Salisbury University

2026

Mathematics and Computer Science Alumni NEWSLETTER

Greetings!

Dear Friends,
Greetings! My name is Dr. Jiacheng Cai. I am the Mathematics and Computer Science (MATH/COSC) alumni coordinator at Salisbury University (SU). On behalf of the faculty and staff of the Mathematical Sciences and Computer Science departments, I would like to share some exciting news from 2025 to 2026 with you.

Jiacheng Cai

Student Successes

Our students continue to excel in various fields and earn significant reputations for our departments and the university. In the spring of 2026, a team of four actuarial students, advised by Dr. Jiacheng Cai, is participating in the Society of Actuaries (SOA) 2026 Student Research Case Study Challenge, an international student research competition including 100 teams representing 65 universities, spanning 19 countries and six continents. The team (An Nguyen, Brice Salazar-Calderon, Julia Zappacosta, and Mike Prozzoly) worked as an actuarial consulting group tasked with analyzing large scale data and developing an insurance solution for a fictional space mining company set in the year 2175. Within eight weeks, the team performed advanced data analytics and actuarial modeling, putting their effort to a professional report for submission. The team is announced to be in the semi-finalist recently (top 26 out of 100 globally) and we are waiting for the results of finalist.

1

The team AstroGulls: from left, Julia, An, Dr. Cai, Mike, and Brice

Stephora Cesar Alberi, last year's commencement speaker and a computer science major with minors in math and data science, has been selected as a 2026 Gates Cambridge Scholar. Only 26 U.S. fellows were chosen this year, out of 6,000–7,000 applicants worldwide. Salisbury also received a special mention, as Stephora is our second Gates Scholar. One of the most competitive awards globally, Gates Cambridge Scholars often come from institutions such as Ivy League schools, MIT, Berkeley, and others. Stephora will be fully funded to pursue a Ph.D. in biotechnology at the University of Cambridge in the Chemical Engineering and Biotechnology Group under Dr. Clemens Kaminski, as a member of Fitzwilliam College. Her research will use computer vision to create smarter microscopes, improving imaging for infectious diseases and accelerating diagnostics and drug discovery, particularly for the Global South.

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Stephora Cesar Alberi.

continued

Student Successes continued

MATH/DSCI Presenters at SUSRC 2025

In the 2025-2026 academic year, students conducted research under the supervision of our faculty in the field of algebra, data visualization, statistics applications, actuarial and finance analysis, mathematics education, and computer science. All the projects were successfully completed and presented at the Salisbury University Student Research Conference (SUSRC), SU Summer Research Showcase, Posters on the Bay, and National Conference on Undergraduate Research. Several students successfully published their works with their mentors.

List of presentations on 2025 SUSRC:

Oral Presentation

- A Study of Lattices with an Eye Toward Quantum Cohomology for Flag Manifolds of Type B, Stephen Barr – Advised by Dr. Ryan Shifler
- On the Quantum Parameter in the Quantum Cohomology of a Family of Odd Symplectic Partial Flag Varieties, Caleb Shank, Connor Bean – Advised by Dr. Ryan Shifler
- Empowering Solar and Soil in Maryland: A Suitability Analysis for Agrivoltaic Systems, Urjit Chakraborty – Advised by Dr. Randall Cone
- Celite: A Collection of Cellular Automaton Simulators, Kyle Tranfaglia, Dustin O'Brien, Timothy McKirgan – Advised by Dr. Michael Bardzell and Dr. Xiaohong Wang
- GullHacks: Introduction to the Salisbury University Hackathon, Jairik McCauley – Advised by Dr. Sang-Eon Park

