

ASEE Chemical Engineering Division Newsletter



Editor: Matthew Cooper (mecoope3@ncsu.edu), North Carolina State University

A Message from the Chair:



Christi Patton-Luks
Missouri University of
Science and Technology



The temperatures have already started to drop as the frenzy of another school year begins. The luxury of working on my projects at a leisurely pace is now a distant memory as the bustle of meetings and courses returns.

As much as I relish the relaxed pace of summer, I still look forward to the excitement of meeting new students and starting new projects. I love the anticipation of a new semester and getting to put ideas gleaned from the ASEE conference into practice!

The 2015 annual conference was in sunny(!) Seattle. Our division held an outstanding series of presentations and discussions on topics ranging from “Novel Student Experiences in Chemical Engineering” to “Diversity in Chemical Engineering Education: Status and Perspectives”. We were fortunate to have a schedule with no parallel sessions which made networking easier. Thank you to Kevin Dahm for serving as Program Chair this year.

At our division meeting in Seattle, Lisa Bullard led us through a brainstorming activity. Most of the suggestions related to communications and awards (and communications about awards). I think that you will see some changes in these areas in the coming year. I believe that one of the best things that we do as a division is to recognize excellence in our colleagues.

On that note, I want to remind you that it is time to be thinking about the 2016 conference in New Orleans (June 26 – 29). Arthur Felse will be our Program Chair and abstract submissions are available until

October 19, 2015. Consider sharing your ideas with the division by presenting your educational research or work-in-progress. Joe Shaeiwitz is already hard at work setting up an excellent banquet and the Awards team is working on improved funding.

This summer ASEE made several changes that necessitated an amendment to division bylaws and increase in dues. Our division dues have been raised from \$3 to \$8 to cover additional ASEE overhead costs. This small increase should allow our division to continue with the excellent programming and awards that we have grown to expect. I appreciate your support in meeting the deadlines required to make the changes.

Finally, I would also like to thank the officers from 2014-2015 for their leadership this past year. Lisa Bullard is a tough act to follow! I would like to thank Laura Ford for her years as division Secretary-Treasurer and look forward to working with her as chair-elect this year. I would like to thank Allen Hersel for his years of service as Membership Chair – this job is currently open, so this is YOUR opportunity to become more involved in the division! Please check out the “Officer Resources” page on our website to see just what this job entails. Be sure to contact me at luksc@mst.edu for more information about this or our division in general.

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2015 ASEE Chemical Engineering Division Award Recipients



William H. Corcoran Award

For the best paper published in the previous calendar year in *Chemical Engineering Education*:
Sponsored by Eastman Chemical Corporation

David D. Shaw and Dr. Leonard F. Pease III (University of Utah) are recognized for their paper, "Efficient Grading."



Joseph J. Martin Award

For the best paper in the ChE Division:

Alec S. Bowen, Daniel R. Reid, and Dr. Milo Koretsky (Oregon State University) are recognized for their paper "Development of Interactive Virtual Laboratories to Help Students Learn Difficult Concepts in Thermodynamics."



Best Poster Award

For the best poster in the ChE Division:

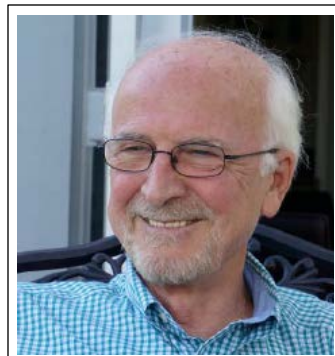
Dr. Cheryl A. Bodnar, Dr. Eric J. Beckman, Dr. Joseph J. McCarthy, and Dr. Steven R. Little (University of Pittsburgh) are recognized for their poster "Work in Progress: A Vision for the First "Product Innovation Sequence" for Chemical Engineers."



CACHE Award

For contributions to computing in chemical engineering:
Sponsored by the CACHE Computing Corporation
Dr. George Stephanopoulos (Massachusetts Institute of Technology)

George Stephanopoulos is the Arthur D. Little Professor of Chemical Engineering at the Massachusetts Institute of Technology. He was awarded the CACHE Award for Excellence in Computing in Chemical Engineering Education for his generation of software packages and the writing and editing of associated learning materials and books in computer-aided chemical engineering education.

