DivCHED Newsletter
Spring 2017

In Memorium - Jeffery Hepburn
ACS Fellows Nominations Due April 1, 2017
DivCHED Travel Award Deadline
   September 15, 2017

ACS 253rdd Nation Meeting
Advanced Materials, Technologies,
Systems & Processes
April 2-6, 2017 | San Francisco, CA

Published by the Division of Chemical Education, Inc.,
American Chemical Society
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JEFF HEPBURN, IN MEMORIUM

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CHED Connections
Recently, a friend gave me a wall hanging that she said reminded her of me:

I’m pretty sure that she was referring to my tendency, as a cyclist, to tackle challenging hills and courses; but I couldn’t help but think about how the saying relates to some of the recent changes that have taken place or are taking place in the Division of Chemical Education.

Over the past few years, the leadership of the Division has taken on some challenging, uphill battles. For example, they have started the process of professionalizing the business of the Division by hiring experts to take care of our administrative and financial obligations. They have educated us about our fiduciary responsibilities. They have reorganized several committees and made resources available—such as videoconferencing capabilities—to support the work of those committees. As a Division, we are currently reviewing and revising our Division bylaws so that our practices will be consistent with our legal documents. In the fall, we will begin the process of updating our Division Operations Manual.

None of this is easy. It’s an uphill journey, but it’s an uphill journey along the right path. Each of these tasks advance the Division and its abilities to serve its members, and we in the Chair Succession are sincerely grateful for each of you that have helped us accomplish—or are helping us accomplish—those tasks. Struggling uphill toward higher ground is much easier when you are working with and supported by your friends!

MaryKay Orgill
University of Nevada, Las Vegas
2017 DivCHED Chair

As chemists and educators, we thrive in a constant state of change. Think about it: you are not doing the identical research that you did when you began your career. Nor are you teaching your courses in exactly the same manner as you did in your first semester in the classroom. The Division of Chemical Education is also always changing. A number of new people have joined the Executive Committee in leadership positions. I am not new to the Executive Committee, but I am certainly new to the chair succession.

As other chair-elects have noted, there is a lot to learn about CHED! My plan for 2017 is to listen and learn. Our division is fortunate to have excellent mentors and a tradition of helpfulness. I am grateful to the current chair, MaryKay Orgill, and immediate past chair, Cathy Middlecamp, for sharing their wisdom and helping me learn about the position and the issues that are currently in front of the Division.

If you are wondering how to get active in the Division or if you have a comment or concern, please feel free to contact me or any member of the Executive Committee. If you are attending the national meetings in San Francisco or Washington, please plan to attend the CHED Social on Sunday evening and say hello!
From the Secretary/Councilor, Dan King [dk68@drexel.edu]

Greetings to all. I’m excited and nervous as I start my new position as Secretary of the Division. I know that I have big shoes to fill, and I thank Resa Kelly for sharing her time and knowledge to help me figure out what I’m supposed to be doing and how to do it. When I first joined the Division, I never expected that I would serve in this position.

To be honest, a year ago, I didn’t expect that I would be in this position. Hopefully this inspires other members to get involved with the Division. All you have to do is volunteer. We are always looking for people who want to contribute.

Congratulations to the newly elected DivCHED Officers: Cheryl Frech (Chair-elect), Dan King (Secretary), Iona Black (Councilor), Marilyne Stains (Alternate Councilor), and Deanna Cullen (Member at Large). Thank you also to the other candidates who agreed to run for each position.

At the Spring Meeting, we will be starting the arduous task of reviewing and revising the Division bylaws and operations manual. The goals of this process are to ensure that these documents accurately represent the work that is currently being done by the Division and to make any necessary changes to improve the effectiveness of the Division. Work has already begun and will continue in San Francisco on the Friday before the Meeting. We’ll keep you updated as the process moves forward.

I thank you for this opportunity, and I will do my best to help the Division continue to move forward. If there is anything that I (or we as a Division) can do to improve your experience in the Division, please let me know. If you are making the trip to San Francisco, I hope to see you at the DivCHED social reception on Sunday evening.

From the Member-At-Large, Deanna Cullen [dcullen@jce.acs.org]

I feel honored to be writing this first article as your Member at Large delegate. I appreciate the nomination and appointment and I look forward to serving in this position. I would like to extend my thanks to Jimmy Reeves for his past six years of service as Member at Large and wish him the best as he transitions into retirement. Jimmy was kind to offer me guidance and suggestions that I am sure will help me as I transition to this new role.

Part of my position includes a seat on the Board of Trustees of the ACS Examinations Institute. This past year, we have followed the transition of the Exams Institute into a true small business (non-profit) operation. The intellectual property development operation is now managed by Kirsten Murphy, the Director of the Institute, at the University of Wisconsin in Milwaukee. Julie Adams manages the business operations side in Berthoud, CO. This is a pivotal time for the Institute and I look forward to being more directly involved.

Over the past few years, the BCCE organizing committee and the Executive Committee have worked to formalize the structure of the growing conference. ExComm voted at the Fall 2016 ACS meeting to hire a Meeting Planning Partner for a two-year term to work with the BCCE organizing committees. The two-year term was to begin January 31, 2017. This will hopefully lighten the load of BCCE organizers and promise an exceptional experience for the conference attendees. The 25th BCCE will be held during the summer of 2018 in Indiana at the University of Notre Dame. Speaking of conferences, ChemEd 2017 will be held in Brookings, SD at South Dakota State University July 23 -27. The conference organizers have announced that Andy Brunning, Bassam Shakhashiri and Lee Marek will speak at the conference.

As announced previously, the Journal of Chemical Education and ChemEd X have endowed the James Bryant Conant Award in High School Chemistry Teaching and the Exams Institute has endowed the ACS Award for the Achievement in Research for the Teaching and Learning of Chemistry. The permanent sponsorship of these two prestigious awards begins with the presentations at the San Francisco meeting. Since the Division also supports the Pimentel Award, the Division is sponsoring three awards for 2017. I would also like to remind our members that in 2006, the Division established an endowment to underwrite an Awards Program designed to recognize, encourage and inspire outstanding teachers of high school chemistry in the ten Regions of ACS. As a high school teacher myself, I have met hundreds of exemplary chemistry teachers, but it has been brought to my attention that the number of nominations received in many of those regions is very small. I encourage those of you that are involved with high school teachers to support this program by taking the time to nominate worthy candidates and also make your local sections more aware of these awards. You can find information about all of the award programs on the Division website. I am proud to be a member of a Division that has made such large financial commitments toward recognizing those involved with chemical education.

On a sad note, I want to note the passing of our friend, Jeff Hepburn, of Urbandale, IA. Jeff passed on February 23rd after a courageous battle with cancer. He was 61. Jeff was an active member of the Division of Chemical Education and served in many leadership roles. He retired from teaching high school chemistry, including AP chemistry and IB chemistry, in 2012. He will be sorely missed.

I am looking forward to attending the ACS meeting in San Francisco and to be more formally involved in discussions and decisions that affect Division membership and chemical education. I hope you will feel comfortable reaching out to me if you have any questions or comments.

Sincerely,
Deanna Cullen
The View from the Program Chair, Tyson Miller [Miller_T1@heritage.edu]

As the West Coast begins to emerge from one of the more precipitation-filled winters (snow where I am, rain west of the Cascade mountains), it’s time to ponder the exciting program we’re about to have this spring at the 253rd ACS National Meeting in San Francisco, CA from April 2-6, 2017.

Before going further, I want to take a few minutes to acknowledge the immeasurable contributions of Irv Levy, who served as the lead CHED Program Chair from 2011-2016. There are few people in CHED who haven’t either worked a program with him or served with him in some capacity. We owe him a great “Thank You!” for a job well done. He and Cinzia Muzzi are your San Francisco meeting co-chairs, and they have created a fabulous program. We are blessed to have Sally Mitchell, Jenelle Ball, and Greta Glugoski-Sharp as our team for the High School program. I hope you can join us in San Francisco and take the time to personally thank Irv, Cinzia, Sally, Jenelle, and Greta for their work on your behalf.

There are always folks behind the scenes that provide critical support for our programming at a national meeting. We owe thanks to ACS staff who take care of many things great and small that make our meetings organized and enjoyable. Special thanks go to Robin Green, Nicole DiFabio, Jessica Roberts, and Beverly Johnson for their contributions. A shout out also goes to Heather Johnson for all her work at the Division level. A quality meeting would not happen without their vital work.

Our meeting program will be held in the San Francisco Marriott Marquis this time. It features 40 symposia, along with the High School Program and Undergraduate Posters, with 7-8 concurrent sessions the entire meeting – including Thursday! CHED is honored to host four ACS award symposia: George C. Pimentel Award in Chemistry Education (Tom Holme); ACS Award for Achievement in Research for the Teaching and Learning of Chemistry (Marcy Towns); ACS Award for Encouraging Disadvantaged Students into Careers in the Chemical Sciences (Saundra Y. McGuire). In addition, the James Bryant Conant Award (Laura Slocum) will be given during the High School Program. While CHED programming is always worth celebrating, we have a great deal more to celebrate this year in San Francisco!

And speaking of the High School Program, it is anticipated to be one of our largest ever, with over 100 teachers expected. We will have the traditional Sunday AM session/CHED-HS Interface Luncheon/PM session format. For pre-college teachers who want to get extra content especially designed for their use, Polymer Ambassador Sherri Rukes will once again provide a program for teachers on Monday night at the meeting. This is a very popular session, and we are glad it has become a standard element at national meetings.

We will host a state-of-the-art symposium in San Francisco titled “State of the Art: Applying Chemistry Education Research to Practice”. Thanks go out to Patrick Daubenmire and Deborah Herrington for bringing this to our division. For those of you who might have an idea for a state-of-the-art symposium for the future, let us know! There’s usually at least a year’s worth of planning that goes into these special sessions.

The Call for Papers for the Fall 2017 ACS National Meeting in Washington D.C. has already gone out. Denyce Wicht and Beatriz Rios-Mckee are assembling a fine program. We hope to see you there as well! Please submit an abstract.

The deadline for submission to Washington D.C. is March 27, 2017.

We are here to produce programming at national meetings that is useful, relevant, and serves the needs of CHED members. Let us know how we can improve the program, and what role you might play as a volunteer. Please do not hesitate to contact me (miller_t1@heritage.edu) with your ideas. I look forward to seeing you in San Francisco!

Know Your Way Around the Division

If you need to pay membership dues, want to make a contribution to the DivCHED Service Award fund, or want to know about money, budgets, etc., contact the Treasurer.

If you want to change your mailing address, want a Division publication, or want to know about official Division actions, etc., contact the Secretary. If you want to receive this CHED Newsletter (or not receive it), contact the Secretary.

If you want to bring an idea before the Executive Committee or want to make an opinion known, contact the Member-at-Large.

If you want to contribute something to CHED News, contact Heather Johnson.
Jeff Hepburn, a superb chemical educator, died on February 23, 2017 after a long battle with cancer. Jeff undertook a number of roles within the ACS Division of Chemical Education. He was a key member of several exam writing committees for ACS Exams, including serving as the secretary of the committee that constructed the High School Advanced Exam. He served both as chair and as co-chair of the High School Committee. He served on the editorial advisory board for the Journal of Chemical Education. He was a member of the Biennial Conference Committee and served as an Alternate Councilor for The Division.

He earned a bachelor’s degree from the University of Northern Iowa, after graduating from Ft. Dodge High School in 1973. He later received a master’s degree in science education from the University of Iowa. Well beyond these formal accomplishments he was constantly interested in learning new things, and particularly exploring ways to help students learn chemistry. He liked to say he did CPR in his classroom, meaning “Chemistry,” “Problem solving” and “Relevance” and his students certainly achieved many things as a result.

He taught high school chemistry at Dowling Academy and at Des Moines Central Academy, where he taught both AP and IB chemistry. At Central he coached the Science Bowl team that routinely qualified for the national competition and encouraged and helped his students succeed in the Chemistry Olympiad competition each year. His students remember him as both an incredible teacher and phenomenal role model. Jeff retired from Central Academy in 2012.

Jeff was the winner of the 2010 James Bryant Conan Award for teaching. Many of his former students credit him with sparking their interest in chemistry and the percentage of students from his classes that started college in a chemistry related field was estimated to be between 20-25%.

Jeff shared his enthusiasm for teaching chemistry with many other teachers as well, serving as a team member for the Flinn Scientific Foundation Summer Workshop Program, as a consultant for the College Board and as an AP Chemistry Preparation Program instructor. He was also a member of the International Brotherhood of Magicians and the Society of American Magicians, and his flair for dramatic presentation was a feature of his chemical demonstration that was admired by all who had the opportunity to see them.

He had several hobbies outside of chemistry, most notably the performance of magic. One of his more intriguing pursuits was to obtain autographs from scientists who had won the Nobel Prize and he collected over 100 such treasures over the years.