Poster Presentation

- Analysis of Collision & Contact Sports Classifications, Dustin Obrien, Kyle Tranfaglia, Dylan Johnson – Advised by Dr. Kyle Teller and Dr. Echo Leaver
- Thyroid Nodule Study, Ashlyn Orr – Advised by Dr. Veera Holdai
- Designing the Most Effective Volleyball Practice Plan, Leah Osmon – Advised by Dr. Veera Holdai
- Periodic Behavior in Finite Linear Cellular Automata, Abigail Pierson – Advised by Dr. Michael Bardzell
- Deep Learning for Derivatives: Using LSTMs to Refine Option Pricing Models, Eli Prushansky – Advised by Dr. Deepak Bastola
- Analyzing Costs Related to Fires in Salisbury, MD, Cameron Vinson, Joseph Sanchez, Jackson Griffin, An Nguyen – Advised by Dr. Kyle Teller
- Salisbury DSP, Diego Zane, Aiden Levy – Advised by Dr. Randall Cone
- AI Swing Analysis, Walter Euceda-Mendoza, Andrew Mehall – Advised by Dr. Yaping Jing
- Analysis of Lynx Fecal Cortisol Data, Alayna Bucchioni – Advised by Dr. Angela Freeman
- The Deception of House Wrens: How Cuteness Hides Destruction, Emily Paslick, Catie Egan – Advised by Dr. Jeremy Corfield, Dr. Giulia Franchi
- Synthetic Facial Synthesis and Temporal Manipulation via Neural Networks, Vincent Pham, Jorge Armando Verduzco Zavala, Will Lamuth – Advised by Dr. Sang-Eon Park
- Thinking Adapter: Enhancing LLM Reasoning with Low-Latency Thought Processing, Spencer Presley, Dustin O'Brien – Advised by Dr. Junyi Tu
- Developing an Adaptive Robotics System with Sports Equipment for Individuals with Severe Disabilities, Urjit Chakraborty – Advised by Dr. Dean Ravizza, Dr. Giulia Franchi

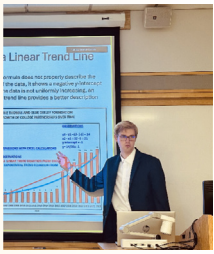
continued

Student Successes continued

Our students work on projects that not only benefit their own professional development but also benefit local organizations and businesses.

1 *CAMS Project in Spring 2026*

The Center for Applied Mathematics and Science (CAMS) host a directed consulting course in spring 2026. This year, partnered with Perdue Foods LLC, several teams of computer science, data science, and mathematics students worked under the advice of Dr. Deepak Bastola (Mathematics) and Dr. Junyi Tu (Computer Science) to analytically and statistically assess the factors influencing litter quality. Using innovative tools and algorithms, students worked in collaborative groups to conduct research overview and implement analytical tasks, strengthening and expanding their technical and problem-solving skill sets throughout the project. The client benefited from these student-centered consulting efforts through actionable insights, such as identifying optimal moisture levels or chick density, ranking key influencing factors, and pinpointing specific areas or farms that require focused attention. These contributions help improve operations while optimizing both productivity and animal welfare. This collaboration between Salisbury University and surrounding businesses reinforces our unique role in supporting community partnerships and elevating our educational and regional economic impact.



2 *Internship Presentation*

Advised by our faculty members, several students participated/will participate in internship/research projects to help local organizations, such as NASA Wallops Flight Facility Ground Safety Branch, TidalHealth, Salisbury Fire Department, Centers for Medicare and Medicaid Services, Integrated Technology Solutions, K&L Microware, The Thomas and Elise Deeley Foundation, Dunbar Bender & Zapf, Inc., JP Morgan, Delmarva Digital, etc.

3 *Jairik McCauley, Anye-Nkwenti Forti, Logan Kelsch and Kelvin Ruano won 1st Place – Women's Health Category at Health Hack*

Computer science students are shining in multiple fields. On January 25, 2026, Shaun Hoffmann (CS Undergrad), Diego Zane (CS Undergrad), Jungho An (Staff / CS Grad), and Alex Lin (Georgetown University Grad) won Best Use of Snowflake API at HoyaHacks. Jairik McCauley received the prestigious 2025 UPE Academic Achievement Award of $1500. Four computer science students: Jairik McCauley, Anye-Nkwenti Forti, Logan Kelsch and Kelvin Ruano won 1st Place – Women's Health Category at Health Hack at Robert Wood Johnson University Hospital and Rutgers Robert Wood Johnson Medical School Health Hack 2025. Several students won the Perdue School Business Competition: Ramez Elobeid and Will Weber won 2nd Place in Bernstein Business Plan Competition ($5,000 in cash and $5,000 in service), Ramez Elobeid won 1st place in Idea Factory Poster Competition ($3,,,,000), Ashley Gerbes won Merit Award in Idea Factory Poster Competition ($500). In 2025 the following students participated in Summer Research Awards: Owen Beabout accepted by NSF REU EXERCISE program; Ramez Elobeid awarded Guerrieri Henson Summer Research Grant; Danish Ahsan, Sude Celik, Anye-Nkwenti Forti, Logan Kelsch, Brennen McCorison, Ali Ranjha, Aaron Triplett awarded Summer Research Grant by Graduate Studies and Research.

