

### **SEPTEMBER 2024 NEWSLETTER**



### Noteworthy Events at SciX 2024 You Won't Want to Miss

Don't miss out! The early bird registration deadline is 9 September, 2024. As a Society of Applied Spectroscopy (SAS) member, you qualify for a special discount. Register now and save! Hope to see you there!

### Sunday, 20 Oct.

Networking Opportunities at Scientific Conferences: A Guide for Emerging Scientists

5:15 - 6:00 PM, Ballroom A

Keynote Session: The Foundations of AI: Exploring the Spectrum 6:00 - 7:15 PM, Ballroom A

Student Poster/SciX Opening Mixer Event 7:15 - 9:00 PM, Ballroom B

### Monday, 21 Oct.

Coblentz Society Annual Members Meeting – Breakfast! 7:00–8:30 AM, location TBA (<u>registration requested</u>)

Coblentz Society Speed Mentoring

12:00–1:30 PM, location TBA (registration requested)

Showcasing Career Paths in the Spectroscopic Sciences (Organized by SAS Early Career)

1:30-3:10 PM, Room 303

Openining Exhibit Hall Reception 5:30–7:30 PM, Exhibit Hall B

SAS Student & Early Career Event (registration required, see the flyer below) 8:00 PM –12:00 AM, Raleigh Flying Saucer

### Tuesday, 22 Oct.

Celebrating Women in Spectroscopy: A Networking Breakfast (registration required, see flyer below)
7:00–8:30 AM, Marriott private dining room

### Headshots

12:00–5:00 PM, Exhibit Hall between the SAS (114) and Coblentz Society (106) booths

Exhibit Happy Hour 5:30–7:30 PM, location TBA

SAS Awards Presentations 7:30–8:30 PM, location TBA

SAS Members' Wine and Cheese Reception 8:30–11:00 PM, location TBA

### Wednesday, 23 Oct.

NESAS Lester W. Strock Award Session 1:30–3:10 PM, Room 301B

All in the Family: A Peaceful Gathering of Hieftje Descendants 3:50–5:30 PM, Room 305B

Coblentz Society Members-Only Networking Event (tickets required) 7:00–10:00 PM, The Flying Saucer

### Thursday, 24 Oct.

SAS and Applied Spectroscopy William F. Megger Award Award *and* Coblentz Society Clara Craver Award Plenaries 8:15–9:30 AM, Ballroom A

SAS and Applied Spectroscopy William F. Meggers Award Session 10:30 AM–12:10 PM, Room 301B

Shootout at Hieftje's Atomic Spectroscopy Corral Session 10:30 AM–12:10 PM, Room 305B

Coblentz Society Clara Craver Award Session 1:30–3:10 PM, Room 301B

Early Career Research in Forensic Sciences Session 1:30–3:10 PM, Room 303

Shootout at Hieftje's Molecular Spectroscopy Corral Session 1:30–3:10 PM, Room 305B

SciX Gala 7:00–11:30 PM, Ballroom B&C

Gloria Story, 2024 SAS President







# PLEASE JOIN US AT THE CELEBRATING WOMEN IN SPECTROSCOPY:



**NETWORKING BREAKFAST** 

AT SCIX 2024 ON OCTOBER 22ND, 2024 7:00 AM - 8:30 AM

MARRIOTT PRIVATE DINING ROOM

**Keynote Speaker:** 

Anita Mahadevan-Jansen, Professor at Vanderbilt University

&

**Roundtable Networking with Mentors** 

Register for SciX and the Breakfast at https://scixconference.org/



















### Dr. Regan Silvestri Wins Technical Educator Award!

Congratulations to a member of the Cleveland section of The Society of Applied Spectroscopy (SAS), Dr. Regan Silvestri, who has won the <u>Cleveland Technical Societies Council (CTSC) 2024 Technical Educator Award!</u>

The Technical Educator Award is bestowed annually upon an individual who has made a substantial contribution to technical education methods and/or is considered to uniquely inspire students to pursue technical fields. This individual has demonstrated outstanding performance, creative abilities, technical competence, and integrity in the practice of his or her technical discipline.

Dr. Silvestri continually demonstrates commitment to professional development in himself and in his students. He is an active member of SAS and the American Chemical Society (ACS). He involves his students in these organizations by bringing them to the local meetings, giving the students a means to network and grow in the technical community. He has established an active and engaged research group and supports the students to present their work at local conferences, which brings unique opportunities to the community college students. Two of his students have won the prestigious SAS/ACS Ernst B. Yeager Award for outstanding undergraduate research in spectroscopy.

Dr. Silvestri shares his passion and enjoyment of science in fun and engaging ways; whether it be by having the student DJ music prior to Sciencepalooza presentations, offering informal conversation and question sessions with speakers after talks, or setting up radio interviews with local radio stations to promote the webinars and the science presented.

In addition, Dr. Silvestri responds to the changing educational needs of the community. In 2009, he took control of the SAS "Spectroscopy for Kids" show and added a number of chemistry demonstrations. The new and improved "Magical Science Show" has reached over 27,000 students in Northeast Ohio. The show was featured on the 2019 "Inspiring Young Girls to Pursue Science" broadcast on a local TV channel and presented at the 2022 Cleveland Cavaliers STEM Day and presented in 2023 at Progressive Field before a Cleveland Guardians baseball game to amaze his largest crowd yet.

