SAS SPECTRUM eNEWS

Geraldine Richmond Receives ACS Highest Honor

Congratulations to SAS Honorary Member and Fellow Geraldine "Geri" Richmond, presidential chair in science and professor of chemistry at the University of Oregon, for receiving ACS' highest award, the 2018 Priestley Medal. The award was established in 1922 and is named after Joseph Priestley, the discoverer of oxygen. The Priestley Medal is commonly awarded to scientists who are advanced in their fields, as it is intended to commemorate lifetime achievement. Previous winners include Nobel Laureates Linus Pauling (1984) and Ahmed Zewali (2011) among many other notable chemists. The award recognizes Richmond for her "pioneering contributions to our understanding of the molecular properties of liquid surfaces and her extraordinary service to chemistry on the global level.

The SAS Newsletter Committee contacted one of Professor Richmond's former students, Adam J. Hopkins, for his perspective on her contribution to the field of spectroscopy and the broader scientific community:

> Professor Geraldine "Geri" Richmond (a SAS Fellow) of the University of Oregon has been named the Priestley Award Medalist for 2018 by the American Chemical Society for her studies of aqueous interfaces and advocacy for chemistry around the world. Her groundbreaking work using nonlinear techniques, initially second harmonic generation (SHG) and then vibrational sum-frequency (VSF) spectroscopy, has shaped our fundamental understanding of surfaces and interfaces. The computational and experimental efforts from her prolific group of graduate students, undergrads, and post-docs continually furthers the way that both academics and industrial scientists and engineers understand interfacial structures and dynamics.
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> Beyond doing groundbreaking fundamental research, Geri requires her students to understand spectroscopy. It is not enough to be able to recite the equations for SHG and VSF; you must absorb them and internalize them. Furthermore, one has to know both Raman and IR spectroscopy to be able to handle the rigors of VSF. When I was in her group in the 2000s, we had weekly meetings where the students and postdocs worked our way through the likes of Shen, Fayer, and Long.
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> Geri also understands that being a spectroscopist requires more than being able to turn on an instrument and press 'Go'. One should be able to be able to build and troubleshoot complex laser systems; many a graduate student has spent long days and nights tweaking a master oscillator to get signals that others could not for some critical data.
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> Of course, education and outreach are critical components of one's time in Geri's group; she founded COACh (https://coach.uoregon.edu/about/) in 1998 and over 18,000 women and advocates have attended the career development workshops. Her passion for teaching and creating equality within science is something that you cannot help but become a little infected with. One year, she called a group meeting do an implicit bias test; it was an eye-opening experience for everyone and certainly changed the way I approached my students; and later my career and social choices.
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> This focus on the fundamentals—understanding the theory, the equipment, and the requirements to make very hard measurements—combined with encouraging each of us to look at the implications of our behavior and make a connection to humanity is what makes Geri a great scientist and an asset to SAS. Former lab members are teachers, research professors, semiconductor process engineers, and laser spectroscopists and more. Every one of us carries a passion for learning and for light out into the world to help prepare the next generation of spectroscopists.

—Contributed by Adam J. Hopkins
(Geri's student from 2002 to 2010)
Spectroscopy Product Manager at Metrohm USA

Diane Parry Receives FACSS Distinguished Service Award

Congratulations to Former SAS President and current SAS Treasurer Diane Parry for being awarded the 2017 FACSS Distinguished Service Award. The award is presented by the FACSS Governing Board and is given to an individual who has demonstrated exceptional, long-term service to the FACSS organization. Diane has served in numerous leadership roles within the SAS and is certainly an exceptional choice.

Newsletter Committee Members

After searching high and low, we have several new members joining our Newsletter committee. Now our committee has five members as listed.

Team member	Country of origin	Undergraduate school	Graduate school	Favorite spectroscopy	Current employment status	Hobby
Chad Atkins	Canada	University of Waterloo	University of British Columbia	IR, Raman	Just graduated. Looking for opportunities	Travel, surfing, hockey, yoga
Xiaoyun (Shawn) Chen	China	Tsinghua University	University of Michigan	IR, NIR, Raman, SFG	Dow Chemical	Jogging and reading and raising kids
Mark Mabry	USA	Miami University of Ohio	West Virginia University	IR, Raman	Cobalt Light Systems	Sailing
Rachel Masyuko	Kenya	University of Illinois at Urbana Champaign	University of Notre Dame	IR, NIR, Raman, LC-MS	Archer Daniels Midland Company	Traveling, hiking, music and reading
Luisa Profeta	USA	University of Dallas	University of South Carolina	IR, Raman, GC-MS, XRF	Field Forensics, Inc.	Strength training, running, cooking

Figure 1. (a) Rachel Masyuko, (b) Mark Marbry, (c) Chad Atkins, (d) Luisa Profeta, and (e) Xiaoyun (Shawn) Chen.

