

# THE CAPITAL CHEMIST



A Publication of the Chemical Society of Washington Section of the American Chemical Society

## Joint CSW/WCDG Dinner Meeting: 10/11

Join us on Thursday, October 11th, for the Joint meeting of the Chemical Society of Washington (CSW) and Washington Chromatography Discussion Group (WCDG).

### Biography

Melissa M. Phillips has been a research chemist in the Chemical Sciences Division at the National Institute of Standards and Technology (NIST) since 2008. She is involved in the certification efforts for food and dietary supplement Standard



Reference Materials (SRMs) and is a coordinator of the Dietary Supplement Laboratory Quality Assurance Program (DSQAP), the Health Assessment Measurements Quality Assurance Program (HAMQAP), the Total Nutrients Quality Assurance Program (TNQAP), and the Food Reference Materials Program. Her interests include development of new analytical methods for the determination of marker compounds, vitamins, and contaminants in foods and dietary supplements, and improving the measurement capabilities of the food and dietary supplement communities using reference materials and quality assurance programs. Melissa obtained a B.S. in Chemistry, an M.S. in Forensic Chemistry, and a Ph.D. in Analytical Chemistry from Michigan State University. Melissa is a member of the AOAC INTERNATIONAL Official Methods Board and is a fellow of AOAC INTERNATIONAL.

### **Abstract, Application of Chromatography in the Development of Reference Materials for Foods and Dietary Supplements**

Since 1990, the National Institute of Standards and Technology (NIST) has provided matrix-based food reference materials intended to support measurements for nutrition labelling. These reference materials are used in method validation and quality control, which requires NIST to utilize higher order approaches for obtaining true results. The characterization of these reference materials was enabled through the development and use of novel separations of organic nutrients, such as fatty acids, water- and fat-soluble vitamins, and carotenoids. NIST also has a long-standing collaboration with the National Institutes of Health (NIH) Office of Dietary Supplements' (ODS) Analytical Methods and Reference Materials (AMRM) Program. NIST supports the goals of the AMRM program by characterizing matrix-based dietary supplement reference materials for use in quality control, which often relies on development of unique extraction and separation approaches for each class of marker compounds in numerous botanical matrices. Most recently, NIST began expanding efforts in food safety beyond toxic metal measurements to include development of reference materials for arsenic speciation and mycotoxins and research into harmonization materials for protein food allergens and material authenticity. Each of these new areas requires development of new extraction, separation, and detection approaches. This presentation will highlight the use of separations to characterize various reference materials for dietary supplements, food nutrition, and food safety at NIST.

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### Inside this issue:

- This year's NCW theme is, "Chemistry is Out of This World!"
- Start planning your Illustrated Poem Contest for NCW
- Learn about the CSW Candidates running in this year's election
- Read about the wrap-up of the 50<sup>th</sup> year of Project SEED

## Meeting Logistics

Date: Thursday, October 11, 2018

Time: 6:00 p.m. Check-in/Social Hour

6:30 p.m. Dinner

7:00 p.m. Presentation

Location: ACS Headquarters – Marvel Hall - 1155 16th St., N.W., Washington, DC

Menu: Meal will be catered by Fresh Connections and will feature Cuban-style grilled chicken (chicken grilled in adobo sauce), served with basmati rice, tossed salad, and artisan bread. Vegetarian (Vegan) Option: veggie stir fry (marinated tofu, quickly stir-fried with hoisin sauce and special seasonings), served with jasmine rice. Dessert: cream cheese and sugar-topped cupcakes. Assorted beverages will be provided.

Cost: This program is co-sponsored by CSW and WCDG. There is no charge to attendees for the meal.

RSVP by noon on Tuesday, October 9, to [csw@acs.org](mailto:csw@acs.org) (preferred) or by phone (messages only: 202.659.2650). Please provide the names in your party when you RSVP, and if you wish to have the meat or vegetarian option. The public is invited to attend. You may attend the talk only, but reservations are appreciated. If you need any further information or would like to make a reservation, please contact the CSW office by email at [csw@acs.org](mailto:csw@acs.org) or by voicemail at 202.659.2650.

