The Crucible

2014 ACS Central Regional Meeting

WEB.ACSCERM2014.ORG

Register Now!
Advance Registration for the Central Regional Meeting (CERM) ends October 4th!

EXPOSITION AND TECHNICAL SYMPOSIA

COVERING CUTTING EDGE TECHNOLOGY in Analytical, Inorganic, Organic, Physical, Biochemical, Polymer, Proteomics, Energy, and Chemical Education

FOR MORE INFORMATION CONTACT:

FOR GENERAL INFORMATION:
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BRIAN STROHMEIER Exposition Co-Chair brian.strohmeier@thermofisher.com

Contents...

2014 ACS Central Regional Meeting  1
CERM 2014 ACS Leadership Institute  2
CERM 2014 Registration  3
CERM 2014 - Workshop  4
Descriptions
Teacher Programming CERM 2014  5
Seeking Nominations for 2015  5
Carnegie Science Awards
Project SEED 2014 Duquesne University  6
Society For Analytical Chemists of Pittsburgh October Meeting  7
Women Chemists Committee  8
Breast Cancer Fundraiser
National Chemistry Week  9
2014 Illustrated Poem Contest
Spectroscopy Society of Pittsburgh October Meeting & Technology Forum  10
National Chemistry Week 2014  11
ACS Fall 2014 National Meeting Report
Pittsburgh Section Travel Grant  13
Recipient Christian Legaspi ACS National Conference Report  15
Advertiser’s Index
Calendar  16
ACS Leadership Institute

Thursday, October 30, 2014

Join us to learn essential skills and strengthen your competitive edge in today's global economy. The first 9 people who register are free with additional scholarships available!

Fostering Innovation
8:00 AM – 12:00 PM        Westinghouse Room
The very basis of Chemistry, your profession, and ACS challenge you to advance your thinking, identify new solutions, and design new approaches continuously. In this four-hour course you will learn that innovation doesn’t happen by chance but can be managed. The understanding and tools you gain will help you learn how to tap into your own innovation style as well as learn how to stimulate innovative thinking for different circumstances.

Leading Change
1:00 PM – 5:00 PM        Westinghouse Room
Almost any initiative today in the workplace involves change and can often meet resistance. This four-hour course provides leaders with a step-wise process to lead change and guide volunteers more effectively through the change process to achieve greater results and efficiency. Participants will gain a skill that can be used in many common workplace and professional situations.

For more information contact: Julianne Wolfe, Leadership Development Chair, jwolfe@rjleegroup.com
## REGISTRATION FEES

<table>
<thead>
<tr>
<th>Registration Type</th>
<th>ADVANCE Until October 3</th>
<th>ONSITE After October 3</th>
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</thead>
<tbody>
<tr>
<td>01. ACS Member</td>
<td>$125</td>
<td>$175</td>
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<tr>
<td>02. Nonmember</td>
<td>$200</td>
<td>$250</td>
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<tr>
<td>03. Graduate Student/Post-Doc</td>
<td>$50</td>
<td>$65</td>
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<tr>
<td>04. Undergraduate Student</td>
<td>$35</td>
<td>$50</td>
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<tr>
<td>05. High School Teacher*</td>
<td>$60</td>
<td>$75</td>
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<td>06. Retired/Emeritus</td>
<td>$25</td>
<td>$40</td>
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<td>07. Unemployed</td>
<td>No Charge</td>
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<tr>
<td>08. 50+ Year ACS Member</td>
<td>No Charge</td>
<td>No Charge</td>
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<tr>
<td>09. High School or Project Seed Student</td>
<td>No Charge</td>
<td>No Charge</td>
</tr>
<tr>
<td>10. Guest</td>
<td>$25</td>
<td>$40</td>
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- Registration must be accompanied by payment in order to be processed.
- Request for refunds must be submitted in writing prior to October 3rd in order to receive a refund minus the $25 administrative fee.
- Questions can be directed to ACS Regional Meetings at 1-800-333-9511 or by contacting Lauren Stewart via email at L_stewart@acs.org.
- Please contact Lauren Stewart to advise of any dietary or physical restrictions at L_stewart@acs.org.
- *High School Teacher registration fee includes one Project Seed Luncheon Celebration ticket.
- **Receive a 20% refund off payment for the Rum Science Event on Wednesday and/or Friday just for staying at the Double Tree Green Tree. Refunds will be issued after conference and upon verification of reservation.
- +Conference Registration is not required to attend this event.

