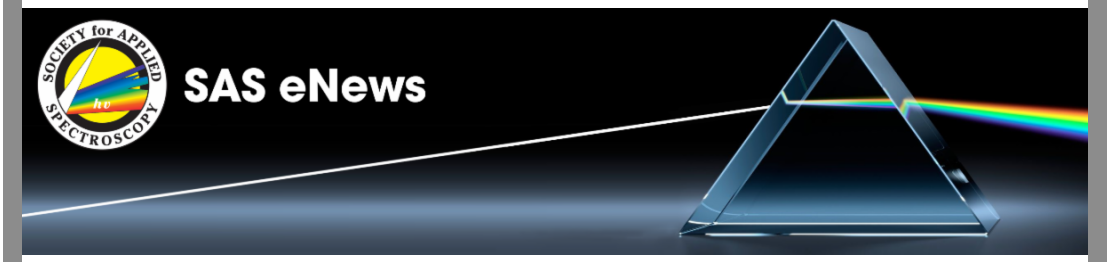


Check Out Talks and Sessions by SAS Members as Well as Short Courses at SciX 2023!

Please support your fellow SAS members by attending their talks and sessions at SciX 2023! A **non-comprehensive list** of talks and sessions submitted by speakers and session chairs can be found below. The full program can be found here! Also, please see and participate in the short courses being offered! Full description of the courses can be found at the FACSS SciX 2023 Short Courses Page.

Bonnie Saylor, SAS Executive Director

SAS Presenter(s)	Session ID	Topic	Date	Time	Room
Alexis Weber	Short Course CSAS 119	How to Make Connections: Networking at Conferences and in Higher Education	08-Oct	1:00–5:00 PM	To be announced (TBA)
Peter Griffiths	Keynote	50 Years of FACSS and SciX Conferences: The Remarkable Correspondence with Advances in Vibrational Spectroscopy	08-Oct	6:00–7:15 PM	Cascade 1
Dula Amarasiriwardena	SAS 109	Beginners Guide to Atomic Absorption and Emission Spectroscopy	08-Oct	1:00 PM–5:00 PM	TBA
Dula Amarasiriwardena	SAS 110	Introduction to ICP-MS: Fundamentals, Best Practices and Tips and Tricks	09-Oct	1:00 PM–5:00 PM	TBA
Caelin Celani	CHEM01	Graphing a New Path Forward: Network Analysis in Chemometrics	09-Oct	8:30 AM–10:10 AM	Southern Pacific E
Fay Nicolson	23CTP/EARLY03	Showcasing Career Paths in the Spectroscopic Sciences (Sponsored by SAS Early Career Interest Group)	09-Oct	1:30 PM–3:10 PM	Sierra 2
Alexander Rzhevskii	CSAS 104	Modern Raman Microscopy for Applications in the Material and Life Sciences	09-Oct	9:00 AM–5:00 PM	TBA

Thibaut Van Acker	23ATOM05	High-End ICP-MS Applications	09-Oct	3:50 PM–5:30 PM	Central Pacific A/B/C
Alexis Weber	CHEM-02.4	The Application of Raman Spectroscopy to Estimate the Time Since Deposition of Bloodstains Aged Under Environmental Conditions	09-Oct	2:30–2:50 PM	TBA
Mary Kate Donais	23ART01	Student Research in Archaeological Chemistry	09-Oct	8:30 AM–10:10 AM	TBA
Frank Vanhaecke and Dariya Tukhmetova	23ATOM05	High-End ICP-MS Applications	09-Oct	3:50 PM–5:30 PM	Central Pacific A/B/C
R. Kenneth Marcus, Arne Bengtson, and Steven Ray	23ATOM03	From Humble Beginnings: The Great Diversity of Glow Discharge Spectrometries	09-Oct	8:30–10:10 AM	Central Pacific A/B/C
Dula Amarasiriwardena	SAS 122	LA-ICP-MS: Elemental Analysis of Incremental Tissues as an Indicator of Past Pollution Events	10-Oct	1:00 PM–5:00 PM	TBA
Robert Lascola	23PAT01	50 Years (and More) of PAT in Nuclear Materials Processing	10-Oct	8:30 AM	Southern Pacific E
Robert Lascola	23FORENS01	Nuclear Forensics	10-Oct	1:30–3:10 PM	Southern Pacific A/G
Barry K. Lavine	CHEM04	Authentication of Edible Oils Using an Infrared Spectral Library and Digital Sample Sets for Calibrated and Uncalibrated Adulterants	10-Oct	1:30 PM–3:10 PM	Southern Pacific E
Cassio Lima	Short Course	Multivariate Analysis for Beginners: Pre-Processing and Data Analysis of Raman/IR Spectra in the Matlab Environment	10-Oct	1:00 PM–5:00 PM	TBA
Mary Kate Donais	23ART03	Historic Perspective and Recent Advances in Art Analysis Using Vibrational Spectroscopy	10-Oct	1:30 PM–3:10 PM	TBA
Alexander Gundlach-Graham, Detlef Günther, Derrick Quarles, Veronica Bradley, and Hark Karkee	23ATOM01	ICP Time of Flight MS	10-Oct	8:30–10:10 AM	Central Pacific A/B/C
Derrick Quarles and Catharina Erbacher	23ATOM02	Metallomics Based Applications	10-Oct	3:50–5:30 PM	Central Pacific A/B/C