Parking: Parking is available in nearby commercial parking garages. Please be aware that garage closing times vary. Parking is also available on the street after 6:30 pm, but be aware that most parking meters are in effect until 10:00 pm and may be limited to 2 hours. You should check the individual meters for details and payment methods as some are no longer coin-operated.

Metro: Blue/Orange/Silver Line (McPherson Square or Farragut West) or Red Line (Farragut North)

## Blast Off for 2018 National Chemistry Week!

This year's National Chemistry Week (NCW) theme is "Chemistry is out of this world!" focusing on astrochemistry. You will learn more about the chemistry of outer space in this year's issue of *Celebrating Chemistry*. Outer space is mostly empty, with some objects, such

as planets, moons, stars, asteroids, and comets, scattered throughout it. Join us as we learn about the stars, the Sun, and what it takes to live in outer space. The electronic version of the *Celebrating Chemistry* Newsletter is available from the ACS website ([www.acs.org/ncw](http://www.acs.org/ncw)).



Each year the American Chemical Society's NCW campaign reaches millions of people with positive messages about the contributions of chemistry to their daily lives. NCW is a community-based annual event that unites ACS local sections, businesses, schools, and individuals in communicating the importance of chemistry to our quality of life. It is the one time during the year that chemists, regardless of background, unite with the common goal of spreading the word that chemistry is good for our economy, our health, and our well-being.

The Chemical Society of Washington (CSW), along with the ACS Office of Community Activities, is planning several NCW events. Volunteers are needed for these outreach activities. We are in the early stages of planning the events, so watch for additional information in the October *Capital Chemist*, on the CSW website.

You can contribute to the NCW campaign by performing chemical demonstrations at a neighborhood school (consider having an illustrated poem contest!); conducting hands-on activities with children at museums, malls, or libraries; or writing articles or letters to the editor of your local paper. If you would like to lead an activity at

your local school or library, CSW will provide you with some grade-specific materials to hand out to the students, as well as some simple demonstrations that you can use.

More information about local activities will be posted on the CSW website ([www.capitalchemist.org](http://www.capitalchemist.org)) as they become available. For further information, or to volunteer, contact the CSW NCW coordinator, Kim M. Morehouse via e-mail at [kim.morehouse@fda.hhs.gov](mailto:kim.morehouse@fda.hhs.gov), or by phone at 240-402-1889 (day) or 301-384-7311 (evening).

## 2018 NCW Illustrated Poem Contest Chemistry is Out of This World

The Chemical Society of Washington Local Section of the American Chemical Society (ACS) is sponsoring an illustrated poem contest for students in Kindergarten through 12th grade.

Contest Deadline: Monday, October 29, 2018

Prizes: The winning entry for each grade category will receive a chemistry tee shirt

Contact: Kim Morehouse, [kim.morehouse@fda.hhs.gov](mailto:kim.morehouse@fda.hhs.gov)

[Complete the attached form to submit with your entry.](#)

Winners of the Chemical Society of Washington Local Section's Illustrated Poem Contest will advance to the National Illustrated Poem Contest for a chance to be featured on the ACS website and to win prizes!

Write and illustrate a poem using the NCW theme, "Chemistry is Out of This World." 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

Possible topics related to space chemistry include:

- Light
- Stars
- Atmosphere
- Spectrum
- Planets
- Gases
- Supernova
- Ultraviolet

Entries will be judged based upon:

- Artistic Merit - use of color, quality of drawing, design, and layout
- Poem Message - fun, motivational, inspiring about yearly theme
- Originality Creativity - unique, clever and/or creative design
- Neatness - free of spelling and grammatical errors

Contest rules:

- All poems must be no more than 40 words, and in one of the following styles to be considered: Haiku, Limerick, Ode, ABC poem, Free verse, End rhyme, and Blank verse.
- Entries are judged based upon relevance to and incorporation of the NCW theme, word choice and imagery, colorful artwork, adherence to poem style, originality and creativity, and overall presentation.
- All entries must be original works without aid from others. Poems may be submitted by hand on an unlined sheet of paper not larger than 11" by 14" or scanned and sent via email. Illustrations may be



created using crayons, watercolors, other types of paint, colored pencils, or markers. The illustration may also be electronically created by using a digital painting and drawing app on a computer, tablet, or mobile device.