### SOCIAL EVENTS

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Time</th>
<th>Price</th>
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<tbody>
<tr>
<td>YCC Luncheon</td>
<td>Wednesday, October 29</td>
<td>12:00 PM – 1:20 PM</td>
<td>$15.00</td>
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<tr>
<td>Welcome Reception – Wine, Wii and ‘Wiches◆</td>
<td>Wednesday, October 29</td>
<td>7:00 PM – 9:00 PM</td>
<td>$12.00</td>
</tr>
<tr>
<td>Rum Science – Pittsburgh Style**</td>
<td>Wednesday, October 29</td>
<td>7:30 PM – 9:15 PM</td>
<td>$45.00 (Includes transportation)</td>
</tr>
<tr>
<td>WCC Luncheon</td>
<td>Thursday, October 30</td>
<td>11:40 AM – 12:50 PM</td>
<td>$25.00</td>
</tr>
<tr>
<td>Central Regional Awards Reception &amp; Dinner◆</td>
<td>Thursday, October 30</td>
<td>Cash Bar: 5:00 PM Dinner: 6:00 PM Awards: 7:00 PM</td>
<td>$40.00</td>
</tr>
<tr>
<td>Undergraduate Network and Resume Luncheon</td>
<td>Friday, October 31</td>
<td>11:30 AM – 12:50 PM</td>
<td>$10.00</td>
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<tr>
<td>Ice Cream Social with ACS Governance</td>
<td>Friday, October 31</td>
<td>2:00 PM – 3:00 PM</td>
<td>Complimentary</td>
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<tr>
<td>Rum Science– Pittsburgh Style and a View**</td>
<td>Friday, October 31</td>
<td>5:30 PM – 10:20 PM</td>
<td>$55.00 (Includes transportation)</td>
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<tr>
<td>Project SEED Celebration Luncheon No Charge for High School &amp; Project Seed Students</td>
<td>Saturday, November 1</td>
<td>11:30 AM – 1:30 PM</td>
<td>$20.00</td>
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### WORKSHOPS

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<th>Workshop</th>
<th>Date</th>
<th>Time</th>
<th>Price</th>
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<tr>
<td>ACS Career Workshop: Finding Your Pathway</td>
<td>Wednesday, October 29</td>
<td>8:00 AM – 12:00 PM</td>
<td>Complimentary</td>
</tr>
<tr>
<td>ACS Career Workshop: Individual Resume Reviews</td>
<td>Wednesday, October 29</td>
<td>1:30 PM – 5:00 PM</td>
<td>Appointments will be scheduled.</td>
</tr>
<tr>
<td>ACS Leadership Institute: Fostering Innovation***</td>
<td>Thursday, October 30</td>
<td>8:00 AM – 12:00 PM</td>
<td>Members: $150 Non-Members: $300</td>
</tr>
<tr>
<td>ACS Leadership Institute: Leading Change***</td>
<td>Thursday, October 30</td>
<td>1:00 PM – 5:00 PM</td>
<td>Members: $150 Non-Members: $300</td>
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### TOTAL FEES:

<table>
<thead>
<tr>
<th>Method of Payment</th>
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<td>American Express</td>
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### TOTAL AMOUNT ENCLOSED

| Cardholder Name (please print): | Signature: |
1. Finding Your Pathway - Learn about the four main career pathways available to chemical professionals: Higher education, industry, government, and entrepreneurial careers and why each one may or may not be the right choice for you. This workshop is not only ideal for graduate students and recent grads, but also experienced professionals who are considering a career change. In addition to learning about which types of careers are available in each pathway, you’ll also learn about the job market and hiring trends to help you make your choice. The workshop allows time for you to inventory your own values, interests, background, strengths and weaknesses so that you can select which career pathway you’d like to explore in detail. This course is being offered on Wednesday, October 29th from 8:00 AM – 12:00 PM

2. Fostering Innovation - We are constantly challenged to come up with new ideas, approaches, and solutions, yet most of us feel ill-equipped to do this effectively. With a systematic and proven process to generate ideas you can lead your team to develop new ideas. Gain the understanding and tools to tap into your own innovation style and stimulate innovative thinking among your team members. This course is being offered on Thursday, October 30th from 8:00 AM – 12:00 PM

