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January 2016

NCAS 113th Annual Meeting

Report by: Dr. Clay Britton, Methodist University

The 113th meeting of the NC Academy of Science will be held on the campus of Methodist University, Fayetteville, NC on April 1st and 2nd, 2016. This year's theme is **It Isn't Easy Being Green, or Is It?: A S.T.E.M.-based Approach to What it Means to BE Green.** We have invited several fantastic speakers to share their perspectives on "green" research, technologies and strategies to help us address issues that are impacting our local and global environments.




As always, there will be undergraduate and graduate students, along with faculty representing colleges and universities from around the state. With such a diverse gathering of scientists the Local Arrangements Committee is attempting to schedule something for everyone!

The meeting will open on Friday, April 1st with a Friday evening poster session followed by an opening address. During this opening event heavy hors d'oeuvres will be available. Saturday will include oral sessions from submitted abstracts, a Keynote address, and workshops and special sessions. Titles and subjects for these sessions are still being planned. Saturday evening will conclude with the awards ceremony and reception. As additional information becomes available it will be found via a link on the Academy website <http://www.ncacadsci.org>. Updates will be made frequently so keep coming back!

The website will also contain information with directions, hotel information, online registration, and abstract submission. We look forward to seeing all of you in April!

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SAVE THE DATE!

113th NCAS Annual Meeting

April 1-2, 2016 | Times: TBD


Location:
The new Thomas R. McLean Health Sciences Building,
Methodist University

THEME:
It isn't easy being green, or is it?
A S.T.E.M.-Based Approach at What It Means to Be "Green."

methodist.edu | facebook.com/MethodistUniversity
910.630.7000 | 5400 Ramsey Street, Fayetteville, N.C. 28311



The new Thomas R. McLean Health Sciences Building



NCAS 113th Annual Meeting

Meeting Highlight

Notice by: Dr. Clay Britton, Methodist University

On behalf of the local arrangements committee, I would like to welcome you to join us for the 113th annual North Carolina Academy of Science (NCAS) meeting being held on Methodist University's campus in Fayetteville, NC. Methodist University has never hosted NCAS, but we are excited about this opportunity! The meeting will be held in our new Thomas R. McLean Health Sciences building, as well as our Physician Assistant Program facilities. The Health Sciences building is still under construction so this meeting will be one of the first formal events showcasing Methodist University's newest academic space.

Last year's meeting "Innovation in Research", held at Winston-Salem's Wake Forest Biotech Place, was a great success and illustrated many of the novel technologies being used in science and medicine. In fact, the themes of the annual meetings over the past several years have emphasized the health sciences in some way. This year's theme is looking at a different aspect of the S.T.E.M disciplines and their relationships with the concept of "being green". Our goal is to bring together researchers from various disciplines to examine the theme: **It Isn't Easy Being Green, or Is It?: A S.T.E.M-based Approach to What it Means to BE Green**. We hope that you leave the meeting with a greater appreciation for different scientific, technological, engineering, and mathematic approaches to raising awareness and finding solutions to the impacts we are having on the environment.

I encourage you to attend the meeting and to submit an abstract. This annual meeting is an important venue to present your research, as well as a good place for students to present their research for the first time. Please keep an eye for a link to the meeting website which is coming soon (Visit the Academy pages for a link: <http://www.ncacadsci.org>). More information, instructions, and links will be added shortly so keep checking! You can send other questions to me, Clay Britton, at clbritton@methodist.edu (please add NCAS to the subject line!).

Call for Judges

Notice by: Dr. Beth Overman, Methodist University

We are seeking volunteers to serve as judges for research posters and oral presentations that are being considered for Derieux Awards for Research Excellence during the Annual Meeting of the North Carolina Academy of Science. The meeting will be held at Methodist University on April 1st and 2nd, 2016. Qualifying undergraduate posters will be presented and judged during the evening session on Friday, April 1st. Oral papers will be presented and judged on the morning of Saturday, April 2nd. A grading rubric for the poster and oral papers will be provided to volunteers prior to the meeting. For more information on the Derieux Award please visit the CASCAS website: <http://www.ncacadsci.org/cancas/Derieux.html>.

