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A Note from the Chair

Dear Fellow Chemistry Professionals and Enthusiasts,
I would like to highlight a few items that NC-ACS is doing that may be of potential interest to you:

Video Competition: As highlighted by James Harrington on page 16, NC-ACS is currently hosting a video competition focused around energy. Videos are due by October 6 and can be submitted by anyone in North Carolina, not just NC-ACS members! Award categories are based on age groups, from young kids to retirees. The videos will be featured on the NC-ACS YouTube channel, and they may also be displayed at NCW activities and our State Fair booth.

Honors and Awards: At our Local Section Meeting on Nov. 1, our 2013 Distinguished Lecturer, Orlin Velev from NC State, will be honored, as well as our scholarship winners, video contest winners, volunteer of the year winner, 50- and 60-year members, and also the ACS Fellows from our section that were chosen this year. Please refer to page 13 for more details.

Need For Volunteers and Leadership: We have a lot of activities in October that need volunteers, such as the National Chemistry Week events, our State Fair Booth, and also as judges for our Local Section student poster competition. Or, if you would like to gain leadership skills, we can also provide opportunities for you to hone those skills too. Potential leadership opportunities include serving as our Social Media Coordinator or Public Relations Coordinator (which includes useful training through ACS). Leadership for the Younger Chemists Committee (YCC) is also needed, as well as assistance with our Project SEED program and also engaging with regional K-12 teachers.

New Sustainability Discussion Group: We are in the process of establishing a new discussion group focused around Sustainability and Green Chemistry/Engineering. The purpose of this group is to host technical discussions and lectures focused on sustainability and green chemistry/engineering. The inaugural event is being planned for November. Additional programming beyond the technical sessions such as community and educational outreach activities will be planned according to participants’ interests. To get involved, please join the listserv by sending this one-line message to mj2@lists.ncsu.edu: subscribe ncacs-sustainability email@domain.com, replacing "email@domain.com" with the address that you want to subscribe to the list.

Co-Sponsorships: We are seeking financial support for a variety of activities, including our NC-ACS Project SEED program (http://ncprojectseed.org/), Undergraduate Research scholarships, NC-ACS Local Section meeting on November 1, and targeted events. Please contact me for further information; we can find an opportunity that suits your budget and interests.

Please watch the listserv, website, LinkedIn group, Facebook group, and TarHelium for more details on our activities. If you have other ideas, or other questions or comments, please do not hesitate to contact me or other members of the Executive Committee, all of whom are listed on the last page of every TarHelium. We look forward to engaging with you through our common interest in chemistry!

Melissa Pasquinelli, 2013 Chair
Melissa_Pasquinelli@ncsu.edu
Dear Friends and Colleagues,

This year, we have several NC-ACS positions up for election, including:
Chair-Elect (1 position; 2-year term)
Treasurer (1 position; 2-year term)
Secretary (1 position; 2-year term)
Councilor (2 positions; 3-year term)
Alternate Councilor (2 positions; 3-year term and 2 positions; 1-year term)

For a full description of the duties for each position, please refer to the online NC-ACS job manual: [http://ncacs.sites.acs.org/Executive%20Committee/job_manual.html](http://ncacs.sites.acs.org/Executive%20Committee/job_manual.html)

Balloting for these positions will be online. An e-mail will be sent to each Section Member who has supplied the ACS with an e-mail address. This e-mail will contain a link to the election site. If you have access to e-mail, but did not provide the ACS with an e-mail address, please send me an e-mail message requesting the election link. **Electronic ballots must be submitted by October 31st.**

There is one candidate for Chair-Elect: 
**Suraj Dhungana**

There is one candidate for Treasurer: 
**Joan Bursey**

There is one candidate for Secretary: 
**Lauren Felder**

There are four candidates for Councilor: 
**Rachelle Bienstock**
**Sara Paisner**
**Melissa Pasquinelli**
**Laura Sremaniak**

There are two candidates for Alternate Councilor: 
**Alexandra B. Ormond**
**Alan Tonelli**

Write-in candidates for all positions are allowed.

Please note that the Councilor candidates with the third and fourth most votes will be elected Alternate Councilor for the one-year term.

Thanks,
Keith Levine, 2013 NC-ACS Past-Chair
levine@rti.org
Candidates for NC-ACS 2013 Elections

**Candidate Name:**
Suraj Dhungana

**Seeking Position:**
Chair-Elect

**Colleges/Universities Attended; Degrees Awarded:**
Ph.D., Chemistry, Duke University, Durham, NC (May 2004).
B.A., Chemistry, Grinnell College, Grinnell, IA (May 1999).

**Hobbies/Interests Outside of Chemistry:**
Travel, photography, sports, nature exploration with my children

**Contributions to the NC-ACS and the ACS:**
Alternative Councilor, Executive Committee, ACS North Carolina Section (2011-2013)
Member, Organizing Committee, Annual ACS-NC Local Section Meeting (2010, 2011 and 2013)
Events Volunteer, ACS North Carolina Section

**Most Significant Professional Accomplishments:**
21 Peer-review publications, 3-book chapters
Early Career Author, RTI International, RTP, NC, 2013
RTI President’s Award, RTI International, RTP, NC, 2012
Fellows Award for Research Excellence, National Institute of Health – 2007 and 2008
Young Investigator Award, American Chemical Society Division of Inorganic Chemistry – 2006
International Union of Pure and Applied Chemistry Prize for Young Chemists, Honorable Mention – 2005

**Plans for Service to the NC-ACS, if Elected:**
If elected I would like to focus on the following:

1) Fully support all current Local Section programs and activities, and help improve them as needed.