Advised by our faculty members, several students participated/will participate in internship/research projects to help local Our programs helped students to achieve their academic and career goals. Many students successfully obtained graduate school offers from top universities, such as Georgetown University and University of Maryland College Park, and job offers from big companies, such as Aon, Progressive, Dunbar Bender & Zapf, Inc., TidalHealth, etc.

Events for Our Students

Our departments continue to host and explore events and activities to enhance our students' experiences beyond the classroom.

In 2025-2026, the Department of Mathematical Sciences hosted multiple career development events, including, but not limited to, resume and job application workshops, math support and opportunities student for success workshop, graduating students experience sharing panel, etc. Together, these initiatives strengthened students' professional readiness by providing practical guidance, peer mentorship, and exposure to diverse career pathways. The events fostered a supportive community that connected academic training to real-world applications, empowered students to make informed career decisions, and reinforced the department's commitment to holistic student success beyond the classroom.

1
- *Math support and opportunities for student success workshop*
- *Graduating students experience sharing panel*

In 2025-2026, the Department of Computer Science, Department of Mathematical Sciences, and MATH/DSCI/COSC club hosted multiple alumni speaker series. We had the honor to invite our proud alumni to give in-person or virtual presentations to our current students, sharing their invaluable experiences. Invited alumni includes Brian Guaracci (Class of 2000) from OpenAI, Ryan Robinson, ASA, MAAA (Class of 2017) from Piper Jordan, Omar Aboul-Enein (Class of 2018) from National Institute of Standards and Technology, Ryan Rosiak (Class of 2022) from JP Morgan. We will host another two presentations from Andrew Mehall (Class of 2025) from OSC Global and Grace Miles and Sarah Kotula (both Class of 2017) from Delaware Electric Cooperative.

2
- *Ryan Rosiak presentation*
- *Ryan Robinson Presentation*
- *Brian Guaracci virtual presentation*

In the spring of 2026, our MATH/DSCI/COSC students had a wonderful visit to NASA WFF. They visited fabrication facilities, the balloon center, the Range Control Center, and the launch pads. This opportunity provided our students with a deeper insight and experience of their major knowledge and real-world professional jobs. Thank you to Math/CS student club, Dr. Bardzell, and Dr. Holdai for organizing this field trip.

3 *NASA Trip*

The Math and COSC club held its annual Math Challenge in the spring of 2026 and GullCode Programming Competition in the spring of 2025. These competitions provided great opportunities for our students to apply their knowledge and skillsets to solve challenging problems in a limited time period.

4
- *MATH Challenge*
- *COSC GullCode*

continued

Events for Our Students continued

PME and UPE

In 2025, Department of Mathematical Sciences and Department of Computer Science hosted two honor society induction ceremonies for Pi Mu Epsilon (PME) and Upsilon Pi Epsilon (UPE). PME and UPE are non-secret honor societies where the purpose is the promotion of scholarly activity in mathematics/computer science among students in academic institutions and among the staffs of qualified non-academic institutions. To be eligible to join the societies, students must have completed a series of math/computer science coursework and maintain high general and major GPA. The departments are honored to present the inductees this year:

PME

- Stephora Alberi
- Owen Beabout
- Andrew Brower
- Sude Celik
- Nicholas Corcoran
- Earl Detter
- Andrew Mehall
- Jairik McCauley
- An Nguyen
- Cameron Vinson
- Julia Zappacosta
- Jorge Armando Verduzco Zavala

UPE

- Owen Beabout
- Dude Celik
- Hamza Chaudhry
- Nicholas Corcoran
- Nicholas Duvall
- Brooke Izzett
- Christian McKenney
- Lilly Ngo
- Austin Phalines
- Connor Sullivan
- Cameron Vinson
- Noah Webb
- William Weber.

STAY CONNECTED

For more news about the two departments, visit :

- MATH: What's New in the Mathematics Department?
- Computer Science: What's New in the Computer Science Department?

Both Mathematics and Computer Science departments are grateful for generous support from our alumni. Please contact Dr. Jiacheng Cai (jxcai@salisbury.edu) to share your story of success (news/updates) or to participate in an alumni presentation or discussion panel.

Faculty News and Program Development

Our faculty continues to provide professional scholarships and to develop, create, and adjust our curriculums to better serve our students' needs for professional developments.

