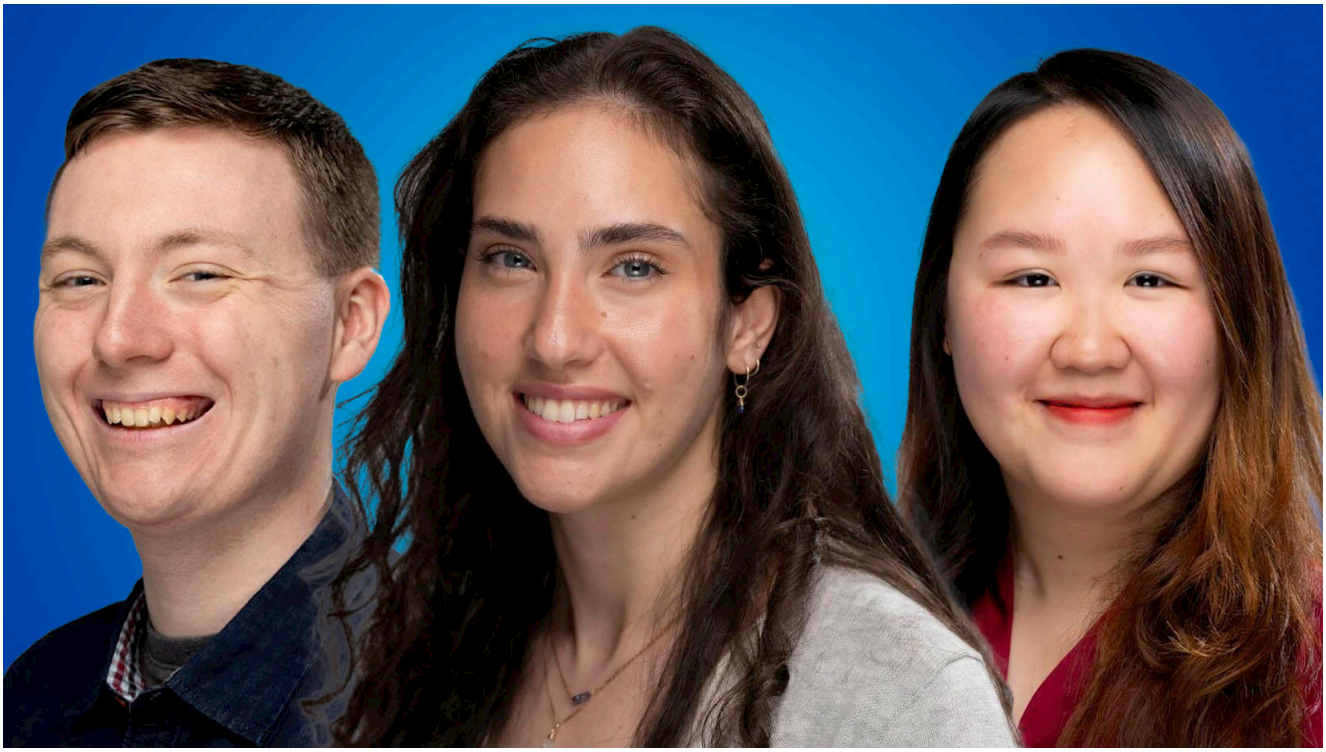
1865 THE UNIVERSITY OF MAINE
Maine College of Engineering and Computing

