

July 2025 Newsletter



Meet the ECIG's Leadership Committee!

This month, the Early Career Interest Group's (ECIG) leadership committee is highlighting committee members Heather Juzwa, William Skinner, and Andrew Whitley.

Are you an Early Career member who would like to be highlighted as the "Early Career Member of the Month"? If so, please complete the brief online survey found [here](#).



Heather Juzwa

Senior Field Sales Engineer
15 years at SAS

THE BIGGEST BENEFIT OF SAS MEMBERSHIP?

"The welcoming community"

CHILDHOOD DREAM JOB?

"Teacher"

WHAT MADE ME FALL IN LOVE WITH SPECTROSCOPY?

"Having great mentors in the community"

FAVORITE PART OF MY JOB?

"As a Senior at Pitt, I worked as a student aide in the Employment Bureau at Pittcon. Back then, everything was on paper, and HR reps kept telling me I should go into sales as I shuffled resumes and scheduling cards. I was firmly against it—sales reps annoyed me. Yet here I am, nearly 25 years later, still in sales. The difference is, I don't feel like a sales rep. I'm a problem solver, a customer advocate, and a vessel to promote science wherever I can!"

WHAT SCIENTIST, PAST OR PRESENT, WOULD I MOST LIKE TO MEET?

"Marie Curie has always fascinated me. I admire Curie not just for her groundbreaking scientific discoveries, but for her independence and relentless dedication to her research."



William Skinner

Postdoctoral research fellow

2 years at SAS

THE BIGGEST BENEFIT OF SAS MEMBERSHIP?

“Networking Events”

CHILDHOOD DREAM JOB?

“Inventor”

WHAT MADE ME FALL IN LOVE WITH SPECTROSCOPY?

“Interdisciplinary problem solving”

FAVORITE PART OF MY JOB?

“The moment when something finally clicks and I understand the system that I'm working with at a deeper level. Whether it is troubleshooting or a broader understanding of a physical or biological process.”

WHAT SCIENTIST, PAST OR PRESENT, WOULD I MOST LIKE TO MEET?

“Leonhard Euler – For his foundational contributions to mathematics, physics, and engineering. So much leads back to Euler!”



Andrew Whitley

VP of Business Development
26 years at SAS

THE BIGGEST BENEFIT OF SAS MEMBERSHIP?

“Networking (and partying!)”

CHILDHOOD DREAM JOB?

“Striker for Nottingham Forest”

WHAT MADE ME FALL IN LOVE WITH SPECTROSCOPY?

“Solving real-world problems”

FAVORITE PART OF MY JOB?

“Helping others succeed”

WHAT SCIENTIST, PAST OR PRESENT, WOULD I MOST LIKE TO MEET?

“Alexander Fleming, for discovering penicillin (it is better to be lucky than good, it is better to be both) and allegedly writing the postwar James Bond series of spy novels.”

Contributed by Anthony Stender, Early Career Interest Group



Student Innovation Shines at the 2025 May Conference

The 67th Annual May Conference was held again on 21 May 2025 at John Carroll University sponsored by the Society for Applied Spectroscopy Cleveland Section along with the Microscopy Society of Northeast Ohio (MSNO). The successful conference included a keynote by Cheri Hampton,

Air Force Research Laboratory, speaking on “From Inner Space to Outer Space: A Journey in Electron Microscopy Applications.” One of the most important aspects of the conference is encouraging and supporting students to present their work. The following students won various awards.