2) Work with Executive Committee to increase participation and engagement of NC-ACS section members in NC-ACS sponsored events.

3) Work with Executive Committee to develop and implement a strategic plan to increase visibility of NC-ACS section and use that to attract new members and corporate sponsors.
Candidate Name:
Joan Bursey

Seeking Position:
Treasurer

Colleges/Universities Attended; Degrees Awarded:
The University of California at Berkeley (Berkeley, California) Ph.D. in chemistry, 1969
The Creighton University (Omaha, Nebraska) B.S. Chemistry, major in math and chemistry, 1965

Hobbies/Interests Outside of Chemistry:
Editing science papers for non-English speakers
Playing accordion in klezmer band and accordion band
Sewing/knitting

Contributions to the NC-ACS and the ACS:
I have been Treasurer of the NC-ACS for more than 25 years. I converted ACS financial books from a pen and ink ledger to a spreadsheet.

Most Significant Professional Accomplishments:
Serving as Treasurer for NC-ACS for more than 25 years.
Working in contract research at RTI International (then RTI), Radian Corporation, and ERG.
More than 25 professional publications.

Plans for Service to the NC-ACS, if Elected:
I plan to continue as Treasurer, maintaining financial records for the local section and paying the bills.
Candidate Name: Lauren Felder

Seeking Position: Secretary

Colleges/Universities Attended; Degrees Awarded:
NC State University, B.S. Biological Sciences, Pre-Med Concentration (2012)

Hobbies/Interests Outside of Chemistry:
Raleigh Venom Rugby Player
Half-Marathon Runner in Training
Interest in Forensics and History
Favorite hobby is cooking/baking

Contributions to the NC-ACS and the ACS:
None at the moment. Brand new member.

Most Significant Professional Accomplishments:
Completing my first contribution of Scientific Stature and accomplishing children outreach in the sciences through the STEM program.

Plans for Service to the NC-ACS, if Elected:
To learn more about the activities in the ACS and make sure that other members have this knowledge as well. To capture the ideas and thoughts that are continually developing within the organization as accurately as possible. To help as secretary and any other areas that may need assistance such as outreach.
Candidate Name:
Rachelle Bienstock

Seeking Position:
Councilor

Colleges/Universities Attended; Degrees Awarded:
PhD Chemistry-The University of Michigan, Ann Arbor, 1985
BChE Chemical Engineering- The Cooper Union, New York City, 1980

Hobbies/Interests Outside of Chemistry:
Reading
Taking walks in Duke Forest.

Contributions to the NC-ACS and the ACS:

Dr. Rachelle Bienstock has been a long standing active member of the ACS both at the local and national level. She volunteered at the booth at Festival for the Eno this summer, and assisted with the vendor, sponsor and fundraising committee for the SERMACS 2012 meeting held here in RTP. She recently completed her tenure as ACS National Program Chair (2010-2012) for the Division of Chemical Information (CINF), and is Chair-Elect for the Division and will serve as division chair in 2015. She currently serves as a member of the ACS North Carolina Government Affairs Committee (NC-GAC) and as a member of the ACS Committee on Chemical Abstracts (CAS). She will co-chair a symposium “Translational Cancer Bioinformatics: Data, Methods, and Applications” in the CINF Division at the upcoming 247th ACS National Spring 2014 Meeting to be held in Dallas, Texas, March 16-20, and is beginning to organize a local networking “COMP together” group, a program which is sponsored by the ACS Division of Computational Chemistry.

Most Significant Professional Accomplishments:


Plans for Service to the NC-ACS, if Elected:

I would like to involve and reach out to more of the local membership and increase involvement-particularly on the university campuses. Duke, UNC and NC State should have some local ACS speakers on careers and job opportunities for chemists. More local programming and linking of local programs to national divisions- i.e. COMP together program; encourage streaming live feeds of national meetings and more accessibility of national meeting and regional meetings to those unable to travel. Encourage more political advocacy and involvement of local chapter with ACS NC Government Affairs Committee to serve the needs of chemists in terms of addressing needs of employment (encouraging growth of technology sector in RTP and surrounding area), and medical insurance for unemployed chemists. Establishing more ties to local high school chemistry teachers and assisting them with applications for grant funds now available through the ACS.
Candidate Name:
Sara Paisner

Seeking Position:
Councilor

Colleges/Universities Attended; Degrees Awarded:
University of North Carolina, Kenan-Flagler Business School – Chapel Hill, NC May 2013
Master of Business Administration, Concentrations in Marketing with focus on Digital Marketing, and Entrepreneurship, Thomas M. Belk Premier Fellow
University of California at Berkeley – Berkeley, CA March 2001
PhD in Chemistry, GPA 3.8/4.0
Dartmouth College – Hanover, NH June 1996
Bachelor of Arts, Chemistry

Hobbies/Interests Outside of Chemistry:
Sailing, Martial arts

Contributions to the NC-ACS and the ACS:
American Chemical Society, since 1996 (President and Founder Eastern NY Section WCC/ISP 2003-2004; Chair-Elect Eastern NY Section 2005; Chair ENY Section 2006; Committee member, National Women Chemist’s Committee (WCC) 2005-2012, Chair, WCC Attracting Subcommittee ’09-11, Digital Media and Communications Subcommittee ’11-’12, Vice-Chair of WCC 2011). Councilor NC-ACS 2006-present.