3. Leading Change - Change is a constant today, yet it is often met with resistance. Leading change—whether it is a change in priorities, direction, or people—is critical to your success as a leader in your profession. This course provides leaders with a step-wise process to lead change and guide committee members, division members, and local section members more effectively through the change process for greater results and efficiency. This course is being offered on Thursday, October 30th from 1:00 PM – 5:00 PM

***You MUST go to www.acs.org/professionaladvancement to register and pay in order to reserve your seat for any of the ACS Leadership Courses being offered. The first nine people to register for any one of the Leadership Courses are complimentary and the next eleven registrants will receive a 50% discount.

SPECIAL EVENTS AND ATTRACTIONS

Rum Science – Pittsburgh Style, Wednesday, October 29th
Learn a little rum science the old-fashioned way — through a tasty sampling of rum and a tour of Pittsburgh's only rum distillery in the city's Historic Strip District! You’ll also learn the story behind Maggie’s Farm Rum Distillery. Transportation to Maggie’s leaves from the DoubleTree at 7:30 pm with tasting and a tour from 8-9 pm. Round-trip transportation for this event is included in the ticket price.

Rum Science – Pittsburgh Style and a View, Friday, October 31st
Take a taste and a ride as the science lesson includes Maggie’s Farm Rum Distillery, a tour & tasting and then a ride up the historic Duquesne Incline where you will get a behind-the-scenes tour of the incline and discover the science of funiculars! Transportation to Maggie’s leaves the DoubleTree at 5:30 pm with the tasting starting at 6 pm. Afterwards, you will be transported to the incline for a tour beginning at 7:20 pm. The view of downtown from the top of Mount Washington is one of the most beautiful in the city! After the tour, there will be free time to dine in Station Square before bus transportation back to the DoubleTree at 10 pm. All transportation for this event is included in the ticket price.

CERM 2014 registrants and guests will receive a 20% discount on the ‘Burgh, Bits and Bites Pittsburgh Food Tour, Saturday, November 1st. Transportation is NOT included. While you’re here, come learn Pittsburgh history by sampling the ethnic foods that represent the many immigrants that came over and worked in the steel mills. Gain some insight while eating your way through a neighborhood and discover its history! Tours begin at either 10 am or 1:30 pm. For more information about Burgh, Bits and Bites check out their website http://burghfoodtour.com/. See the CERM website, www.acs.cerm2014.org, under ‘Events’ for more information on how to get your 20% discount!

CERM 2014 registrants and guests will receive a 20% discount on the Carrie Blast Furnace Tour, Saturday, November 1st. Transportation is NOT included. Learn about Pittsburgh history as the former steelmaking capital of the world. The Carrie Blast Furnace tour is a two-hour retired steelworker guided tour of the only blast furnace left in Pittsburgh. Towering 92 feet over the Monongahela River, constructed of 2.5. thick steel plate and lined with refractory brick, Carrie Furnaces 6 and 7 are extremely rare examples of pre World War II iron-making technology. Since the collapse of the region’s steel industry in the 1970’s and 1980’s, these are the only non-operative blast furnaces in the Pittsburgh District to remain standing. Tours begin at 10 am. For more information visit Carrie Blast Furnace Tour. See the CERM website, www.acscerm2014.org, under ‘Events’ for information on how to get your 20% discount.

Advance Registration ends Friday, October 3rd • All refunds are subject to the $25 Administrative Fee
• Make your hotel reservation at the DoubleTree Green Tree Hotel and receive 20% off the Whiskey Science Events
• Visit www.acs.cerm2014.org for up-to-date programming information
Seeking Nominations for 2015 Carnegie Science Awards

Each year, Carnegie Science Center honors a select number of deserving organizations and individuals in our region – researchers, entrepreneurs, educators, and innovators. Their stories showcase our region’s excellence and inspire the science and technology leaders of tomorrow. Preparing to celebrate our 19th year in 2015, the Carnegie Science Awards have honored the accomplishments of more than 425 individuals and organizations whose contributions in the fields of science and technology have impacted our region’s industrial, academic, and environmental vitality.