Those who would like to contribute to memorials in Jeff’s honor may visit http://centralacademyalumminetwork.org/donate-new/ and follow the Donate link to the Community Foundation of Greater Des Moines’s donation page. Please include “Mr. Hepburn” in the Honorarium field or “Chemistry Department” in the Comments field. Alternatively, checks can be made out to the “Community Foundation of Greater Des Moines.” Please list “Jeff Hepburn” or “Chemistry Department” on the memo line of the check, and send to: Community Foundation of Greater Des Moines, 1915 Grand Ave., Des Moines, IA 50309.
253rd ACS Meeting & Exposition, San Francisco, CA

April 2-6, 2017
Theme: Advanced Materials, Technologies, Systems and Processes

Meeting Co-Chairs:
Cinzia Muzzi, DeAnza College, 21250 Stevens Creek Blvd., Cupertino, CA 95014, 408.864.5790, mussicinzia@deanza.edu
Irvin J. Levy, Gordon College, 255 Grapevine Road, Wenham, MA 01984, 978-867-4877, irv.levy@gordon.edu

High School Program Chair:
Sally Button Mitchell. Albert Einstein Fellow, Department of Energy, Office of Science, Room 3-F-061, 1000 Independence Ave SW, Washington, DC 20585, (202) 287-6489, sbmitchell2@gmail.com

Undergraduate Poster Chair:
Nicole DiFabio, Undergraduate Programs Office, American Chemical Society, 1155 Sixteenth St NW, Washington, DC 20036, (800) ACS-5558, ext. 8010, N_DiFabio@acs.org

CHED Program Co-Chair:
Tyson A. Miller, Heritage University, 3240 Fort Road, Toppenish, WA 98948, (509) 865-0421, miller_t1@heritage.edu

GSSPC Organizers:
Susette Ingram (georgetowngsspc@gmail.com) and others from Georgetown University
“Water Sustainability: Chemists in Pursuit of Clean Water”

Program Synopsis
DivCHED abstracts can be found at http://divched.org/sites/default/files/meetings/spring2017/253SanFrancisco_CHED_Separates.pdf.

SUNDAY MORNING

High School Program
S. B. Mitchell, Organizer; J. L. Ball, Organizer; J. L. Ball, Presiding Papers 1-4

State of the Art: Applying Chemistry Education Research to Practice
P. L. Daubenmire, Organizer; D. G. Herrington, Organizer; P. L. Daubenmire, Presiding Papers 5-10

Citizens First!
C. Maguire, Organizer; R. D. Sheardy, Organizer; C. Maguire, Presiding; K. Slavens, Presiding Papers 11-18

Green Chemistry: Theory & Practice
E. J. Brush, Organizer; J. E. Wissinger, Organizer; E. J. Brush, Presiding Papers 19-25

Research in Chemistry Education
D. P. Cartrette, Organizer; D. R. Mulford, Organizer; G. T. Rushton, Presiding; M. N. Stains, Presiding; M. Teichert, Presiding; J. Walker, Presiding Papers 26-29

NMR Spectroscopy in the Undergraduate Curriculum
L. J. Anna, Organizer; D. P. Soulsby, Organizer; A. S. Wallner, Organizer; L. J. Anna, Presiding; D. P. Soulsby, Presiding; A. S. Wallner, Presiding Papers 30-36

Undergraduate Research Papers
C. V. Gauthier, Organizer; J. V. Ruppel, Organizer; N. L. Snyder, Organizer; J. V. Ruppel, Presiding Papers 37-52

Eye Tracking Research in Chemistry Education
S. J. Hansen, Organizer; J. R. Vandenplas, Organizer; S. J. Hansen, Presiding Papers 53-59

SUNDAY AFTERNOON

High School Program
S. B. Mitchell, Organizer; J. L. Ball, Organizer; J. L. Ball, Presiding Papers 60-66

State of the Art: Applying Chemistry Education Research to Practice
P. L. Daubenmire, Organizer; D. G. Herrington, Organizer; D. G. Herrington, Presiding Papers 67-71

Citizens First!
C. Maguire, Organizer; R. D. Sheardy, Organizer; R. Bishop, Presiding; R. D. Sheardy, Presiding Papers 72-79

Green Chemistry: Theory & Practice
E. J. Brush, Organizer; J. E. Wissinger, Organizer; J. E. Wissinger, Presiding Papers 80-84

Research in Chemistry Education
D. P. Cartrette, Organizer; D. R. Mulford, Organizer; J. A. Schmidt-McCormack, Presiding Papers 85-92

NMR Spectroscopy in the Undergraduate Curriculum
L. J. Anna, Organizer; D. P. Soulsby, Organizer; A. S. Wallner, Organizer; L. J. Anna, Presiding; D. P. Soulsby, Presiding; A. S. Wallner, Presiding Papers 93-99

Undergraduate Research Papers
C. V. Gauthier, Organizer; J. V. Ruppel, Organizer; N. L. Snyder, Organizer; C. V. Gauthier, Presiding Papers 100-115

Celebrating Chemistry through Outreach: Honoring the Legacy of Christine Jaworek- Lopes
I. J. Levy, Organizer; B. E. Rios McKee, Organizer; D. K. Wicht, Organizer; B. E. Rios McKee, Presiding Papers 116-123
SUNDAY EVENING
General Posters
T. A. Miller, Organizer; Papers 124-199

MONDAY MORNING
ACS Award for Achievement in Research for the Teaching & Learning of Chemistry: Symposium in honor of Marcy H. Towns
S. Bretz, Organizer; M. Cooper, Presiding Papers 200-207
ACS-CEI Award for Incorporating Sustainability into Chemistry Education
S. O. Obare, Organizer; S. O. Obare, Presiding; K. Aubrecht, Presiding Papers 208-214
Fundamentals of Chemistry Outreach Education: From Program Design to Assessment
E. J. Brush, Organizer; E. S. Garcia Sega, Organizer; S. Nellutla, Organizer; E. Sega, Presiding Papers 215-221
Advances in e-Learning & Online Chemical Education
D. A. Canelas, Organizer; L. A. Morsch, Organizer; P. Sorensen, Organizer; D. A. Canelas, Presiding Papers 222-229
Chemistry Education Research: Graduate Student Research Forum
J. Donnelly, Organizer; M. Popova, Organizer; J. Donnelly, Presiding; M. Popova, Presiding Papers 230-238
Curricular Innovations in Undergraduate Chemical Education Impacted by NSF
R. K. Boggess, Organizer; C. A. Burkhardt, Organizer; C. A. Burkhardt, Presiding Papers 239-246
Undergraduate Research Papers
C. V. Gauthier, Organizer; J. V. Ruppel, Organizer; N. L. Snyder, Organizer; N. L. Snyder, Presiding Papers 247-262
MONDAY AFTERNOON
ACS Award for Achievement in Research for the Teaching & Learning of Chemistry: Symposium in honor of Marcy H. Towns
S. Bretz, Organizer; S. Bretz, Presiding Papers 263-269
Process Oriented Guided Inquiry Learning (POGIL)
R. S. Moog, Organizer; R. S. Moog, Presiding Papers 270-278
Fundamentals of Chemistry Outreach Education: From Program Design to Assessment
E. J. Brush, Organizer; E. S. Garcia Sega, Organizer; S. Nellutla, Organizer; S. Nellutla, Presiding Papers 279-288
Advances in e-Learning & Online Chemical Education
D. A. Canelas, Organizer; L. A. Morsch, Organizer; P. Sorensen, Organizer; L. A. Morsch, Presiding Papers 289-296
International & Multicultural Perspective
C. T. Cox, Organizer; S. J. Hansen, Organizer; W. E. Schatzberg, Organizer; C. T. Cox, Presiding Papers 297-305
Curricular Innovations in Undergraduate Chemical Education Impacted by NSF
R. K. Boggess, Organizer; C. A. Burkhardt, Organizer; R. K. Boggess, Presiding Papers 306-312
Undergraduate Research Papers
C. V. Gauthier, Organizer; J. V. Ruppel, Organizer; N. L. Snyder, Organizer; C. V. Gauthier, Presiding Papers 313-328
Undergraduate Research Posters
N. Di Fabio, Organizer; Papers 329-1754
MONDAY EVENING
Innovating Materials for the Next Generation: Bringing Practical Applications into the Chemistry Classroom
S. C. Rukes, Organizer; S. C. Rukes, Presiding Papers 1755-1761
Successful Student Chapters
N. Di Fabio, Organizer; Papers 1762-1889
Sci-Mix
TUESDAY MORNING
George C. Pimentel Award in Chemical Education: Symposium to honor Thomas A. Holme
S. Bretz, Organizer; M. Cooper, Presiding Papers 1890-1898
ACS Award for Encouraging Disadvantaged Students into Careers in the Chemical Sciences: Symposium in honor of Saundra Y. McGuire
I. M. Warner, Organizer; I. M. Warner, Presiding Papers 1899-1903
GSSPC: Water Sustainability
A. Adcock, Organizer; I. Brekalo, Organizer; Z. De los Santos, Organizer; J. P. England, Organizer; S. E. Ingram, Organizer; Z. S. Sakhaei, Organizer; J. Nelson, Presiding; Z. S. Sakhaei, Presiding; S. E. Ingram, Presiding; A. Adcock, Presiding Papers 1904-1908
Advances in e-Learning & Online Chemical Education
D. A. Canelas, Organizer; L. A. Morsch, Organizer; P. Sorensen, Organizer; P. Sorensen, Presiding Papers 1909-1914
Advances in Teaching Organic Chemistry
S. F. Hornbuckler, Organizer; S. F. Hornbuckler, Presiding Papers 1915-1923
Perspectives on Climate Change Literacy & Education: Local to International
G. P. Foy, Organizer; K. E. Peterman, Organizer; G. P. Foy, Presiding Papers 1924-1933
Advancing Undergraduate Research
B. L. Gourley, Organizer; R. M. Jones, Organizer; R. M. Jones, Presiding Papers 1934-1944
TUESDAY AFTERNOON
The Role of Research Experiences in the ACS Certified Degree
J. Wenzel, Organizer; T. J. Wenzel, Presiding Papers 1952-1959
GSSPC: Water Sustainability
A. Adcock, Organizer; I. Brekalo, Organizer; Z. De los Santos, Organizer; J. P. England, Organizer; S. E. Ingram, Organizer; Z. S. Sakhaei, Organizer; J. Nelson, Presiding; A. Adcock, Presiding; S. E. Ingram, Presiding; I. Brekalo, Presiding; Z. S. Sakhaei, Presiding Papers 1960-1962
Course-Based Undergraduate Research Experiences (CUREs) in Chemistry
J. M. Heemstra, Organizer; R. Waterman, Organizer; J. M. Heemstra, Presiding Papers 1963-1972
Writing in Chemistry
S. A. Finkenstaedt-Quinn, Organizer; A. C. Moon, Organizer; A. C. Moon, Presiding Papers 1990-1992

253rd ACS National Meeting
Advancing Undergraduate Research
B. L. Gourley, Organizer; R. M. Jones, Organizer; B. L. Gourley, Presiding Papers 1991-2001

Simulations, Animations & other Visualizations in Educating about Chemistry SAVE Chemistry!
R. M. Kelly, Organizer; R. Tasker, Organizer; R. M. Kelly, Presiding Papers 2002-2011

WEDNESDAY MORNING
Using Chemistry Education Research to Inform the Design & Use of Assessment Materials
J. J. Reed, Organizer; S. Villafane-Garcia, Organizer; J. J. Reed, Presiding; S. Villafane, Presiding Papers 2012-2016

Communicating Science in the Twenty-First Century to Diversified Audiences
A. E. Neybert, Organizer; C. A. Supalo, Organizer; A. E. Neybert, Presiding; C. A. Supalo, Presiding Papers 2017-2025

Strategies Promoting Success of Two-year College Students
L. J. Anna, Organizer; T. Higgins, Organizer; A. M. Palmer, Organizer; L. J. Anna, Presiding; T. Higgins, Presiding; A. M. Palmer, Presiding Papers 2026-2033

Course-Based Undergraduate Research Experiences (CUREs) in Chemistry
J. M. Heemstra, Organizer; R. Waterman, Organizer; R. Waterman, Presiding Papers 2034-2043

Research in Chemistry Education
D. P. Cartrette, Organizer; D. R. Mulford, Organizer; M. Mack, Presiding Papers 2044-2050

Undergraduate Laboratory Experiments Involving Advanced Materials
W. J. Miller, Organizer; W. J. Miller, Presiding Papers 2051-2058

Advancing Undergraduate Research
R. M. Jones, Organizer; B. L. Gourley, Organizer; B. L. Gourley, Presiding Papers 2059-2068

Research on Learning in the Lab
M. J. Chrzanowski, Organizer; S. Sandi-Urena, Organizer; S. Sandi-Urena, Presiding Papers 2069-2075

WEDNESDAY AFTERNOON
Using Chemistry Education Research to Inform the Design & Use of Assessment Materials
J. J. Reed, Organizer; S. Villafane-Garcia, Organizer; J. J. Reed, Presiding; S. Villafane, Presiding Papers 2076-2080