Most Significant Professional Accomplishments:
Started my own company. Graduated with PhD, then graduated with MBA. Developed cool thermal interface materials for electronics companies that became actual products in customer parts.

Plans for Service to the NC-ACS, if Elected:
I will continue to support the NC-ACS as a councilor.
Candidate Name:
Melissa Pasquinelli

Seeking Position:
Councilor

Education:
Postdoctoral Scholar, Department of Chemistry, Duke University (2002-2004)
B.S., Chemistry and Mathematics (with honors), Seton Hill College (now University) (1996)

Hobbies/Interests outside of chemistry:
I enjoy exploring the outdoors, playing cards, listening to music, practicing yoga, going to the gym, and spending time with her family, friends, and pets.

NC-ACS:
Chair (2013); Chair-Elect (2012); Alternate Councilor (2011-2013); Secretary (2007-2011); Founder and Chair of the Sustainability Discussion Group (2013-current); Project SEED Faculty Mentor (2007-current); Project SEED subcommittee member (2010-current); WCC Advisory Board member (2010-current); frequent volunteer for local section activities (2007-current)

ACS:
Associate Member, Committee for Environmental Improvement (2012-current); Chair of the ACS Working Group for incorporating sustainability into graduate education (2013-current); Leader for Chemistry Club that was named "ACS Outstanding Chapter" for both years that I was a leader (1995-1996); Peer Reviewer for ACS Journals and Books (2007-current); Attendee at the ACS Leadership Institute (2012); Awarded the Leadership Development Award from the ACS Younger Chemists Committee (2003); Organized 4 symposia at National (Mar 2013, Mar 2012) and Regional ACS meetings (Nov 2012, Dec 2010); have chaired several sessions at National and Regional ACS Meetings.

Most Significant Professional Accomplishments:
Associate Professor in Fiber and Polymer Science at NC State University.
My research team and I develop computational strategies that relate the structure, dynamics, and physicochemical interactions of molecules such as polymers or proteins to their functional properties and their role in processes. One significant accomplishment in recent years is the development of innovative shape memory polymer fibers that actuate at room temperature, which has led to one provisional patent and a second patent disclosure. More info about my research team:
http://www.te.ncsu.edu/mpasquinelli/

I have mentored research projects for over 40 students thus far at the graduate, undergraduate, and high school levels who have won over 30 awards for their research and presentations at the local, regional, state, and international levels. I was recognized by the Intel Science Talent Search as “the one person who has been most influential in the development of my scientific career” for Melissa Chan, a competition semi-finalist and Project SEED student, Feb 2011

Plans for Service to the NC-ACS, if Elected:
I will continue my roles as: (1) a faculty mentor and subcommittee member for the Project SEED program, and will work with program coordinators and others to secure funding for the program by writing grants and interfacing with industry; (2) a coordinator for the new Sustainability Discussion Group; (3) a leader in actively seeking out involvement of high school and middle school teachers in our local section activities; and (4) a liaison with ACS National through my involvement with the Committee for Environmental Improvement and also through Council. I will continue to seek out and nominate deserving individuals for awards at the local, regional, and national levels.
Candidate Name:
Laura Sremanick

Seeking Position:
Councilor

Colleges/Universities Attended; Degrees Awarded:
Ph.D. Chemistry, 1996, University of North Carolina at Chapel Hill
B.S. Chemistry, 1991, University of South Carolina

Hobbies/Interests Outside of Chemistry:
I enjoy running marathons & triathlons, traveling, and I am active in my church.

Contributions to the NC-ACS and the ACS:
Councilor, 2007-present
Chair Subcommittee on Project SEED for the NC-ACS
co-Chair Subcommittee of NC-WCC
Member, WCC of the ACS
co-Chair Subcommittee on Awards & Recognition for ACS
Chair, Non-tenure faculty track task force for ACS
There are many meetings, events and programming associated with each of the above positions. For example, I organized two Negotiations Skills workshops this year in Raleigh. I co-planned another WCC event on "Emotional Intelligence" which was delivered by a human resources expert

Most Significant Professional Accomplishments:
I am a Teaching Associate Professor and the Associate Department Chair of Chemistry at NC State University.
In 2012, I was awarded the Marcus Hobbs award.
I was awarded a $10,000 Extension and Engagement grant from NC State University for Project SEED from 2013-2014.

Plans for Service to the NC-ACS, if Elected:
I plan to continue my term of service on the national WCC and the Task Force on Non-tenure track faculty. I am interested locally in the professional development of younger chemists, especially in soft skills. The NC-ACS and particularly the NC-WCC is one place where programming and infrastructure can assist in this area and where younger chemists can meet and be mentored by more experienced chemists.
Candidate Name:
Alexandra B. Ormond

Seeking Position:
Alternate Councilor

Colleges/Universities Attended; Degrees Awarded:
North Carolina State University, Fiber and Polymer Science, Ph.D., 2012
North Carolina State University, Chemistry, B.S., 2007
North Carolina State University, Polymer and Color Chemistry - ACS Certified, B.S., 2007

Hobbies/Interests Outside of Chemistry:
I try to make time during the week to run, read (fiction/non fiction literature), and knit/crochet. I enjoy volunteering for or organizing social/professional events. I am also a member of a book club.

Contributions to the NC-ACS and the ACS:
In the past four years of being a member of ACS, I have volunteered at several functions. I helped with set-up and tear-down at the 125th NC-ACS Sectional Conference (Fall 2011), volunteered during National Chemistry Week at NC Museum of Natural Sciences (Fall 2011), and volunteered at the Eno River Festival on 4th of July, 2013.