Derrick Quarles and Madeleine Lomax-Vogt	23ATOM04	Single Particle and Single Cell ICPMS	10-Oct	8:30–10:10 AM	Central Pacific A/B/C
Sevde Dogruer Erkok	23SPR05	Detecting Fentanyl Analogs by Combining Surface-Enhanced Raman Spectroscopy (SERS) and Paper Spray Mass Spectrometry (PS-MS).	11-Oct	1:50 PM	Cascade 4
Alex Scheeline and Jim de Haseth	CSAS-124	What's in the Box: How Do Spectrometers Work (Jointly with Jim deHaseth)	11-Oct	9 AM–12 PM	TBA
Mary Kate Donais	23ART02	Analysis of Exotic Materials from Mummies to Mars	11-Oct	8:30 AM–10:10 AM	TBA
Mary Kate Donais	Short Course	Introduction to Data Analytics for the Analytical Chemist	11-Oct	9 AM–5 PM	TBA
Matthieu Baudelet, Mauro Martinez, Benjamin Manard, and Derrick Quarles	23ATOM06	Common strategies for LA-ICP-MS and LIBS	11-Oct	8:30–10:10 AM	Central Pacific A/B/C
			11-Oct		
Benjamin Manard and Kyle Hartig	23ATOM07	Early Career in Atomic Spectroscopy	11-Oct	1:30–3:10 PM	Central Pacific A/B/C
Michael S. Bradley	23FORENS06	Multirange Vibrational Spectroscopy for Pharmaceutical Forensics	12-Oct	8:30 AM–8:50 AM	Southern Pacific A/G
Matt Gabel	23FORENS05	Multimodal Raman Spectroscopy For Comprehensive Forensic Analysis	12-Oct	1:50–2:10 PM	Southern Pacific A/G
Ravi Kalyanaraman	23FORENS06	Pharmaceutical Forensics	12-Oct	8:30 AM	Southern Pacific A/G
Alexis Weber	Thurs-P16	Identifying the Effects of Bluestar Forensic Spray on the Ability to identify Bloodstains Using Raman Spectroscopy	12-Oct	10:10-10:45 AM, 3:10-3:50 PM	TBA
Zoë Whalley	PAT01	Looking 50 Years into the Future of PAT	12-Oct	8:30 AM–10:10 AM	Southern Pacific E
Alicia Cruz-Uribe	23ATOM09	Laser Ablation Based Atomic Spectroscopies: Fundamental and Applications	12-Oct	8:30–10:10 AM	Central Pacific A/B/C

Opportunities to Meet Industrial Spectroscopy Experts at SciX 2023!

As part of the Process Analytical Technology (PAT) section at SciX 2023, there will be a discussion panel (with experts from leading companies and institutions such as DuPont, Dow, Lubrizol, Savannah River National Lab, and many collaborative technology providers) at the end of the 23PAT04 session, "In Situ Spectroscopy for Industrial R&D", on Wednesday, 11 October. This discussion is open to everyone, and it will include topics such as PAT technology, best practices, current challenges, and future developments. Come prepared with questions and join us for an interesting and exciting discussion!