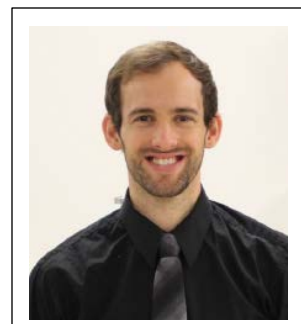


ChE Division Future Faculty Grant

For chemical engineering graduate students who have not presented at an ASEE Annual Conference:

Kenneth P. Mineart (North Carolina State University)

In the large Unit Operations laboratory course at North Carolina State University, graduate student Kenneth Mineart demonstrated an uncommon drive to help students learn, and received positive reviews from students during the student course evaluation process. As Kenneth has progressed through his graduate career, he has demonstrated a genuine interest in teaching. He is enrolled in NCSU's "Preparing the Professoriate" program, which intends to groom the next generation of engineering educators for excellence in the classroom. He is co-author of *Improving Student Technical Communication via Self Reflection*, a paper in the 2015 ASEE Annual Meeting.



2015 ASEE Chemical Engineering Division Award Recipients



Chemstations Lectureship Award *Sponsored by Chemstations, Inc.*

Dr. Ignacio E. Grossmann
(Carnegie Mellon University)



Professor Ignacio E. Grossmann, the Rudolph R. and Florence Dean University Professor of Chemical Engineering and former Department Head at Carnegie Mellon University, has made significant, pioneering contributions to systematic methods in process synthesis, optimal decision-making under uncertainty and process logistics including planning and scheduling across the chemical processing enterprise. His outstanding contributions have had significant impacts in power generation, energy management systems, resource conservation and the optimization of batch and continuous processes for chemical, food and pharmaceutical production. They have also opened up new research vistas and made tremendous impact in engineering practice. His contributions to education include mentoring 48 PhDs, with a quarter of them in academia, a groundbreaking textbook, and far-reaching web-based educational materials and software.

Ray W. Fahien Award

For outstanding teaching effectiveness and educational scholarship for faculty members in their first 10 years:

Daniel Lepek, Associate Professor of Chemical Engineering at The Cooper Union, is a leader in chemical engineering education and a major proponent of leveraging technology to improve student learning. Since joining The Cooper Union, he has taught 10 different courses and has been very active in the ASEE Chemical Engineering Division, having served as Program Chair for the 2013 Annual Conference and Division Director from 2013-2015. Since receiving the 2011 “Engineering Education” Mentoring Grant, he has published two peer-reviewed conference proceedings and currently has a chemical engineering textbook under contract. His current educational research is focused on peer instruction, technology-enhanced active learning, and electronic textbooks.

Dr. Daniel H. Lepek
(The Cooper Union)



**Congratulations to all ChE
Division Award Winners!**

Announcing 2016 ASEE ChE Division Awards!



Send one file to ASEE ChE Division Award Chairs: Bernard Van Wie (bvanwie@wsu.edu) and Joseph Menicucci (jmenicucci@gmail.com)

Chemstations Lectureship Award

This award is presented to a distinguished engineering educator to recognize and 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. *This will be the final year of funding from Chemstations - ASEE CHED thanks them for their eight years of generous support.*

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.

Donald R. Woods Lifetime Achievement

Award in Chemical Engineering Pedagogy

This award is given in honor of Donald R. Woods, a renowned engineering educator and long-time faculty member at McMaster University. This award will normally be given for lifetime achievement, recognizing a sustained career of contributions to pedagogical practice, scholarship, and/or mentoring that not only caused innovative and substantial changes, but also inspired other 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 awards do not require a formal nomination packet:

William H. Corcoran Award

This award is presented each year for 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 \$1500 honorarium (per paper) and a commemorative plaque presented at the Chemical Engineering Division Banquet of the ASEE Annual Conference. *This will be the final year of funding for this award from Eastman Chemical Corporation - ASEE CHED thanks them for their years of generous support.*

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.

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 2016 meeting in New Orleans, LA are due by January 15, 2016, with the winners notified in March 2016.

Please consider nominating one of your faculty or a colleague at another school for an ASEE Chemical Engineering Division Award!

Award packets should be sent (as a single file) to:
Bernard Van Wie (bvanwie@wsu.edu) and
Joseph Menicucci (jmenicucci@gmail.com)
ASEE ChE Division Awards Chairs



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 Chairs by January 15, 2016.

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 at 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 re-nominated using the original nomination package for one additional year only by sending an email to the Awards Chair along with the electronic award nomination. However, reference letters should be updated for the year of the renewed application. After the re-nomination a complete new nomination is required.

Submit the entire nomination as ONE electronic file to bvanwie@wsu.edu and jmenicucci@gmail.com by January 15, 2016. General, procedural or other questions about the awards should be directed to these Awards Committee Chairs.

Contact the Awards Committee Chairs, Bernard Van Wie (bvanwie@wsu.edu) and Joseph Menicucci (jmenicucci@gmail.com) or consult the Division website (<http://www.asee-ched.org>) for more information.