We are also in need moderators for each of the oral paper sessions on Saturday. Moderators can be either faculty or students. Please contact Michele Malotky (mmalotky@guilford.edu) or Beth Overman (beth_overman@ncsu.edu) if you are willing to serve in either capacity. There will be the opportunity to sign up during the online registration process. Please be sure to include your area of expertise so that we can assign you to an appropriate section. Thank you for your help!

NCAS News

Call for Yarbrough Undergraduate Research Grants

Notice by: Dr. Eric Butler, Shaw University

Yarbrough Grants fund undergraduate research conducted by freshmen, sophomores, or juniors from Colleges and Universities across the state. Students must be a Collegiate Academy member and have a research advisor who is a current member of the Senior Academy. Grant recipients will present their research at the 2017 NCAS Annual Meeting. Deadline for receipt of all application materials is **April 15, 2016**. Awards will be announced by **June 30, 2016**. The full set of application materials will be distributed through the NCAS listserv and is also available on the NCAS website. For more information, contact Dr. Eric Butler at ebutler@SHAWU.edu.

NC Student Academy of Science Competition

Notice by: Dr. Karen Guzman, Campbell University

The North Carolina Student Academy of Science (NCSAS) serves student in grades 6-12, encouraging and mentoring them as young scientists. Their website aptly states their approach, “Sharing Science the Way Scientists do”, as they organize science competitions across the state. These competitions are more than just an opportunity to present a paper and an oral presentation, but provide young students with mentorship as the research scientists that judge the projects interact with them, offering constructive feedback and inspiration. These competitions are held each year at the District and State levels. On April 8, 2016, the annual state meeting will be held at the North Carolina School of Science and Math in Durham. For more information, visit their website (<http://www.ncsas.org>) or the page specifically for the competitions (<http://www.ncsas.org/competitions>). I hope you will get involved and perhaps motivate a young scientist that may someday change the world!

Dues Notice

Notice by: Dr. Maria Pickering, NCAS Secretary

It's not too late to renew your membership for 2016! Technically late (due January 1), but you are forgiven—your member contributions help support programs and maintain the viability of the Academy. Please renew your membership for 2016 by visiting the membership tab on www.ncacadsci.org to pay your dues today!

Special Thanks to Our Institutional Members!

Brevard College, Campbell University, Davidson College, Duke University, Elon University, Gardner-Webb University, Guilford College, Lenoir-Rhyne University, University of North Carolina—Chapel Hill, University of North Carolina—Charlotte, University of North Carolina—Greensboro, Wake Forest University, Warren Wilson College, Western Carolina University, William Peace University.

Featured Scientist: Dr. Amy Sheck

Report by: Dr. Casey Davenport, UNC-Charlotte

Curiosity, passion, and collaboration are qualities of successful scientists and are important drivers in moving science forward. Dr. Amy Sheck embodies these elements in her career and service to the scientific community.

Growing up, Dr. Sheck loved working in the vegetable garden, but was always dismayed when various pests attacked her crops. Where did they come from? How did they find her particular vegetables in a suburban environment? These questions and her own curiosity eventually led her to becoming an entomologist and evolutionary ecologist, studying the genetic basis of diet breadth in pest insects in tobacco and cotton fields.



Dr. Sheck recognizes the importance of cultivating scientific curiosity in relevant and accessible situations in her role as a biology research and population genetics teacher for gifted high school students at the North Carolina School of Science and Mathematics (NCSSM). For example, she has shifted the case studies and examples used in class from her own expertise in genetics of pest insects to those the students were interested in, often related to human disease. Letting student interest and curiosity reign is also an important component of the biology research lab she runs, where there may be as many as 8 different projects going at once. While overseeing such variety can be challenging, Dr. Sheck strongly believes that young scientists need to cultivate and pursue their passions, because when difficulties arise, passion is what maintains interest and motivates continued progress.

In addition to encouraging her students to follow what fascinates them, Dr. Sheck also emphasizes the necessity of collaboration. One of the ways she has accomplished this has been through organizing a TEDx event at NCSSM for the past 5 years. In her own career trajectory, Dr. Sheck “discovered how powerful it is to combine expertise from different fields of study,” and finds value in the TED format for her students due to the interaction between the audience and speakers, as well as the huge diversity in attendees, ranging from scientists, lawyers, doctors, educators, and other community leaders. Additionally, students gain leadership skills by recruiting sponsors, inviting audience members, managing technology, and promoting the event. Inside the classroom and out, Dr. Sheck is a shining example of cultivating and nurturing young scientists to be successful by encouraging their curiosity, passions, and relationships with others.

