

# SAS SPECTRUM eNEWS

## **SAS National Meeting during SciX 2017 Reno, Nevada October 8–13, Grand Sierra Resort**

SciX 2017 and the SAS National Meeting are coming soon to the Grand Sierra Resort (GSR) in Reno, Nevada. It is one of the must attend events for SAS Members and, as always, there will be multiple SAS events to be held at SciX.

**Annual SAS Member Event:** Sunday, October 8, 2017, 12:00–4:00 PM, the Shasta Room at GSR. Comedy Hypnotism. Can you be hypnotized? This is your chance to find out or you can just watch as some of your fellow SAS members go under during this hypnotizing show! After the show, follow us to the Bunker for pick-me-ups, food, and games! RSVP by September 22, 2017 to [sasadmin@s-a-s.org](mailto:sasadmin@s-a-s.org) or call us at 301-694-8122.

**Student Poster Showcase and Awards:** Sunday, October 8, 2017, 7:00–9:00 PM. (during the SciX mixer). Please join us in celebrating the future of spectroscopy as SAS students showcase their research and compete for the annual SAS Student Poster Awards.

**Student Event:** Monday, October 9, 8:00–11:00 PM at the Sierra Bay Aqua driving range, just out the south entrance of the GSR. Students, this is your chance to network with one another, so be sure to join us for food and drinks!

**Wine and Cheese Awards Reception:** Tuesday, October 10, 2017 at 7:30 PM at the Grand Sierra Resort, Tahoe Ballroom. SAS cordially invites all SAS members to join us at our annual Wine and Cheese Awards Reception. This is a free member's only event with food and drinks. Doors will open to non-members at 9:00 PM with limited refreshments.

If you would like to become a member, please visit SAS booth 82 at SciX, or contact the SAS Office at (301) 694-8122 or [sasadmin@s-a-s.org](mailto:sasadmin@s-a-s.org).

## **Promoting Your Website and SAS**

Many of our members have their own personal or business websites, which contain many useful information and links. One such example is from our member Richard Crocombe's website:

<https://www.spectroscopyconsulting.com/resources>

SAS encourages members to use their own website to promote SAS. If you have websites with useful spectroscopy resources, please let us know so that we can compile such a list to share with the rest of the SAS members.

## **Purdue Symposium**

The Symposium on Applied Spectroscopy and Photonics 2017 at Purdue University is the 1st annual symposium organized by Purdue University Chapter of Society for Applied Spectroscopy (PUCSAS). This annual one-day symposium on advanced fundamental and applied Spectroscopy and Photonics addresses cutting edge Photonics and Spectroscopy techniques including Laser Induced Breakdown Spectroscopy (LIBS), Raman Spectroscopy, Single Photon Spectroscopy, BioPhotonics, Fluorescence, Laser Spectroscopy, Astronomy, Laser Machining to name a few. The symposium will be organized on Sep 16th, 2017 at Wilmeth Active Learning Center, Purdue University from 11 AM–5 PM.

Our key note lectures from internationally renowned scientists, and accompanying poster sessions encourage discussion on the latest research in the field of Photonics and Spectroscopy. (Final Program to be updated soon)

Dr. Roger Wiens, Los Alamos National Laboratory, Exploring Mars with Curiosity and Laser Spectroscopy  
Dr. Suvrath Mahadevan, Department of Astronomy and Astrophysics, Penn State, Next-Gen Planet Hunter  
Dr. Ji-Xin Cheng, ECE, BME, Boston University, Revisiting the "little animals" under a chemical microscope  
Dr. Sebastian Wachsmann-Hogiu, Department of Bioengineering, McGill University,  
Dr. Gabriel Popsecu, Department of Electrical and Computer Engineering & Bioengineering, UIUC  
Dr. Christopher Goldenstein, Mechanical Engineering, Purdue University  
Dr. Yung C Shin, Mechanical Engineering, Purdue University  
Dr. Masanobu Yamamoto, Basic Medical Sciences, Purdue University and Miftek Corp, Laser Induced Photon Spectroscopy (LIPS) by differential Geiger-mode silicon photomultiplier

[Register](#) today. Space is limited! RSVP us by Sep 9th to receive free Lunch! registration is free!

## APACT 18

APACT 18 Conference will be held on 25–27 April 2018, in Newcastle, England. For full details, see <https://apact.co.uk/>.

### SAS Member Profile: Don Clark

The SAS Newsletter Committee asked Don Clark, an active organizer and participant in numerous UK-based STEM outreach activities, to share his experiences with us.

**Background:** Don Clark is an experienced chemist currently working at Pfizer in Discovery Park, Kent, UK. He completed a Bachelor of Science in chemistry at the University of Aston in Birmingham, which sparked his interest in analytical chemistry.

His first job after university was at Upjohn Pharmaceuticals, where he developed QC methods for new products using a variety of various analytical techniques. Upjohn provided him with the opportunity to complete a Master of Science degree, which he did part-time at Birkbeck College, University of London, in the field of analytical chemistry. During the mid-1980s, spectrometers were not operated with powerful PCs, but instead controlled by directly inputting dozens of commands; Don was known by his colleagues as the "Wizard of the Runes" for his knowledge of these commands. In 1990, he joined Pfizer with an opportunity to specialize in vibrational spectroscopy and has been employed there ever since.