Please consider nominating those around you to be recognized in categories such as Emerging Female Scientist, University/ Post-Secondary Student, Environmental Sciences, Life Sciences, and more! Those chosen for an award or honorable mention will be invited to the Carnegie Science Awards Ceremony, to be held on May 8, 2015 at Carnegie Music Hall in Oakland.

For more information about Carnegie Science Awards, or to nominate an individual, please visit: www.carnegiescience-center.org/Awards. Nominations must be submitted online by Oct. 31, 2014 to be considered by the selection committee. Thank you for helping Carnegie Science Center recognize the outstanding science innovators throughout our region!
While most students anticipate the end of the school year and cannot wait for a fun-filled, stress-free summer to arrive, there are other students who want to expand upon their knowledge through different opportunities. Project SEED provides just that opportunity!

For 8 weeks, ten students from five different Pittsburgh area high schools were granted a special opportunity to be a part of Project SEED at Duquesne University. Project SEED provides economically disadvantaged high school students with a chance to work hands-on in a chemistry laboratory. Through this experience, students are able to expand their networking skills, gain knowledge about careers in the chemical sciences, participate in cutting-edge research projects and work with state-of-the-art research instrumentation.

As in previous years, students attended seminars by guest speakers and presented their research results as a poster at the annual undergraduate research symposium at Duquesne University. However, unlike the previous years, this year’s students had the opportunity for a special visit to Bayer MaterialScience. The trip provided the students with an additional opportunity to present their research posters. Furthermore, they also had the chance to explore some of the laboratories, learn about specialized equipment to characterize new materials, and talk with Bayer scientists about their career paths.

Ultimately, the trip to Bayer was very informational and fun. It kept the SEED students excited and engaged! These students did not want to go home...they loved seeing all of the types of products that incorporated materials synthesized at Bayer. Some highlights of the tour were the scanning electron microscope, the atomic force microscope and the bulletproof plastics.

"As a SEED student myself, I would like to take a minute and just say that this has been the best experience I’ve had. Eight weeks may seem so short, and believe me it flew by! However, within those eight weeks, I have watched my achievements reach even greater heights. I am now a more patient, confident, and responsible person. I've learned so much this summer. I never expected to learn so much in such a short amount of time. I loved meeting new people. I have gotten the chance to talk to so many different people and it really benefited me. I have gained a better understanding of what I want to do with my future plans. Through seminar speakers and learning about other students’ projects, I now want to be a genetics counselor. I am very interested in Biology and genetics. Learning about the brain (and the body) is really awesome. I was in a positive environment every day and that is what kept me going. I had plenty of motivation during this time period. I worked with blue pigments for my project. Through this project, I have learned so much! On the first day, I never thought I would be able to come this far. But now I am an expert on my project! I get so excited when someone asks me to explain my project to them, because I know exactly what I am talking about! The friendships I have made at Project SEED have really impacted me. These friendships will last a lifetime. Everyone was always there to help me and make me smile, even on my roughest days. I could honestly go on and on about Project SEED and all of the positive benefits that surround it. I would highly encourage high school students who are interested in science to participate in Project SEED. It is an opportunity that all students who meet the requirements should take advantage of. I wouldn’t trade this experience for anything! It has really made me a better person and I am truly blessed that I had made the decision to be a part of Project SEED! I came here like a seed being planted. Now that seed is beyond grown. I will continue to grow unstoppably. Thank You!" Amber Latona, West Mifflin High School Senior.

Article submitted by Dr. Jennifer Aitken Duquesne University Project SEED Coordinator and her Project SEED student, Amber Latona.
Abstract: Accurate determination of small numbers of molecules is a challenging measurement problem in chemical analysis. Quantitative analysis of small molecular populations is especially important for understanding chemistry at liquid/solid interfaces, where only a limited population of molecules can reside at the interface. While single-molecule fluorescence imaging has recently produced exciting results, reporting locations and motions of labeled molecules in biological cells, for example, rarely are such results interpreted on a quantitative basis due to the challenge of preparing standards and developing criteria for confidently identifying and counting molecules. In this talk, we address the challenges of validating the accuracy of single-molecule counting as a quantitative analysis method. Total-internal-reflection fluorescence imaging allows selective imaging of molecules at liquid/solid interfaces and spatial criteria are included in the image analysis to distinguish molecular signals from detector noise. This methodology is applied to measuring the interactions of signaling peptides with model lipid membranes, association constants and kinetics of DNA hybridization, and yields of protein-binding interactions used in the bioassays.