Currently I’m the lead organizer of the 2013 NC State Fair, which will be held Oct. 17 - 27.

I have presented a poster at the local section conferences in Fall 2010 and 2011, and gave an oral presentation at the national ACS meeting in Fall 2011.

As a faculty member of Meredith College, I have taken on the role of being the ACS student chapter advisor this year (starting Fall 2013).

Most Significant Professional Accomplishments:
I’m in the process of starting my career as a chemistry professor, and have so many accomplishments to attain in my future. To date, my most significant professional accomplishments have been receiving a Ph.D. and having the opportunity to teach Chemistry, my favorite topics (teaching/mentoring and chemistry)!

Plans for Service to the NC-ACS, if Elected:
I plan on staying active in the NC-ACS, elected or not. I’m going to carry through organizing the NC State Fair 2013, and motivate others in getting involved in the NC State Fair 2014 (and further). My goal is to continue involving young professionals in NC-ACS by encouraging their participation in local section meetings, volunteering for any and all upcoming events our section hosts, and becoming members of the ACS.

Personally, I will continue volunteering at the NC-ACS activities, participating in monthly meetings (if no overlap with teaching), and being proactive at social NC-ACS events.

As an alternate councilor, I would be available to be a substitute to the councilors and attend ACS National Council meetings, as it is my plan to attend more ACS National meetings in the future.
Candidate Name:
Alan Tonelli

Seeking Position:
Alternate Councilor

Colleges/Universities Attended; Degrees Awarded:
Ph.D. in Polymer Chemistry from Stanford in 1968
B.S. in Chemical Engineering from the University of Kansas in 1964

Hobbies/Interests Outside of Chemistry:
Reading, travel, sports.

Contributions to the NC-ACS and the ACS:
Section Chair, SEED committee (ACS national and NC-ACS), organized NC-ACS section annual meeting, and two SERMACS symposia [2004-Confinned Polymers and 2012-Project SEED best Practices], both held in Raleigh. Long-time participant in NC-ACS activities at the NC-State Fair and Chemistry week at the NC Museum of Natural Science. Chair of the NC-ACS Polymer Discussion group.

Most Significant Professional Accomplishments:
Over 400 peer-reviewed publications, including two books, in a broad range of Polymer Science research.

Plans for Service to the NC-ACS, if Elected:
Continue my active participation in SEED and other outreach activities.
North Carolina Section of the ACS

Save the Date!

Celebrate Local Science Accomplishments!

North Carolina American Chemical Society’s
127th Sectional Conference
Friday, November 1, 2013 at 5:30PM,
NCSU College of Textiles
Centennial Campus, Raleigh, NC

Outstanding Technical Program! | Awards!
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• NC ACS Distinguished Lecturer | • Marcus E. Hobbs Service Award
• High School, Undergraduate, & Graduate Student Posters | • Recognition of 2013 NC-ACS Fellows & 50 and 60 Year ACS Members
• Minimum of 3 Cash Prize Winners from Each Poster Session Category | • NC ACS 2011 Undergraduate Scholarship Awards
• Topic Specific Awards from Local Area ACS Discussion Groups | • Announcement of the Winners of the 1st Annual ChemTube Competition!

Free Registration! Food and Beverages Provided!

Poster presentations describing impressive research project updates from students in a wide variety of scientific disciplines. There will also be special poster awards from the discussion groups.

Mix and mingle with science enthusiasts over great food and drinks! See the winning videos of the 1st Annual ChemTube Competition where creativity and chemistry collide. The 2013 Distinguished Speaker lecture highlights the scientific achievement of Dr. Orlin Velev, a Triangle area professor from NCSU.

For Poster Submission, please visit:
http://www.ncsu.edu/chemistry/outreach/ACSnc/LSconference/application_ls_conf.html

For information on how to enter the ChemTube Competition, please visit:

For registration and additional information:
http://www.ncsu.edu/chemistry/outreach/ACSnc/LSconference/application_ls_conf.html

Thank you to the College of Textiles for being a conference sponsor!
Events, Call for Volunteers, Call for Teachers

Judges for the Student Poster Competition and Other Logistical Volunteers are needed at the 127th NC-ACS Local Section Meeting!

Judges: The only requirement for being a judge is that you are not currently closely affiliated with a local university. If you have a colleague that might be interested, please let them know as volunteering for the conference is open to non-members. The judging categories are High School, Undergraduate, Graduate and Post Doctoral. Judging scorecards will be provided and have been used the previous 2 years to provide standardized judging.

The Poster Competition is general in nature, so all scientific disciplines are invited to judge! In order for each judge to have time to really talk to the students about their research as well as enjoy the ‘Mix and Mingle’ part of the Meeting, we are hoping to get at least 30 judges this year.

Miscellaneous Volunteering: There are also other volunteering opportunities for the meeting at varying times throughout the afternoon on November 1st, if you would like to help. Between 1pm and 4:00PM, we will be arranging the poster boards for the poster presentations, setting up the registration table, and setting up direction signs. From 4-5:15PM, we’ll need a few people to direct poster presenters to their poster board. From 4:30-7:30PM, I need help at the registration table, which we will plan to do in shifts. Lastly, when we head from the College of Textiles to the Hunt Library for the Lecture and Awards, I’ll need people willing to help direct attendees to the Library.

Please contact me, if you are interested! Paige Presler-Jur (pjur@rti.org)

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Local Section Meeting details... NC-ACS Members are asked to please share this announcement with any students, teachers, parents, science enthusiasts and/or organizations that you think would be interested. This is a great opportunity to meet scientists, professors, and students of many scientific discipline that work and/or study in the local area!