David Schiering, Contributor

Barry M. Wise
President
Eigenvector Research

Robert Lascola
Senior Fellow Scientist
Nuclear & Chemical Processing Division
Savannah River National Laboratory

Xianghuai (William) Wang
Principal Research Scientist
Lubrizol

Sebastian Hülck
CEO
tec5USA

Mark Rickard
Lead Scientist
DuPont

Xiaoyun (Shawn) Chen
Principal Research Scientist
Dow Chemical

Viacheslav (Slava) Artyushenko
Founder & CEO
art photonics GmbH

James Rydzak
Consultant
Specere Consulting

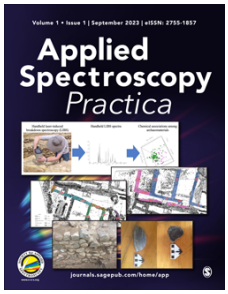
SciX 2023 SAS Awards Ceremony and Wine and Cheese Reception

2023 SciX Joint SAS Early Career/Student Social Event!

The SAS Early Career Interest Group and the Student section will be co-hosting a social event on Monday, 9 October at 8:00 PM in the Game on Bar inside the Nugget Casino. This event will take place after the Exhibition Hall's Opening Reception.

SAS Early Career Interest Group and Student Section

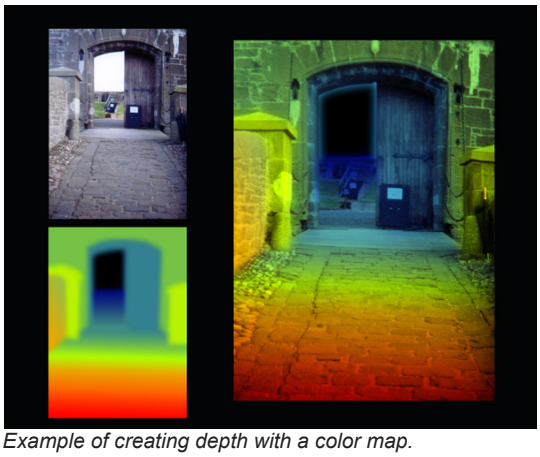
Submit Your Paper to *Applied Spectroscopy Practica*



Applied Spectroscopy Practica is live and accepting manuscript submissions here. To determine if your work is a good fit, browse the journal's Aims and Scope.

Richard Crocombe, Practica Editor-in-Chief

Creating the Illusion of Depth in Images



Example of creating depth with a color map.

With the current state of technology for imaging and visualization of 3D objects, it is common to image a 3D object by recording its 2D projection and representing it on a 2D viewing screen by creating an illusion of depth. Although, true recreations of 3D objects are possible with holographic and volumetric displays, these are expensive and cumbersome. The illusion of depth is usually achieved in drawings and computer renditions by distorting lengths and angles. In photography, lighting plays an important role in creating shadows and edges that carry information about the relative depth of the objects in the frame. Some of the existing technologies such as anaglyphs, polarized 3D systems and interference filter systems, use 2D images of the same scene recorded from different perspectives and superimposed that are then deconstructed using special viewing devices in front of each eye of the viewer. The 3D scene is interpreted directly by the viewer's brain from the deconstructed images. However, if the superimposed image is viewed without the special devices or with only one eye, the image looks distorted, and the depth information is incomprehensible to the viewer. This is an area where prismatic glasses such as ChromaDepth, show promise. Any 2D image can be processed to be viewed with prismatic glasses by first converting it to greyscale and then applying a color map to it. The glasses refract the shorter wavelengths more than the longer wavelengths. As a result, regions of the image that are blue would appear to have greater depth than regions that are red in color. This method of communicating depth is much more suitable for single sensor systems and may find application in future remote sensing and AI systems.

If you have interesting images, write-ups, advice, or anecdotes related to your research or the field of spectroscopy, send them to SASNewsletter@s-a-s.org to be considered for the next issue.

Shruti Ghanekar, SAS Newsletter Committee Member

SAS Early Career Interest Group (ECIG) Travel Awards for SciX 2023

(Left to right): Stephanie Zaleski and Hunter Andrews.

ECIG is pleased to announce the two winners of this year's Travel Awards for SciX 2023: Dr. Stephanie Zaleski and Dr. Hunter B. Andrews.

Stephanie Zaleski received her Ph.D. in Chemistry at Northwestern University in 2016 after working under the direction of Dr. Richard P. Van Duyne. Currently she works as an Assistant Professor in the Department of Chemistry and Biochemistry at California State University, East Bay. Her research interests include art conservation science and improving Surface-enhanced Raman spectroscopy (SERS) as an applied analytical technique. At SciX 2023, Stephanie will be presenting the talk "Developing Surface-Enhanced Raman Spectroscopy Methods for Quantification of Complex Analyte Mixtures in Plant-Based Extracts".