Biography: Joel M. Harris is Distinguished Professor of Chemistry at the University of Utah, where he also holds an adjunct appointment in Bioengineering. Harris received a B.S. degree from Duke University and Ph.D. from Purdue University. He joined the faculty of the University of Utah in 1976. Harris is Fellow of the American Association for the Advancement of Science. He is also Fellow and Honorary Member of the Society for Applied Spectroscopy. He was recipient of an Alfred P. Sloan Fellowship, the Coblenz Award in Molecular Spectroscopy, the ACS Division of Analytical Chemistry Award in Chemical Instrumentation, the SAS New York Section Gold Medal Award in Spectroscopy, the Pittsburgh Analytical Chemistry Award, the Distinguished Teaching Award of the University of Utah, the Benedetti-Pichler Award in Microchemistry, the Bomem-Michelson Award of the Coblenz Society, and the American Chemical Society Award in Analytical Chemistry.
Join the Greater Pittsburgh Area Women Chemists Committee (WCC) in raising funds for Breast Cancer Awareness…

For the second year in a row the WCC donated $1200 to the Young Women's Breast Cancer Awareness Foundation at Magee Hospital, thanks to the generosity of those who have joined in our fundraising events. We are looking to top that this coming year!

This fundraiser includes t-shirts and tote bags with proceeds being donated. All items have the logo shown below (black with hot pink writing).

*Preorders are due by 9am on October 1st!*

Please make check payable to WCC and mail along with this order form to:
Dr. Michelle Ward / Room 107 / 219 Parkman Avenue / Pittsburgh, PA 15260.

You can also use the online form and PayPal link available on our website (www.pghWCC.org).

(You will be contacted when shirts are ready for pick-up.)

Name: _________________________________________________________________________________

Email: _________________________________________         Phone: ______________________________

**t-shirts:** $12/each

- # small t-shirt: _____
- # medium t-shirt: _____
- # large t-shirt: _____
- # x-large t-shirt: _____
- # 2XL t-shirt: _____

**tote bags:** $5/each

(or $4/each with shirt purchase)

- # tote bags: _____
- dimensions: 13”x12”x8”
The Pittsburgh Section of the American Chemical Society (ACS) is sponsoring an illustrated poem contest for students in Kindergarten - 12th grade.

Contest Deadline: Entries must be received at the address below by Friday, October 24, 2014.

Prizes: $50 1st place and $25 2nd place in each of 4 grade categories: K-2nd, 3rd-5th, 6th-8th and 9th-12th grades.

Mail entries to: Michael Mautino, 3485 Frye Ave, Finleyville, PA 15332. On back of entry include student name, grade, school name, teacher name, teacher phone number, and teacher e-mail address.

Winners of the Pittsburgh illustrated poem contest will advance to the ACS National Illustrated Poem Contest!

Write and illustrate a poem using the NCW theme, “The Sweet Side of Chemistry—Candy”. Your poem must be no more than 40 words, and in the following styles to be considered:

- Haiku
- Limerick
- Ode
- ABC Poem
- Free Verse
- End Rhyme
- Blank Verse

Participants are encouraged to explore topics related to:
- Physical properties of candy
- Ingredients in candy and candy making
- Sugar vs. alternative sweeteners
- Any other relevant topics

Entries will be judged based upon:
- Relevance to and incorporation of the theme
- Adherence to poem style
- Originality and creativity
- Overall presentation

Contest Rules:
- Poems must conform to a particular style. No poem may be longer than 40 words.
- The topic of the poem and the illustration must be related to the NCW 2014 theme, “The Sweet Side of Chemistry—Candy”.
- All entries must be original works without aid from others.
- Each poem must be submitted and illustrated on an unlined sheet of paper (of any type) not larger than 11” x 14”. The illustration must be created by hand using crayons, watercolors, other types of paint, colored pencils or markers. The text of the poem should be easy to read and may be printed with a computer, before the hand-drawn illustration is added. or the poem may be written on lined paper which is cut out and pasted onto the unlined paper with the illustration.
- Only one entry per student will be accepted.
- All illustrated poems and/or digital representations of the poems become the property of the American Chemical Society.
- Acceptance of prizes constitutes consent to use winners’ names, likenesses and entries for editorial, advertising and publicity purposes.
TECHNICAL PROGRAM - 8:15 PM
“Oil On Water: Calming the Seas but not the Science”
Professor Geraldine Richmond – Department of Chemistry, University of Oregon