The real winners of this Technical Educator Award are the students who Dr. Silvestri helps lead to success in both science and in life.

### Coleen McFarland



## The Magic of Projection Mapping: Turning Ordinary Objects into Extraordinary Experiences

Imagine walking down the street at night, and suddenly, the building beside you comes to life. Its walls ripple with waves of color, windows morph into eyes, and the entire structure transforms into a living, breathing entity telling a story through light and sound. This is not a scene from a science fiction

movie—it's the captivating world of projection mapping, a technology that turns ordinary objects into dynamic canvases for art and storytelling.

At its core, projection mapping is a technique that uses light projectors to cast images, videos, and animations onto physical objects, transforming them into immersive, interactive experiences. Unlike traditional video projection, which usually involves projecting onto a flat screen, projection mapping adapts to the shape, texture, and contours of three-dimensional surfaces. These surfaces could be anything from a small sculpture to an entire city skyline.

The magic begins with specialized software that creates a virtual model of the object to be projected upon. This software "maps" the object's surface, pinpointing where the projector needs to place each pixel of light. When the projector beams the image onto the object, the light wraps around its curves and edges, creating an illusion that the object itself is changing shape or color.

Creating a projection mapping display is no small feat. It requires a deep understanding of both the physical space and the technology used. For large-scale projections, such as those on buildings or monuments, powerful projectors with outputs of 20,000 lumens or more are often required. These projectors are capable of casting bright, clear images even from great distances. In some cases, multiple projectors are used in tandem, their images seamlessly blended together to create one massive, cohesive display.

Smaller, indoor displays might only need a projector with a fraction of that power, around 2,200 lumens, but the principles remain the same. The key is precision—ensuring that the images align perfectly with the contours of the object to avoid distortion and maintain the illusion.

Projection mapping is more than just a visual trick; it's a powerful tool for communication, creativity, and connection—think about the Inauguration ceremony of the 2024 Olympic games in Paris. As technology continues to advance, the potential for even more immersive and interactive experiences grows. Whether it's used to enhance a live event, preserve history, or create new forms of art, projection mapping is a vivid reminder of the limitless possibilities when technology and imagination meet.

So the next time you see a building dancing with light, or a statue seemingly come to life, you'll know that what you're witnessing is not just a show, but a

carefully crafted Illusion—a blend of art, science, and technology that turns the ordinary into the extraordinary.



2024 Olympic Games Opening Ceremony in Paris featuring projection mapping on the Eiffel Tower by Xinhua, Alamy stock photo

Alejandro de La Cadena Perez Gallardo, Newsletter Committee

Call for Papers: Special Collection in Applied Spectroscopy Practica

Applied Spectroscopy Practica announces a Special Collection on 'Portable Spectroscopy and Multispectral Sensors'. We invite you to submit a paper to this collection.

Practica is a peer-reviewed, open access, sister journal to Applied Spectroscopy with its more than 75-year history. Practica's home page is on the Sage Journals website.

Papers submitted for this Special Collection will go through the same review and revision process as all papers in *Practica* and will then appear on-line as soon as they are processed. When the Special Collection is closed, all the papers will appear in a special open access 'flipbook' issue of the Journal, accessible to all.

*Practica* is launching this special collection of papers now, and we invite you to submit a manuscript. You can find the journal's submission guidelines <a href="here">here</a> and an overview of the Special Collection <a href="here">here</a>.

The guest editors for this Special Collection are Dr. Richard Crocombe, Dr. Pauline Leary, and Prof. Brooke Kammrath, who were the co-editors of the two-volume book 'Portable Spectroscopy and Spectrometry', published by John Wiley in 2021.

This special collection will include papers on the technologies and applications of (a) portable spectroscopy and spectrometry, and (b) miniature spectroscopic sensors. This encompasses the whole field, from engineering design, application development, deployment and operation in the field, etc. For miniature spectroscopic sensors, it also includes integration into consumer products used in the home, and wearables such as sports watches, rings, and other wearables. Papers from end users and operators are particularly encouraged.

### Potential topics for papers include:

- Technologies and applications of portable spectrometers and miniature spectral sensors
- Development of spectroscopic libraries and matching algorithms, especially for mixtures
- Development of quantitative calibrations, their validation and application
- Practical examples: hazardous materials, safety and security, narcotics, explosives, cultural heritage, counterfeit detection, chemical and pharmaceutical manufacturing, field geology, food quality, radioactivity detection, etc.
- Integration with unmanned systems, stand-off and remote sensing
- Future applications, especially clinical and medical
- Applications in consumer goods and in the home
- Wearable devices and their applications

If you have any questions, don't hesitate to get in touch with us.

#### Richard Crocombe

## PODCAST: Exploring the World of Spectroscopy for Portable and Wearable Systems: Technology and Applications

Check out this <u>podcast</u> featuring our very own SAS members, Jerry Workman and Richard Crocombe: Analytically Speaking Ep. 27: Exploring the World of Spectroscopy for Portable and Wearable Systems: Technology and Applications. Other episodes of the podcast can be found <u>here</u>.

Ellen Miseo, SAS Secretary

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Society for Applied Spectroscopy • 230 Washington Avenue Ext, Suite 101, Albany, New York 12203, United States • 5183131160

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