RAISE UP INCLUSIVE STEM RETREAT

Sponsored by the Hanson Center for Inclusive STEM Education

Sat. February 7, 2026

-RETREAT PROGRAM-

LAFAYETTE
HANSON CENTER
FOR INCLUSIVE STEM EDUCATION

Retreat Mission

This retreat is designed to equip, empower, and energize you for your academic and professional journey in STEM. We invite you to join us for interactive sessions and dynamic networking opportunities aimed at forging your future while building a more diverse, equitable, and inclusive STEM community together. We look forward to welcoming all students, faculty, and staff to this collaborative event.

RAISE Organizations & Retreat Leaders

American Chemical Society: Mika Harari '28
Engineers Without Borders: Alessia Costanzo '28
Hispanic Finance Association: Michelle Islas Escamilla '26
Kovalevsky Society (Founding Member): Xinyuan Liang '26,
 Zoey Zou '26
National Society of Black Engineers (Founding Member):
 Jasmine Williams '26
Neuroscience Club: Alex Rodriguez '28
Pre-Health Professions Society: Sophia Covolesky '29
Society of Hispanic Professional Engineers (Founding Member): Mauricio Hernandez '27
Society of Women Engineers (Founding Member):
 Grace Weed '29
Tri-Beta Biology Honors Society: Shoilee Mandal '29
Women in Computing: Akeena Hall '26
Women in Economics: Isabela Maldonado '26

Hanson Center Student Leaders

Rachel Kimball '26
Sandra Djayeola '28

FACULTY ADVISOR

Dr. Wendy Hill, Hanson Center Director

What is RAISE?
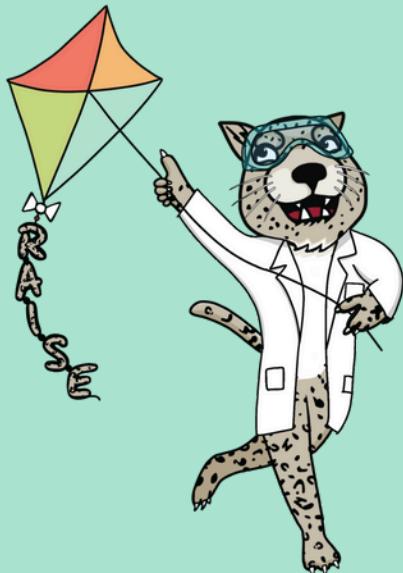
RAISE is a coalition of existing student STEM organizations. We harness our shared missions and actions to collaboratively advance inclusive STEM education at Lafayette.

Our mission is to...

- **partner on projects across the STEM fields to deepen and expand their impact**
- **collaborate and share information among the student organizations to increase the effectiveness and influence of their programs**
- **provide student input and advice on Hanson Center projects and initiatives.**

RAISE

A Hanson Center Initiative for Change

Science, Technology, Engineering, and Mathematics

Keynote: Dr. Raychelle Burks

Dr. Raychelle Burks is an award-winning forensic chemist, science communicator, and Provost Associate Professor at American University. A Fellow of the American Chemical Society and recipient of the prestigious Grady-Stack Award, Dr. Burks is renowned for her research in forensic sensors and her unique ability to make science accessible through pop culture.

A sought after science communicator, Dr. Burks appeared on the Science Channel's Outrageous Acts of Science and will soon be appearing on the Smithsonian Channel's The Curious Life and Death Of, as well as ACS Reactions videos, Royal Society of Chemistry podcasts, and at genre conventions such as DragonCon and GeekGirlCon. Dr. Burks helped create and organize SciPop Talks!, which blends science and pop culture, and she writes the forensic science–true crime column Trace Analysis for Chemistry World.

We're excited to welcome Dr. Burks to Lafayette!

Retreat Schedule

11:45 AM –12:00 PM   **Registration (Marquis Lobby)**
12:00—1:15 PM   **Plated Lunch and Keynote:**
Dr. Raychelle Burks
(Marquis Dining Hall)

Workshops: Rockwell
1:30—2:10 PM   **Session 1**
2:10—2:20 PM   **Break** *(Snacks in Dyer Center)*
2:20—3:00 PM   **Session 2**

Hot Seats: Rockwell
3:10-3:50 PM   **Industry and Graduate School**
with Early-Career Alumni

Rockwell Eco Café and Courtyard
4:00-4:45 PM   **RAISE a Glass: Mocktails,**
Posters, and Networking

*Each session has multiple workshops, so you may attend one workshop per session.