Student Oral Presentation Winners

	Student	Affiliation	Title
MSNO Grand Prize	Md Sirajul Islam	Case Western Reserve University (CWRU)	Sulfur-doped <u>MXene</u> Quantum Dots for PB ²⁺ Detection Using Fluorescence Quenching
1 st	Justin Zimmerman	CWRU	Experimental Design for In-Vitro Simulation and Evaluation of Cardiovascular Pacing Lead Failure
2 nd	<u>Hairou Yu</u>	CWRU	Azimuthally Resolved Scattering Morphology Resolved Total Internal Reflection Microscopy (SMR-TIRM) of Anisotropic Colloidal Particles
2 nd	Brett Ley	CWRU	Defect-Driven Fatigue Behavior in LPBF Ti-6Al-4V: Insights from Fractographic Analysis
3 rd	Zoey Lockwood	CWRU	Optimizing the Optical and Therapeutic Performance of Indocyanine Green for Cancer and Imaging Treatment
3 rd	Alexandria Miskey	CWRU	Aerosol Jet Printing Challenges for an Instrumented Pressure Sensing Prosthetic Liner

Student Poster Winners

Biological Sciences

	Student	Affiliation	Title
1 st	Wren <u>Hoertdoerfer</u>	University of Akron	Surface Structures Act as an Optical Grating in <u>Xenopeltis</u> Unicolor Iridescence
2 nd	Aliya Ali	Lorain County Community College (LCCC)	Targeting CCR5 Function as a Therapy for AIDS
3 rd	Alena Espinosa Alvernia	LCCC	Development of Therapies to Target Neuroinflammation

Physical Sciences

	Student	Affiliation	Title
1 st	Peyton Mann	Youngstown State University	Dynamic Control of a Polymer-Dispersed Liquid Crystal Film for Use in Smart Greenhouses
2 nd	Shubhendu Kumar	University of Akron	Direct Measurement of Molecular Contact Area Using Sum Frequency Generation Spectroscopy
3 rd	Desiree Mae Prado	CWRU	Breakthrough Conductivity Enhancement in Deep Eutectic Solvents via <u>Grotthuss</u> -type Proton Transport

Ernest B. Yeager Award

Kayla Poling	CWRU	Water-Driven Enhancement of Electrochemical Mass Transport and Kinetics in Deep Eutectic Solvent Electrolytes with <u>Grotthuss</u> -Enhanced Proton Conductivity
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As part of the conference program, the Northeast Ohio Science & Engineering Fair showcased student research excellence, with the following students earning various awards.

John Bell Memorial Award, SAS

1 st	Lila Morley	Hawken Upper School (HUS)	Effects of Gut Microbially Produced Phenolic Acids on Host Metabolic Health
2 nd	<u>Samipa Patek</u>	Solon High School (SHS)	The Absorption of Anthocyanins Through a Semi-Permeable Membrane
3 rd	Elias Sharifi	HUS	Non-Invasive Molecular Classification of Gliomas Using Explainable AI and Radiomic Features from Multi-Sequence MRI

MSNO

1 st	<u>Yuvha Karthikeyan</u>	SHS	Nerve
2 nd	Christian Hammer	St. Vincent-St. Mary High School	Exploring the Circuitry of the Retina
3 rd	Tristane McDermott	Athens High School (AHS)	The Camouflage Capacity of Young Squid

Regional Science Day, MSNO

1 st	Tristane McDermott	AHS	The Camouflage Capacity of Young Squid
2 nd	Kamil Balci	SHS	How Does Extracellular pH Affect Phagocytosis in Macrophages
3 rd	Bryan Shin	AHS	Enhancing Blood-Brain Barrier Penetration of Nanoparticle with Toxin-derived Peptides

Contributed by Coleen A. McFarland

Join the Newsletter Team!

The Society for Applied Spectroscopy (SAS) Newsletter committee is seeking dedicated volunteers to join our team to help create the monthly SAS newsletter.

What's in it for you?

- Connect with fellow SAS enthusiasts: Build valuable relationships within the Society.
- Make a meaningful impact: Contribute to a vital resource for the entire SAS community.
- Gain valuable skills: Develop your writing, editing, and communication abilities.
- Commitment: A modest time commitment of a few hours per month is all that's required.

No experience needed! We welcome individuals from all backgrounds and skill levels. If interested, please contact Konnor Jones at konnorkjones@gmail.com to learn more and get involved.

Contributed by Konnor Jones, SAS Newsletter Editor