Hunter Andrews obtained his Ph.D. in Mechanical and Nuclear Engineering from Virginia Commonwealth University in 2020. Hunter now works in the Isotope Applications Research Group within the Radioisotopes Science and Technology Division at Oak Ridge National Laboratory. His current research is focused on the

development of in-situ, online monitoring tools for complex environments. Hunter's SciX talk is titled "Overview of Laser-Induced Breakdown Spectroscopy Research at Oak Ridge National Laboratory".

SAS Early Career Interest Group

Second Annual SAS New York Capital Region (NYCR) Applied Spectroscopy Symposium

On 23 June 2023, the SAS NYCR Student Chapter hosted the Second Annual NYCR Applied Spectroscopy Symposium. This event was a resounding success with a turnout of over 40 individuals from multiple universities. This symposium truly kicked off the "summer of spectroscopy", highlighting the amazing research being done by academics in the Capital region. It was made possible with strong support from our sponsors: Shimadzu, PerkinElmer, and BioTools!

This Second Annual Symposium covered a wide range of topics in spectroscopy including forensic sciences, medical diagnostics, biological studies, environmental analysis, and novel applications. The event was kicked off by a presentation by our esteemed keynote speaker, Mary K. Carroll, a Dwane W. Crichton Professor of Chemistry at Union College, and American Chemical Society (ACS) President. She spoke on the topic of Aerogels, "From Molecular Spectroscopy to Aerogels: A Research Journey". The incredible keynote presentation was followed by three oral presentations and 14 poster presentations. This was twice as many poster presentations from the year before!

Two awards were presented at the symposium: the most outstanding oral and poster presentation, based on popular vote by attendees. The "Outstanding Oral Presentation" award was presented to Julia Danischewski for her talk on "Characterizing the Behavior of an Ion Beam within an Acoustic Field". Additionally, the "Outstanding Poster Presentation" award was won by Niara Nichols for her discussion on the "High Five! The Detection of Cannabis Ingestion Using Fingerprint Residues and High-Resolution Mass Spectrometry". Overall, this year was an amazing improvement from year one and we are hoping it will grow again next year!

SAS New York Capital Region Student Chapter

(Left to right): Julia Danischewski, Mary Carroll, Alexis Weber, and Samantha Pryor.

SPIE Defense + Commercial Sensing Conference Call for Abstracts

SAS members Richard Crocombe, Luisa Profeta, and Steve Barnett are the co-chairs of this SPIE conference, which will take place at National Harbor, Maryland, (Washington DC area) next year, 21–25 April 2024.

The overall emphasis in this conference is on advanced technologies for spectroscopic instrumentation, particularly for miniature, portable, and wearable instruments, but also including novel spectroscopic sources used in the laboratory and process applications (e.g., Quantum cascade laser, interband cascade laser, supercontinuum). The scope focuses on the optical region: UV-visible, infrared, near-infrared, terahertz, and Raman molecular techniques. However, it also includes advances enabling miniature and portable spectrometers across the electromagnetic spectrum, including x-ray fluorescence, laser induced fluorescence, laser induced breakdown spectroscopy (LIBS), nuclear magnetic resonance, and mass spectrometry.

The conference includes papers describing breakthrough, novel, recently-introduced, and commercial instrumentation; also the rapidly emerging fields of portable and handheld hyperspectral imaging, multispectral sensors incorporated in consumer goods and wearables, smartphone spectroscopy, citizen spectroscopy, with cloud-based collection and processing of data from those instruments.

This conference has an active Call for Papers, which can be found here.

Richard Crocombe, Editor-in-Chief, Applied Spectroscopy Practica

Seeking New Editor/Editor-in-Chief for *Applied Spectroscopy Practica*

Applied Spectroscopy Practica is the Society's new open-access, peer-reviewed journal. It has the same editorial and reviewing standards as the Society's long-standing Journal, *Applied Spectroscopy*.

Richard Crocombe will be stepping down as the Editor-in-Chief (EiC) of *Applied Spectroscopy Practica* at the end of 2024. SAS intends to appoint an Editor for this journal for January 2024, with the anticipation that the Editor would succeed to the position of EiC at the start of 2025. (At that point, Richard Crocombe would become an Editor). Appointment to the position of EiC is on the recommendation of SAS's Publications Committee and the approval of SAS's Executive Committee. The EiC usually has a three-year term and runs the Journal editorially independent from the Society.

