



Shimadzu to Present and Host Tour at December Meeting

NJ SAMPE welcomes members and friends to our next monthly meeting of the 2024-2025 season, to be held at Shimadzu Scientific Instruments, Somerset, NJ on Thursday, December 5 at 5:30 pm. Jarid Barthold-Robinson, Senior Product Coordinator with Shimadzu, will present "Ultrasonic Fatigue Testing: A Rapid Testing Method for Additively Manufactured Metal Alloys."

Rapid prototyping using additive manufacturing techniques has increased the need for faster methods to characterize the fatigue behavior of 3D-printed alloys. Fatigue testing instruments utilizing ultrasonic (20 kHz) sample resonance enable testing to 10⁷ cycles in about 10 minutes versus over 10 hours using standard instrument designs. Ultrasonic fatigue measurements also allow sample testing to extremely high cycles (10¹⁰) in a reasonable timeframe allowing insight to material failure behavior beyond the traditional "fatigue limit" of 10⁷ cycles.

Shimadzu's talk will review the experimental considerations necessary for successful USF measurements and provide examples of measurements of 3D printed alloys.

December's meeting will include networking, dinner, the presentation, and a facilities tour. To register and make a payment in advance, click [here](#) or scan the QR code.

Students are always welcome to attend at no cost, though an RSVP to megan@njsampe.org by December 2 is required.



University Research Symposium at CAMX: Student Reflections



The University Research Symposium (URS) at September's CAMX in San Diego was a special event showcasing young professional talents.

URS is a competitive program that sponsors selected SAMPE student members to present the results of their technical research at CAMX each year.

Two students from our SAMPE at Rowan University Student Chapter, William Beck and Jaclyn McLaughlin, presented their research and shared their thoughts here on the Symposium and how it helped to further their academic and budding professional careers.

William Beck: "The University Research Symposium at the CAMX conference was a rewarding experience, one that began nine months before the event kicked off.

To compete in the URS competition, students were required to submit a research abstract, a personal essay, and their transcripts, allowing SAMPE to identify qualified and distinguished candidates pursuing the same degree. After reviewing the candidates, semi-finalists were chosen and asked to write a research paper demonstrating their ability to discuss their work at a high level. Those who stood out were invited to present their research at the CAMX conference in San Diego, where their presentations would be judged alongside the remaining finalists. This invitation also included complimentary travel to San Diego, which was a prize in itself.

Before the conference programming started, all finalists shared a dinner hosted by the judges of the competition and SAMPE. The students and judges were all friendly and supportive, which helped ease the tension before competing the next day. It took a day and a half to hear all the presentations, and by the end, we were ready for a break—the perfect time to explore the exhibit hall. The judges took the rest of the day to decide the winners. The following day we convened for an award luncheon where the winners were announced. This year there were two students representing Rowan University. Jaclyn McLaughlin got a hard-fought third place in a very talented PhD category, and I got first place in the master's category.

Overall, I enjoyed and learned a lot from the experience. I connected with peers and networked with many people from the composites industry. SAMPE does an outstanding job of supporting students and highlighting their research through awards and competitions like URS. I would highly encourage all students who feel passionate about their research and want to become more involved with SAMPE, and the materials industry in general, to submit to the URS competition.

If you're interested, one piece of advice would be to frame your presentation not just as a display of data—no matter how impressive—but as a story that highlights the scientific process behind collecting the data, the original hypothesis guiding your research, and the broader implications of your findings." (Continues on Page 2...)

SAMPE at NYU Turns 10

Ten years of success at NYU Tandon.
Page 2

Upcoming Events

Preview our calendar of events for the 2024-2025 season. Page 2

Sponsor of the Month

Aurorium.
Page 3

SAMPE at NYU Turns 10!

New York University’s Tandon School of Engineering SAMPE Student Chapter is celebrating its 10th anniversary this year. SAMPE at NYU is a great example of a sustainable campus club devoted exclusively to material and process engineering, bringing together many disciplines across the student body of the Brooklyn campus.

Conceived by Borys Schafran, NJ SAMPE Chair from 2013 to 2018, the Chapter was established after several outreach meetings and presentations to students and faculty. A very enthusiastic group, led by Inaugural Chair Shermie (Yunyi) Miller-Zhang, Steven Eric Zeltmann, Sarah Biscardi and Sean Winchester, launched the Chapter as a new campus club, and with the support of faculty advisor Prof. Rastislav Levicky, the club flourished and was handed over to several new leaders as students graduated.