Abstract: Since the Romans first spread oil on water to calm the raging seas, curiosity has persisted about the unique nature of the interface between water and a hydrophobic liquid. Understanding how molecules behave at an oil-water interface is critical for solving many technological and environmental problems. This presentation will focus on our most recent efforts in understanding the molecular structure of the oil-water interface and the unique environment it provides for ions, molecules, macromolecules, and nanoparticles that are drawn into its inner realm. The studies are a combination of spectroscopic and thermodynamic measurements coupled with theoretical simulations.

Bio: Geraldine (Geri) Richmond is the Presidential Chair in Science and Professor of Chemistry at the University of Oregon. Her research using laser spectroscopy and computational methods focusses on understanding the chemistry and physics that occurs at complex interfaces that have relevance to important problems in energy production, environmental remediation and atmospheric chemistry. She is a member of the National Academy of Sciences, the American Academy of Arts and is a Fellow of the American Chemical Society (ACS), the American Physical Society (APS) and the Association for Women in Science. Awards for her scientific accomplishments include the ACS Olin-Garvan Medal, the Spiers Medal of the Royal Society of Chemistry, the ACS Joel H. Hildebrand Award in Theoretical and Experimental Studies of Liquids and the APS Davison-Germer Prize. She is the co-founder and Director of COACh, a grass-roots organization that has helped in the career advancement of thousands of scientists and engineers in the U.S., Asia, Africa and Latin America. Awards for these efforts include the Presidential Award for Excellence in Science and Engineering Mentoring, the ACS Award for Encouraging Women in the Chemical Sciences, the Council on Chemical Research Diversity Award and the ACS Charles L. Parsons Award. Richmond has served on numerous national and international advisory and editorial boards. She is currently serving on the U.S. National Science Board, an independent policy advisory board to the U.S. President and Congress on science and engineering research and education issues, and will assume the role of President for the American Association for the Advancement of Science (AAAS) in 2015.

TECHNOLOGY FORUM - 5:30 PM
Duquesne University – Laura Falk Hall located in Mellon Hall
Tim Russell & Moss Clark – Maggies Rum Farm

Tim Russell received an AST degree in Avionics from the Pittsburgh Institute of Aeronautics in 2003, then went on to work for what is now The Boeing Company as a technician for four years and a project manager for another four on a ship torpedo countermeasures system contract with the US Navy. After being a homebrewing hobbyist for over eight years and founding Craft Pittsburgh Magazine in 2010, a quarterly publication focusing on Pittsburgh’s alcoholic beverage industry, Mr.

Continued on Page 11
YOU ARE INVITED!!!

Join the Pittsburgh Section ACS as We Celebrate

National Chemistry Week!

Where: Carnegie Science Center
When: October 24-25, 2014

The 2014 National Chemistry Week (NCW) celebrations in Pittsburgh will be held on Friday, October 24 (10 AM to 3 PM) and Saturday, October 25 (10 AM to 5 PM), at the Carnegie Science Center.

Join in the NCW activities as we celebrate this year’s NCW theme

“Great Chemistry is Everywhere!”

Hands-on Activities - Theater Shows – Prizes

- Visit over 20 tables with hands-on experiments, activities, and demonstrations
- Visit the Drake Oil Well Museum’s Mobile Energy Education Training Unit, located in the Carnegie Science Center’s parking lot, on Friday, October 24th
- Catch special NCW-related theater shows
- Register to win a chemistry set or one of several prizes

For more information about the NCW celebration in Pittsburgh, visit the Pittsburgh Section ACS’s website at http://www.pittsburghacs.org/outreach/national-chemistry-week/

Find us on Facebook at: Pittsburgh ACS NCW

You can also contact the Carnegie Science Center at (412) 237-1640 or the Pittsburgh Section ACS’s NCW Coordinator Michael Mautino at (412) 777-4792 / michael.mautino@bayer.com

The Pittsburgh Section’s 2014 NCW activities are sponsored by the Society for Analytical Chemists of Pittsburgh, the Spectroscopy Society of Pittsburgh, the PPG Industries Foundation, the PPG Science Education Council, the Carnegie Science Center, and Bayer Corporation.
Four ACS Pittsburgh Section Councilors were in attendance at San Francisco.