- The text of the poem should be easy to read and may be typed before the hand-drawn or digital 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.
- No clipart or unoriginal images can be used.
- Only one entry per student will be accepted; all entries must include an entry form. If the illustration is created using a digital painting or drawing app, the name of the program must be included on the entry form.
- 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.

## Chemistry Day at the Smithsonian National Air & Space Museum

Chemistry Day at the Smithsonian National Air & Space Museum  
600 Independence Ave SW, Washington, DC 20560  
Tuesday, October 23 (Mole Day!)  
10 a.m. – 3 p.m. (volunteer hours 9 a.m. – 4 p.m.)

ACS is taking over Smithsonian's National Air & Space Museum for a full day of hands-on activities, speakers, and stage demonstrations to teach museumgoers and middle school students about the importance of chemistry, all in the name of National Chemistry Week and this year's theme "Chemistry is Out of This World". Are you interested in running hands-on activities or distributing giveaway bags? If so, you can sign up to volunteer using [this online form](#). Questions, contact [outreach@acs.org](mailto:outreach@acs.org).

## 2018 Electronic Voting Procedures / Meet the Candidates

The CSW Nominations and Elections Committee is proud to present an outstanding slate of candidates for the 2018 election. Candidates are running for positions as Officers, Councilors, and Managers with terms beginning in 2019.

Detailed candidate information, including biographies and statements, are listed in alphabetical order for each office on the CSW website. Candidate statements will also be available with your ballot. Take a look and get to know the people running!

### [View the Candidate Statements](#)

By participating in our annual election you will play an important role in deciding the direction of the Chemical Society of Washington. Voting will begin on or before October 15 and is restricted to members of the Chemical Society of Washington.

## How to Vote

### Electronic Voting:

If you are a full CSW member and have a valid e-mail address on file with The American Chemical Society, then on or about October 15 you should receive an email with instructions for accessing the secure voting website, along with a unique voter ID code. If your email account has strong spam filters, please “white list” [elections@vote-now.com](mailto:elections@vote-now.com) and [election.ballot@votenow.com](mailto:election.ballot@votenow.com) in order to ensure that you receive your voter ID code.

### Mailed Ballots:

CSW members without an email address in their ACS member record, those who have opted out of CSW email communications, or whose ballot email is returned as undeliverable will receive a paper ballot package with voting instructions and candidate statements.

### Voting deadline

The deadline for voting is November 15, 2018 at 11:59 p.m. ET. The online voting system will shut down at exactly 11:59 p.m. Eastern Time on November 15, 2018.

Results will be announced on the Capital Chemist website and in the December Newsletter Issue.

We want CSW to be representative of its members, but we need your help! This is your chance to make your voices heard! Thank you in advance for your participation and if you have questions about the voting process, or if you did not receive a ballot by October 22, please do not hesitate to contact us at [csw@acs.org](mailto:csw@acs.org).

## 50th Anniversary of Project SEED Comes to a Close

The 50<sup>th</sup> Anniversary of Project SEED came to a close on August 25, 2018, with the annual Research Symposium. Eight Project SEED I students presented posters, while 2 Project SEED II students gave oral presentations. CSW members volunteered to judge the posters, and while the competition was quite tight, Mr. Kevin Hu was selected as the first place winner. Mr. Hu presented his work regarding the coupling of gold nanorods and fluorescein isothiocyanate, which assists in the detection of gold nanorods during permeability and diffusivity measurements. Professor Marie-Christine Daniel, Mr. Hu's advisor, and group member Ms. Chanda Lowrance from University of Maryland – Baltimore County attended the symposium to support her stellar Project SEED fellow. Second place was awarded to Ms. Darlin Paredes, who presented on thermal analysis of paper degradation, a topic of significant importance to the Library of Congress, where she spent the summer. Dr. Andrew Davis, who hosted 2 Project SEED I students this summer, was in attendance to support his fellows as well.