Registration is open for the 127th NC ACS Local Section Meeting!

The organizers of the NC American Chemical Society (ACS) 127th Sectional Conference announce an evening to celebrate scientific research and accomplishments in the local area. All scientific disciplines will be showcased in the Conference Poster Session!

The Conference will be held on November 1, 2013 at the NC State University College of Textiles on Centennial Campus in Raleigh, NC. Conference registration is free and open to ACS and non-ACS members, to register click here.

Mix and mingle with science enthusiasts over great food and drinks! See the winning videos of the 1st Annual ChemTube Competition where creativity and chemistry collide (Details here). The 2013 Distinguished Speaker lecture highlights the scientific achievement of Dr. Orlin Velev, a Triangle area professor from NCSU. (Abstract)

For more information, please contact Paige Presler-Jur (pjur@rti.org).

Entries for the Poster Presentation are also being requested at this time. Posters are welcome from ALL scientific disciplines and individuals. Only Student Posters are entered into a competition and may feature student research covering any aspects of chemistry or a related science. The poster competition is open to high school, undergraduate, and graduate students. Local Area Discussion groups will also be giving a prize for Topic Specific Posters in the student competition! The deadline for submission is October 25, 2013. Please submit your poster title here.

Thanks!

Paige Presler-Jur
NC-ACS 2013 Chair-Elect
Events, Call for Volunteers, Call for Teachers

Call for Volunteers:  
NC State Fair – October 17-27, 2013

The North Carolina Section of the American Chemical Society will be again participating at the NC State Fair on October 17-27, 2013. Nearly 1 million people attend the Fair for the rides, games, concerts, fireworks, and of course the food!

The theme of the exhibit this year is Agriculture Today. We will be sharing with the visitors the aspects of agriculture, the differences between historic, current, and future agriculture, and especially the chemistry impact on modern agriculture. At our booth we will hold activities for the public that will include educational discussions, knowledge tests, interactive demonstrations, and stage demonstrations to small and large groups of visitors. We are looking for volunteers for the exhibit, who are willing to give time to staff the booth and/or prepare stage demonstrations. Our exhibit will need to be staffed from 9:00 am to 9:45 pm from October 17-27 in 3-4 hour shifts. The stage demonstrations will be 30 minute to 1 hour segment that will run 4 times per day. Whether you can work a 4.5 hour shift, or perform a stage demonstration, we would be excited to have you! Parking and admission to the fair will be free for all who volunteer at the ACS booth.

This is a great opportunity to take part in an outreach event for our local section, and attend the Fair for free! Invite your friends to volunteer with you for several hours, and then enjoy spending the rest of the day getting entertained by all of the Fair attractions.

If you are interested in any aspect of the Agriculture Today Exhibit, please contact Sasha Ormond at: sasha.ormond@gmail.com. Please provide your name, contact information, and the day/time that works best for you. As the Fair gets closer, we will contact you with more details and the activities that we will be presenting.

Call for Volunteers:  
National Chemistry Week 2013 - October 12, 2013

The North Carolina Section of the ACS is actively planning the National Chemistry Week event for this coming year. National Chemistry Week is an event that is held annually in October that serves to increase public awareness of chemistry in society, sponsored by the American Chemical Society. The theme of this year’s National Chemistry Week is “Energy: Now and Forever,” celebrating the science of energy in the home and in the world around us! Thermal, electrical, kinetic, or chemical energy; all forms of energy are up for discussion at our annual event!

This year, we are planning a single event at the North Carolina Museum of Natural Science in Raleigh on Saturday, Oct. 12 from 9:00 am to 4:00 pm. We are currently recruiting volunteers who are interested in participating in any aspect of the event at the museum, either presenting or logistical. We would like volunteers who are interested in presenting a booth with an interesting, interactive demonstration that speaks to learners of all ages to share the role of chemistry in our lives. We are especially in need of volunteers who can help out with logistical aspects on the day of the event and with the local section’s display at the event.

Last year’s event was the 25th Anniversary of National Chemistry Week, and the day featured 15 groups from academia and industry who presented for almost 4000 visitors on topics from microfluidics to biologically-inspired textiles, and we’re hoping to make this year even bigger! If you are interested in volunteering to present or for logistical support, have suggestions for additional activities, or would like additional information, please contact James Harrington at mhtorringjan@yahoo.com.

Thank you, and we look forward to seeing you!

By James Harrington
North Carolina Section of the American Chemical Society

First Annual ChemTube Competition

The North Carolina Section of the American Chemical Society is proud to announce the First Annual ChemTube Competition! The local section has created a Youtube channel to share interesting and exciting chemistry videos produced by both members and non-members from across the region. We are accepting applications from individuals and classroom groups for a contest to produce and share videos about chemistry on our Youtube channel!

The theme for this year’s competition is:

**Energy: Now and Forever!**

Chemistry comes into play in both the realm of traditional energy sources and of the alternative energy sources of the future. In addition to electrical energy, though, there are thermal, chemical, and kinetic energy, all of which make the world work! Produce a video that discusses or demonstrates energy in chemistry and let us see it! The format of the video can be a documentary, an interview with an individual who works with energy chemistry, a fun or innovative demonstration of energy, or a profile of a company that uses energy chemistry.

**How to Enter:**

It’s easy to take part in the competition! All you have to do is film a video that can fit in any of the categories and submit an entry form and a copy of the video to mhtorringjan@yahoo.com. We will upload the videos to the NCACS Youtube channel for viewing and voting.

