, please feel free to email me at randy.lewis@byu.edu. Additionally, I encourage you to become more involved in the Chemical Engineering Division of ASEE. Your contributions will be greatly valued.

Just as a reminder, the 2012 ChE Summer School is fast approaching and will be held at the University of Maine campus. The Summer School is a great venue that provides up-to-date information, tips, teaching techniques, resources, networking, etc. There will be great opportunities for interaction between and among both new and “old” faculty. In the near future, we will be requesting ideas for sessions. My first experience at the 1997 Summer School in Snowbird, UT was great! I met many new people and obtained a great wealth of knowledge from the many sessions.

In closing, I want to leave you with a thought regarding leadership from the pamphlet “Bits and Pieces on Leadership”—April 2009. As quoted: “Archie Dunham, the former chairman of energy company ConocoPhillips, frequently wrote the letters QTH STS STA on the top of his notepad during important meetings. The letters served as a reminder … to be ‘Quick To Hear, Slow To Speak, and Slow To Anger’. Dunham’s advice for leaders: ‘Learn to be a good listener, gather information from many sources, don’t react too quickly to what you hear, and, above all else, don’t become angry.” I think this is great counsel. As the Chemical Engineering Division Chair, I will always seek to emulate this counsel. Let’s make this a great year and expand our vision for the Division.

Randy

Dr. Randy Lewis, Brigham Young University
Plans are underway for the next Chemical Engineering Summer School, which will be held at the University of Maine in late July or early August 2012. The exact dates will be announced next year. The planning committee includes Joe Shaeiwitz (WVU), Randy Lewis (BYU), Jennifer Curtis (Florida), Greg Ogden (Arizona), Kim Ogden (Arizona), and John Hwalek (Maine).

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. There are plenty of recreational opportunities on campus for participants and families, including hiking/biking/running trails and canoeing/kayaking on the Stillwater River. Canoes and kayaks can be rented on campus. Maine is a wonderful vacation spot, and it is usually quite comfortable in the summer. Summer highs average around 80°F, with lows in the high 50s. One of the goals of this summer school is to provide an environment for the whole family. To this end, there will be more time for family and participant activities. The current schedule is being planned from Saturday to Thursday. The preliminary program includes group/family events Sunday until 3 p.m. and Tuesday after lunch. Free time will also be available in the afternoons on Monday, Wednesday, and Thursday. The evening will end around 8:30-9:30 p.m., at the latest.

It is too early to identify session/workshop topics. However, we expect to have the one-day teaching workshop to lead off the summer school, and a session or two on how to perform engineering-education research. A survey will be sent to assistant professors in 2010 to get feedback on the topics that would make attendance at the summer school attractive.

Another idea, courtesy of Mike Cutlip, who co-chaired the summer school in Boulder, CO, in 2002, is to invite a select group of international participants. We believe that our summer school is unique, and it would benefit everyone to export the summer-school concept to our colleagues all over the world. We would also benefit from learning about their educational activities. This could potentially lead to international summer schools in the future.

If you are interested in obtaining the preliminary schedule to provide feedback, please email us. Additional feedback is also welcome; however, no session topics can be promised at this time. Please address your feedback to both joseph.shaeiwitz@mail.wvu.edu and randy.lewis@byu.edu.

Here are some links to activities in the vicinity of the University of Maine:
http://www.bangormaine.gov/vb_recreation.php
http://www.bangormaine.gov/cs_parksrec.php
http://www.bangorinfo.com/parks.html
http://www.sunkhaze.org/
http://www.nps.gov/acad/
http://www.acadia.net/np/
http://www.acadia.national-park.com/
http://www.baxterstateparkauthority.com/
http://en.wikipedia.org/wiki/Mount_Katahdin
2009 Winner of the
CHEMICAL ENGINEERING DIVISION LECTURESHIP AWARD
sponsored by Chemstations

Antonios G. Mikos
Louis Calder Professor of Bioengineering and Chemical and Biomolecular Engineering, Rice University

Building a Better Biomaterial

Initial strategies in the field of biomaterials focused upon the application of existing materials to fill specific medical needs. Early biomaterials commonly served structural/functional roles, while being biologically inert. Recent advances, however, have enabled the development of biomaterials specifically engineered to actively interact with the biological environment. For instance, our laboratory has applied a variety of techniques to impart biological activity to otherwise biologically inert materials for medical applications. These efforts have ranged from the controlled release of bioactive molecules from materials to applying advanced cell culture techniques to coat materials with a biologically active matrix. The principles underlying this paradigmatic shift in biomaterials science form the foundation of the undergraduate-level biomaterials textbook, Biomaterials: The Intersection of Biology and Materials Science, recently published by Pearson Prentice Hall. This text seeks to reflect the interdisciplinary scope and dynamic nature of the field of biomaterials in an effort to develop the interest of undergraduate chemical engineers in building better biomaterials.