Communicating Science in the Twenty-First Century to Diversified Audiences
C. A. Supalo, Organizer; A. E. Neybert, Organizer; A. E. Neybert, Presiding; C. A. Supalo, Presiding Papers 2081-2089

Strategies Promoting Success of Two-year College Students
L. J. Anna, Organizer; T. Higgins, Organizer; A. M. Palmer, Organizer; L. J. Anna, Presiding; T. Higgins, Presiding; A. M. Palmer, Presiding Papers 2090-2095

Course-Based Undergraduate Research Experiences (CUREs) in Chemistry
J. M. Heemstra, Organizer; R. Waterman, Organizer; J. M. Heemstra, Presiding Papers 2096-2103

Research in Chemistry Education
D. P. Cartrette, Organizer; D. R. Mulford, Organizer; R. Komperda, Presiding Papers 2104-2109

Undergraduate Laboratory Experiments Involving Advanced Materials
W. J. Miller, Organizer; W. J. Miller, Presiding Papers 2110-2118

Eliciting Attentiveness from Cyber-Savvy Students without Using Electronic Tools
C. E. Cannon, Organizer; K. Kostecka, Organizer; C. E. Cannon, Presiding Papers 2119-2127

General Papers
S. A. Fleming, Organizer; V. Feng, Presiding Papers 2128-2134

THURSDAY MORNING
How Do We Teach Collaboration? Best Practices for Educating Future Researchers & Innovators
M. DeBoever, Organizer; B. Hames, Organizer; M. Krause, Organizer; D. Watt, Organizer; M. DeBoever, Presiding Papers 2135-2140

Current Best Practices for Chemistry REU Programs
M. A. Griep, Organizer; M. A. Griep, Presiding Papers 2141-2147

Engaging Students in Physical Chemistry
C. M. Teague, Organizer; C. M. Teague, Presiding Papers 2148-2155

Instructors & Researchers: Advancing Graduate Student Education
G. Bhattacharyya, Organizer; S. J. Hansen, Organizer; G. Bhattacharyya, Presiding; S. J. Hansen, Presiding Papers 2156-2163

General Papers
S. A. Fleming, Organizer; M. L. Curry, Presiding Papers 2164-2171

General Papers
S. A. Fleming, Organizer; J. E. Owens, Presiding Papers 2172-2179

General Papers
S. A. Fleming, Organizer; S. M. Tremain, Presiding Papers 2180-2187

The General Chemistry Course for a Changing World
D. A. Katz, Organizer; D. A. Katz, Presiding Papers 2188-2194
### Schedule of CHED Committee Meetings and Social Events

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Venue</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SATURDAY, APRIL 1, 2017</strong></td>
<td><strong>ACS Exams Institute, Board of Trustees (open)</strong></td>
<td>Marriott Marquis, Sierra A</td>
<td>7:30AM – 12:00PM</td>
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<td></td>
<td><strong>JCE, Board of Publications (open)</strong></td>
<td>Marriott Marquis, Sierra B</td>
<td>7:30AM – 12:00PM</td>
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<tr>
<td></td>
<td><strong>Program Committee (open)</strong></td>
<td>Marriott Marquis, Sierra C</td>
<td>10:30AM – 12:00PM</td>
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<tr>
<td></td>
<td><strong>Executive Committee</strong></td>
<td>Marriott Marquis, Golden Gate Blrm</td>
<td>1:00PM – 1:30PM (closed)</td>
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<td></td>
<td>1:30PM – 4:00PM (open)</td>
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<td></td>
<td>4:00PM – 5:30PM (closed)</td>
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<tr>
<td><strong>MONDAY, APRIL 3, 2017</strong></td>
<td><strong>Young Chemistry Education Scholars Committee (open)</strong></td>
<td>Marriott Marquis, Sierra H</td>
<td>8:00AM – 9:30AM</td>
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<tr>
<td></td>
<td><strong>Business Meeting (open)</strong></td>
<td>Marriott Marquis, Salon 1/2</td>
<td>12:00PM – 12:30PM</td>
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<tr>
<td></td>
<td><strong>New Member Committee (open)</strong></td>
<td>Marriott Marquis, Salon 1/2</td>
<td>12:30PM – 1:00PM</td>
</tr>
<tr>
<td><strong>SUNDAY, APRIL 2, 2017</strong></td>
<td><strong>Biennial Conference Committee (open)</strong></td>
<td>Marriott Marquis, Golden Gate Blrm C3</td>
<td>8:00AM – 9:30AM</td>
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<td></td>
<td><strong>International Activities Committee (open)</strong></td>
<td>Marriott Marquis, Salon 1</td>
<td>8:00AM – 9:30AM</td>
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<td></td>
<td><strong>Chemical Education Research Committee (open)</strong></td>
<td>Marriott Marquis, Sierra H</td>
<td>12:00PM – 1:30PM</td>
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<td></td>
<td><strong>Finance Committee (closed)</strong></td>
<td>Marriott Marquis, Foothill G</td>
<td>1:30 PM - 3:00 PM</td>
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<tr>
<td></td>
<td><strong>Regional Meetings (open)</strong></td>
<td>Marriott Marquis, Sierra G</td>
<td>12:00PM – 2:00PM</td>
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<tr>
<td></td>
<td><strong>Long Range Planning Committee (open)</strong></td>
<td>Marriott Marquis, Sierra G</td>
<td>2:30PM – 4:30PM</td>
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<td><strong>Safety Committee (open)</strong></td>
<td>Marriott Marquis, Sierra H</td>
<td>4:00PM – 5:30PM</td>
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<td></td>
<td><strong>DivCHED Social Reception (open)</strong></td>
<td>Moscone Center, 130</td>
<td>5:30PM – 7:00PM</td>
</tr>
</tbody>
</table>

**Moscone Center**
747 Howard St Fl 5, San Francisco, CA 94103
(415) 974-4000

**San Francisco Marriott Marquis**
780 Mission St, San Francisco, CA 94103
(415) 896-1600
AGENDA – Executive Committee (Open)
Division of Chemical Education
Saturday, April 1, 2017
1:30PM – 4:00PM Marriott Marquis, Golden Gate B Blrm

Notes:
1. The agenda packet is available on the Division web site: [http://www.divched.org/](http://www.divched.org/)
2. The Executive Committee (ExComm) consists of 19 members, 13 elected members, plus the Chair of the Board of Publication, Editor-in-Chief, J. Chem. Educ., the Chair of the Board of Trustees, the Director, Examinations Institute and the Chair, Division Program Committee (Chair and Chair Elect). Only ExComm members are present in Executive Session. Input is welcomed from all in attendance at the Open Session, but ExComm members are the only persons who may vote on actions before the Executive Committee.
3. Reimbursement forms for ExComm members will be provided via interactive form on the Division’s website – Under the tab - Meetings. [http://www.divched.org](http://www.divched.org)

Open Session - 1:30PM to 4:00PM

<table>
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<tr>
<th>Action (X)</th>
<th>Time</th>
<th>Items</th>
<th>Page</th>
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<tbody>
<tr>
<td>1:30</td>
<td>Call to order</td>
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<tr>
<td>X</td>
<td>Approve meeting agenda and consent agenda reports</td>
<td></td>
<td>1-2</td>
</tr>
<tr>
<td>X</td>
<td>Approval of the Fall 2016 ExComm Meeting Minutes, Open Session</td>
<td></td>
<td>3-11</td>
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</tbody>
</table>

**Introductions**
- Chair’s Announcements – M. Orgill
  - Welcome new members of ExComm, Bylaw review update, Virtual meeting capabilities
- Past Chair’s Announcements – C. Middlecamp
  - Updates on past and ongoing business: Safety Committee copyrighting of “Safety Guidelines for Chemical Demonstrations”, Fiduciary responsibilities and training, Records retention policy, Business manager
- Chair Elect’s Announcements – C. Frech
  - 2017 CHED Technical Division Video
- Secretary’s Announcements – D. King

**Discussion**
- Name change for the High School Chemistry Committee – R. Morgan-Theall, E. Yezierski
- Biennial Conference Committee update – D. Sykes
  - Changes in leadership, hiring of meeting planning partner, current goals and directions, request for funds to support a one-time BCC retreat

| X          | Proposed BCCE Recording Policy – M. Orgill | | 60-64 |
| X          | BCC/ExComm Representation – C. Middlecamp | | |

**3:00 Break**

**3:15 Public Relations Committee White Paper – M. Orgill**

| 3:15 | Program Committee Report - T. Miller | | 65-69 |
|      | Treasurer’s General Report - A. Wilson | | |
|      | Board of Publication Oral Report – E. Yezierski | | 12-15 |
|      | Board of Trustees of the ACS Exams Institute Oral Report – A. Grushow | | |

**3:45 Open Discussion/Input to the Executive Committee**

| 3:45 | AACT Representative – R. Allen | | |
|      | ACS Education Division Highlights – K. McCue | | 54-59 |
|      | Committee Chair Voices | | |
|      | CHED Liaisons | | |

**4:00 Adjourn Open Session**
Spring ACS 2017: The Younger Chemistry Education Scholars Committee Presents:

**Sunday April 2nd** From 9-11AM
Coffee & Pastries at Blue Bottle Coffee
66 Mint Street

**Monday April 3rd** From 8:30AM-12PM
Graduate Student Research Symposium at Marriott Marquis—Nob Hill A
780 Mission Street

**Monday April 3rd From 4-7PM**
Networking Social and Appetizers at Press Club
20 Yerba Buena Lane

**Tuesday April 4th** 7:30-930AM
Coffee & Pastries at Equator Coffees & Teas
222 2nd Street

Visit us online: divched.org/blogs/YCES @acs_yces facebook.com/groups/YCESCommittee
High School Chemistry Day

Follow #ACSTeacherDay on Twitter

TEACHER PROGRAM
San Francisco, CA
April 2 – 6, 2017

REASONS TO ATTEND
the ACS National Meeting in San Francisco

- Only $110 includes the chemistry teacher program, exposition hall, AND the whole ACS meeting
- Networking opportunities, including a free lunch and reception on Sunday
- Earn Professional Development hours
- Try out hands-on activities during the Sunday and Monday programs
- Winner of the 2017 James Bryant Conant Award in High School Chemistry Teaching will be a presenter

WHAT TEACHERS HAVE ENJOYED ABOUT PAST PROGRAMS:
"The presenters worked so hard to share their information. I am grateful!"
"Great presentation! Really interesting connection between class and current research."
"It was nice having a lot of different perspectives from a lot of teachers."
"Lunch was great! Door prizes were fun."

Visit www.acs.org/chemistryteacherprogram for up-to-date information
<table>
<thead>
<tr>
<th>Schedule</th>
<th>Time</th>
<th>Session</th>
<th>Organizer(s)</th>
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<tbody>
<tr>
<td>Chemistry Teacher Program</td>
<td>8:30 AM – 12:00 PM</td>
<td>Corrosion prevention</td>
<td>Sherri Rukes</td>
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<td></td>
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<td>Advanced materials for corrosion prevention</td>
<td>Bruce Lipshutz</td>
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<td>Teaching chemistry today with an environmentally responsible view of tomorrow</td>
<td>James Kessler</td>
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<td>Middleschoolchemistry.com lesson shows that carbon dioxide can make water acidic</td>
<td>Eric Bartelink</td>
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<td>Reconstructing ancient human diet in the prehistoric San Francisco Bay area using data sets and careers through student collaboration</td>
<td>Julie Hubbard</td>
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<td></td>
<td>Who asks a more beautiful question</td>
<td>Julie Hubbard</td>
</tr>
<tr>
<td>Polymer Program</td>
<td>1:00 PM – 4:30 PM</td>
<td>Materials, Materials: They are everywhere</td>
<td>Ed Escudero and Sherri Rukes</td>
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<td>Cars: A rolling evolution of material choices</td>
<td>Andrew Nydam</td>
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<td>Evolution of aircraft materials: Why are we building plastic airplanes?</td>
<td>Andrew Nydam</td>
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<td>Polymers, polymers everywhere</td>
<td>Danielle Moore</td>
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<td>Chemistry connections: Inspiring students with innovation</td>
<td>Kate Anderson</td>
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<td>Composites and conductive materials: Making everyday materials do more</td>
<td>Sherri Rukes</td>
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<tr>
<td>Chemistry Teacher Program</td>
<td>1:00 PM – 4:30 PM</td>
<td>Tracing the steps to the Conant Award</td>
<td>Deanna Cullen</td>
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<td>Making connections that matter!</td>
<td>Laura Slocum</td>
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<td>Deep impact: Summer research with high school students</td>
<td>Lisa Ott</td>
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<td>Designing three-dimensional assessments</td>
<td>Melanie Cooper</td>
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<td>Establishing a culture of laboratory safety in secondary education</td>
<td>Karlo Lopez</td>
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<td>Sex, drugs, and the high school chemistry curriculum</td>
<td>Michelle Wynn</td>
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<td>The Chemistry Phenomenon – Learning Science at Every Grade Level</td>
<td>Rebecca Field, Sally Mitchell &amp; Greta Glugoski-Sharp</td>
</tr>
<tr>
<td>Chemistry Teacher Reception</td>
<td>5:00 PM – 7:00 PM</td>
<td>Chemistry Teacher Reception</td>
<td>Ed Escudero and Sherri Rukes</td>
</tr>
</tbody>
</table>

Visit [www.acs.org/chemistryteacherprogram](http://www.acs.org/chemistryteacherprogram) for more information.
HOURS OF OPERATION

SUNDAY, April 2
7:00 AM - 10:00 AM .......... 15 minute service
10:00 AM - 4:00 PM .......... 30 minute service
4:00 PM - 7:00 PM .......... 15 minute service
7:00 PM - 11:00 PM .......... 30 minute service

MONDAY, April 3
7:00 AM - 10:00 AM .......... 15 minute service
10:00 AM - 4:00 PM .......... 30 minute service
4:00 PM - 11:00 PM .......... 15 minute service

TUESDAY, April 4
7:00 AM - 10:00 AM .......... 15 minute service
10:00 AM - 4:00 PM .......... 30 minute service
4:00 PM - 11:00 PM .......... 15 minute service

WEDNESDAY, April 5
6:30 AM - 11:00 PM .......... 30 minute service

THURSDAY, April 6
7:00 AM - 6:00 PM .......... 60 minute service

SAN FRANCISCO MAP

LEGEND

Scan here to download a copy of this schedule onto your smartphone or device.