See: [https://www.youtube.com/user/NCAmChemSoc](https://www.youtube.com/user/NCAmChemSoc) for more details and examples!


Submissions may begin immediately and are due by October 6, 2013. Voting will be based on the number of “likes” each video collects. The videos that garner the most “Likes” will be selected and shown at the local section’s public activities at the North Carolina State Fair and the National Chemistry Week activity at the North Carolina Museum of Natural Science in Raleigh, NC on October 12, 2013. We’re looking forward to seeing your video! Good luck!

*By James Harrington*
Teachers are needed for the OSHER Lifelong Learning Institute (OLLI) at Duke University

The OSHER Lifelong Learning Institute (OLLI) at Duke University offers non-credit classes to (mostly) retired adults in the Triangle community. Over one hundred classes are given each semester during the Fall, Winter, and Spring semesters on a wide variety of topics. While we would be happy to meet new OLLI members who would like to take our classes, we are particularly interested in recruiting new teachers-particularly in the sciences. While we can offer a very modest honorarium for teaching, most OLLI teachers teach as volunteers. Current we are planning new classes on drug discovery and development, radioactivity, great events in biological evolution and several other areas. If you think you might be interested in developing a class, please email Phil Carl (pcarl@bellsouth.net). You can find out more about OLLI at http://www.learnmore.duke.edu/olli/.

Philip Carl (pcarl@bellsouth.net)

Call for Posters for the 127th NC ACS Local Section Meeting!

The organizers of the NC American Chemical Society (ACS) 127th Sectional Conference announce a call for posters from ACS and non-ACS members. All scientific disciplines are invited to showcase research projects and accomplishments!

The Conference will be held on November 1, 2013 at the NC State University College of Textiles Centennial Campus in Raleigh, NC. Poster presenters are asked to be set up by 5:30PM. The Poster Session is from 5:30-7:30PM that evening.

Student Posters are entered into a competition and may feature student research covering any aspects of chemistry or a related science. The poster session is open to high school, undergraduate, and graduate students. Cash prizes will be awarded in each of the 3 student groups. The Local Area Discussion groups will also be giving a prize for Topic Specific Posters in the student competition!

The deadline for submission is October 25, 2013. Please submit your poster title here. Conference registration is free and open to ACS and non-ACS members, to register click here. For more information, please see the attached flyer or contact Paige Presler-Jur (pjur@rti.org).

Check out the Section Facebook Page: http://www.facebook.com/NorthCarolinaACS

Become a Science Coach!

Share your expertise and enthusiasm for science with an elementary, middle, or high school teacher in your community by becoming an ACS Science Coach. In this year-long volunteer role, you’ll work directly with a classroom teacher to support science learning. Together, you and the teacher will decide how to best combine your time and talents. If approved, ACS will donate $500 to the school to support your efforts. Find out more at www.acs.org/ScienceCoaches.
Connect to Triangle Area Science Cafés and Pints of Science!

**Pints of Science Calendar**

- **October 22** - Carla Frohlich "Origins of Chemical Elements"
- **November 26** - John Millhauser "Where Turkey and Thanksgiving Comes From"
- **December 17** - Heather Troutman "Sustainable Plastics"
- **January 28** - Erik Ascheung "Species Invasions"
- **February 25** - James Bonner "Nanotoxicology"
- **March 25** - Mi Gyung Kim "Women in Science"

Events are Held at:
**Tir Na Nog**
218 South Blount St
Raleigh, NC 27601
Phone: 919.833.7795

https://www.facebook.com/PintsofScience

“Science Cafés are live—and lively—events that take place in casual settings such as pubs and coffeehouses, are open to everyone, and feature an engaging conversation with a scientist about a particular topic” (from http://www.sciencecafes.org/what/)
Several Members of the NC-ACS Executive Committee attended the ACS 264th National Meeting and Exposition that took place September 8-12, 2013 in Indianapolis, In. and here is some of what they had to say.

Jim Chao wrote: Council Approved Electoral Redistricting Lines beginning 2014.

There was not much deliberation on the redrawing of district lines which would move the North Carolina Section from a district in the Southeast to District II which is in the Central East Coast which includes Michigan, Virginia, Western Pennsylvania, and Indiana. As mentioned in my editorial, the North Carolina Section will still be a major constituent to any district that it belongs. The only concern which was raised in the District IV Caucus meeting was that the Western Carolinas section would not be moving and thus is the only North Carolina Section remaining in District IV from the Southeast. Independently we will still belong to the Southeast Region which handles our technical regional conferences.

James L. Chao, North Carolina Councilor.

Sara Paisner wrote:
While we didn't win a chemluminary award, the Indy meeting was still a good one.
Some interesting facts;
1. Only around 9000 or so people were expected to attend but in the end over 10,000 people attended the meeting
2. The Alton Brown and Alan Aida events were hugely popular, with arrivals an hour early to get good seats and standing room only
3. The motion to rearrange the geographic boundaries for districts was passed and we will be part of District II going forward, although it doesn't take effect until 2014.
National ACS News and Information

Additional notes from the Indianapolis National Meeting: Site selection for future national meetings.

Richard Palmer, Councilor, NC Section

The Meetings and Expositions Committee (M&E), on which I have just completed my limit of 6 years service, has had several responsibilities. Of particular importance to M&E has been the selection and recommendation of sites for National Meetings. However, without explanation, it was announced this year that M&E’s role in site selection would be terminated and that the Board would take over that responsibility.