Biographical Sketch

Antonios G. Mikos is the Louis Calder Professor of Bioengineering and Chemical and Biomolecular Engineering at Rice University. He is the Director of the J.W. Cox Laboratory for Biomedical Engineering and the Director of the Center for Excellence in Tissue Engineering at Rice University. He received his Dipl.Eng. (1983) from the Aristotle University of Thessaloniki, Greece, and his Ph.D. (1988) in chemical engineering from Purdue University. He was a postdoctoral researcher at the Massachusetts Institute of Technology and the Harvard Medical School before joining the Rice Faculty in 1992 as an assistant professor. Mikos’ research focuses on the synthesis, processing, and evaluation of new biomaterials for use as scaffolds for tissue engineering, as carriers for controlled drug delivery, and as non-viral vectors for gene therapy. His work has led to the development of novel orthopaedic, dental, cardiovascular, neurologic, and ophthalmologic biomaterials. He is the author of over 380 publications and 24 patents. He is the editor of 10 books and the author of one textbook (Biomaterials: The Intersection of Biology and Materials Science, Pearson Prentice Hall, 2008). He has been cited over 13,000 times and has an h-index of 62. Mikos is a Fellow of the International Union of Societies for Biomaterials Science and Engineering and a Fellow of the American Institute for Medical and Biological Engineering. He has been recognized by various awards including the Alpha Chi Sigma Award for Chemical Engineering Research of the American Institute of Chemical Engineers, the Robert A. Pritzker Distinguished Lecturer Award of the Biomedical Engineering Society, the Edith and Peter O’Donnell Award in Engineering of The Academy of Medicine, Engineering and Science of Texas, the Marshall R. Urist Award for Excellence in Tissue Regeneration Research of the Orthopaedic Research Society, the Clemson Award for Contributions to the Literature of the Society for Biomaterials, and the Outstanding Chemical Engineer Award of Purdue University. Mikos is a founding editor of the journals Tissue Engineering Part A, Tissue Engineering Part B: Reviews, and Tissue Engineering Part C: Methods and a member of the editorial boards of the journals Advanced Drug Delivery Reviews, Cell Transplantation, Journal of Biomaterials Science Polymer Edition, Journal of Biomedical Materials Research (Part A and B), and Journal of Controlled Release. He is currently president of the North American Tissue Engineering and Regenerative Medicine International Society. He is the organizer of the continuing education course Advances in Tissue Engineering offered annually at Rice University since 1993.
2009 Award Recipients

**Lifetime Achievement Award in Chemical Engineering Pedagogy**

T. W. Fraser Russell  
U. University of Delaware  

T. W. Fraser Russell received a BSc and MSc from the University of Alberta and a PhD from the University of Delaware, all in chemical engineering. He is currently the Allan P. Colburn Professor of Chemical Engineering and Chief Engineer of the Institute of Energy Conversion, a laboratory at the University of Delaware devoted to thin film photovoltaic research and a United States Department of Energy Center of Excellence for Photovoltaics Research and Education. He most recently served for five years as the Vice Provost for Research. Professor Russell is a member of the National Academy of Engineering (NAE) and a registered professional engineer in the State of Delaware (P.E.).

**William H. Corcoran Award**

Neil S. Forbes of the University of Massachusetts is recognized for his paper entitled “A Module to Foster Engineering Creativity: An Interpolative Design Problem and an Extrapolative Research Project,” (for the best paper published in the previous calendar year in Chemical Engineering Education).

**Joseph J. Martin Award**

Mr. Bill J. Brooks and Dr. Milo D. Koretsky of Oregon State University are recognized for their paper, “A Web-Based Interactive Science and Engineering Learning Tool that Promotes Concept-Based Instruction.” This was the best paper in the ChE Division at the previous ASEE meeting that also appeared in the proceedings.

**Ray W. Fahien Award**

Margot A. S. Vigeant  
Bucknell University  

Margot Vigeant is an associate professor of chemical engineering at Bucknell University where she has been a faculty member since August 1999. Currently, she is also coordinator for Exploring Engineering, the first year course in engineering taken by all majors. Margot’s main pedagogical scholarship is in improving conceptual learning in thermodynamics. She is also interested in development of active, collaborative, and problem-based learning experiences for engineering courses and in faculty development to enable these pedagogies. She lives in Lewisburg PA with her husband Steve and her sons Gabriel and Simon.