**All hot seats will be happening concurrently, but feel free to move between different hot seat sessions as you wish.

Workshop Session 1
(Concurrent sessions from 1:30 PM to 2:10 PM)

A Conversation with Dr. Raychelle Burks
Rockwell 362

Continue the conversation with Dr. Burks in this informal, interactive session following her keynote. This is your chance to ask questions and dive deeper into her journey as a forensic chemist, a fellow of the American Chemical Society, and a trailblazing science communicator. From her research on national security sensors to her experiences at major conventions like DragonCon, gain firsthand insights from the first woman of color to receive the prestigious Grady-Stack Award. Don't miss this unique opportunity to engage directly with Dr. Burks and explore how to build a dynamic, inclusive, and boundary-breaking career in STEM.

Achievement Without Exhaustion in STEM
Rockwell 262

*Organized by the Prehealth Professions Society
and the Kovalevsky Society
Presented by Sophia Covolesky and Xinyuan Liang*

As empowering as STEM disciplines can be, their rigor often leaves students vulnerable to burnout. Through reflection, empowerment, and practical strategies, participants will learn how to tackle challenges while maintaining long-term motivation. Together, we'll explore how to embrace a growth mindset and foster resilience in both our academic and personal lives. Join us for supportive discussions, inspiring stories from peers, and stress balls!

Community Over Competition: Redefining STEM Culture
Rockwell 104

Organized by Women in Computing and American Chemical Society
Presented by Akeena Hall and Mika Harari

While STEM fields thrive on innovation and discovery,competition can sometimes overshadow the collaborative spirit that drives scientific breakthroughs. Join us for an interactive workshop exploring how competition and community shape the STEM experience and our academic journeys. Whether you've felt the pressure to constantly compete or have found strength in supportive communities within your field, this session offers a space to unpack what drives us, what divides us, and how we can build more inclusive STEM environments together.

Workshop Session 2
(Concurrent sessions from 2:20 PM to 3:00 PM)

Building Inner Confidence in STEM
Rockwell 104
*Organized by the Tri-Beta Biology Honor Society
and the Kovalevsky Society
Presented by Shoilee Mandal and Zoey Zou*

Feeling unsure of yourself does not mean you don't belong. Many students in STEM face moments of self-doubt, especially in high-pressure settings. This interactive workshop tackles imposter phenomenon head-on by providing clear strategies to understand why these feelings appear and how to respond to them with confidence and resilience. Participants will leave with a renewed sense of their own strengths, practical approaches for personal empowerment, and custom stickers from our closing activity!

Where Science Meets Story:
The Intersection between STEM and the Humanities
Rockwell 262
*Organized by the Society of Women Engineers and the Neuroscience Club
Presented by Grace Weed and Alex Rodriguez*

One of the biggest divides in academia is STEM vs. the Humanities. Are these fields as separated as they seem? Or are they more connected than we realize? As students, alumni, and faculty of a liberal arts college, what role do we have in bridging this divide, if at all? Join us for an engaging session of discussion and activities to learn more about the vital intersection between STEM and the Humanities, and how interdisciplinary thinking fosters more inclusive and impactful STEM environments. For when science meets story, everything changes.

Combatting Biases in STEM
Rockwell 360

Organized by Engineers Without Borders, the Society for Hispanic Professional Engineers, and the National Society of Black Engineers
Presented by Alessia Costanzo, Mauricio Hernandez, and Jasmine Williams

While students are pushed to reach new heights, the unspoken pressures that shape academic and professional spaces, particularly for students from underrepresented backgrounds, often remain in the shadows. This interactive workshop explores the "hidden curriculum" that governs success, the expectation of constant brilliance, and the pressure to suppress parts of one's identity in order to advance. We will examine how minority groups are frequently generalized and viewed as a monolith, contributing to feelings of isolation and self-doubt, and why even moments of achievement can fuel perfectionism and imposter phenomenon rather than confidence. Through open dialogue, this discussion will identify these challenges, gain awareness of shared experiences, and create space for collective understanding moving beyond simply "being comfortable" within these pressures to actively overcoming them in our academic journeys, careers, and personal lives.