Shuttle service managed and operated by Transportation Management Services
Carbon Neutral Shuttles

For all shuttle and wheelchair assistance inquiries, please call:
1-866-439-8564

253rd ACS National Meeting & Exposition
April 2 - 6, 2017 | San Francisco, CA
www.acs.org/sanfran2017 | #acsSanFran

SHUTTLE SERVICE SCHEDULE
Updated as of November 6, 2016

KEY | HOTEL | ROUTE | SHUTTLE BOARDING LOCATION
--- | --- | --- | ---
1 | Courtyard by Marriott Downtown San Francisco | W | Walk to Moscone Center
2 | Grand Hyatt San Francisco | 1 | Curbside on Post Street at Stockton Street
3 | Hilton San Francisco Union Square | 2 | Taylor Street
4 | Hotel Abri | 2 | Walk to Parc 55
5 | Hotel Nikko San Francisco | 2 | Walk to Parc 55
6 | InterContinental San Francisco | W | Walk to Moscone Center
7 | King George Hotel | 1 | Walk to Westin St Francis - Post Street
8 | Palace Hotel, A Starwood Luxury Collection | 1 | New Montgomery Street
9 | Parc 55 San Francisco - A Hilton Hotel | 2 | Curbside on Cyril Magnin Street
10 | Park Central San Francisco | W | Walk to Moscone Center
11 | San Francisco Marriott Marquis | W | Walk to Moscone Center
12 | San Francisco Marriott Union Square | 1 | Walk to Grand Hyatt - Post Street
13 | Sir Francis Drake Hotel | 1 | Walk to Westin St Francis - Post Street
14 | The Mosser | W | Walk to Moscone Center
15 | W San Francisco | W | Walk to Moscone Center
16 | Westin St. Francis | 1 | Post Street Entrance

For all shuttle and wheelchair assistance inquiries, please call:
1-866-439-8564
Shuttle service managed and operated by Transportation Management Services
Carbon Neutral Shuttles
**Upcoming Meeting Information**

**254th ACS Meeting & Exposition, Washington DC**

August 20-24, 2017

**Theme:** Chemistry's Impact on the Global Economy

**Meeting Co-Chairs:**
Heritage University, 3240 Fort Road, Toppenish, WA 98948, (509) 865-0421, miller_t1@heritage.edu
Denyce Wicht, Suffolk University, 41 Temple St, Boston, MA 02114-4241, (617)573-8252, dwicht@suffolk.edu
Beatriz Rios McKee, beatriz.rios-mckee@nokia.com

**High School Program Chair:**
Sally Button Mitchell, Pine Grove Middle School, 6318 Fremont Rd, East Syracuse, NY 13057, (315)637-9837, sbmitchell2@gmail.com
Sherri Rukes, Libertyville High School, 708 W Park Ave., Libertyville, IL 60048-2604, (847)327-7603, scrukes@comcast.net

**Undergraduate Poster Chair:**
Nicole DiFabio, Undergraduate Programs Office, American Chemical Society, 1155 Sixteenth St NW, Washington, DC 20036, (800) ACS-5558, ext. 8010, N_DiFabio@acs.org

**CHED Program Chair:**
Tyson A. Miller, Heritage University, 3240 Fort Road, Toppenish, WA 98948, (509) 865-0421, miller_t1@heritage.edu

**GSSPC Organizers:**
Ryan Mondschein and Chad Powell, Virginia Polytechnic and State University, “Standing on the Shoulders of Giants: Developing Chemistries for Improved Global Health”

**Symposia List: Descriptions can be found at** [https://callforpapers.acs.org/dc2017/CHED](https://callforpapers.acs.org/dc2017/CHED)

**Abstract submission deadline:** Monday, March 27, 2017

- Advances in E-Learning (Oral)
- Advancing Graduate Education: Opportunities & Challenges (Oral)
- Assessment Instruments for the ACS Accredited Degree Program (Oral)
- Chemistry in the Age of Cheap Computing (Oral and Poster)
- Citizens First! (Oral)
- Communicating Chemistry through Social Media (Oral)
- Engaging Undergraduates with Raman Spectroscopy (Oral)
- Games & Active Learning Techniques to Help Students Understand Chemistry (Oral)
- General Papers (Oral)
- General Posters (Poster)
- Green Chemistry: Theory & Practice (Oral)
- GSSPC: Standing on the Shoulders of Giants: Developing Chemistries for Improved Global Health (Oral)
- High School Program (Invited Oral)
- How are Students Prepared for the Global Economy? How Do We Prepare Students for the Global Economy? (Oral)
- Increasing Retention of Under-Represented Students in Chemistry (Oral)
- Innovations in Undergraduate Biochemistry Education (Oral)
- Integration of STEM & the Liberal Arts (Oral)
- International Exchange Programs in the Service of Science Education (Oral)
- International Programs: Assessing the Impact (Oral)
- Metacognition in Chemistry Education: Connecting Research & Practice (Oral)
- Navigating Chemistry Career Pathways in Sustainable Policy Amidst Volatile Political Environments (Invited Oral)
- Online & Upward: Improving Online Education to Increase Chemistry’s Global Reach (Oral)
- Process Oriented Guided Inquiry Learning (Oral)
- Putting CER into Practice: Using Chemistry Education Research to Inform Teaching Strategies (Oral)
- Research in Chemistry Education (Oral)
- Successful Student Chapters (Poster)
- Twenty-First Century Innovative Assessments in Chemistry & other STEM Related Courses (Oral)
- Undergraduate Research Papers (Oral)
- Using Computational Methods to Teach Chemical Principles (Oral)
- Undergraduate Research Posters (Poster):
  - Agricultural & Food Chemistry
  - Analytical Chemistry
  - Biochemistry
  - Biotechnology
  - Chemical Education
  - Computational Chemistry
  - Environmental Chemistry
  - Geochemistry
  - Green Chemistry & Sustainability
  - Inorganic Chemistry
  - Medicinal Chemistry
  - Nanochemistry
  - Organic Chemistry
  - Physical Chemistry
  - Polymer Chemistry
ConfChem Online Conferences

Fall 2017 Online ConfChem: Mathematics in Undergraduate Chemistry Instruction
10/26/2017 - 11/27/2017

Chemistry is a quantitative science. For majors in the sciences and engineering, chemistry provides a foundation in solving scientific calculations: mathematics applied to measurements. In recent years, many instructors have noted deficits in the background of growing numbers of students enrolling in undergraduate chemistry courses for science majors. In a 2012 survey of nations with highly developed economies, 16 to 24 year olds from the US had the lowest scores in “numeracy” among the 22 nations tested.

For this virtual conference, we seek submissions focused on how we can help students learn to solve calculations in courses that teach or prepare students for the quantitative component of chemistry:

• What experiments have instructors conducted to improve student success rates in solving scientific calculations? What strategies would be recommended as a result?
• What online or other resources have been found to be effective in assisting students who need additional preparation or review for the mathematics that is prerequisite for chemistry?
• What topics in mathematics are most important in courses preparing students for chemistry? Which skills should be measured to determine placement in general versus preparatory chemistry sections? What levels of proficiencies should be required before placement in general chemistry?
• Which strategy has proven to be more effective for students learning to perform scientific calculations: Approaching first from the perspective of teaching critical thinking and reasoning skills, or from the application of memorized problem-solving algorithms?

If you are interested in submitting a paper (and we do hope you are), please contact Cary Kilner: carypq@aol.com or Eric Nelson: EANelson@ChemReview.Net. Further information may be obtained at the conference site, http://confchem.cccc.divched.org/2017FallConfChem.

Relevant Dates:
June 19, 2017: Abstracts Due
September 18, 2017 Papers Due
October 26, 2017: Conference Begins

Organizers: Cary Kilner and Eric Nelson

2YCs Conferences

Early Spring Conference 2017
March 31 - April 1, 2017
216th Conference
Truckee Meadows Community College
Reno, NV
Conference Website
Registration
Reno Tahoe USA, four season destination (video)
Contact:
Program Co-Chair/Local Arrangements Chair
Olga Katkova: okatkova@tmcc.edu
Program Co-Chair
Kathleen Kolbet: kkolbet@tmcc.edu
Exhibits Chair
Matthew Leathen: mleathen@tmcc.edu

Late Spring Conference 2017
May 26-27, 2017
217th Conference
Bronx Community College
Bronx, NY
Conference Website
Registration
Contact:
Program Chair
Mark Matthews: matthewsm@durhamtech.edu
Local Arrangements
Olga Hogrefe: hogrefeo@durhamtech.edu
Exhibits Chair
Oliver Just: justo@durhamtech.edu

Fall Conference 2017
November 3-4, 2017
218th Conference
Durham Technical Community College
Durham, NC
Conference Website
Contact:
Program Chair
Mark Matthews: matthewsm@durhamtech.edu
Local Arrangements
Olga Hogrefe: hogrefeo@durhamtech.edu
Exhibits Chair
Oliver Just: justo@durhamtech.edu

Meetings
|                                            | 255th ACS National Meeting & Exposition | March 18-22, 2018  | New Orleans, Louisiana |
|                                            | 256th ACS National Meeting & Exposition | August 19-23, 2018 | Boston, Massachusetts |
|                                            | 257th ACS National Meeting & Exposition | March 31-April 4, 2019 | Orlando, Florida |

| 2017 Regional ACS Meetings                  | Middle Atlantic (MARM) June 4 - 6, Hershey, PA |
|                                            | Central (CERM) June 6 - 10, Detroit, MI |
|                                            | Northwest (NORM) June 25 - 28, Corvallis, OR |
|                                            | Great Lakes (GLRM) June 27 - 30, Fargo, ND |
|                                            | Midwest (MWRM) October 18 - 20, Lawrence, KS |
|                                            | Rocky Mountain (RMRM) October 25 - 28, Loveland, CO |
|                                            | Southwest (SWRM) October 29 - November 1, Lubbock, TX |
|                                            | Southeastern (SERMACS) November 7 - 11, Charlotte, NC |
Biennial Conference Committee (BCC)

Co-chairs William Harwood and Sherril Soman, and committee members Seth Anthony, Marian Dewane, and Mark Freilich rotated off the committee at the end of 2016. Their service to the committee and the division is greatly appreciated. Current members of the committee are Renee Cole (renee-cole@uiowa.edu), Julie Henderleiter (henderlj@gvsu.edu), David Heroux (dheroux@smcvt.edu), Sally Hunnicutt (sshunnic@vcu.edu), Irv Levy (Irv.Levy@gordon.edu), Suazette Mooring (smooring@gsu.edu), MaryKay Orgill (marykay.orgill@unlv.edu), Clarissa Sorensen-Unruh (CSorensen@cnm.edu), Dan Sykes (dgs12@psu.edu), and Vickie Williamson (williamson@mail.chem.tamu.edu). John Michael Sophos (jsophos611@comcast.net) has been contracted to serve as the Meeting Program Planner to partner with the BCC and Biennial Conference on Chemical Education (BCCE) planning teams.

Biennial Conference on Chemical Education (BCCE)

The 24th Biennial Conference on Chemical Education (BCCE) conference was held July 31-August 4, 2016 on the campus of The University of Northern Colorado. The conference theme was “Elevating Chemical Education”. Over 1300 educators from all over the world attended the conference including 144 high school teachers and 145 students. The exhibition hosted 48 companies at 60 booths. A total of 1028 abstracts were presented in 76 symposia and 5 poster sessions. The conference offered 110 workshops. The Biennial Conference Committee extends its gratitude and appreciation to Richard Schwenz and the other members of the UNC planning team for hosting the 2016 BCCE.