**CACHE Award**

Brice Carnahan  
University of Michigan  

Brice Carnahan has championed integration of computing into engineering curricula for more than 50 years. He has co-authored (with Prof. James O. Wilkes) several textbooks on computers, programming, operating systems, networks, productivity applications, and numerical methods. He is a co-founder of CACHE, a Fellow of the AIChE, and a past recipient of the ASEE Chemical Engineering Lectureship. Brice has served as Chair of the AIChE CAST Division, edited many AIChE Symposium Series volumes, and received the AIChE Computers in Chemical Engineering award. Brice’s most-recent research interests involve development of mathematical tools and algorithms for dynamic simulation of chemical processes on parallel computers.

**Sponsored by Chemical Engineering Education**
2009 Award Recipients, cont.

**Best Poster Award**

Zenaida Otero Gephardt, John Natoli, and Marvin Harris of Rowan University are recognized for the poster, “A Laboratory Safety Program to Promote Student Safety Consciousness, Enhance the Curriculum and Strengthen University-Industry Interactions.” This was the best poster presentation in the ChE Division at the 2008 ASEE meeting.

**ASEE Award: Benjamin Garver Lamme Award**

John W. Prados
University of Tennessee

John W. Prados, Vice President & University Professor Emeritus at the University of Tennessee, is recognized by the Benjamin Garver Lamme Award for 50 years of combined service to the University of Tennessee, ASEE, ABET, NSF, and to the nation and world. He led engineering education reform through the modernization of accreditation processes that encourage innovation in engineering education. As coordinator of the Engineering Education Coalitions program, he worked to secure resources for development and institutionalization of engineering educational innovations. As second editor of the Journal of Engineering Education, he enhanced an archival journal that publishes educational scholarship papers which meet standards comparable to those of research journals. His contributions have enhanced the quality of engineering education around the world.

The Benjamin Garver Lamme Award was established in 1928, and recognizes excellence in teaching, contributions to research and technical literature, and achievements that advance the profession of engineering college administration.

**ASEE Award: National Outstanding Teaching Award**

Donald P. Visco, Jr.
Tennessee Technological University

Donald P. Visco, Jr., Professor of Chemical Engineering at Tennessee Technological University, is recognized by the National Outstanding Teaching Award for his diverse, extensive, and sustained activities, as well as his noteworthy contributions to his department, university, and profession in the area of engineering education. Visco has won recognition in a variety of areas associated with education and service. At Tennessee Tech, he received the College of Engineering Brown-Henderson Outstanding Faculty Award, as well as the University Outstanding Faculty Award for Teaching. Within the Southeast Section of ASEE, he received the New Faculty Research Award, Outstanding Teaching Award, and Outstanding Campus Representative Award. He also received the Zone II Outstanding Campus Representative Award, and the ASEE Chemical Engineering Division’s Ray Fahien Award. Within his technical discipline, Visco has received the Department of Energy’s Presidential Early Career Award for Scientists and Engineers (PECASE). He received his B.S. and Ph. D. degrees in chemical engineering from the University at Buffalo, State University of New York, with time between spent in the US Navy.

The National Outstanding Teaching Award recognizes an engineering or engineering technology educator for excellence in outstanding classroom performance, contributions to the scholarship of teaching, and participation in ASEE Section meetings and local activities.

**ASEE Award: Fellow**

David DiBiasio
Worcester Polytechnic Institute

The fellow grade of membership is conferred upon an active member of ASEE who has been a member for at least 10 years, in recognition of outstanding contributions to engineering or engineering technology education.
Announcing ASEE ChE Division Awards for 2010

The Chemstations Lectureship Award
This award, sponsored by Chemstations, is presented to a distinguished engineering educator to recognize and to encourage outstanding achievement in an important field of fundamental chemical engineering theory or practice. The individual shall demonstrate achievement through the formulation of fundamental theory or principles, improvements of lasting influence to chemical engineering education with books and/or articles, and the demonstration of success as a teacher. In addition, evidence of the ability to conduct original, sound, and productive research, and an interest in the progression of chemical engineering through participation in professional and educational societies shall be demonstrated. The recipient presents a lecture at the ASEE summer school. The award consists of a $3,000 honorarium, $500 travel allowance, and a commemorative plaque presented at the Chemical Engineering Division Banquet of the ASEE Annual Conference.