MAINE COLLEGE OF ENGINEERING AND COMPUTING NEWSLETTER | APRIL 2024



Meet the 2024 Outstanding Graduating Students

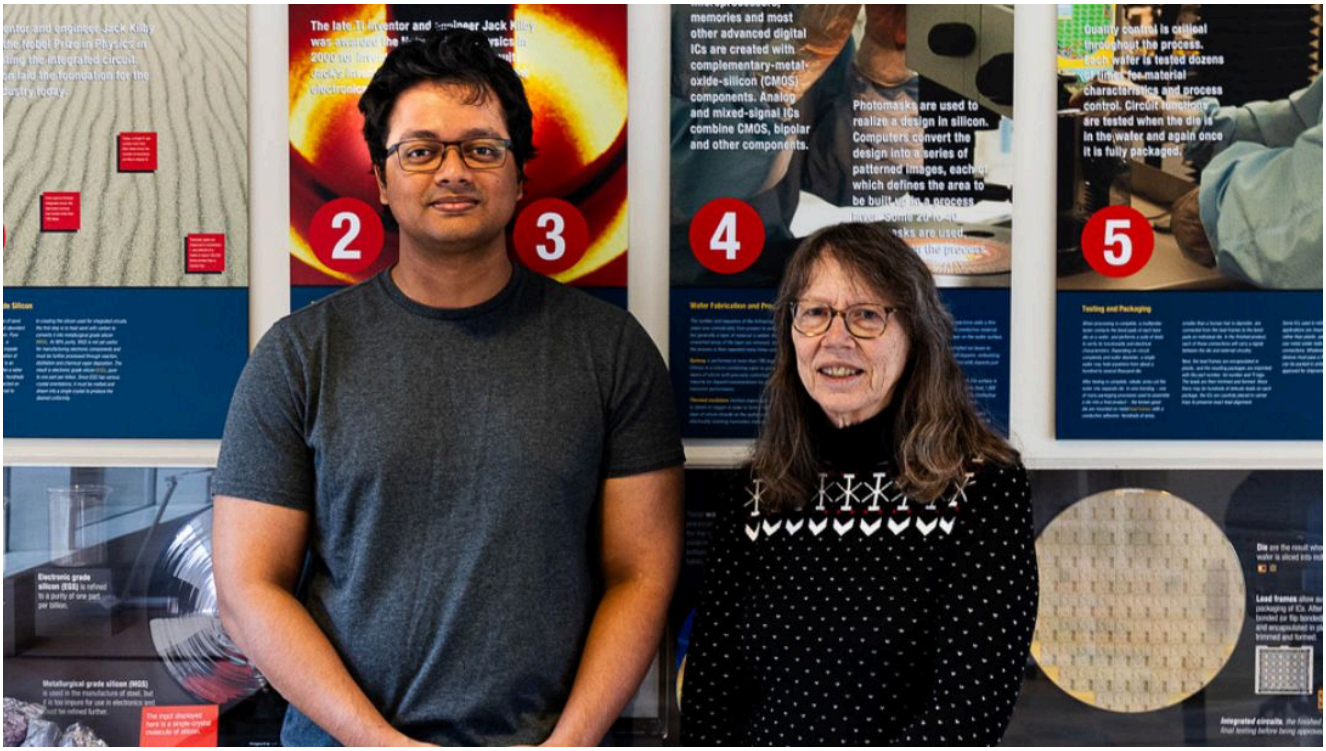
Lydia Gilmore of Bangor, Maine, is a 2024 valedictorian. She is majoring in mechanical engineering and is a member of the Cross Country and Track & Field teams. On the accelerated track for a master's in mechanical engineering, she is also an undergraduate research assistant at the Advanced Structures and Composites Center (ASCC).

Through small community races as a child, Gilmore discovered her talent for running and the joy she found in pushing her physical and mental limits. She went on to set university records for top ten performances in several long-distance track events and to finish in the top 20 of the America East Conference Cross Country Championship. She won the Team Maine award for highest individual GPA; was nominated for the M Club Dean Smith award, presented annually to the top male and female student-athletes; and was named several times to the America East All-Academic team. Full story…

Devin Frazer of Danbury, New Hampshire, is the Outstanding Graduating Student in the Maine College of Engineering and Computing. He is a mechanical engineering technology major with a minor in naval science. He was awarded the Navy ROTC 4-year National Scholarship and has received the Navy ROTC Academic Excellence Award. Most recently, he received the Marine Corps Association's Honor Graduate award and the Military Officers Association of America ROTC

ROTC. Upon graduation, he will be commissioned into the United States Navy as a submarine officer. Full story…