SAMPE at NYU is currently self-sustaining and autonomous, with their own meetings and activities.



The incoming Executive Board includes:

President: Miguel Valle, BS Civil Engineering 2025 (mv2203@nyu.edu)

Vice President: Haoxian Zheng, MS Chemical & Biological Engineering 2025 (h2570@nyu.edu)

Secretary: Malhar Solanki, MS Mechanical Engineering 2025 (malhar.solanki@nyu.edu)

Treasurer: Cheryl Kim, BS Biomolecular Science 2027 (ck3866@nyu.edu)

For this academic year, the Board will continue strengthening the Chapter's internal programming and expanding its profile across NYU. They are also exploring fundraisers expressly to participate in future SAMPE and CAMX events.

Readers may recall the November 2023 NJ SAMPE meeting was held on the NYU Tandon campus. It featured a panel of local professionals sharing their career experiences and addressing student questions.

SAMPE at NYU plans to host more NJ SAMPE monthly meetings in Brooklyn as well, so please watch our events calendar for updates.

URS (from Page 1)

Jaclyn McLaughlin: “This year, I took part in the CAMX URS competition. Students from all over the country submit journal-style papers to the URS committee of judges, and finalists were rewarded with an opportunity to present their work to their peers. We’re also given the chance to attend the CAMX conference after the conclusion of the presentations.

I previously participated in the student symposium as a Master’s student. One thing that I am glad has not changed at all since my last experience is the quality of students that I have met. The URS does a great job of bringing together students from all over the US and other countries.

Of course, we discuss the technical ins and outs of our projects. I find that, in the openness of these discussions amongst students, the main goal is to aid one another. No one is trading lab secrets by any means, but students are quick to share the title of an important paper or tips to complete an experiment.

Outside of the competition, students often share meals and meet around the conference. It’s very easy to leave this conference with one or two new friends that you look forward to seeing at the next SAMPE event.”

#Open to work

NJ SAMPE is always pleased to provide employment outreach services for its valuable members.

New member Rob Coulton is open to new professional opportunities.

Says Rob: “I am a driven engineering leader and manager, with extensive experience in manufacturing, process engineering, and product development. By employing practical yet effective solutions, I work to move projects forward across the finish line on time and budget. I enjoy managing people and leading teams and work well to cross departments and silos, bringing the team concept to the forefront.”

Coulton holds a BS in Mechanical Engineering from Geneva College and Lean Six Sigma certificates from Villanova University.

He’s based in the Greater New York City area and is available for full-time employment and consulting opportunities.

For additional information, please reach out to Rob at rjcoulton@optonline.net.

Intro to AM Course

The University of California Merced is offering a new course entitled “Introduction to Industrial Additive Manufacturing” as an online offering.

Instructors include Dr. Antonio Paesano, Additive Manufacturing (AM) Lead at The Boeing Company. Details can be found in the flyer below. To register, please visit <https://ucm.edu/uoCz7j>




FREE 3D PRINTER

INTRODUCTION TO INDUSTRIAL ADDITIVE MANUFACTURING

Jumpstart your career in engineering through additive manufacturing

- This course will empower students with cutting-edge knowledge and skills in the rapidly evolving field of additive manufacturing (also known as 3D printing).
- Our mission is to foster innovation and prepare the next generation of engineers and designers to leverage the transformative potential of additive manufacturing technologies through practical hands-on software training and comprehensive theoretical instruction.
- This course will teach the fundamental processes and software skills, with hands-on learning of a specific AM software package that students can leverage to obtain internships or early career positions in the field.

MEET THE EXPERTS



- David Fleck, MS, Antonio Paesano, PhD and Steve Corzib bring over 50+ years experience in the engineering industry across multiple sectors within the industry.
- With experience in materials science and engineering, engineering materials, innovation and design, plastics, polymer engineering, and more, these individuals bring valuable real-world experience to your learning.
- These individuals have worked in many additive leadership positions, including positions at General Atomics, Hewlett Packard (HP), Boeing, General Motors, DOW, University of Delaware, and 3M Company, including authoring “Handbook for Sustainable Polymers for Additive Manufacturing.”
- Are you a UC Merced Undergraduate Engineering Student? This course is approved to satisfy your Technical Elective degree requirement. See your Academic Advisor for more information.