Rachel Masyuko (Figure 1a) began her journey in spectroscopy as an undergraduate researcher at the University of Illinois at Urbana Champaign. Upon completion of her undergraduate work, she then moved on to her graduate studies at the University of Notre Dame, Indiana working with Dr. Paul Bohn. Her dissertation work focused on utilizing Raman imaging as a tool to study complex plant and microbial communities. During her time at University of Notre Dame, Rachel was awarded the Coblentz Society Student award. It was also during this time that she became a member of both the Society for Applied Spectroscopy and the Coblentz Society. While in graduate school, she also volunteered as a recruiter for the graduate school and worked with a team of other students to help with the recruitment and retention of minority students. Upon completion of her Ph.D. studies, Rachel accepted a senior analytical chemist with Archer Daniels Midland Company in Decatur, Illinois. In this role, she utilizes Raman, NIR, and mid-IR to develop various calibration models to afford online process monitoring in several of the production facilities within the company. She also performs LC-MS method development and routine analyses to support the various projects in development.

In her free time, she enjoys traveling to different parts of the world, hiking, reading, and music.

Mark Mabry (Figure 1b) is a molecular spectroscopist with 20 years of industrial experience. Mr. Mabry graduated from West Virginia University with a master's degree in chemistry in 1992. His thesis work involved the study of solvent-solute interactions using solvatochromic shifts in FT-IR and Raman spectra. After graduate school, he worked briefly as an environmental chemist before taking a position as an analytical research scientist with Rayonier, a chemical cellulose manufacturer. In this role, he used FT-IR microscopy to investigate product contaminants and worked to develop FT-Raman methods to characterize cellulose and cellulose based polymers, and participated on a PAT team to implement a NIR method to monitor process variables. Next, Mr. Mabry held the position of FT-IR, Raman, and microspectroscopy applications chemist for Thermo Fisher Scientific. Based on his exposure to the pharmaceutical industry, he transitioned to a position as a product development scientist for Pfizer Consumer Healthcare in Richmond, Virginia, where he has lived since 2004. Mr. Mabry retuned to a 100% spectroscopy focus in 2012 as a field applications scientist with Rigaku Raman Technologies and now as applications scientist and service engineer for Cobalt Light Systems, Inc., based in Reston, Virginia.

Mr. Mabry has been actively involved with both the Society for Applied Spectroscopy and the American Chemical Society. He served the SAS as the Tour Speaker Coordinator for 2014. He was also the Exposition chair for the 2011 Southeast Regional ACS meeting (Richmond, VA).

In his spare time, Mr. Mabry is an avid sailor who enjoys racing on a nearby lake and sailing on the Chesapeake Bay with friends and family.

Chad Atkins (Figure 1c) joined the SAS via a free student membership offered at SciX 2012 in Kansas City, Missouri. He had little experience with professional societies and wasn't sure what benefits the student membership would provide. The next year, he was inspired to get involved and was elected as the SAS Student Representative (2013–2015). In this role, he organized student events at SciX and Pittcon, communicated Society news directly to the student membership, and highlighted the research of several students through profiles in the monthly newsletter. In August 2016, he represented the Society as a student ambassador at the International Conference on Raman Spectroscopy in Fortaleza, Brazil. He recently completed his Ph.D. at the University of British Columbia, Vancouver, where he developed expertise using vibrational spectroscopy to investigate biological analytes. He became actively involved in outreach activities during his degree and enjoys maintaining an active lifestyle. Chad enjoys hearing from scientists in the spectroscopy community, so if you want to pitch an idea for a story or submit a suggestion for a profile in the newsletter, you can contact him through email (catkins@chem.ubc.ca) or find him on Twitter (@chemchad).

Luisa Profeta (Figure 1d) became an SAS Student member in 2004 shortly after joining Michael "Micky" Myrick's research group at the University of South Carolina to work on her Ph.D. in Physical Chemistry. Through her time in school, her involvement with SAS, and its technical section, the Coblentz Society continued in conjunction with her work on multivariate optical computing (MOC) focusing on near-infrared applications. Upon starting her postdoctoral research position at Pacific Northwest National Laboratory working on the expansion of the quantitative infrared database, she became more active as a SAS and Coblentz Society board member. Luisa's subsequent moved to MRIGlobal (formerly Midwest Research Institute), Alakai Defense Systems, and most recently to Field Forensics, Inc. have allowed her to remain active in researching and using IR, Raman, GC-MS, XRF and other spectroscopic applications for different government clientele. Subsequently, she's also remained active in the SAS, Coblentz, and FACSS communities, serving as a board member, secretary, serving as the SciX 2014 General Chair in Reno, Nevada, and assisting with the SAS Newsletter. She has also been promoting applied spectroscopy at the SPIE.DCS meeting as a co-Conference Chair for the "Next Generation Spectroscopic Technologies" along with other SAS colleagues. Luisa appreciates the camaraderie and networking help that SAS has provided in her career, and tries to give back in kind. She encourages students to touch base with her at lprofeta@fieldforensics.com or luisaprofeta@gmail.com about questions relating to career direction and work–life balance.

When she's not traveling for work, or making sure that her three young children (ages 5, 3, and 1) are not burning down her house, Luisa dabbles in a variety of activities, including, but not limited to: Strength training, running, cycling, swimming, gardening, playing Settlers of Catan, cooking, crochet, and traveling for leisure to new places.

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.