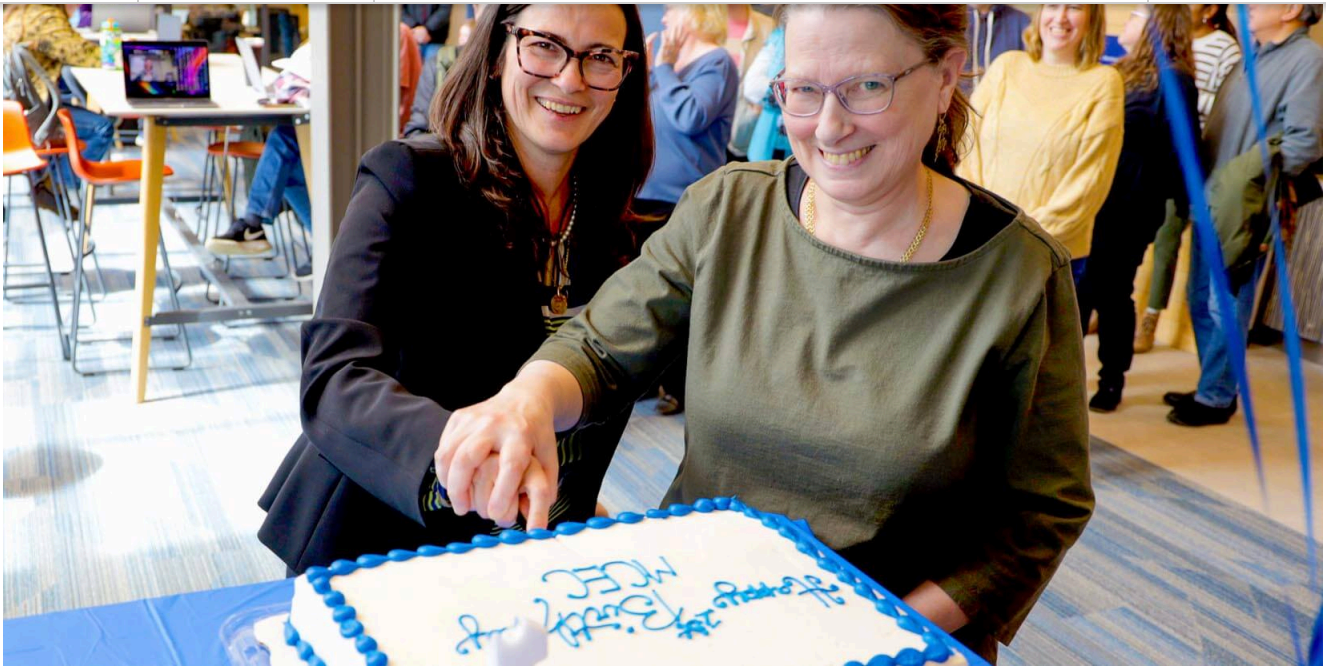
Jiyeon Park of Incheon, South Korea, is the Outstanding Graduating International Student in the Maine College of Engineering and Computing. Park, who is majoring in electrical engineering technology, enrolled at UMaine in fall 2022 after graduating from Eastern Maine Community College. During her senior year, she helped upgrade the paper-making equipment at UMaine's Process Development Center. She also served as a teaching assistant in spring 2023 and has volunteered at various events during her college career, including engineering career fairs and an engineering expo. In the summer 2023, she interned with RLC Engineering and plans to continue working for the company alongside pursuit of a graduate degree at UMaine. During her time at UMaine, she received the International Presidential Scholarship and an electrical engineering scholarship. Full Story…



The University of Maine has been granted a significant award from the National Science Foundation's (NSF) **Innovative Technology Experiences for Students and Teachers (ITEST)** program. This $1.2 million grant signifies a crucial step in the university's efforts to advance STEM education, particularly in the field of semiconductor science and technology.

Led by Principal Investigator (PI) Prabuddha Chakraborty and Co-Principal Investigator (Co-PI) Rosemary L Smith, the University of Maine aims to develop a comprehensive semiconductor curriculum tailored for high school students. This curriculum will incorporate state-of-the-art technologies such as Artificial Intelligence (AI), interactive game modules, and hands-on learning experiences.

The project, titled "Collaborative Research: A Semiconductor Curriculum and Learning Framework for High-Schoolers Using Artificial Intelligence, Game Modules, and Hands-on Experiences," has a total budget of approximately $1.3 million, with the university's share amounting to $415,000. The grant was awarded on March 13, 2024, and will run from June 1, 2024, to May 31, 2028. Read the abstract…