M&E’s procedure has been to identify appropriate sites and recommend these sites to the Board ten years in advance. These recommendations have been made after careful vetting by the ACS Staff and the Committee, considering, not only the location, but also the existence, location and cost of facilities and infrastructure for housing, the technical program, governance functions and the exhibition, the cost and availability of travel options, labor costs, and other more technical aspects. Of paramount importance in the recommendations of future sites has been the prediction of the financial success of the meetings, which depends critically on the total registration.

Some 15 years ago, based on the surveyed desire of the membership, it was decided to expand the sites for national meetings to include a number of “expansion”, or “experimental”, sites. These included Denver, Dallas, St. Louis, Salt Lake City, Indianapolis and San Antonio, which were added to the traditional sites such as San Diego, San Francisco, New Orleans, Boston, Washington DC and Philadelphia. Other previously used sites such as New York were reluctantly abandoned because persistent cost and infrastructure problems. During the last several years, to some extent because of several meetings with lower than hoped for registration (Salt Lake City (poor attendance and low satisfaction of attendees) and Denver (poor attendance but HIGH satisfaction of attendees)), all previously selected sites have been intensely re-vetted by the Staff and the Committee. As a result, the current M&E has made several difficult changes in these earlier recommendations because of previously unrecognized problems (such as pulling out of Chicago (persistent bifurcation of the infrastructure) and St. Louis (multiple problems with infrastructure) and moving of a date for Washington DC (an accidental scheduling conflict with the Cherry Blossom Festival and resultant cost increases)). It also seems unlikely that we will ever return to Salt Lake City. However, close scrutiny of Denver and Indianapolis indicated that they are excellent sites, particularly for Fall meetings. And, in fact, both of these sites were very popular with the actual attendees, although unfamiliarity seems to have discouraged registration. Dallas (Sp 2014) is also a concern, but, since we have been there once before, it will probably work alright (too late to change in any event). San Antonio (Sp 2021), was under the new microscope this year, with the possibility it might be changed—all with the goal of having a positive meeting experience AND a positive bottom line. However, the Board’s recent decision to suspend all site selection and remove M&E’s role in recommending selections, appointing a task force to reconsider how meeting sites are selected, leaves open the question of whether there will be member input to site selection in the future.
Al Crumbliss wrote:

1) The Council voted AGAINST a name change for the Colloid Div to include Nanomaterials in their name. The thinking being that the term "Nano..." belongs to multiple divisions.

2) There was general discussion about unemployment levels for chemists, which while well below that of the workforce in general, they are too high. Perhaps the EC should discuss to what extent unemployment among chemists is an issue in our section and what additional services we should provide.

Al also sends a reminder that the ACS website contains multiple valuable links, including one to the Climate Change Toolkit and Water Resources.

http://www.acs.org/content/acs/en/climatescience.html

http://www.acs.org/content/acs/en/sustainability/understandingsustainability/sustainable-water.html

http://cen.acs.org/articles/91/i38/2013-Salaries-Employment.html
Fritz London of Duke University
By Maurice Bursey and Richard Palmer

Who among us hasn’t heard of London forces, or the Heitler-London theory of bonding in the hydrogen molecule? But did you know that Fritz London spent the last fifteen years of his life as a member of the Duke University faculty?

Fritz London was born in 1900 in Breslau, Germany (now Wrocław, Poland). He first studied philosophy, taking a doctorate at the University of Munich in 1921. He then was attracted to physics by the revolution in thinking about the atom, and studied with Max Born, Arnold Sommerfeld, and Erwin Schrödinger. The famous paper with Walter Heitler explaining the homopolar bond appeared in 1927, just months after the introduction of quantum mechanics, separately, by Werner Heisenberg and Erwin Schrödinger, and it is considered the first paper in quantum chemistry. The work with Robert Eisenschitz that developed the concept of dispersion forces that bears his name – London forces -- appeared in 1930. However, in 1933, London lost his position at the University of Berlin because of the new laws of Nazi Germany barring persons of Jewish origin from civil service.

In August 1933 Frederick Lindemann offered London a fellowship at Oxford University sponsored by ICI. Anticipating the dangers of remaining in Germany and of never being able to continue his career there, London gladly accepted, and he and his wife Edith moved to Oxford shortly thereafter. In Oxford, London worked with his brother Heinz developing a phenomenological theory of superconductivity, especially in connection with the exponential decay of the magnetic field in a superconductor (the exponent now known as the London length, or penetration depth) resulting in the seminal paper published in 1935 in the Proceedings of the Royal Society. The fellowship at Oxford was funded only for three years, and in 1939 London was offered and enthusiastically accepted a position at the Institut Henri Poincaré working with Paul Langevin at the Collège de France. In Paris, London’s interests turned also to the study of superfluidity, in which field he also made important contributions, particularly in the use of Bose-Einstein statistics.

In 1937 Paul Gross, then Professor of Chemistry and Chair of the Chemistry Department at Duke University, while in Paris, discussed with London the possibility of a faculty appointment at Duke. London agreed to give a series of lectures in the fall of 1938. He then joined the faculty in 1939. He and Edith and their newborn son Frank moved to Durham that year. Although his original appointment was in chemistry, he later was appointed James B. Duke Professor of Chemistry and Physics.