The 25th BCCE will be held on the campus of the University of Notre Dame. Please visit the conference webpage at http://bcce2018.org/. The organizing committee will be accepting proposals for symposia and workshops from May 1, 2017 until December 1, 2017; however, if you want your symposium to be included in the “Call for Papers”, please submit a proposal by July 1, 2017. For additional program information, please contact General Chair, Steve Wietstock (swietsto@nd.edu), and Programming Co-Chairs, Cate Reck (creck@indiana.edu) and Jim Parise (james.parise@nd.edu). Interested exhibitors should contact Steve Wietstock.

Planning for the 26th BCCE at Oregon State is under way. Updates will be provided in subsequent newsletters. Please contact the General Chair, Richard Nafshun (richard.nafshun@oregonstate.edu), with any questions.

The Biennial Conference Committee encourages any individual or institution interested in hosting a BCCE to contact any member of the BCC. Currently, we are identifying hosts for the 2022 and 2024 BCCEs.

Chemical Education Research Committee, Jack Barbera [jbarbera@pdx.edu], Chair

Greetings from the Chemistry Education Research (CER) committee! The committee has been very busy lately; here are a few of the highlights.

Transition of CER listserv

- The CER listserv has been moved from the servers at Miami University to the ChemEd-X server. All prior subscribers were merged to the new list. Details about signing up for an account or editing an existing account can be found at cer.chemedx.org.
- CER committee members now moderate the listserv.
- Many thanks to Jon Holmes for volunteering to build the server space, training the moderators, and diligently dealing with technology issues when they arose.
- Special thanks to Stacey Lowery Bretz for developing and hosting the original list, it has proved to be a vital resource for the CER community.

Undergraduate CER poster awards

- The CER committee is sponsoring an award for the best undergraduate CER poster presented at an ACS national meeting.
- In collaboration with the Younger Chemistry Education Scholars, posters at each national meeting are reviewed and rubric scored. Winners receive $100.
- In addition to reviewing the posters, CER committee members also assist the ACS program committee in categorizing submitted undergraduate poster abstracts into the CER and other division sections.

Development of CER resources

- In addition to the ChemEd-X server hosting the CER listserv, this new platform will allow for a variety of new features, including a place to house CER resources pages.
- The committee is currently working to compile a list of resource ideas for the first generation of the web pages.
- Committee members will be working with Jon Holmes to build out these aspects of the chemedx.org site. Stay tuned!

Jack Barbera – CER committee chair
Portland State University
Committee/Board Reports

International Activities Committee, Resa Kelly [resa.kelly@sjsu.edu], Chair

The current goal of the DivCHED IAC is to promote issues on global education by organizing or co-sponsoring programs both nationally and internationally. In future meetings, the committee will be working to clarify the mission and vision while also examining specific duties and responsibilities that members can perform.

One of the primary actions of the committee has been to review applications and to select a 2017 travel award recipient. The IAC had three applicants for the $2000 travel award and the award went to Dr. Mageswary Karpudewan. Dr. Karpudewan is a senior lecturer in chemistry education at the School of Educational Studies in Saint Malaysia and she is also an international member of the ACS and DivCHED. She will be attending the ACS National meeting in San Francisco this spring and she will speak during the International and Multicultural symposium which is co-organized by IAC members: Sarah Hansen, Charlie Cox and Wendy Schatzberg.

In addition to the travel award the committee has been working to sharpen its website and a new blog was posted highlighting international experiences of DivCHED members. The current post is by Joshua Adams and Dr. MaryKay Orgill who share their blog on the international field research of seven high school teachers in Yunnan Province of China. http://www.divched.org/content/be-safe-have-fun-do-good-science. We hope to determine ways to share the work of all members of the Division of Chemical Education who do work internationally.

In more recent news, Past Chair Butch Atwood, Chair Resa Kelly and Dr. Joel Harris of the ACS Analytical Chemistry Division, who received two ACS awards, recently returned from a trip to Havana, Cuba where they toured the Chemistry Department facilities at the University of Havana and met with a variety of faculty, staff, graduate and undergraduate students. They visited a Pedagogical University where future chemistry teachers are trained and educated and they visited two local high schools. Atwood and Kelly interacted with the teacher candidates and high school students. The visit led to deep discussion of how Cuba and the US might begin to collaborate. Currently, Atwood, Kelly and Harris are organizing a workshop for eight Cuban Delegates to engage in further brainstorming to construct plans and actionable items for future collaborations. The workshop will be held immediately after the ACS National Meeting in San Francisco.

In closing, the committee wishes to formally thank past chair, Dr. Charles "Butch" Atwood, for his service to the committee and leadership in strengthening our international presence.

We would also like to acknowledge the service of past members whose work was of great value to the DivCHED IAC: Anil Banerjee, Lourdes Echegoyen, Sonali Raje and Santiago Sandi-Urena.
Regional Meetings Committee, Marty Perry [Marty.Perry@stlcop.edu], Chair

The Regional Meetings Committee (RMC) is charged by the Division to:

1. Provide oversight of the ACS Division of Chemical Education Region Awards, which includes the development and maintenance of Award Guidelines, participation in the selection and presentation of the Region Award winners;

2. Insure that a Chemical Education Program is part of each Regional Meeting;

3. And promote the purpose and work of the ACS Division of Chemical Education.

RMC is pleased to outline in this NEWSLETTER Report recent efforts to address its charge.

1. ACS Division of Chemical Education Region Awards:

   • Fall 2016 Awardees for Excellence in High School Teaching
     Seven of the ten ACS Regions held meetings in 2016 providing opportunities to recognize and reward excellence in the teaching of high school chemistry. We reported in the Fall 2016 issue of the NEWSLETTER on the three Spring Awards; RMC is pleased to report on the following four region Awards presented in Fall 2016.

   The 51st ACS Midwest Regional Meeting, October 26-28, 2016, Manhattan, KS
   The winner of the 2016 Division of Chemical Education Midwest Region Award for Excellence in High School Chemistry Teaching, in Honor of John E. Bauman, Jr., is Gissel McDonald from Spring Hill High School in Spring Hill, KS.

   Gissel McDonald received her BA in Biology with minor in Chemistry at Texas A&M University in 1999. She began her teaching career in Oklahoma where she taught middle school science, high school biology, chemistry, physics, and was also an adjunct professor at Connors State College. In 2003, she moved to Olathe, KS, and has taught at Spring Hill High School ever since. At SHHS, Gissel has taught Chemistry I and Chemistry II. While she still teaches and loves Chemistry, she developed a Material Science and Technology course in 2010 which has been a huge success with students of all academic abilities. In 2010, se was selected as a Master Teacher forASM Materials Science Teachers Camp Program. In this role, Gissel travels to various academic institutions across the U.S. during the summer to teach week-long professional development programs for high school science teachers. These programs are designed to introduce teachers to material science in an effort to provide teachers more tools, hands-on activities, and real-life applications of chemistry to use in their classrooms. Gissel has also presented at an NSTA Regional Conference. In 2007, Gissel was selected as the Spring Hill High School Teacher of the Year. In addition to teaching, she has also served her school as the Student Council sponsor for many years, High School Girls Track Coach, and FCA sponsor. Gissel has been married to Brian for 17 years. They have 2 children who keep her very busy. Maddux is 4 years old, and Eva is 2 years old.

   The 68th ACS Southeast Regional Meeting, October 23-26, 2016, Columbia, SC
   The winner of the 2016 Division of Chemical Education Southeast Region Award for Excellence in High School Chemistry Teaching is Robert R. Gotwals, Jr. from North Carolina School of Science and Mathematics in Durham, NC.

   Robert teaches chemistry in the residential program and a series of computational science courses (introductory, chemistry, biology, scientific programming, and medicinal chemistry) for NCSSM Online. He runs a research group in computational science residually, with students doing independent research in computational science and students working in computational mouse biology with the Jackson Laboratory. He is fluent in American Sign Language, a long-time Braille transcriber and instructor. Robert spent 11 years with the Marines (corpsman) and 11 years as a Naval intelligence officer. He received his BS in Chemistry from East Carolina University and a MS.Ed from the University of Rochester and the Rochester Institute of Technology.
The 73rd ACS Southwest Regional Meeting, November 10-13, 2016, Galveston, TX

The winner of the 2016 Division of Chemical Education Southwest Region Award for Excellence in High School Chemistry Teaching is Carol B. Brown from St. Mary's Hall in San Antonio, TX.

Carol teaches Advanced Placement and Honors Chemistry at Saint Mary's Hall in San Antonio, TX. She is a past president of The Associated Chemistry Teachers of Texas and an active member of The American Chemical Society. As such, she served on the ChemMatters advisory board for 2 years. She gives numerous workshops in Advanced Placement Chemistry and Pre-AP Science for Middle School. She is a contributing author to “AP Vertical Teams in Science, Social Studies, Foreign Language, Studio Art, and Music Theory” published by The College Board, “Advanced Placement and TEKS: A Lighthouse Initiative for Texas Science Classrooms” published by TEA, and “Laying the Foundations to Advanced Placement Science” published by Advanced Placement Strategies, Inc. Among her awards are the 1984 Southwest Regional Award in High School Chemistry Teaching (ACS), the CMA Regional Catalyst Award, The Advanced Placement Special Recognition Award (Southwest Region) 1989 and 1997, the 1993 Tandy Technology Scholars National Award, the 1999 Siemens Award for Advanced Placement, Saint Mary’s Hall Master Teacher Award, the Presidential Award for Excellence in Mathematics and Science Teaching-Texas Finalist 2015, and the Outstanding Texas Educator from Texas Academy of Science 2016. Carol has been an AP Reader for 13 years, served on the AP Chemistry Test Development Committee for 9 years, and served 2 years on the AP Chemistry Curriculum Redesign Committee.

The ACS Northeastern Regional Meeting, October 5-8, 2016, Binghamton, NY

The winner of the 2016 Division of Chemical Education Northeastern Region Award for Excellence in High School Chemistry Teaching is Tracy Suggs from Vestal High School in Vestal, NY 13960.

Tracy joined the faculty at Vestal High School in 1992, and has chaired the Chemistry Department since 2003. During her tenure, she has taught a variety of chemistry classes, including both Advanced Placement and International Baccalaureate courses. In addition to her outstanding work in the classroom, Tracy demonstrates an outstanding commitment to her students by advising extracurricular activities for them, such as the Chemistry Magic Show and the Science Olympiad. In addition, as a New York State Master Teacher, she actively supports her colleagues by facilitating professional development. Tracy also serves as an education consultant to the New York State Education Department.

Finalists for the Fall 2016 ACS Division of Chemical Education Region Awards for Excellence in High School Teaching:

In 2014 RMC began the practice of using the CHED Newsletter to recognize all nominees for the Region Award for Excellence in High School Teaching and the schools at which they teach. In the tables below we list each Region Award, the 2016 Recipient, and all those whose complete nomination portfolios came before the Region Awards Committees.

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<tr>
<th>2016 ACS Division of Chemical Education Midwest Region Award for Excellence in High School Teaching, in Honor of John E. Bauman, Jr.</th>
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<tr>
<td>Awardee</td>
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<td>Gissel McDonald</td>
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<td>Spring Hill High School</td>
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<td>Spring Hill, KS 66083</td>
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<td>Finalists</td>
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<tr>
<td>Roseanne Hoffman</td>
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<td>Harrisonville School District</td>
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<td>Harrisonville, MO 64701</td>
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<tr>
<td>Laurie Kallhoff</td>
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<td>Canby High School</td>
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<td>Canby, MN 56220</td>
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<td>Kristi Deaver Uselding</td>
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<td>Ankeny Centennial High School</td>
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<td>Ankeny, IA 50023</td>
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2016 ACS Division of Chemical Education Southeast Region Award for Excellence in High School Teaching

AWARDEE
Robert R. Gotwals, Jr.
North Carolina School of Science and Mathematics
Durham, NC

FINALISTS

Emily Gilstrap
Easley High School
Easley, SC 29642

LaShawn McNeil
Lincoln High School
Tallahassee, FL 32311

Romina M. Jannotti
Paul J. Haggerty High School
Oviedo, FL 32765

2016 ACS Division of Chemical Education Southwest Region Award for Excellence in High School Teaching

AWARDEE
Carol B. Brown
St. Mary’s Hall
San Antonio, TX 78217

FINALISTS

Karen Compton
Plano East Senior High School
Plano, TX 75074

Theresa Delong
College Park High School
The Woodlands, TX 77384

Carolyn Ericson
Clements High School
Sugar Land, TX 77479

Sarwat Jafry
St. John's School
Houston, TX 77019

Michelle DuBay
Hubbard High School
Hubbard, TX 76648

Usha Devanthosh
North Houston Early College High School
Houston, TX 77065

Gale Hunt
Hebron High School
Carrolton, TX 75010

2016 ACS Division of Chemical Education Northeastern Region Award for Excellence in High School Teaching

AWARDEE
Tracy L. Suggs
Vestal High School
Vestal, NY 13850

FINALISTS

Judith D. Ashworth
Manchester High School
Manchester, NH 03103

Maggie Estlinbaum
Jordan-Elbridge High School
Marcellus, NY 13108

Amy Matts
Spackenkill High School
Poughkeepsie, NY 12603

Deborah A. Day
Amity Regional High School
Woodbridge CT 06525

Cary James
Bangor High School
Bangor, ME 04401
• **Region Award Nominations:**
  RMC continues to pursue ways by which a spectrum of Society-affiliated groups can participate in the Region Award nomination process.