The meeting attracted approximately 15,700 attendees and an exposition of 432 booths.

The Candidates for President-Elect, 2015 are: Peter K. Dorhout, William A. Lester, Jr. and Donna J. Nelson.

The Candidates for Directors-at-Large for a 2015-2017 term: Dawn A. Brooks, William F. Carroll Jr., Barbara A Sawrey, and Ellen B. Stechel. The election of two Directors-at-Large from among those candidates will be conducted in the fall. Ballots will be mailed to the Council on or before October 10.


The Council elected Lydia E. M. Hines, Robert L. Lichter, Mamie W. Moy, Anne T. Obrien, and Eleanor D. Siebert to the Committee on Nominations and Elections for the 2015-2017 term.

As part of a regular performance review, the Council voted unanimously to continue the Committee on Patents and Related Matters, subject to concurrence by the Board of Directors; and to continue the Committee on Technician Affairs.

The Committee on Meetings & Expositions reported that the total meeting registration was 15,761. Of these, 9,840 were regular registrations, 1,131 were exhibitors, 3,671 were students, 551 were exposition only, and 568 guests. The exposition had 435 booths with 232 companies. The meeting had over 11,847 papers presented.

The Committee voted to recommend to the Board of Directors the following sites for National Meetings:

- Boston – Fall 2024, 2029, 2031
- San Diego – Spring 2025, 2031 and Fall 2027
- Chicago – Fall 2022

Budget and Finance reviewed the Society’s 2014 probable year-end financial projection which calls for a Net Contribution from Operations of $14.4 million, or $752,000 higher than the approved budget. Total revenues are projected at $497.2 million. This is $1.1 million or 0.2% unfavorable to the approved budget. The projected shortfall is primarily driven by lower-than-budgeted Electronic Services, Registration fees, and Advertising revenues. Total expenses are projected at $497.2 million, which is $1.9 million or 0.4% favorable to the approved budget. This variance is the result of lower-than-budgeted expenses across multiple categories primarily in the Society’s information services divisions (CAS and Publications). The Probable 1 projection was developed using May 31 actual financial results. Based on more recent information through July, management believes this projection will be exceeded.

The Committee on Economic and Professional Affairs announced that the unemployment rate for all ACS chemists has dropped from 3.5% in March 2013 to 2.9% as of March 2014. However, the unemployment rate for new chemistry graduates as of August 2013 is considered to be an all-time high of 14.6%. The number is higher when we isolate bachelor’s level graduates, for whom the rate is 15.8%.

The Committee on Local Section Activities will award 14 Innovative Project Grants totaling $30,033 bringing the 2014 total to 33 IPG awards totaling over $70,000. LSAC will also be offering grants during the fall to assist local sections with hosting a strategic planning retreat; a Leadership Development System course in their section, and to assist with travel to the 2015 ACS Leadership Institute. National Chemistry Week will be held October 19-25 with the theme, “The Sweet Side of Chemistry Candy.”

The Membership Affairs Committee reported that as of June 30, the total ACS membership was 158,869, a net increase of 512 since May of this year. The number of international members has grown this year by 312, to almost 25,000.

On the recommendation of the International Activities Committee, the Council voted the establishment of an International Sciences Chapter in South Africa. This action requires Board action.

The Council passed a resolution commending Executive Director and CEO Madeleine Jacobs on the occasion of her upcoming retirement.

On the recommendation of the Committee on Budget and Finance, The Board voted to approve an advance member registration fee of $390 for national meetings held in 2015.

Continued on Page 13
At the beginning of September every year, my department asks each of its graduate students for a report to check in on their progress toward their degree. One of the items they ask that you address is your goals for the next year. In my report looking ahead at my fourth year in the program, I described attendance at a national conference as a “lofty goal” of mine. However, with hard work and with promising results on this new project, it was not out of reach—and I grasped it.