Program Developments and Recognitions

- The Actuarial Science Program at Salisbury University has successfully been recognized by the Society of Actuaries by inclusion on the list of Universities and Colleges with Actuarial Programs – Advanced Curriculum – the ONLY ONE in Maryland and one of the only 16 among the northeastern United States.
- To meet the challenge of the recent rapid development in AI and prepare our graduate with the latest skills and knowledge for real world, Computer Science Department developed three new courses in their program: 1) Large Language Models and Applications; 2) Convolutional Neural Networks and Applications; 3) Generative AI for Everyone.
- The two departments collaborated to adjust/create courses for the major students to meet the General Education – Experiential Learning requirements. Courses include internship, undergraduate, directed consulting, software engineering projects, etc. These courses enhance our students experience and better prepare them for their professional future.

Faculty Tenure, Promotions, Awards, and Advancements

- Dr. Jathan Austin successfully received promotion to professor.
- Robert Barber was promoted to professor emeritus.
- Dr. Jiacheng Cai successfully received the Associate of the Society of Actuaries credential.
- Dr. Yaping Jing received Henson Faculty Award of Excellence in Research Mentoring.
- Dr. Kyle Teller, Dr. Junyi Tu, and Dr. Peter Wang successfully received tenured and are in the process of promotion to associate professor.
- Dr. Ryan Shilfer was accepted and successfully graduated to the second cohort of the Emerging Leaders Program with Leadership Maryland.
- Dr. Sophie Wang received Salisbury University Distinguish Faculty Award.
- Dr. Sophie Wang is an Alternate of Fulbright U.S. Scholar of 2026.

Publications

- Dr. Troy Banks co-authored "Informing Academia Through Understanding of the Technology Use, Information Gathering Behaviors and Social Concerns of Gen Z," an interdisciplinary collaboration with Dr. Nicole A. Buzzetto-Hollywood (UMES) and Dr. Austin J. Hill (Harford Community College). Their article was published in *Informing Science: The International Journal of an Emerging Transdiscipline.*
- Dr. Deepak Bastola co authored a scholarly article examining the impact of simulation based instruction on the suicide assessment of confidence of Master of Social Work students. The article, titled "Impact of Simulation Based Instruction on the Suicide Assessment Confidence of Master of Social Work Students," has been accepted for publication in the *Journal of Social Work Education.*
- Dr. Jiacheng Cai's article "Small Program, Big Dream: Our Journey to the 2024 SOA Student Research Case Study Challenge," about SU's third-place finish in this international competition, was published in *Expanding Horizons.*
- Dr. Jiacheng Cai's article "Shaping the Future of Actuarial Science at AMS 2025: Collaboration, Innovation and Forward-Looking Research in New Orleans" (co-authored with Dr. Fang Yang from Georgia State University) about the highlight of the AMS 2025 Special Session on Actuarial Education and Actuarial Mathematics, was published in the *Society of Actuaries Career Development Newsletter.*
- Dr. Ben Goodberry's article "Type A Partially-Symmetric Macdonald Polynomials" was published in *Algebriac Combinatorics.*
- Dr. Veera Holdai co-authored "A Statistical Analysis and Generalized Linear Models of Cerebral Stroke" with James M. Bennett student Peter Jin. Their article was published in *The Journal of Emerging Investigators.*
- Dr. Enyue Lu published paper (co-authored with students Beabout, Dodd, and Murphy) "Mitigating Catastrophic Forgetting Using Improved Clustering-based Episodic Memory", Proceedings of the 25th IEEE International Conference on Data Mining (ICDM 2025), to appear
- Dr. Enyue Lu published paper (co-authored with Tang, Gonzalez, Lieberman, Lee, and Jin) "Change Detection and Land Cover Classification of Flooded Regions in UAVSAR Imagery Using Deep Learning", Proceedings of the 25th IEEE International Conference on Data Mining (ICDM 2025), to appear
- Terry Manns, with SU colleague Dr. Jamie Emerson (Economics), co-authored "Risk-Taking and Performance in Marathon Running: Do Pace Setters Matter?" Their article was published in *Economics Bulletin.*
- Dr. Ryan Shifler's article "Minimum Quantum Degrees with Maya Diagrams" was published in the Annals of Combinatorics.
- Dr. Ryan Shifler also co-authored an article with students Connor Bean and Caleb Shank. Their article, "On the Quantum Parameter in the Quantum Cohomology of a Family of Odd Symplectic Partial Flag Varieties," was published in the *Journal of Algebra and Applications.*

Dr. Sophie Wang co-authored a paper titled: "The emerging global threat of salt contamination of water supplies in tidal rivers" on *Environmental Science & Technology Letters* journal.