• **Converting Regions Awardees to James Bryant Conant Nominees:**
  Beginning with the 2015 Region Awards, DivCHED Representatives to individual Regional Meetings took leadership roles to facilitate the nomination of Region Awardees for the James Bryant Conant Award.

2. **Chemical Education Programming at Regional Meetings:**

• **DivCHED Representative Involvement in Programming**
  RMC continues to be concerned by the lack of interest on the part of some Regional Meeting organizing committees in having more than a single session in their program devoted to Chemical Education. RMC is increasing its efforts to contact organizing committees early on in the planning process to not only encourage Chemical Education programming but to also volunteer to organize a symposium, general session, or poster session. Our recent efforts have led to additional programming at NORM-2016 and MARM-2017. RMC is also exploring partnerships with AACT to encourage and sponsor pre-college programming at regional meetings.

  **Regional Meeting Planning Conference (RMPC):**
  The RMC was represented by Marty Perry at the Regional Meetings Planning Conference (RMPC) held on November 2-4, 2016 at ACS Headquarters. Leaders for the upcoming ACS Regional Meetings were provided information about how the Division of Chemical Education can assist their organizing committees with programming support. A new Region Board track included representatives from seven of the ten ACS regions. Both groups of attendees were also provided award guidelines for the Excellence in High School Teaching Award.

• **Promotion of ACS Division through Regional Meetings:**
  RMC continues its joint project with the New Members Committee involving the design, preparation, and display of a poster that describes, using text and images, the mission and activities of the Division of Chemical Education. The poster is displayed by the DivCHED Representative, at each of the Regional Meetings, in a formal poster session and/or in the Registration area. The poster serves as a device to disseminate information about Division and to recruit new members to the Division.
Safety Committee, David Finster [dfinster@wittenberg.edu], Chair

The Safety Committee has been meeting regularly at national ACS meetings and working on various tasks. Last summer we finished a revision of “Safety Guidelines for Chemical Demonstrations.” We are working on plans for widespread distribution of these Guidelines. They are posted on the CHED website under the Safety link near the bottom of the “Committee” tab: http://www.divched.org/committee/safety

We continue to explore with the Exams Institute the possibility of revising the 1997 Exam in Chemical Health and Safety. If you are using the (someone outdated) 1997 exam and are interested in using a revised version, please let me know.

In the June 27, 2016 issue of C&ENews, there was an essay by Tom Connelly (ACS Executive Director and Chief Executive Officer) on “The ACS’s Role in Safety.” In this essay, Dr. Connelly invited comments about questions he posed regarding safety. Part of this effort was a prelude to the consideration of including “safety” as a Core Value in the ACS 2017 Strategic Plan. The CHED Safety Committee drafted a lengthy response to this request, the content was endorsed by the CHED Executive Committee, and the response was submitted. (The Safety Committee response is posted on the Safety Committee website and the ACS Strategic Plan is at: http://strategy.acs.org/?cid=home_4up.) Responses were also drafted by CHAS and the Committee on Chemical Safety (CCS) (perhaps among others). Those of us in ACS “safety community” at large were very pleased to see that “safety” in now listed as a Core Value in the 2017 ACS Strategic Plan! There are other mentions of safety in the various Goals and Challenges/Opportunity statements in the Plan (along with some dramatic statements about chemical education!) The inclusion of the Safety as a Core Value of the ACS is the culmination of a series of events over the past several years. Most chemical educators know about the tragic events at UCLA and Texas Tech. These incidents, among others such as the multitude of demonstration tragedies involving methanol fires in recent years, prompted the CCS to produce documents on safety culture, hazard assessment, and two documents about learning objectives for high school and post-secondary chemical safety instruction. (See links below.) Further, there was recently a workshop held to explore the use of the RAMP safety protocol in high school laboratories for use by teachers and students. All in all, there is much happening in the world of safety in chemical education with much work yet to be done.

https://www.acs.org/content/dam/acsorg/about/governance/committees/chemicalsafety/academic-safety-culture-report-final-v2.pdf


The RAMP protocol is described in the booklets (3,4) listed just above and is taken from: “Laboratory safety for Chemical students, 2nd edition, R.H. Hill, D. C Finster, Wiley, 2016

Although not an activity related to the Safety Committee, the CCS will soon be releasing the 8th edition of “Safety in Academic Laboratories” (SACL). This booklet has seen wide use over the past three decades. Chemistry departments who have used SACL in the past should visit the CCS website to learn more about the 8th edition.

Finally, the ACS has recently decided to require more overt statements about chemical hazards and risks in all ACS journals. The exact format is a work in progress and may vary a bit from journal to journal. Our Journal of Chemical Education already requires such a statement but more specificity in content might emerge.

Dave Finster
Chair, Safety Committee
dfinster@wittenberg.edu
Younger Chemistry Education Scholars, Stephanie Ryan [sryan@ryaneducationconsulting.com]; Jordan Harsman [jharshman3@unl.edu], Co-Chairs

We were excited to kick off another successful series of events at BCCE 2016. Thanks to the generous support of a number of faculty members, we were able to give advice on CVs to 17 graduate students/postdocs at the second annual CV Speed Dating event. This iteration of the event also featured a panel in which the faculty members were able to share a few words of wisdom for prospective job hunters. At the 2016 BCCE, we gathered a record 62 people at the networking social. This year, we successfully implemented some structured activities as a way to maximize meeting new people. It was a very promising sign when even those who have been in the field for some time reported meeting new people! Finally, the Graduate Student Research Forum had enough submissions to span across three sessions at BCCE. We thank everyone involved for making this long-standing symposium a permanent venture for the foreseeable future!

We also helped spread the word about the ACS Program-in-a-Box titled “The Chemists Code for Success”. Seven of our “friends of the YCES committee” either hosted an event themselves or found someone on their campus to host it. We provided a beaker mug for each location to raffle off to its participants as an incentive. We were highlighted as an example how one division’s outreach resulted in such a high return.

We hope to continue coordinating and providing high quality professional advice through our blog. At our meeting, we voted to invite 11 authors to write on as many topics for future blogs that range from Securing Your First Grant to Tips for Being a Reviewer for Chemistry Education Research Journals. We believe that these blogs are getting out to people in the field and hope that they are serving as quality professional development that is specialized to the people in chemistry education. We update the blog periodically, so be sure to check it out at http://www.divched.org/blogs/YCES! If you are a faculty member, please share it with your graduate students. Past posts are relevant to each new group of graduate students!

We also procured brand new banners and polo shirts for our Undergraduate Recruitment booth. Thanks to the Executive Committee for helping our booth look professional as we share the field of Chemical Education with undergraduates who may not have been aware it was an option for them. This year at ACS we have a great program of events lined up including a coffee mornings on Sunday and Tuesday and a social on Monday afternoon/evening. Keep an eye out on our facebook page and the listserv for a flyer of events.

Finally, although all of our committee members help out immensely throughout the year, we wanted to take a brief moment to highlight a few members who have put in extra time this year to make sure that the committee’s visions came to fruition. Our Treasurer and Social Chair Justin Carmel helped us design and order our materials for our recruitment booth and secured raffle prizes for our events. Sonia Underwood and Brittland DeKorver and Thomas Bussey all made sure that BCCE events were well staffed and running smoothly. David Wren has put in countless hours making sure that our blog has a queue of posts ready to go and working with posters if they need help. And finally, a major thank you to Jordan Harsman who had to take on more responsibility at the conferences this year as co-Chair because his co-Chair Stephanie Ryan couldn’t attend conferences due to her newborn.
Greetings to all from ACS Exams.

2016 was a great year for ACS Exams in many respects. During the summer of 2016, the annual winners of the National Awards particularly important (and sponsored by) the Division of Chemical Education were announced. This group of winners is notable on their own merits, but in addition, at ACS Exams, we were especially proud as this group has been part of the ACS Exams family. Marcy H. Towns of Purdue University will be receiving the ACS Award for Achievement in Research for the Teaching and Learning of Chemistry; an award sponsored by ACS Exams. Laura Slocum of Heathwood Hall Episcopal School in South Carolina will be receiving the James Bryant Conant Award in High School Chemistry Teaching; an award sponsored by the Journal of Chemical Education and ChemEd X. Marcy and Laura have served ACS Exams in numerous ways including serving on the Board of Trustees and serving on exam committees and chairing exam committees. Finally, our own past Director, Thomas Holme of Iowa State University, will be receiving the George C. Pimentel Award in Chemical Education; an award sponsored by Cengage Learning and the ACS Division of Chemical Education. The awards ceremony on April 4th held at the spring ACS National Meeting will be a moment of great pride for chemical education!

Exam development in 2016 was also tremendous and tremendously busy! In early 2017, we will release the newest versions of the general chemistry (full year) exam, analytical chemistry exam, and instrumental analysis exam; in late spring, we will release the newest versions of the first-term general chemistry paired questions exam, second-term general chemistry paired questions exam, and organic chemistry (first-term) exam. We are in development on many exams also. In trial testing this spring are the biochemistry exam, diagnostic of undergraduate chemical knowledge (DUCK) exam, organic chemistry (full year) exam, and general chemistry (second-term) exam. We also expect to start field testing a full year general chemistry exam in a new electronic environment. If you are interested in participating in field testing, please let us know. As always, there is no cost to you as we provide all test booklets and answer sheets. We do request that you return student performances to us to assist us in the final stage of exam development. Finally, we are in development (with expected field testing in 2017 or early 2018) of the general-organic-biochemistry exam, general chemistry (full year) exam, general chemistry (first-term) exam, high school (first year) exam and physical chemistry exam (likely to be thermodynamics first). We are very appreciative of the vast number of faculty and instructors who serve on these exam committees and the chairs who lead these groups. If you are interested in serving on future exam committees, please let us know. We are regularly starting new committees, particularly in general and organic chemistry.

We would also like to specially thank all faculty and instructors who participated in trial testing in Fall, 2016. We were so pleased at the fantastic response to the request to field-test exams with 97 institutions participating. Over 8,300 trial tests were distributed for field testing providing the critical data to committees for producing the high-quality assessments aligned with the reputation of ACS Exams.

The business continues to be strong with 2016 finishing as an excellent year. Under the outstanding leadership of our Business Operations Manager, Julie Adams, our sales have been strong and our continued stability will enable the continued operations of ACS Exams far into the future.

Unfortunately, 2016 also saw the continuation of challenges in maintaining the security and integrity of the intellectual property of our exams and study materials. Sadly, we have fully recalled two exams: General Chemistry First Term Exam 2012 and Analytical Chemistry Exam 2007. We were also required to remove from sales and replace the Instrumental Analysis Exam 2009. All users of these exams were immediately contacted once the recalls began with a remedy of replacement exams (free of charge) or reduced prices in the case of the Instrumental Analysis Exam. New exams for Analytical Chemistry and Instrumental Analysis will be available this spring and the newest General Chemistry First Term Exam (2015) has preliminary norms which will be finalized later this spring. Additionally, a new General Chemistry First Term Exam is under development. These recalls were required given the illegal posting of exam material, compromising the integrity of the exam and the exam norms. We would like to continue to stress to everyone in the community how important it is to work together to maintain the integrity of secure exams and impress on our colleagues and students the gravity of illegally posting or distributing copyrighted material.

Unfortunately, we also continue to deal with illegal posting of scans of the study guides online with the newest threat through posting of items from the study guide in an online practice exam or study format. We take very seriously the trust the community has in the integrity of our exams and appreciate the support by the community to assist in maintaining this.

As always, ACS Exams would not function without the numerous and dedicated board members, exam committee chairs and members, trial testing faculty and instructors, and the focus group participants. The highest quality work that ACS Exams has the honor of producing is only possible due to the many, many people who contribute to this work. It continues to be a humbling and extraordinary experience working with you all. And, if you are interested in working with us on exam committees or through development projects, please let us know. For this and all other concerns or matters related to ACS Exams, please feel free to contact me at kmurphy@uwm.edu.

We thank you all for your continued support of ACS Exams!

Best to you all,

Kristen Murphy
News from the Board of Publication, Ellen Yezierski [yeziere@miamioh.edu], Chair

We have had a few personnel changes on the Board to share with the Division. We first recognize the important contributions made by member Pratibha Varma-Nelson (Indiana University-Purdue University Indianapolis) and give our sincerest thanks her for expertise and service to DivCHED as Board member. We wish her all the best as Director of the IUPUI STEM Education Innovation and Research Institute. We welcome Frank Torre (Springfield College) to the Board. Some of us had the pleasure of working with Frank when he chaired DivCHED, and all look forward to serving alongside him on the Board.