Unlocking the Secrets of College Success:
A First-Gen Workshop
Rockwell 362

Organized by Women in Economics and the
Hispanic Finance Association
Presented by Isabela Maldonado and Michelle Islas Escamilla

Stepping into college as a first-generation student often means carrying questions no one ever taught you to ask. This "hidden curriculum"--the set of unspoken rules, quiet pressures, and secret expections– can feel impossible to decode alone and make success seem out of reach. This workshop creates a dedicated space to name these challenges, build community, and uncover the tools that help you thrive. Through reflection and interactive activities, we'll explore purpose, mentorship, and opportunity. Join us to claim your confidence and clarity, and develop a toolkit for a future you design yourself.
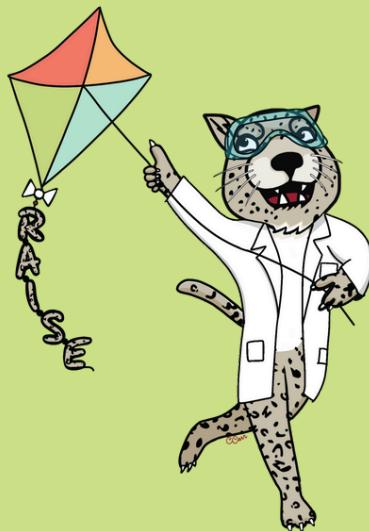
STEM Alumni Hot Seats
Concurrent sessions from 3:10 PM to 3:50 PM
Please see alumni profiles at the end of program.

Engineering & Infrastructure
Rockwell 362

Jill Wabarak '22 Energy Engineer, BR+A Consulting
Michael Bonnah '23 Manufacturing Engineer, Schneider Electric
Elliot Daniels '25 Project Engineer, The Poole & Kent Corporation
Emily Mastroly '25 Staff Engineer, Herbert, Rowland, & Grubic, Inc. (HRG)
Danielle Lindsley '25 Manufacturing Engineer, Lutron Electronics Co.
Oscar Jopp '22 Global Quality Assurance Engineer, Victaulic

Education & Community Impact
Rockwell 104

Ryan Wedeking '23 Data Analyst, Institute for Community Inclusion, UMass Boston
Jefrey Alexander '23 Community Outreach Coordinator, NYC Department of Education
Julie Schramm '24 Master's Student, NYU Steinhardt School of Education
Bria London '24 PsyD Student, Institute of Graduate Clinical Psychology, Widener University
Jenna Tempkin '24 STEM Educator, Liberty Science Center
Jess Langlois '24 Graduate Student, Villanova University

STEM Alumni Hot Seats (continued)
Concurrent sessions from 3:10 PM to 3:50 PM

Health Care
Rockwell 462

Stephanie Ingwer '24 Student, Lewis Katz School of Medicine
Natalie Montes '25 Postbaccalaureate, Northeastern University
Mallory Downs '25 Researcher, Nathan Kline Institute for Psychiatric Research
Rachel Mumford '25 BSN Student, Moravian University; Technician/EMT, St Luke's Anderson and Easton Emergency Squad
Harshil Bhavsar '23 Medical Scientist Training Program, Albert Einstein College of Medicine

Research & Innovation
Rockwell 460

Victoria Binz '17 Manager of Product Development, Dynamic Air Quality Solutions
Abby Harr '25 Research Fellow, National Institute on Drug Abuse
Shannon Dyke '22 Quality Engineer, Secant Group & SanaVita Medical

Business & Technology
Rockwell 360

Evan Vu '23 Software Engineer, AcuityMD
Eduardo Andrade '23 Security Consultant, Deloitte
Wanos Bahiru '25 Analyst, Morgan Stanley
Matthew Stern '20 Software Engineering Manager, AMD
Shannon Nitroy-Saia '14 Senior Data Analytics Manager, Spotify

RAISE a Glass and Poster Session
(4:00 PM – 4:45 PM)

Please join us from 4:00 to 4:45 PM in the ECO Café for appetizers, mocktails, and live jazz from the Mezclas Jazz Trio. This is a great opportunity to network with alumni, faculty, staff, and students while learning about the research conducted by students.