continued

Faculty News and Program Development Continued

Conference Presentation

- Dr. Deepak Bastola presented "MCMC Diagnostics Presented in Interactive Quarto Slides" at the spring 2025 MD/DC/VA MAA Section Meeting at George Mason University
- Dr. Jiacheng Cai co-organized and presented on the American Mathematical Society Fall Southeastern Section Meeting (2025) in New Orleans, LA. Presentation title: The Role of Actuarial Educator in the AI Era: An Informal Exploratory Survey
- Dr. Jiacheng Cai presented on Actuarial Research Conference (2025) in Toronto, Canada. Presentation title: Beyond Exams: Exploring Research Opportunities for Small Actuarial Programs (co-author and co-presenter, Dr. Zhixin Wu from DePauw University)
- Dr. Kyle Teller presented "The Evolving Classroom: Fostering Mastery in Introductory Statistics, Calculus, and Differential Equations" on JMM 2026 AMS Special Session on Assessment Practices that Promote Student Learning.
- Dr. Ryan Shifler, with student Stephen Barr, presented "Lattices in Type B" at the spring 2025 MD/DC/VA MAA Section Meeting at George Mason University
- Dr. Sophie Wang gave presentations at NSF EPIIC RAISE AI readiness outreach activities: AI Readiness in Agriculture Roundtable, AI Readiness in Hospitality Roundtable, AI Readiness in Healthcare Roundtable

Grants/NSF Project:

- Dr. Giulia Franchi was awarded a grant from Maryland Industrial Partnerships (MIPS)for the project: "Robotics Cross Training". 2/1/2026 –1/31/2027, $125,000.00 plus Robot Purchase donation from Delmarva Veteran Builders company (DVB).
- Dr. Giulia Franchi was awarded a grant from NSF Convergence Accelerator Track M for the project: "SequestStar: Capturing carbon and reusing waste streams". National Science Foundation, 2/1/25 -1/31/28, $5,000,000.00.
- Dr. Giulia Franchi was awarded a grant from Maryland Sea Grant NOAA for FY26-27 for the project: "Socio-Agri-Geomorphological Evolution (SAGE) of the Farm-Marsh boundary in the face of sea level rise: Making models usable to encourage adaptive management". I'm one of the CoPI with Dr. M. Houser and Dr. W. Nardin. 02/01/2026-01/31/2028; $300,000.00.
- Dr. Enyue Lu received one-year extension for current USDA project, additional $39,548 in year 6, increased funding from $164,230 to $203,778, adding two more undergraduate students in year 6, awarded in November, 2025
- Dr. Enyue Lu continued to work on the projects "REU Site: EXERCISE - Explore Emerging Computing in Science and Engineering", Funded by NSF.
- Dr. Sophie Wang worked with Peter Wang and Deepak on NSF EPIIC RAISE summer projects with Perdue Food LLC supported by NSF EPIIC RAISE summer faculty mini-grant projects: 1) Deep Learning Based Object Detection and Counting through Fusing RGB and Thermal Videos 2) Adaptive Hatchery Control via Sensitivity Analysis & Artificial Intelligence. There are four undergraduate Computer Science students participating in the two projects: Aaron Triplett, Sude Celik, Brennen McCorison, and Anye-kwenti Forti.

Hosting High School Competitions

Both departments continue to support local secondary education and host the annual high school competitions.

Sponsored by the Klein G. and Mary Lee Leister Foundation and Delmarva Power, an Exelon Company, the Department of Mathematical Sciences hosted the 41st annual Eastern Schore High School Mathematics Competition in November 2025. Students from 19 schools in Delaware and Maryland participated in the event and demonstrated their mathematical talents.

Sponsored by the Klein G. And Mary Lee Leister Foundation, Delmarva Power, an Exelon Company, Omni Technology Professionals, Inc., Salisbury University Libraries, Henson School of Science and Technology, the Department of Computer Science hosted the Fourth Annual Eastern Shore High School Computer Programming Competition in April 2025.

Together, these long-standing initiatives underscore the departments' shared commitment to educational outreach, equity of opportunity, and regional partnership. By engaging talented high school students through academically rigorous and supportive competitions, the departments help cultivate early interest in mathematics and computer science, strengthen pathways from secondary to higher education, and reinforce the university's role as a hub for intellectual growth on the Eastern Shore. These events not only celebrate student achievement but also invest in the future STEM workforce and the educational vitality of the local community.