CACHE Award for Excellence in Computing in Chemical Engineering Education
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 $1,000 honorarium and a commemorative plaque presented at the Chemical Engineering Division Banquet of the ASEE Annual Conference.

Ray W. Fahien Award
This award is given in honor of Ray Fahien, who was editor of Chemical Engineering Education 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. See the Division web site for more details on the award criteria. Educators who have been faculty members for not more than ten years as of July 1st in the year of the award are eligible.

Lifetime Achievement in Chemical Engineering Pedagogical Scholarship
This award will normally be given for lifetime achievement, recognizing a sustained career of pedagogical scholarship that not only caused innovative and substantial changes, but also inspired younger educators to new behaviors that benefit students in Chemical Engineering. The award will be presented on an as-merited basis, not necessarily annually. Acceptance of the award implies the obligation to attend the Chemical Engineering Division Awards Banquet at the ASEE Annual Conference.

The following do not require a formal nomination packet:

William H. Corcoran Award
This award, sponsored by Eastman Chemical Corporation, is presented each year to the author of the most outstanding article published in Chemical Engineering Education. Nominations are not accepted. All published papers in a calendar year are automatically considered. The award consists of a $1,500 honorarium (per paper) and a commemorative plaque presented at the Chemical Engineering Division Banquet of the ASEE Annual Conference.

Best Poster Award
The Best Poster Award is presented for the most outstanding Chemical Engineering Division poster presentation at the ASEE Annual Conference. Nominations are not accepted. Papers must be presented at the chemical engineering division poster session to be considered. The award consists of a commemorative plaque presented at the Chemical Engineering Division Banquet of the ASEE Annual Conference.

Joseph J. Martin Award
The Joseph J. Martin Award is presented for the most outstanding Chemical Engineering Division paper presented at the ASEE Annual Conference. Nominations are not accepted. All papers presented that also appear in the conference proceedings are automatically considered. The award consists of a commemorative plaque presented at the Chemical Engineering Division Banquet of the ASEE Annual Conference.

A condition of receiving most of the above awards is attendance at the Chemical Engineering Division banquet at the 2010 ASEE Meeting in Louisville, KY June 20-23.

Nomination Deadline: January 15, 2010 For more information on ChE Division awards, see http://www.asee-ched.org/
Call for Nominations

The Chemical Engineering Division of ASEE presents awards to outstanding chemical engineering educators at the Division Banquet during the annual ASEE meeting. Nominations of candidates for awards to be presented at the 2010 meeting in Austin are due by January 15, 2010, with the winners notified in March 2010. Please consider nominating one of your faculty or colleague at another school for an ASEE Chemical Engineering Division Award.

Award packets should be sent (as a single file) to:

Valerie Young
ASEE ChE Division Awards Co-Chair
youngv@ohio.edu

Instructions for Assembling Nomination Packets

Please assemble the nomination package in the following order. These instructions parallel those available at www.asee.org. Nominating a faculty member for an award implies that the nominee has been informed and consents to the nomination and conditions of the award.

Do not submit to ASEE headquarters or through their web page.

Submit nominations ELECTRONICALLY following the procedure described below to the ASEE ChE Division Awards Co-Chairs, Valerie Young and Jason Keith, at youngv@ohio.edu by January 15, 2010.

Paper submissions will not be accepted.

Nominations should be sent as ONE Word or PDF file. The document should have sections for nominee information, citation, rationale, curriculum vitae, additional information as required for that award, and letters of support. It is the nominator’s responsibility to assemble all of the pertinent information into ONE electronic document that committee members can easily read.

1. Nominee Information – list the information found on the general ASEE awards form that may be found http://www.asee.org/members/awards/nomForm_paper.cfm
2. Include a 100-word maximum Citation, which will be used if the nominee wins the award.
3. Include a 700-word maximum description of the Rationale for the Nomination.
4. Include a Curriculum Vitae containing the following information: Degrees earned (university and granting dates); other postgraduate study; record of positions held; publications, including all books, published papers and articles; ASEE activities and offices held; awards, honors and inventions, etc.
5. Include Other Supporting Information as required for that particular award. Please see the Chemical Engineering Division web site for details on particular award criteria.
6. Include a maximum of 8 Letters of Support for the nomination. These letters may be from peers, students, and/or former students as appropriate to the award.