In other personnel news, the Board elected Ellen Yezierski (former Interim Chair) to serve as Chair beginning January 2017. The Board is deeply grateful to immediate past Chair Chris Bauer for his service to the Board as Chair and previously as Treasurer. Chris managed the finances and later the operations of the Board beginning in the earliest stages of the Journal’s transition to our co-publication agreement with ACS Publications, ending his tenure in 2016. Chris’ vision, efficiency, and inclusive leadership has helped to systematize and optimize procedures, ensure financial stability, and advance the vehicles by which the Division serves it members through publication. Thank you so very much, Chris!

The Board continues to invite Division members interested in leadership positions to serve as Board Associates. Board Associates participate in the next two Board meetings held before the ACS fall and spring meetings. Associates may be nominated by Board members or by the Committee on Personnel and Nominations. Strong nomination statements describe why the candidate was interested in serving, identify whether the person had published in the Journal in the last five years, list service in other governance positions, and highlight experience with fiduciary responsibilities. Any DivCHED member interested in a Board Associate appointment may submit their name and statement to any Board member or the Division Executive Assistant. Associates will be reimbursed for travel expenses in accordance with CHED Division policy (transportation and additional night’s stay).

At our last meeting in Philadelphia, the Board established the Chemical Education Xchange as a platform separate from the Journal and under the management of Board of Publication of the Division of Chemical Education beginning January 1, 2017. The Board has appointed Jon Holmes (University of Wisconsin-Madison) as Editor-In-Chief of the Chemical Education Xchange, and the Board will work with Jon and other ChemEdX leadership to support and grow this important platform. Congratulations, Jon!

The Board has established a time line for the appointment of the next Journal Editor. The Board also established plans for a smooth, efficient, and transparent editor transition when Norb’s term concludes at the end of 2019.
**Materials & Opportunities**

**Attention New DivCHED Members!**

The Division would like to welcome all new members of ACS Division of Chemical Education. Many of you may have joined this Division to network and become more involved. An easy way to get involved may be joining a committee. To do so, fill out the form on the Divisions webpage to self-nominate yourself for participation in one of the 15 committees. Visit here for the nominations form: [http://www.divched.org/content/nominations-ched-committees-elected-positions](http://www.divched.org/content/nominations-ched-committees-elected-positions). You can also find a copy of this form in this section of the newsletter.

The New Member Committee invites you to stop by the New Member Meeting in San Francisco to be held on Monday, April 3, 2017 at the Marriott Marquis in Salon 1/2 from 12:30PM to 1:00PM.

**The Dorothy and Moses Passer Education Fund, Deadline April 1, 2017**

Applications Being Accepted for The Dorothy and Moses Passer Education Fund.

This Fund was established by a generous donation of Dorothy and Moses Passer. Moses (Mike) Passer was for many years the head of the ACS Education Division. The Fund grants for teachers at two- and four-year colleges or universities that do not have any advanced degree programs in the chemical sciences.

The awards support continuing education activities that must be directly related to the applicant's teaching and must take them away from their campus.

The applicant must be a full time faculty member at his or her institution. The applications are reviewed by a committee. There is no application form but the application must include a description of the proposed activity and how it relates to his/her teaching with dates, locations, titles and contacts; a brief description of the applicant's institution and department; a short curriculum vita; an itemized estimate of expenses, amount of aid requested and sources of all supplemental funds. No support will be given for general attendance at national, regional or local ACS meetings or for any sabbatical support.

Closing dates are three times each year: January 1, April 1, and September 1. Applications may be submitted online [http://www.divched.org/content/passer-education-grant-application-form](http://www.divched.org/content/passer-education-grant-application-form) or emailed in pdf format to the Chair of the Passer Education Grant Review Committee, Catherine MacGowan, catherine.macgowan@armstrong.edu.

**Division of Chemical Education Travel Award, Application Deadline is September 15, 2017**

DivCHED provides this service to members to grant financial support for travel to meetings. Up to 12 members will receive the award each year. The DivCHED Travel Award provides up to 80% of travel expenses for one meeting with a limit of $1,000 for the Spring National ACS Meeting. To be considered for this award, you must be in at least your third year as a member of the Division of Chemical Education at the time of application. The award application deadline is September 15, 2017. Visit [http://divched.org/content/division-chemical-education-travel-award-application](http://divched.org/content/division-chemical-education-travel-award-application) for more information and to apply.

**ACS Division of Chemical Education International Travel Award**

The Division of Chemical Education funds a Travel Award each year in support of a division member who presents and fully participates in an international chemical education conference held outside the U. S. The awardee will have the responsibility to communicate information and insights gained at the conference to the membership through available CHED publications and by postings on the DivCHED Website.

At the New Orleans meeting, the Executive Committee adopted guidelines developed by the International Activities Committee (IAC); these are described below. Questions as well as completed applications can be sent electronically on or before November 30, 2017, to Resa Kelly, current chair of CHED IAC. She can be reached at resa.kelly@sjsu.edu.

**Eligibility:**

The applicant must be a member of the Division of Chemical Education and be a full-time college, university, or high school faculty member. Preference will be given to junior and/or under-represented faculty members who have not had the opportunity to attend an international meeting in chemical education.

**Selection Process:**

1. An announcement about the availability of this Award for the following year will be submitted for publication in the Fall CHED Newsletter, appropriate issues of JCE, and to C&EN News. The announcement will also be posted on the CHED website.
2. The application package is due November 30 each year. It should be sent to the Chair of CHED-IAC. The award, presently $2000.00, is made for the following year.
3. CHED-IAC members serving on the Awards subcommittee appointed by the CHED-IAC Chair will review the applications.
4. The selected applicant will be announced by January 15 each year. An alternate will be selected in case the original awardee is not able to attend.

Materials & Opportunities
Call for Nominations: The 2017 James Flack Norris Award for Outstanding Achievement in the Teaching of Chemistry

Nominations are invited for the 2017 James Flack Norris Award, which consists of a certificate and an honorarium of $3,000 and is given annually by the Northeastern Section (NESACS). The presentation will take place at a ceremony and dinner in November 2017, and will include a formal address by the awardee. The Award was established in 1950 by NESACS to honor the memory of James Flack Norris (1871-1940), a professor of chemistry at Simmons College and M.I.T., chair of NESACS in 1904, and ACS President in 1925-26. Individuals or teams of individuals may be nominated. Nominee(s) should have served with special distinction as teachers of chemistry with significant achievements.

A nomination in the form of a letter should focus on the candidate or candidates' contributions to and effectiveness in teaching chemistry. Curriculum vitae should be included and, where appropriate, a list of honors, awards, and publications related to chemical education. Seconding letters may also be included; these should show the impact of the nominee or nominees' teaching for inspiring colleagues and students toward an active life in the chemical sciences, and attest to the influence of the individual or team's other activities in chemical education, such as textbooks, journal articles, or other professional activity at the local, national, and international level.

The nomination materials should consist of the primary nomination letter, supporting letters, and curriculum vitae. Reprints or other publications should NOT be included. The material should not exceed thirty (30) pages [if individual], and should be submitted electronically in Adobe PDF format through April 15, 2017 to Ms. Anna Singer, NESACS Administrative Secretary <secretary@nesacs.org>. For more information about the Award including a list of past award recipients, see http://www.nesacs.org/awards_norris.html.

Questions about the Award or the nomination process should be directed to the Chair of the Norris Award Committee, Dr. Mark Tebbe, <tebbe.mj@gmail.com>

Nominations for ACS Fellows

Nominations for ACS fellows opened February 1, 2016 and will close at 11:59PM on April 1, 2016. The American Chemical Society (ACS) Fellows Program was created by the ACS Board of Directors in December 2008 to recognize members of ACS for outstanding achievements in and contributions to science, the profession, and the Society. Eligibility criteria for nominees and nominators and the selection criteria can be found here: http://www.acs.org/content/acs/en/funding-and-awards/fellows/eligibility-criteria.html

Nominations come from four sources: ACS national committees, ACS technical divisions, ACS local sections, and individual ACS members. See http://www.acs.org/content/acs/en/funding-and-awards/fellows/nomination-types.html.

To see a list of DivCHED members who are ACS Fellows visit http://divched.org/DivCHEDFellows.
DivCHED provides this service to members to grant financial support for travel to meetings. Up to 12 members receive the award each year. The DivCHED Travel Award provides up to 80% of travel expenses for one meeting with a limit of $1,000 for the Spring National ACS Meeting. To be considered for this award, you must be in at least your third year as a member of the Division of Chemical Education at the time of application.

From the 2016 Awardees....

“One of my goals for this meeting was to network with other chemists. Many times the most valuable information is gleaned from informal discussions with other attendees.”

“At the 2016 BCCE I was able to discuss my desire to find another position with colleagues and also explore opportunities with businesses surrounding the poster sessions.”

“Attending the ACS National Meeting in San Diego in March provided a variety of experiences that will benefit my career as a teacher, researcher, and member of the division.”

“I successfully presented my work to a large audience, learned about other researchers’ work in symposiums and poster sessions, discussed research and teaching with practitioners and researchers, participated YCES committee activities, and became a YCES member afterwards.”

“The first impact of conference attendance was encouragement – I am not alone and there are other educators that are seeking to hone their craft in order to enrich the lives of students.”

“It was truly remarkable to be surrounded by so many enthusiastic colleagues who share my passion for chemical education and research!”

Visit [http://divched.org/content/division-chemical-education-travel-award-application](http://divched.org/content/division-chemical-education-travel-award-application) for more information and to apply.
Cheminformatics: Introduction to the World of Chemical Data

In today's emerging world of **big data** and Interconnected science it is critical for tomorrow’s chemists to develop skills in the handling of data. *You* are invited to participate in the Spring 2017 Cheminformatics OLCC, a multi-campus collaborative taught course sponsored by the ACS CHED and CINF.

- This course is conducted using blended learning involving online guest lecturers and resident faculty facilitators.
- Students and faculty interact with experts in the field of cheminformatics.
- No programming skills are required to participate.
- Students will gain experience in basic programming and accessing public chemical databases programmatically.
- Student projects provide opportunities to collaborate across multiple institutions, both academic and nonacademic.

For 20 years OLCCs have provided chemistry instructors the opportunity to offer new courses outside their area of expertise.

For further information contact  
Bob Belford ([rebelford@ualr.edu](mailto:rebelford@ualr.edu)) or Jennifer Muzyka ([jennifer.muzyka@centre.edu](mailto:jennifer.muzyka@centre.edu))
Early Research published by the American Chemical Society

The e-version of Early Research published by the American Chemical Society is currently available online on a chapter-by-chapter pay-per-view basis. It can be easily accessed at the American Chemical Society (ACS) Symposium Series e-books link: http://pubs.acs.org/isbn/9780841231733. The Table of Contents of the book, the first five sections (Title, Copyright, Foreword; Preface; Guest Foreword; Praise for the Power and Promise of Early Research; and the Introductory Chapter) and the Subject Index can be viewed and downloaded free of charge. Information about the book and its chapter authors can also be viewed free of charge at http://www.bestearly.com/earlyresearchbook.

It is a passionate advocacy for proactively engaging students in authentic research earlier than is traditionally done. This book demonstrates and illustrates that it can be done and it is being done. It spotlights the pedagogical, professional and practical benefits of not waiting until graduate school before students are fully immersed in doing authentic research. This vision is succinctly captured in three words: early, often, and universal.

Early Research is chock-full of successful real world authentic research experiences of 19 authors and co-authors, including a penultimate chapter – Lab Tales - of personal testimonials from 14 students, past and present. They form a diverse mosaic drawn from high school, and community and four-year colleges representing rural, urban, and suburban, and different socioeconomics, ethnicities and gender.

CHED response to the Connelly Essay

Tom Connelly (ACS Executive Director and CEO) posed several questions about safety culture in an ACS Comment in C&ENews in the June 27, 2016 issue. In September, Rod Bennett (DAC Chair), invited all ACS Technical Divisions to submit responses to these questions. Cathy Middlecamp forwarded the request to the CHED Safety Committee. A subgroup of the Safety Committee crafted a response which was subsequently modified a bit and endorsed by the CHED Executive Committee. The response is posted here.
ChemEd X: An Online Community for Chemistry Teachers

Who We Are

Chemical Education Xchange (ChemEd X, www.chemedx.org) provides a welcoming place for high school and college chemistry teachers to collaborate globally, to communicate experiences, and to share pedagogical ideas and tips. All ChemEd X content is moderated and includes articles and activities, which are peer-reviewed by high school and college-level chemistry teachers, as well as blogs, “picks,” and event announcements. Registered users (sign up for free) can enjoy interactive features by asking questions and providing comments. New and experienced teachers alike have contributed curriculum resources and ideas they have used successfully in their own classrooms. Among the topics considered are Modeling Instruction, project-based learning, technology applications, and standards-based grading.

Our Mission

To provide an online platform that allows readers and contributors to:

- Xplore resources and activities related to the central science
- Xperience with one another the profession of teaching chemistry
- Xtend outside the boundaries of traditional chemistry
- Xchange knowledge, ideas, and instructional materials

Our History

ChemEd X has a long association with the Journal of Chemical Education (JCE). For many years, JCE offered chemistry teachers resources beyond the scope of the journal itself via JCE Online. JCE Online included software collections, assessment resources, and other materials specifically of interest to the chemistry teaching community.