Inviting Mentoring Grant Applications for 2016!

Send one file to: Bernard Van Wie (bvanwie@wsu.edu) and Joseph Menicucci (jmenicucci@gmail.com)

ChE Division Mentoring and Travel Grant for New Attendees

All chemical engineering or chemistry faculty who have not attended an ASEE Annual Conference are eligible. There will be at most two grants per year. A faculty member may apply for this grant by the end of October to attend the following year's conference. The faculty member must have submitted an abstract for that conference. The application consists of a curriculum vitae, a maximum one-page statement of interests in educational scholarship and a copy of any submitted abstracts. The faculty member may or may not be collaborating with other faculty who are active in ASEE.

Applications will be reviewed by a committee consisting of the awards chairs and directors. If there is a conflict of interest, the directors will identify another member of the committee. The amount of the grant is \$400 and will include a ticket to the ChE Division Banquet. A condition of the grant is that the grant winner attends the meeting and presents their paper. The grant will be presented at the ChE Division Banquet. The grant winner(s) will be provided with a ChE Division mentor (an individual determined by the ASEE CHED executive committee) who will meet with the grant winner for both formal and informal interactions during the meeting.

ChE Division "Engineering Education" Mentoring Grant

All chemical engineering or chemistry faculty who have not attended an ASEE Annual Conference in the past five years are eligible for this grant. More than one grant may be given annually. A faculty member may apply for this grant by the last day of February. The application consists of a curriculum vitae and a maximum one-page statement of interests in educational scholarship.

Applications will be reviewed by a committee consisting of the awards chairs and directors. If there is a conflict of interest, the directors will identify another member of the committee. The grant will be a ticket to the ChE Division Banquet. The grant winner(s) will be provided with a ChE Division mentor (an individual determined by the ASEE CHED executive committee) who will meet with the grant winner for both formal and informal interactions during the meeting.

ChE Division Graduate Student "Future Faculty" Grant

All current graduate students in a chemical engineering or related program are eligible, and they must be nominated by a faculty member who is a member of ASEE. There will be at most one grant per year to subsidize travel to the ASEE Annual Conference. This grant is intended to build upon the existing ASEE "Bring-A-Student" program. Preference will be given to first-time attendees who have coauthored a paper and will be giving an oral or poster presentation at the ASEE Annual Conference. The nomination consists of the student's resume, a one page letter of support from the faculty member, and the abstract of any ASEE talks with the student as coauthor. Nominations are due by October 31st.

Applications will be reviewed by a committee consisting of the awards chairs and directors. If there is a conflict of interest, the directors will identify another member of the committee. Grants will be announced about two weeks after the paper acceptance deadline. The amount of the grant is \$500 and will include a ticket to the ChE Division Banquet. A condition of the grant is that the grant winner attends the meeting and presents their paper. The grant will be presented at the ChE Division Banquet. The grant winner will be provided with a ChE Division mentor (an individual determined by the ASEE CHED executive committee) other than their nominating faculty mentor who will meet with the grant winner for both formal and informal interactions during the meeting.

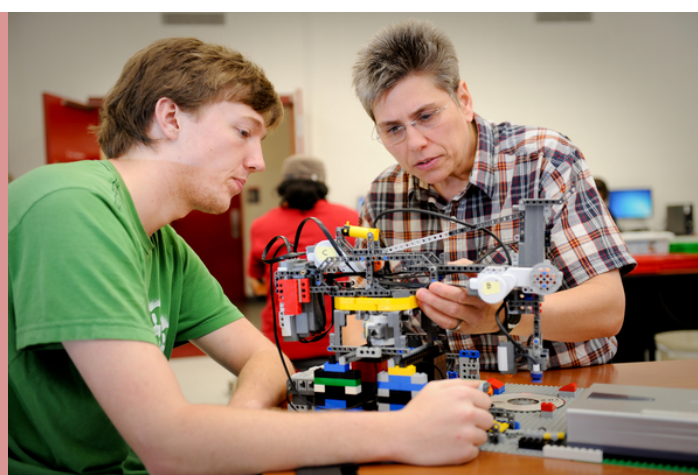
Application Deadline for Mentoring Grants is October 31, 2015!

- A condition of receiving most awards and mentoring grants is attendance at the Chemical Engineering Division banquet at the 2015 ASEE Annual Meeting in New Orleans, LA June 26 – 29 2016.
- For more information on national and other awards, visit the ASEE awards page at <http://www.asee.org/member-resources/award>

CALL for PAPERS!