At Duke, London continued his development of the theory of superfluidity. He originated the concept that superfluidity is intrinsically related to the Bose-Einstein condensation, and so saw that the fluid state of $^3$He should differ from that of $^4$He, which was subject to Fermi-Dirac statistics. These predictions have recently been confirmed. He also predicted the magnetic moment of a rotating superconductor, the London moment, which was later confirmed and is of much importance, for example, in modeling the rotational dynamics of neutron stars. In both superconductivity and superfluidity, London’s fundamental contribution, as noted by John Bardeen, was the recognition that both phenomena are best understood as macroscopic quantum systems.

Professor London did not accept graduate students, preferring to collaborate with others and with postdoctoral students. At Duke, he taught small graduate courses in quantum mechanics, statistics, and quantum chemistry. Although thoroughly immersed in and dedicated to his work, London is remembered by his family for his wry sense of humor. In the summer of 1951, when he was visiting Baden-Baden, he had an annoying cold. While they were walking, he pointed to his runny nose and said to his son Frank, “Superfluids!” Once in 1953, Frank answered the telephone, and then turned to
his father and said, “Daddy, there’s somebody on the telephone who claims he’s Linus Pauling.”

Professor London replied, “It probably is.”

As early as 1937, London was nominated (though not selected) for the Nobel Prize in Physics, but in 1952 his receipt of the prestigious Lorentz Medal was widely thought to predict the next year’s Nobel award. Tragically, after struggling for more than six years with an increasingly debilitating heart condition, Fritz London died on March 30, 1954. He was survived by his wife Edith, who later became an acclaimed artist and passed away herself in 1997, his son Frank, now retired and living in Durham, and his daughter Rosie, now a violinist with the St. Louis Symphony.

London might have received the Nobel Prize in Physics had he not died so young. However, John Bardeen, the only person to be awarded two Nobel Prizes in the same field – in 1956 for his discovery (with Shockley and Brattain) of the transistor effect, and in 1973 for his development (with Cooper and Schrieffer) of the (microscopic) “BCS” theory of superconductivity – in an unprecedented gesture of recognition of which “giant’s shoulders he had stood on,” donated half of his second Physics Nobel Prize to Duke University. His purpose was to establish the Fritz London Memorial Lecture series and the Fritz London Memorial Prize. John Bardeen said, “Fritz London more than anyone else pointed to the path that eventually led to the theory of superconductivity.”

The 2014 Fritz London Memorial Lecture will be presented in April by Professor David Weitz of Harvard University.

We thank Frank London for his recollections about his father. Interested readers will also want to refer to the excellent book by Kostas Gavroglu, “Fritz London, A Scientific Biography,” Cambridge University Press, 1995. MMB also admits shamelessly borrowing from other sources, especially the Physics Department of Duke University’s web page of its distinguished faculty, and even Wikipedia.
Sponsor/Poster Night, October 9th! (6:30-9 pm)
Research Triangle Foundation, 9 Davis Drive

Registration and Map to Research Triangle Foundation:
http://www.tamsgroup.org/sponsors_night.html

Food catered by:

SPONSORS and POSTER PRESENTERS arrive at 6 pm for setup
Contact Chris Shuford (Shuforc@LabCorp.com) if you are not registered
NC-ACS ListServers

The official email listserv of the membership of the NC-ACS Local Section, based on the membership rosters from ACS, is ncacsmembership@lists.ncsu.edu. Inclusion on this email listserv is automatic for dues-paying members.

The following email listserves are also hosted by the NC-ACS Local Section but are open to anyone who is interested in the chemical sciences and engineering in the region:

- ncacs: Announcements of job opportunities and activities that are NOT sponsored by NC-ACS
- ncacs_ycc: Announcements of the Younger Chemists Committee (<= 35 years old)
- ncacs_scc: Announcements of the Senior Chemists Committee (>= 50 years old)
- ncacs_wcc: Announcements of the Women Chemists Committee
- ncacs-volunteers: For people interested in contributing and/or leading NC-ACS activities
- ncchemed: Announcements about Chemical Education (K-12 and Community College)

To subscribe to the LISTNAME list, send this one-line message to mj2@lists.ncsu.edu:

subscribe listname email@domain.com

replacing "listname" with the name of the list and replacing "email@domain.com" with the address you want to subscribe to the list.

You can opt out of any of these lists at any time by doing the previous steps, replacing “subscribe” with “unsubscribe”, and where email@domain.com is the address used for you by the list.

NCACS is on Facebook and Linked In

Our facebook address is:
http://www.facebook.com/NorthCarolinaACS
?ref=ts&fref=ts

Once you have become a member of LinkedIn, you can join the group named the North Carolina Section of the American Chemical Society. There are many ongoing interesting discussions and job postings as well.
NC-ACS Local Section Executive Committee Meetings

The NC-ACS Local Section Executive Committee meets on the first Wednesday of every month. Meetings are held at the Hamner Institute in the Research Triangle Park at 4:30 p.m. All members are welcome and encouraged to attend! Get to know your Executive Committee! Get involved! Volunteer!

Address:
The Hamner Institutes for Health Sciences
6 Davis Drive
PO Box 12138
Research Triangle Park, NC 27709-2137

The next four meetings are scheduled:
Wednesday, Sep 4 at 4:30 PM - 6:00 PM
Wednesday, Oct 2 at 4:30 PM - 6:00 PM
Wednesday, Nov 6 at 4:30 PM - 6:00 PM
Wednesday, Dec 4 at 4:30 PM - 6:00 PM
## NC-ACS Local Section Executive Committee – Winter 2013

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Office</th>
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<td>Chair</td>
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<td>NCBA at EPA</td>
<td>Treasurer</td>
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<td>Jamie Saunders</td>
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