In 2009, the Division of Chemical Education of the American Chemical Society and ACS Publications entered into an agreement to co-publish JCE. The shared publishing agreement did not include many JCE Online resources. Given the popularity and usefulness of those resources, now called “legacy material,” chemedx.org was created in 2012 to host the

“ChemEd X is like the ultimate teacher staff room. Every teacher there is passionate, kind, and great at what they do. They are always willing to help and share, and I always come away as a better educator. It is a huge bonus for my students.”

Chad Husting
Sycamore High School
resources. However, ChemEd X offers much more than the JCE Online resources and has become a virtual home for members of the high school chemical education community.

Since its inception, ChemEd X has not only continued to host legacy material, but has expanded to become a dynamic space for collaboration and community building. Recognizing its significance to the high school community as well as its application to other communities of practice within chemical education, the ACS Division of Chemical Education Board of Publication has established Chemical Education Xchange as an independent entity operating separately from JCE with its own Editor-in-Chief and staff. Jon Holmes, former editor of JCE Software and JCE Online and currently Managing Editor for JCE, has been selected by the Board of Publication to serve as Editor-in-Chief for ChemEd X. Although JCE and ChemEd X are now separate entities and feature different kinds of content, they continue to share similar goals and to support each other in advancing teaching and learning in chemistry.

Our Future

ChemEd X intends to serve communities of practice within chemical education. Other than the pre-college community where we currently concentrate, look for ChemEd X to provide services to the two-year college and the chemical education research communities starting this year. ChemEd X Conferences, a virtual conference service at conference.chemedx.org, is currently organizing its first conference and we expect to offer this service to other chemical education communities. ChemEd X strives to serve as a virtual home for its communities of practice and as its communities expand and identify desired online services, we will endeavor to provide those services.
How To Get Involved

In order to thrive, ChemEd X depends on content contributed by members of the chemical education community. To review the types of content you might contribute to ChemEd X, please go to www.chemedx.org. To submit content, go to “Request to contribute.”

Interactive features (such as posting comments) are available to registered users and registration is free. Registered users may choose to receive monthly newsletters highlighting recent content and may also request their own personal blog to informally share ideas.

A paid subscription provides critical support for ChemEd X. Paid subscribers gain access to premium ChemEd X content, which includes legacy material formerly available at JCE Online with the “Chemistry Comes Alive!” video and image collection, the “ChemEd X video collection,” and other instructional web-based software.

ChemEd X is maintained by chemistry teachers as a service to their peers. Deanna Cullen, a high school chemistry teacher from Michigan, serves as the Editor for the pre-college community. Twelve “lead contributors,” representing a wide variety of expertise in the field, serve as advisors and most contribute content on a regular basis.

Readers can follow ChemEd X on Facebook or on Twitter @ChemEdX.

For Further Information

The following Journal of Chemical Education articles provide more information:

JCE Chemical Education Xchange
Jon L. Holmes  DOI: 10.1021/ed3007617

JCE Chemical Education Xchange: X Marks the Spot for Finding Quality Chemistry Education Resources
Deanna M. Cullen  DOI: 10.1021/ed300790q

Direct inquiries and questions to:

Jon Holmes  Deanna Cullen
jon.holmes@chemedx.org  deanna.cullen@chemedx.org
Editor-in-Chief  Editor

"As a teacher, my best ideas, inspiration, and encouragement come from other teachers. ChemEd X provides a platform for me to share my best practices, learn from others, and engage in the chemistry education community. I find myself posting more to ChemEd X than my own blog because I know my posts will be seen by more people, and I will receive meaningful feedback from fellow educators."

Lauren Stewart
Sylvania Northview High School
Nomination Form for CHED Committees & Elected Positions

Below are listed the various committees or elected positions of the CHED Division. If you are interested in serving, or if you know of division members who are willing to become involved please fill out this form. For more information, please visit the Division of Chemical Education website at <www.acs.org> or contact the individuals listed below.

Committees
Biennial Conference Committee (BCC)
Chemistry Education Research Committee (CER)
Chemistry in the Two Year College (COCTYC)
Computers in Chemical Education (CCCE)
Finance (FC)
High School Chemistry (HSCC)
International Activities (CIA)
Long-Range Planning (LRPC)
New Member (NMC)
Passer Portfolio (PPC)
Personnel & Nominations (CPN)
Program (PC)
Recognition (RC)
Regional Meetings (RMC)
Safety (SC)
Younger Chemistry Education Scholars (YCES)

Elected Positions (3 year terms)
Chair-Elect (Chair, Immediate Past Chair)
Secretary/Councilor
Treasurer
Member-at-Large (3 positions)
Alternate Councilor (4 positions)

Boards
Board of Publications (J. Chem. Ed.)
Board of Trustees (Exams Institute)

Name__________________________________________________________
Institution____________________________________________________________________________________
E-Mail __________________________________________________________________________________________
Committee or Position ___________________________________________________________________________

Name__________________________________________________________
Institution____________________________________________________________________________________
E-Mail __________________________________________________________________________________________
Committee or Position ___________________________________________________________________________

Jennifer Lewis, Chair, Personnel & Nominations
University of South Florida
Department of Chemistry/
Department of Women’s & Gender Studies
4202 East Fowler Avenue FAO 011
Tampa, Florida 33620
jennifer@usf.edu

MaryKay Orgill, 2017 Executive Committee Chair
Department of Chemistry
Mail Stop 4003
University of Nevada, Las Vegas
4505 S. Maryland Parkway
Las Vegas, NV 89154-4003
marykay.orgill@unlv.edu
**Division of Chemical Education Teaching Excellence Endowment**

Why are you a chemist? Many of us would agree with Eli Pearce, Past President of the American Chemical Society (ACS), when he said "my excellent high school teacher was definitely responsible for my choosing chemistry as a career." And now you can join the effort to ensure that the great teachers who launch so many scientific careers are recognized and rewarded by their professional society!

The ACS Division of Chemical Education has stepped forward to establish an endowment that will support awards for high school science teachers in every Region of the ACS. By establishing an effort to solicit funds for the Division of Chemical Education Teaching Excellence Endowment, the Division is making a firm financial commitment to high school science teaching, ACS Regions, and the profession of chemistry. But the project will not be successful without your help.

Our goal is not just a financial one; we are anxious to assemble a lengthy list of donors containing names, of both individuals and collective entities, that will demonstrate to the secondary education community that there is a large number of science professionals who appreciate the value of good science teaching in the Nation's high schools and who are willing to reward it.

Join other individuals and organizations that have already contributed to the. Most of all join what will be thousands of people who know, without that special teacher, their future would look very different.

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**DivCHED Publications**

Division Members are involved in a wide variety of activities that lead to publications in the area of chemical education.

The Journal of Chemical Education is the main publication outlet for the division.

DivCHED is also responsible for the publication of the ACS Exams via the Examinations Institute.

Other journals in which Members publish scholarly articles include:

- The Chemical Educator
- Education in Chemistry
- Science Education
- Journal of Research in Science Teaching
- International Journal of Science Education
- Journal of College Science Teaching
- The Science Teacher
- ChemMatters
- Chemistry Education Research and Practice
Division of Chemical Education Teaching Excellence Endowment!

I want to help ensure that our great teachers are recognized and rewarded!

I am donating $________________ to the Endowment.

Select category:

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NAME(S) to appear on donor's list: ___________________________________________________________ (PLEASE PRINT)

Address ________________________________________________________________________________

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___ My gift is given in honor of ________________________________

___ My gift is given in memory of ________________________________

Select method of payment:

___ Check:

Payable to: The American Chemical Society Division of Chemical Education Teaching Excellence Endowment

___ Credit card (select one):

_____ Visa  _____ MasterCard  _____ American Express

Card number ___________________________________________ Expiration date ______________
Cardholder name __________________________________________
Signature __________________________________________

___ Stock transfer (call 800-227-5558 ext. 8092 for instructions)

Mail to: The Department of Meetings and Expositions Services/CHED HS Fund
American Chemical Society
1155 16th Street NW
Washington, DC  20036

Thank you for your contribution. All gifts of $250 or more will be acknowledged in writing. Acknowledgment will be sent to others upon request.
Membership Form

Introduce a friend, colleague, or student to the Division of Chemical Education!

I wish to join DivCHED: _____ as a Member, $20/year (for ACS members only)
_____ as an Affiliate, $20/year (for non-ACS members).

Affiliates have all membership privileges except voting for
CHED Councilors and holding elective office.

New members will receive information about CHED in general and about its major activities such as the
Exams Institute, the Journal of Chemical Education/JCE Software/JCE Online, and 2YC3.

General Information

Your Name: _____________________________________________

Home Address: ❑ Send mailings here

Work Address: ❑ Send mailings here

email: _____________________________ email: _____________________________

❑ Send me an ACS Membership Application Form—this form is also available online:
   https://center.acs.org/applications/acsmembership/join.cfm

Did anyone encourage you to become a DivCHED member? ❑ Yes ❑ No
If yes, who? _____________________________________________

Payment Information

Payment ($20) must be made in U.S. funds on a U.S. bank—by draft or credit card. Purchase orders not
accepted. There is a $30 charge for all returned checks.

❑ Check or money order enclosed, payable to Division of Chemical Education, Inc.
❑ MasterCard ❑ VISA ❑ American Express ❑ Discover

Credit Card Number

Expiration Date    Month: _____ Year: _____

Signature of Card Holder: _____________________________

Return This Form

Anna Wilson
Treasurer, ACS Division of Chemical Education    765/474-6553
2225 S. Earl Avenue    wilson@purdue.edu
Lafayette, IN 47905

rev. 7/2007
News & Announcements

New DivCHED Officers – 2017

Cheryl Frech, Chair-Elect
Cheryl Frech is the Chair-Elect for CHED in 2017. Cheryl is on the faculty at the University of Central Oklahoma in Edmond, OK, where she teaches general chemistry lecture and labs and a new course, Professionalism in Chemistry I. During her term on the chair succession, Cheryl hopes to help professionalize the work of the division. Away from chemistry, Cheryl plays the flute, clarinet, and handbells; enjoys rock hunting expeditions and any kind of travel; and is on a quest to find her next cat.

Dan King, Secretary/Councilor
I am an Associate Professor in the Chemistry Department at Drexel University (in Philadelphia), where I have worked for the past 15 years. In recent years, my research has involved the creation of POGIL activities that use climate change to teach general chemistry and analysis of the effectiveness of technology inside and outside of the classroom. As the new Secretary I am looking forward to working with the members of the Executive Committee and am happy to listen to any suggestions people have to make things run more smoothly. On a personal note, I have an extensive necktie collection (enough ties to wear a different one each day of the term) and am an award-winning baker (my cookies have won a couple of local baking competitions).

Deanna Cullen, Member-at-Large
Deanna is currently teaching high school chemistry at Whitehall High School, a public school in western Michigan. She has over 25 years of experience at public and private schools. Deanna earned a BS in science education from Ferris State University (1988), an MS in education with an emphasis in educational technology from Grand Valley State University (2003) and she was also in the second cohort of the Target Inquiry program at GVSU (2010). In 2012, she became an associate editor precollege online for the Journal of Chemical Education and helped to develop ChemEd X. In 2015, Deanna was selected by the Michigan Science Teacher Association to be honored as Michigan High School Science Teacher of the Year.

As the newly appointed Member-at-Large, Deanna looks forward to becoming more familiar with the dynamics and varied interests of the constituents of DivChed, making meaningful connections and supporting the mission of the membership. She is a strong advocate for teachers of chemistry at every level and encourages collaborations that help bridge the gap between research and practice.

Deanna has restored the farmhouse her great-great grandparents built in 1887 and lives there with her husband and youngest child. If she is not working, she is likely transporting her son to and from golf or hockey tournaments. If she is lucky, she might find time to fit in a few holes of golf herself.

Tyson Miller, Program Chair
Tyson is the bondservant of the Lord Jesus Christ, husband of Margaret, father of David (age 9) and Emma (age 6), and Science Department Chair at Heritage University. He also currently serves as the CHED Program Chair, and hopes to help as many folks enjoy chemistry and science at national meetings as possible.

Iona Black, Councilor
I am a physical organometallic chemist whose research involves potential anti-cancer drugs, traditional medicines, and contaminated water. I am a Councilor on ExComm. I hope to contribute to the various projects and issues involved with the division. I enjoy traveling, reading thrillers, and use to skydive in tandem until my mom said no more.

Marilyne Staines, Alternate Councilor
I am currently an associate professor in the Department of Chemistry at the University of Nebraska-Lincoln. My research program is focused on studying ways to enhance the implementation of research-based instructional practices into the STEM classrooms. This has involved providing professional development for faculty locally and nationally and studying the effectiveness of these efforts. In my new role as alternate councilor on the Executive Committee, I hope to develop a better understanding of the functioning of the Division.

Lastly, I am a proud mom of an 11 month old, adorable baby boy.