2016 ASEE Annual Meeting

June 26 – 29, 2016 in New Orleans, LA



The Chemical Engineering Division (ChED) of ASEE invites papers for the 2016 Annual Conference and Exposition in New Orleans, LA (June 26-29, 2016). Papers on all topics related to chemical engineering education will be considered. In addition suggestions/proposals for panel discussions, workshops and cross-divisional sessions are welcome. Current topics of interest to ChED include, but are not limited to:

- Innovative use of technologies and new pedagogies in chemical engineering education.
- Learning outcomes, assessment, and accreditation of chemical engineering programs
- Contemporary perspectives (or new advances) in chemical engineering education.
- Diversity initiatives in chemical engineering programs.
- Incorporating safety and regulatory compliance in chemical engineering curricula.
- Teaching professional skills in chemical engineering courses - critical thinking, creativity, communication, and collaboration.
- Non-traditional learning experiences such as experiential, inquiry-based, problem-based, and immersive learning in chemical engineering.
- Outreach activities such as K-12 initiatives, sustainability, global health, climate change, etc.
- Business and entrepreneurship literacy in chemical engineering.
- All other topics related to chemical engineering education.

ChED poster session: Papers describing ongoing work (“work-in-progress”) are particularly welcome in the poster session. Poster papers can be in any topic related to chemical engineering education including the list above. Please note that poster papers will go through ASEE’s double-blind review process.

Open Mic / Town Hall style session: A meeting open to the general audience for free exchange of ideas on current challenges and opportunities in chemical engineering education. Topics and format are TBA.

Conference paper submission is a two-step process: (1) Abstract submission, review, and acceptance; followed by (2) Paper submission, review, and acceptance. Since reviews are double-blind, please do not include the names of authors or institutions anywhere in the abstract or draft paper. At the end of your abstract, please state if you would particularly like your paper to be in a regular session or a poster session. Abstracts will be reviewed, and if accepted, authors are then invited to complete full papers for further review.

The ChED is a “publish-to-present” division: to present at the conference, you must have your paper accepted for publication and have at least one author participate in the peer review. Abstract submission will open on September 1, 2015 and will close on October 19, 2015. Author kits will be published shortly on the ASEE Annual Conference webpage.

Please send your suggestions for panels, workshops, or other non-traditional sessions, and interdivisional sessions to the 2016 ASEE ChED Program Chair Arthur Felse (afelse@northwestern.edu). Also, please contact Arthur Felse for any questions regarding paper submission and review.

**Abstract submission window opened September 1, 2015
and closes October 19, 2015!**

Community Announcements

Welcome new ASEE ChE Division Officers!

- *Division Chair-Elect:* Laura Ford
- *Director:* Milo Koretsky
- *Secretary/Treasurer:* Cheryl Bodnar

FYI: Proposed Amendment to ChE Division

By-Laws Regarding Dues Passed

The results of late Summer voting are in, and the proposed amendment to CHED's by-laws which allows the division to set dues at the annual business meeting has passed.

Photo Credits:

1. T. Barker, "Missouri S&T is chancellor's legacy", located at http://www.stltoday.com/news/local/education/missouri-s-t-is-chancellor-s-legacy/article_a25173df-e55f-5116-8c04-627022385f34.html.
2. https://www.reddit.com/r/pics/comments/34se8s/mount_rainier_to_wering_over_seattle/
3. "New Orleans in a Nutshell", located at http://www.i-am-bored.com/i_am_bored_output.asp?action=search&ss=new+orleans&sa=Go
4. PackPix, located at <http://www.ncsu.edu/photos>.

Congratulations to ChE Division Members on New Positions and Promotions!

- Cheryl Bodnar – Assistant Professor at Rowan
- Dan Anastasio – Assistant Professor at Rose-Hulman Institute of Technology
- Josh Enszer – Assistant Professor of Instruction at University of Delaware
- Laura Hirschfield – Assistant Professor at Rowan
- Allen Hersel – Provost (VP of Academic Affairs) at Trine
- Jason Keith – Dean of Engineering at Mississippi State
- Adrienne Minerick – Associate Dean for Research and Innovation at Michigan Tech
- Dick Zollars – retired from Washington State

Send announcements for future issues of the
ASEE CHED Newsletter to

Matthew Cooper at mecoope3@ncsu.edu

July 29 - August 4, 2017

North Carolina State University

Raleigh, North Carolina



Chemical Engineering Division

Faculty Summer School

Presenter Proposals: June 1 - Nov. 30, 2016

Participant Registration: Nov. 1, 2016 - Jan. 31, 2017

Since 1931, the ChE Summer School has offered
early-career faculty:

- Professional development workshops
- Keynote lectures and panels
- Networking opportunities
- Family-oriented activities

In collaboration with the



www.chesummerschool.org