**Involvement with Professional Societies:** During the mid 1980s, Don became active with the UK-based Infrared and Raman Discussion Group (IRDG) and rubbed shoulders with some of the big players in the spectroscopy community, such as Norman Shepherd, Harry Willis, John Chalmers, and Geoffrey Dent. Don attended his first FACSS meeting in the mid 1990s and it was there he was introduced to the Society for Applied Spectroscopy. He has made efforts to return to SciX every couple of years and says he "values the opportunities to meet new people and to see recent developments in the field."

**Outreach Involvement:** When not working on tasks at his day job, Don is interacting with his community through a variety of STEM outreach initiatives; opportunities are brought to his attention from his role as a STEM ambassador (<https://www.stem.org.uk/>). Furthermore, Pfizer provides a budget to an in-house Community and Academic Team (CAT), and this group develops initiatives to support the development of the next generation of scientists. Don has been involved with this group and hopes its efforts will attract students from different ages and backgrounds into STEM careers.

In terms of actual projects, one of the first outreach initiatives Don was involved with is called "Lab in a Box", a program that allows schools to borrow high specification equipment, at no cost, for use in the classroom. To get the program off the ground, the needs of teachers were surveyed and efforts were made to obtain the necessary equipment. Training sessions for the teachers, called "Twilight training" because they happened after the school day, were organized to demonstrate how the instruments work. The sessions also provided teachers with hands-on experience and the confidence to develop their own experiments based on their needs. The scheme and training is publicized and supported through HubSEE (<http://www.kentandmedwaystem.org.uk/>), his local STEM organization with whom he has built a strong relationship.



The first kit purchased for the "Lab in a Box" program was a simple polymerase chain reaction (PCR) instrument, coupled with easy-to-run gel electrophoresis systems capable of analyzing the PCR products. As reagents tend to be cost-intensive for such experiments, further additions to the "Lab in a Box" collection were made based on what can be bought and the effectiveness such a kit could have. Further additions included an ATR FT-IR spectrometer (for identifying functional groups), a "Space Lab in a Box" consisting of radio wave communication with the FUNcube (<http://www.funcubedongle.com/>) educational satellite, a series of digital microscopes (with rechargeable batteries), and the most popular, a set of thermal cameras. Each interested teacher is given a particular "Lab in a Box" kit for a one or two-week loan period, and the scheduling is administered for each through a "super-user school" who hold the equipment.

Another initiative that Don has been involved with is called "Community Lab". He believed it would be beneficial, for both research and educational purposes, to create a lab space where more advanced instrumentation could be accessed by groups with different backgrounds. Serendipity then took over, as a chance encounter with a colleague in a hallway enabled Don to collaborate with a chemical sciences laboratory in East Kent College (another occupant in the Discovery Park space). Don successfully secured funds from a Royal Chemical Society Analytical Chemistry Trust Fund grant and acquired advanced instrumentation (e.g., benchtop NMR and FT-IR spectrometers). Glassware, rotary evaporators, and other laboratory goods were also acquired second hand from various surrounding companies, or from suppliers who provided them with educational discounts. While the "Community Lab" is still in its infancy, Don hopes it will take off in the coming years; at this point, numerous groups have done quick isolation/identification experiments with azo dyes, polymers, and other real-world compounds. The challenges of the lab so far have been finding the time and personnel to manage the space and perform proper risk assessments of any experiments that may use uncommon chemical species.

While Don continues working on developing these programs, he still finds the time and energy to introduce new initiatives. Most recently, Pfizer UK has developed a "Science in a Box" activity-based program, aimed at providing 13- to 14-year-old students with an understanding of the pharmaceutical industry and the various jobs that are required to bring a medicine to market. Thus far, activities include a simple introduction to mass spectrometry, NMR, and IR spectroscopy, enabling hands-on structure elucidation of a molecule, and the use of wooden building blocks to introduce and explore polymorphism. Also included in this program is the opportunity to work through a mock clinical trial and gain an understanding of good manufacturing practice.

Don credits his career path with being influenced heavily by scientists who went the extra mile; he believes it is his responsibility to return the favor for the next generation of scientists. Don would like to thank the following organizations: Pfizer and Discovery Park, Stanburys, Thermo Scientific, Asynt, HubSEE, and all of the active STEM ambassadors he works with.

*Don is the CSI Manager (Chemistry and Spectroscopy Investigations) in the Materials Characterization Team at Pfizer Global Supply, stationed at Discovery Park in Sandwich, Kent, UK. For any members who are interested in learning more about his outreach experience, or advice on how to start something similar in their own communities, you can contact him at [don.a.clark@pfizer.com](mailto:don.a.clark@pfizer.com).*

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## Society for Applied Spectroscopy's 60th Anniversary

We are currently accepting donations in support of our 60th Anniversary Party in Atlanta, Georgia, during SciX 2018! Please reach deep in to your pockets to help make this a memorable affair. You can do this on the [SAS website](#) or call us at 301-694-8122.

**Do you have something spectroscopy-related you want to discuss in the newsletter?  
Or something that will help our membership such as career tips or application tips?  
Please let us know by emailing [xchen4@dow.com](mailto:xchen4@dow.com).**

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