The Editor supports the EiC in several ways: providing day-to-day cover when the EiC is unavailable, consulting on any 'problematic' manuscripts, suggesting reviewers (additional Associate Editors and Editorial Advisory Board members), soliciting manuscripts, discussing initiatives for Journal topics, etc. There are also regular short video calls with the Journal's Managing Editor (Kristin MacDonald) and with SAGE. For 2024, the likely effort is no more than five hours a week.

The EiC is responsible for the Editorial policy and functioning of the Journal. Day-to-day tasks include evaluating manuscripts as they are received. A proportion may be 'declined' immediately based on being out-of-scope, poor quality, duplication of existing published work, or plagiarism. The Managing Editor triages manuscripts for duplication and plagiarism using the IThenticate tool. Manuscripts are then assigned to an Associate Editor, who is responsible for assigning reviewers and making a recommendation (e.g., minor revision, major revision) to the EiC based on those reviews. Once accepted, manuscripts are processed by the Managing Editor and SAGE. The whole process is run via SAGE's version of ScholarOne. At present, the plan is to have four issues of *Practica* per year. Once *Practica* reaches a steady state, this probably entails receipt of about 10-16 manuscripts per month. If that number increases significantly, then SAS will discuss with SAGE the possibility of increasing the issue frequency. In the future, the Journal might also have either special issues, sections, or collections on specific topics of interest.

Other EiC tasks include selecting additional Associate Editors and Editorial Advisory Board members, soliciting manuscripts (especially at scientific conferences), preparing, and presenting reports on the journal to SAS (Publications Committee, Executive Committee, and Governing Board), and working on a regular basis with the Managing Editor and SAGE. There are occasional conversations with the EiC and Editor of *Applied Spectroscopy*, and that Journal can pass manuscripts (which are regarded as good science but out-of-their-scope) onto *Practica*.

At present, the effort for the EiC is about ten hours per week. This may reduce as the journal moves through its "teething" phase but could remain at that level if the number of submissions increases significantly. SAS provides modest stipends for the Editor and EiC.

SAS is soliciting applications for the position of Editor, to start in January 2024. Applicants should submit a statement of interest, a resume, and details of editorial and publications experience to SAS's Executive Secretary at: exdir@s-a-s.org.

SAS Selects a New Firm to Manage the Society

The Executive Committee is pleased to announce that the Society for Applied Spectroscopy has selected Capitol Hill Management Services as the new firm for managing the Society. "We are pleased to have a proven and accredited national leader in association management to help SAS advance our society's administrative and membership services, grow and support our membership while increasing awareness of the Society across the country", said Board President Peter Larkin. SAS Executive Director Bonnie Saylor will be completing her service to the Society at year's end.

"Through its committed members and outstanding programs, the Society for Applied Spectroscopy advances, promotes, and disseminates knowledge and information concerning the art and science of spectroscopy and other allied sciences", said John A. Graziano, Jr., President of Capitol Hill Management Services. "We are

pleased to work with the Society's dedicated Executive Committee, Governing Board, and volunteers in ensuring a successful future for this professional organization".

President Larkin adds: "At this time, we would also like to thank Bonnie Saylor for her 27 years of service to SAS, the Governing Board, and our members. Bonnie has been a valuable partner and we have appreciated her dedication and hard work to help SAS advance its mission".

The Society is taking a collaborative approach to this management and staffing transition. For the remainder of the year, Bonnie will continue to serve as Executive Director, sharing her operational knowledge and experience with our new staff team at Capitol Hill Management Services. This team consists of Angela Gordon, Ph.D., who will serve in the capacity of Deputy Executive Director until 31 December, and Lindsey Weitz, who will be the Society's Administrator. They will be supported by CHMS colleagues from the Finance, Conference and Meeting Planning, Marketing and Communications, and Graphic Design teams.

The new SAS Office was activated on Monday, 7 August 2023. Please watch for further e-updates on this changeover in the weeks ahead.

Below please find a complete list of new office contact information. We ask you to update your records.

SAS Contact Information Updates *(as of 8/7/23)*

Our phone number has changed: 518-313-1160 ***Please note!***

Our fax number has changed: 518-463-8656 ***Please note!***

Our general office email will be: sasadmin@s-a-s.org ***Please note!***

Our new mailing address is: ***Please note!***
230 Washington Avenue Extension, Suite 101
Albany, New York 12203

Our online services continue at: www.s-a-s.org

Peter Larkin, 2023 SAS President

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 konnorkjones@gmail.com.