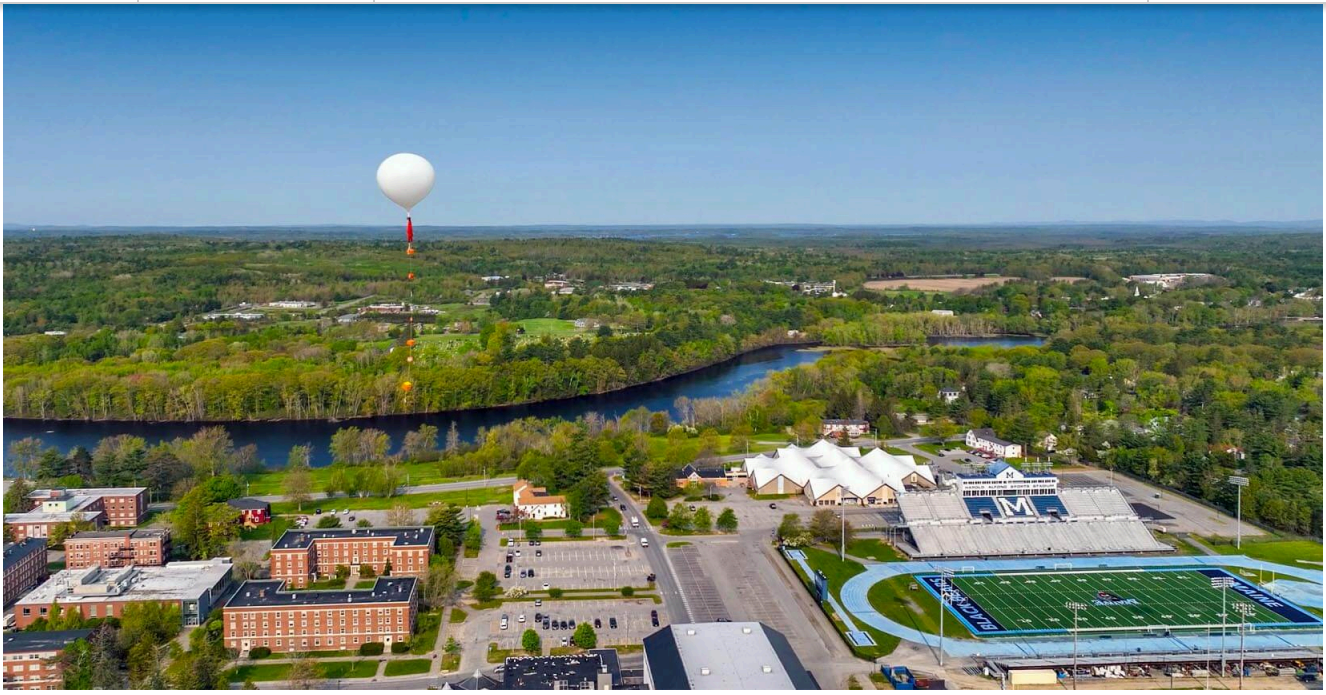


Maine College of Engineering and Computing celebrating one year of success

The Maine College of Engineering and Computing (MCEC), an innovative institution under the UMS TRANSFORMS Initiative, celebrated its first year of successful operation on April 1. MCEC, established through a generous $75 million grant from the Harold Alfond Foundation, has emerged as a beacon of modern education, addressing the evolving needs of Maine's workforce and economy.

"We are advancing cutting-edge engineering and computing innovation and technology," said Joan Ferrini-Mundy, University of Maine President and University of Maine System Vice Chancellor for Research and Innovation. "The Maine College of Engineering and Computing is poised to support the demand for thousands of new engineering and computing graduates who will continue to push the boundaries of research and innovation in the state of Maine and beyond."

Full Story



Media highlights UMaine's contributions to eclipse research

Media outlets including Portland Press Herald, Smithsonian Magazine, New England Public Media, KTRE (Channel 9 Texas), WABI (Channel 5 Bangor), News Center Maine, Bangor Daily News, Maine Public, FOX 23, Voice of Maine, and WGME (Channel 13 Portland) highlighted University of Maine students, faculty and staff participating in the April 8 total solar eclipse. A team of students and faculty from the University of Maine launched a high altitude balloon that livestreamed the eclipse. Cameras were attached to the balloon, which traveled about 90,000 feet into the stratosphere. UMaine junior Noah Lambert said the goal of the project was to capture the moon's shadow as it moves across the earth. Meanwhile, Versant Power Astronomy Center Shawn Laatsch, Ph.D. student Nikita Saini and other UMaine graduate students were in Jackman, Maine collecting images of the eclipse. Laatsch and Saini trained groups of citizen scientists around the country to also collect eclipse images as part of a nationwide project led by the Southwest Research Institute called the Continental-America Telescopic Eclipse (CATE2024) experiment.

WAVED Medical, a spinoff from the University of Maine's **CompuMAINE Lab**, clinched second place at the #OPENminds2024 conference in San Diego. Their team, led by PhD candidate Jeremy Juybari and Dr. Kendra Batchelder, impressed with an innovative breast cancer detection approach.