Any nominee for an award may be renominated using the original nomination package for one additional year only by sending an email to the Awards Chair along with the electronic award nomination. After that a complete new nomination is required.

Submit the entire nomination as ONE electronic file to youngv@ohio.edu by January 15, 2010. General, procedural or other questions about the awards should be directed to Valerie Young at youngv@ohio.edu or 740-593-1496.

Contact the Awards Committee Co-Chair, Valerie Young (youngv@ohio.edu) or consult the Division website (http://www.asee-ched.org) for more information or for nomination packets.
Call for Papers

Fun Fact #1: The Kentucky Derby (Churchill Downs, Louisville, KY) is sometimes called “The Most Exciting Two Minutes in Sports.” Fun Fact #2: The ASEE Abstract Submission Process (September 8 - October 9, 2009) is sometimes called “The Most Exciting 32 Days in Engineering Education.”

The Chemical Engineering Division invites submissions of abstracts on topics relevant to chemical engineering education. Abstracts should be no more than one page in length and should provide a clear statement of the objective, its relevance to the chemical engineering community, any assessment methods used, and results. Topic areas include, but are not limited to, the following:

Curriculum (future of chemical engineering education; curriculum revision / enhancement; nontraditional applications; innovative freshman or sophomore courses or experiences; incorporation of safety; ethics and the environment), Courses (innovation in laboratory or classroom, including design; managing capstone courses; new required or elective courses), Department / Faculty (ABET processes; program outcomes and assessment; contemporary faculty issues; mentoring new faculty; professional development opportunities in education), and Students (advising and career development; nontraditional and underrepresented student populations; recruitment, outreach, and retention; undergraduate research).

Those interested in proposing workshops should contact the program chair directly.

Deadline dates for the 2010 Annual Conference (Louisville, KY):

- Sept 8 - Oct 9, 2009 - Abstract Submission Process Open
- Sept 8 - Oct 16, 2009 - Workshop Proposals & Distinguished Lecture Nominations Due
- Dec 7 - Jan 8, 2010 - Draft Paper Submission Process Open
- Feb 26 - Mar 12, 2010 - Final Paper Submission Process Open
- June 20-23, 2010 - See you in Louisville, KY!!!

For more information about the chemical engineering division program, contact the program chair: Michael E. Prudich, Department of Chemical and Biomolecular Engineering, Ohio University, 167A Stocker Center, Athens, OH 45701; (740) 593-1501; e-mail: prudich@ohio.edu.

More information about the Louisville meeting in general, or the paper submission process in particular, can be found at the following web locations:

General meeting info: http://www.asee.org/conferences/annual/2010/
Call-for-paper info: http://www.asee.org/conferences/annual/2010/Call-for-Papers.cfm

Fun Fact #3: Muhammad Ali (former heavyweight boxing champion and native of Louisville, KY) might have said “Float like a butterfly, sting like a bee - show up in Louisville to talk pedagogy!”
Please Vote: By-Laws Modification

The current by-laws read:

Article VII - Elections
The officers shall be selected by mail, fax, and/or electronic balloting. The Nominating Committee shall supply the Secretary-Treasurer with the names of two nominees for each office or Executive Committee position at least 45 days before the annual meeting of the parent Society. The Secretary-Treasurer shall send a ballot to each member of the Division at least 30 days before said date. The returns from the ballot shall be collected by the Secretary no later than 15 days before said date. In case of a tie the Executive Committee shall cast the deciding ballot. The new officers shall take office ten days after the close of the annual meeting of the parent Society.

The proposed by-laws change is as follows (the deletions are cross-outs and the additions are in boldface):

Article VII - Elections
The officers shall be selected by mail, fax, and/or electronic balloting. The Nominating Committee shall supply the Secretary-Treasurer with the names of two nominees (preferably at least two) for each office or Executive Committee position at least 45 days before the annual meeting of the parent Society. The Secretary-Treasurer shall send a ballot to each member of the Division at least 30 days before said date. The returns from the ballot shall be collected by the Secretary no later than 15 days before said date. In case of a tie the Executive Committee shall cast the deciding ballot. The new officers shall take office ten days after the close of the annual meeting of the parent Society. In the event that the Secretary-Treasurer is running for a contested re-election, the Nominations Committee will handle receipts of ballots (mail, fax or electronic).

Vote by 30 October, 2009: Send an email with the subject “ASEE ChED By-Laws” in favor of or against the proposed bylaws revision to this address: laura-ford@utulsa.edu

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CHEMICAL ENGINEERING DIVISION LEADERSHIP

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