Project SEED's 50th Anniversary was certainly a year to remember, with wonderful fellows and fabulous volunteers, including graduate students from Georgetown University. CSW wishes to express its gratitude to all those who helped make this summer one to remember.

If you would like to support Project SEED in the future, please reach out to us at [csw@acs.org](mailto:csw@acs.org). Volunteers are always welcome, and financial contributions are appreciated in the form of donations to the Turner Fund. All proceeds go directly to financial support for Project SEED Fellows.



# Washington Statistical Society to Sponsor Statistics Education Seminar on October 17<sup>th</sup>

**Title:** Combining GIS and Statistics: Data Visualization to Communicate Findings

**Date/Time:** Wednesday, October 17, 2018 4:00–5:30 p.m. --

Informal reception to follow at approximately 5:45 p.m. at East Street Café on the mezzanine level of Union Station.

**Speaker:** Kristen Hocutt, Solution Engineer, ESRI

**Chair:** Martha McRoy, Research Methodologist, Pew Research Center

**Sponsors:** WSS Statistics Education Committee, WSS Methodology Section and WSS Defense & National Security Program Committee

**Location:** Bureau of Labor Statistics Janet Norwood Conference Center, Rooms 7/8 (Please check board in case of change of room)

BLS is located at 2 Massachusetts Avenue, NE. Use the Red Line to Union Station. Parking in the area of BLS is available at Union Station. For parking information see <http://www.unionstationdc.com/parking>. No validation is available from BLS for reduced parking rates.

**RSVP:** To be placed on the seminar attendance list at the Bureau of Labor Statistics, you need to e-mail your name, affiliation, date of the seminar and seminar name to [wss\\_seminar@bls.gov](mailto:wss_seminar@bls.gov) (underscore after 'wss') by noon on Friday, October 12. Please bring a photo ID to the seminar.

**Abstract:** A Geographic Information System (GIS) provides a powerful collection of tools to help organizations manage, explore, analyze, and present data. When combined with spatial statistics methods in ArcGIS, the approach helps analysts make full use of geographic context when generating the information that helps organizations make better decisions. In this talk, we discuss how solving spatial problems related to classification, clustering, and regression helps organizations in the domains of business, public health, and natural resources. Specific examples cover the use of Kriging, Density-based Clustering, and integrating your own R-driven processes with the R-ArcGIS Bridge. Applying these workflows can be the first step to help you explore spatial data relationships and design the models that help determine the right course of action in your research and organization. For the majority of this talk, only a knowledge of introductory statistics will be assumed.

**Remote Access:** WebEx link:

<https://dol.webex.com/dol/j.php?MTID=m52ddc873c58c90ab5bea43eb9a0dfb16>

Note: Particular computer configurations might not be compatible with WebEx

**For audio:** Call (866) 865-9536 (Toll Free) or (517) 966-0857

Attendee access code: 744 124 3

**POC email:** Carol Joyce Blumberg, [cblumberg@gmail.com](mailto:cblumberg@gmail.com)

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- [www.mboservices.net](http://www.mboservices.net)
- <http://membership.acs.org/W/WashDC/career.html>



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The **Chemical Society of Washington (CSW)** is the local ACS Chapter for the Washington, DC area and serves approximately 4,000 members.

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[www.facebook.com/ACSCSW](http://www.facebook.com/ACSCSW).

## CSW Calendar of Events

October 11: CSW Meeting

October 17: Statistics Education Seminar

October 21-27: National Chemistry Week

October 23: Mole Day! ☺

October 23: Chemistry Day at the Smithsonian

October 29: Illustrated Poem Deadline

November 8: CSW Meeting

November 15: Voting Deadline for CSW Election

November 28: Board of Managers Meeting

December 15: CSW Meeting