This meeting was my first national conference and the first time I had the opportunity to present my work outside the city of Pittsburgh. This was also my first trip to The City by the Bay, despite being a West Coast native. Even though some speed bumps arose in the first couple days, everything came together for my poster presentation of Substituent effects on the properties of short oligothiophenes: A combined physical and theoretical approach for both the Sci-Mix and PHYS division poster sessions. My work has focused on the absorption and emission properties of thiophene and several novel derivatives designed to explore the effects of steric hindrance on the torsion between the thiophene rings. The sheer number of posters at Sci-Mix was humbling, having only attended smaller events. In light of the size of the sessions, I had a respectable number of visitors to my poster, both from physical and theoretical chemistry, promoting fruitful discussions and insight into other valuable spectroscopic and computational techniques. In addition to the knowledge I acquired from the poster sessions, the talks given in both the COMP and PHYS divisions were very helpful. Of particular utility were the talks given in honor of the late Dr. Nicholas C. Handy, a British theoretical chemist who had a major hand in developing density functional theory (DFT). Appropriately, many of these talks were focused on methods for improving both DFT and time-dependent DFT (TD-DFT) and its accuracy in different systems, particularly in their application to spectroscopy, which is very pertinent to my research. Furthermore, I had the opportunity to listen to a talk given by one of the big names in the area of optoelectronics, Dr. Jean-Luc Brédas, as well as chemistry Nobel Prize laureate, Dr. Alan Heeger. Dr. Heeger made a case for thinking outside the box for new ideas with his talk on self-assembly of semi-conducting polymers into unidirectional channels via capillary action, leaving me inspired to expand my own thinking.

While much of my time was spent in the meetings, I did visit the exposition. Between collecting business cards and free pens, my fellow theoretical chemists and I chatted with representatives from several companies, including Gaussian, Semichem, and BASF. Much to our surprise, the representatives from BASF, the largest chemical company in the world, assured that there were positions available for chemists with many different areas of expertise, including theory. I left feeling more confident that, should I choose to do so, I could enter an industry position upon completion of my degree.

After the conference, I was able to take a couple days to explore the beautiful city of San Francisco. I hit Fisherman’s Wharf, Ghirardelli Square, The Castro, Haight-Ashbury, and Chinatown, eating delicious food and seeing some new and interesting sights. I even made sure to visit In-N-Out Burger for the first time, to appease my California friends.

Overall, the experience was highly constructive for me in terms of science, networking, and social adventures. I would like to thank ACS Pittsburgh for the financial support, and my advisors, Dr. Linda Peteanu and Dr. David Yaron, for preparing me well for this experience.
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The Crucible Deadline

The deadline for items submitted to The Crucible is the 1st of the month prior to publication.

For example, all items for the November 2014 issue must be to the editor by October 1, 2014.

Volunteers Needed!

There are a number of volunteer opportunities in the Pittsburgh ACS section! If you are interested in volunteering, please contact Heather Juzwa at hljuzwa@shimadzu.com!

The Crucible

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ADVERTISERS INDEX

INDSPEC Chemical Corporation 18
Micron inc. 18
NuMega Resonance Labs 18
Robertson Microlit Laboratories 18
Society for Analytical Chemists of Pittsburgh 18
Spectroscopy Society of Pittsburgh 18
Pittsburgh Area Calendar

Monday, October 6
Society for Analytical Chemists of Pittsburgh  
“Quantitative Analysis at the Limit of Counting Individual Molecules”  
Joel M. Harris, Ph.D., Professor of Chemistry, University of Utah  
Duquesne University, Pittsburgh, PA

Wednesday, October 15
The Spectroscopy Society of Pittsburgh  
Technical Program  
“Oil On Water: Calming the Seas but not the Science”  
Professor Garaldine Richmond - Department of Chemistry, University of Oregon

Technology Forum  
Tim Russell & Moss Clark - Maggies Rum Farm  
Duquesne University, Laura Falk Hall located in Mellon Hall, Pittsburgh, PA

Friday, October 24 & Saturday October 25  
National Chemistry Week  
Carnegie Science Center, Pittsburgh, PA

Tuesday, October 28 - Saturday, November 1  
CERM 2014  
Doubletree by Hilton, Green Tree, PA

Monday, November 3  
Society for Analytical Chemists of Pittsburgh  
Dr. ChryS Wesdemiotis, The University of Akron  
Duquesne University, Pittsburgh, PA