For more on the TEDx-NCSSM event coordinated by Dr. Sheck, see <http://www.ncssm.edu/news/2016/01/05/tedxncssm-returns-to-campus-with-fifth-annual-conference/>

Astronomy Days

Report by: Dr. Karen Guzman, Campbell University

The NC Museum of Natural Sciences was bustling with activity as visitors and volunteers shared their love for science during this year's Astronomy Days event. The Academy set up a small room with activities, displays and demonstrations. Under the microscope, you could look at live tardigrades, vinegar eels, or get a peak at your own fingerprints. At another station, you could draw your favorite alien. If you like to accessorize, you could make a necklace of seeds that later would grow into little plants. Other activities included matching organisms to their habitat, checking your genetic makeup based on dominant and recessive traits, and wearing 3D glasses to view astrological images from NASA.



On Saturday, the museum recorded over 11,000 visitors and 370 volunteers, but statistics on Sunday's attendance was not yet available as the event wrapped up the second and final day of the event. For the Academy's role in the event, Dr. Lisa Kelly, organized over 40 Academy volunteers that greatly enjoyed staffing the activities and demonstrations.

The visitors, young and old, seemed to enjoy watching the wiggly worms (nematodes) and coloring their images of life beyond Earth, but the interactions between the visitors and the scientist-volunteers are what make this event special, as they put a face to the science and perhaps inspire the public with their enthusiasm for understanding the unknown world.



Job Openings in the Scientific Community

1. Assistant Professor — Chemistry, Brevard College, Brevard, NC

The college seeks an enthusiastic teacher to fill a tenure-track, nine month faculty position to begin in August, 2016. Successful candidates must be interested in teaching chemistry at all levels of the undergraduate curriculum, but especially at the introductory level. Review of applications begins immediately and will continue until the position is filled.

2. Assistant Professor of Biology, Chowan University, Murfreesboro, NC

The Department of Biology seeks a broadly trained biologist to teach introductory biology, biochemistry, and genetics. Review of applications begins immediately and will continue until the position is filled.

3. Division Director of Basic Sciences, East Carolina University, Greenville, NC

The School of Dental Medicine invites applications for the Division Director of Basic Science Instruction. Applications will be considered until position is filled. Visit www.jobs.ecu.edu for more information.



The North Carolina Academy of Science
Meredith College Department of Biological Sciences, 3800 Hillsborough St., Raleigh, NC 27606-5298

Phone: 919-760-8189
Fax: 919-788-0956
ncacadsci@email.meredith.edu

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Check us out on the web!
<http://www.ncacadsci.org/home.html>

The **objective** of the North Carolina Academy of Science is to "encourage the advancement of science within the state of North Carolina by promotion of scientific research and by the fostering of education in the sciences". The North Carolina Academy of Science meets these objectives by...

- Publishing a peer reviewed scholarly journal, the *Journal of the North Carolina Academy of Science*.
- Fostering and encouraging student involvement in the sciences through support of the Collegiate (CANCAS) and Student Academies (NCSAS).
- Promoting interactions among scientists and students throughout North Carolina.
- Providing a forum for exchange of ideas for solving issues important to North Carolina.

The Academy members include individuals from academia, industry, government, and all others who support the objectives and goals of the Academy.

North Carolina Academy of Science

Our Mission

The North Carolina Academy of Science promotes public appreciation of science, science education, scientific research and a meaningful role for science in public policy.

Our Goals:

Promote public appreciation of science

- Partnership with Science Centers
- Public Lecture Series
- Newsletter

Promote science education

- NCAS Webpage
- Academic Lecture Series
- NCAS Publications: Journal, Educational Publications
- Student Academy - Middle & High School

Promote scientific research

- Yarbrough and Bryden Research Grants
- CANCAS Undergraduate Research Workshop
- Presentation Opportunities at Annual Meetings
- Journal of the North Carolina Academy of Science

Promote science in public policy

- Symposia
- News Releases
- Position Statements
- Interactions with Public Officials