Originating in the CompuMAINE Lab, WAVED Medical underwent NSF-funded I-Corps™ training and completed the Pioneer and Propel E-Team Program cohorts. Their efforts earned them a 2023 Qualcomm Innovator Stipend, validating their project's

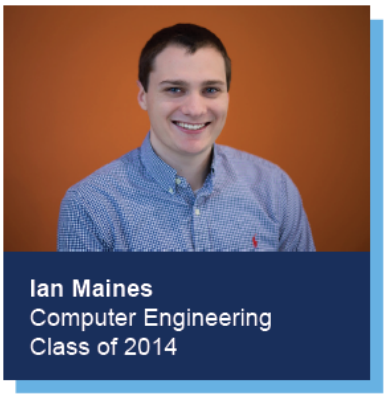
UMaine Surveying Engineering Technology Students place 3rd in National Competition

The UMaine Student Chapter of the National Society of Professional Surveyors (NSPS) attended the 2024 NSPS National Student Competition April 22nd through April 23rd in Washington DC. and placed third (3rd) out of eighteen (18) teams in the baccalaureate division. It is a 2-day competition. It includes a full-day surveying monument hunt across the entire District of Columbia and a second day of historical surveying field exercises and calculations. The second day's exercises

image-based algorithm technology targeting breast cancer risk areas. Their solution aims to enhance early detection and provide personalized care, potentially revolutionizing breast cancer management.

Tull, Peter Kelton, Max Heck, Thomas Berry and Morgan Haufler. Rich Vannozzi, Asst. Professor of Surveying Engineering Technology serves at the team's advisor and accompanied them to Washington DC."

Alumni Highlights - Ian Maines ’14



Ian Maines
Computer Engineering
Class of 2014

Why did you choose Computer Engineering?
I’ve always had a fascination with how the world works and tinkered with computers and other electronics as a child. Computer Engineering allowed me to explore the inner workings of devices and systems that are not easily understandable from the outside. I’ve always enjoyed building things, and Computer Engineering gave me the electronics and programming skills to build just about anything I wanted.

Why did you choose UMaine’s Electrical and Computer Engineering Department?
The University of Maine College of Engineering and Computing has a reputation for creating great engineers. I knew the program would give me the foundation I would need to be successful, and was also to the smaller program with smaller program with smaller class sizes. It was an added bonus that the program was also closer to home.

What was your experience at UMaine (classes, social network, other activities)?
I really enjoyed my time at UMaine with a couple of on-campus jobs that I really loved (Network Operations and Teaching Assistant), and close collaboration with my classmates, especially in our upperclassman years.

What is your position today? What do you do in your job?
I’m a Director of Software Engineering at PTC. The teams I lead are responsible for Customer Response and DevOps for PTC’s Kepware line of Products. I really enjoy the mix of helping engineers solve complex technical problems and the customer-facing work that I do as we work to resolve customer-reported incidents and defects.

How did UMaine contribute to your success?
Throughout my career I’ve served in a variety of roles that required me to develop new skills, and the ECE program at UMaine gave me a foundation in the Engineering and problem-solving skills I needed to be successful in each of them.

We love to hear what our alumni are up to! Please fill out the short questionnaire below to be featured in a future issue and social media!

Fill out questionnaire

Quick Bytes

Led by captain **Liz Drelich**, the **UMaine Steel Bridge**

The **SCIS Capstone Showcase** and NCWIT

Manisha Choudhary has been named one of 'The

and third in lightness out of 14 teams at this year's New England Regional competition at UNH.

Caitlin Howell's work on adaptive and functional liquid coatings, spotlighted in an AAAS EurekaAlert. Published in Industrial Chemistry & Materials on February 23rd, this invited review delves into the innovative applications and potential of these coatings. From enhancing durability to enabling dynamic responses to external stimuli, Howell's research opens new avenues in materials science. Dive into the intricate world of liquid coatings and discover how they're revolutionizing industries. Explore the article on EurekaAlert for insights into this cutting-edge research: [Link] (https://www.eurekalert.org/news-releases/1036694).

Ferland from 5-7pm. SCIS Capstone students displayed their projects, while the NCWIT Aspirations in Computing awards honored winners, including guest speaker Margaret Kastelein, the 2023 AiC award recipient.

PhD student **Liza White** was invited to represent graduate students on a panel discussing the role of student research and development in helping both education and the economy for the latest episode of the Maine Question podcast.

Babak Hejrati awarded Flagship Doctoral Research Fellowship 2024 by Vice President for Research, securing full support for PhD student over two years."

American Academy of Environmental Engineers and Scientists (AAEES) through their 2024 40 Under 40 Recognition Program.

Alex Friess has been selected to serve as Associate Editor for the prestigious AIAA Journal of Aircraft, showcasing his expertise and dedication to aerospace engineering. Congratulations to Alex for this significant contribution to the field!

Roberto Lopez-Anido's latest journal publication in Polymers, titled "Environmental Durability of Bio-Based and Synthetic Thermoplastic Composites in Large-Format Additive Manufacturing" authored by Saavedra-Rojas, F.A., Bhandari, S., and Lopez-Anido, R.A. Explore the open-access article at https://doi.org/10.3390/polym16060787.

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