COURSE INFORMATION

TITLE:	ME 340B Introduction to Industrial Additive Manufacturing
DATE/TIME:	Tues/Thurs, January 29 - May 10, 2025; 4:00 - 5:30 PM
LOCATION:	Online, Live Synchronous via Zoom
COST:	\$1,895 (financial aid does not apply)
REGISTER NOW:	https://ucm.edu/uoCz7j

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FOR MORE INFORMATION: EMAIL: extension@ucmerced.edu

EXTENSION
Professional and Leadership

Calendar

NJ SAMPE Events

December 5, 5:30 PM
Presentation by Jarid Barthold-Robinson, followed by lab tour and dinner
Shimadzu Scientific Instruments, Somerset, NJ
[Register](#) | [Directions](#)

December 15
Student Chapter Grant applications due!
[Learn More](#)

No Chapter Meeting in January
Happy New Year!

February 2025
Rowan University, Glassboro, NJ

SAMPE Webinars

Type V Composite Tank for Hydrogen Storage - Fabrication Approaches, Testing and Challenges
Presented by Ranji Vaidyanathan and Matt Villareal, Infinite Composites
December 18, 10 AM PST (1 PM EST)
[Learn More](#) | [Register](#)

Thermoplastic Composite Recycling: From Demonstration to Implementation
Presented by Hans Luinge, Co-Founder - Spiral RTC
January 15, 10 AM PST (1 PM EST)
[Learn More](#) | [Register](#)

Advanced Automated Fiber Placement Strategies for Thermoplastics
Presented by Waruna Seneviratne, Director - ATLAS, NIAR
March 19, 10 AM PDT (1 PM EDT)

Sponsor of the Month:

Aurorium

Formerly Vertellus, Aurorium is the materials innovation partner that helps global manufacturers harness the power of possibility to make the world a better place. Prior to re-branding as Aurorium in March 2023, Vertellus completed six acquisitions in 4 years: Bercen Chemicals, Chemtrade Life Sciences, IM Chemical, Jarchem Innovative Ingredients, Polyscope Polymers, and Centauri Technologies.

Aurorium’s portfolio of specialty ingredients and performance-enhancing materials serve key industries, including transportation, coatings and adhesives, energy and electronics, healthcare, personal and home care, food and beverages, agriculture, and paper and packaging.

The high maleic anhydride functionality of ZeMac™ co-polymers is ideal for use in fiber applications.

and mineral sizings formulated for demanding automotive and infrastructure

Xiran™ and Xibond™ styrene maleic anhydride (SMA) copolymers, compounds, and aqueous solutions address unique challenges in specialty electronics, automotive, and adhesive applications.

Polycin™ polyols and Vorite™ prepolymers are designed and paired to meet critical performance specifications of adhesive and sealant systems in challenging environments.

Single component Sealrite™ gel sealant systems deliver excellent hydrolytic stability with extremely low hardness, enabling low stress encapsulation.

The versatile Morflex™ and Citroflex™ families of plasticizers are compatible with a wide range of polymer systems. Offerings include non-toxic options suitable for phthalate replacement.



For more information, contact:

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Thank You to Our 2024-2025 Corporate Sponsors



We are the New Jersey Chapter of SAMPE

Chartered in 1977, NJ SAMPE is one of the oldest Chapters in the SAMPE network. We serve the greater NJ/NY/CT/PA area by focusing on our membership, as well as student and young professional outreach. NJ SAMPE includes 10 SAMPE Fellows, 13 Senior Honorary Members, one SAMPE George Lubin Award Winner, and one SAMPE Young Professionals Emerging Leadership Award Winner. NJ SAMPE was designated as SAMPE's first Center of Excellence for Additive Manufacturing in 2018.

We welcome you to participate and network, either for business opportunities, recruitment, or keeping up with industry trends in the region. As the only technical society encompassing all fields of endeavor in materials and processes, SAMPE provides a valuable forum for scientists, engineers and academics. We especially invite students and young professionals to engage in dialog with industry members, explore career options, make presentations at monthly meetings, and join our local student chapters.

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