We invite you to participate in the "People's Choice" Award by voting for your favorite poster; the winner will be awarded a $50 Visa gift card.

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Poster Session

Students will be giving poster presentations highlighting their research or STEM-focused initiatives on campus. Grab a mocktail and come see the great work being done by Lafayette students. This is a good way to learn about research opportunities! Poster titles are on the following pages…

Poster Titles

Phosphorylation and Its Effects on Protein-Protein Interactions in Health and Disease

Abigail Gallagher
Supervisor: Dr. Anastasia Thévenin

The purpose of this project is to study phosphorylation and its effects on protein-protein interactions in health and disease. Connexin 43 and gap junction phosphorylation serve as regulatory mechanisms of Src's oncogenic activity. There are three current projects that the Thévenin research lab is working on: the regulation of Src and ZO-1 interaction with Cx43 through S373 phosphorylation, the regulation of the Src-Cx43 interaction by MAPKs, and targeted delivery of Cx43-based peptides to cancer cells to inhibit Src activity. Project 1 results indicate that phosphorylation at S373 is a toggle switch for Cx43-Src vs. Cx43-ZO-1 interaction; project 2 results indicate that phosphorylation at MAPK sites (S255, S279, S282) prevents Src recruitment; project 3 results indicate that pHLIP-Cx43 (S/S) peptide delivered to C6 rat glioma cells decrease cell proliferation. Methods used for these projects include Src pull down assays, western blots, and Cx43CT purification. While some results have been indicated, these three projects are ongoing.

Design of a 3D-Printed Sensing Insole for Injury Recovery

Kira Marr
Supervisor: Dr. Brent Utter

This work presents the design, fabrication, and data collection methods of a 3D-printed sensing insole. The insole is fabricated using fused deposition modeling and consists of

Poster Titles

TPU base with TPU and electrically conductive PLA sensors. The insole is designed to fit underneath standard orthotic insoles to identify limping during injury recovery, thus preventing future injury from unequal loading. The sensing component consists of five 3D-printed capacitive sensors connected to an Arduino Uno through an analog to digital convertor. The sensors are arranged in the pattern of major pressure points on the feet during walking and running, identified from gait analysis data and insole wear patterns. To collect data, input voltage steps are sent through the circuit, and data points are taken at a uniform time after the input step. Assuming that the system is first-order, these data points represent changes in the time constants of the sensors under applied load. The results show an effective method of data collection for future calibration and experimentation.

Characterization of Mouse Insula-Frontal Cortex Circuitry During Attention

Lauren Karwacki
Supervisor: Dr. Henry Hallock

We examined how the insula and frontal cortex (FC) contribute to attention by selectively inactivating insula neurons projecting to the FC before an attention task in male and female mice. This inactivation impaired performance in a high-demand sustained-attention task, with stronger effects in females. Molecular profiling showed many of these projection neurons are GABAergic. These findings provide mechanistic insight into how cortical circuits support attention-guided behavior.

Poster Titles

Inactivation of Hippocampal-Frontal Circuity During a Touchscreen-Based Spatial Working Memory Task

Matthew O'Leary
Supervisor: Dr. Henry Hallock

Rodent spatial working memory tasks often engage hippocampal-frontal circuits, unlike primate tasks. Using the touchscreen-based TUNL task, we found that inactivating this circuit reduced accuracy for closely spaced objects but not for longer delays. This suggests spatial proximity, not delay, drives hippocampal involvement and supports TUNL's preclinical utility.

Thermodynamic Evaluation of a Prototype Phase-Change Material Based Thermal Energy Storage System

Noah Schipper
Supervisor: Dr. Amy Van Asselt

As an Engineering Studies honors thesis candidate, I am investigating a thermal energy storage system as a point-of-use energy management strategy. During the project, I acquired experimental time-series data from a prototype device to determine its charging and discharging efficiency. By deriving an energy-balance thermodynamic model, we used parametric analysis to determine the most efficient fan speed, charging time, and insulation state. The thermal energy storage system aims to reduce and shift HVAC electricity consumption to utilize time-of-use energy prices and to complement intermittent, renewable energy sources.

Poster Titles

Experimental Investigation on the Effect of Confining Stress, Shear Rate, and Loading Direction on Inclined Sand Deposits Using A Direct Shear Device

Alessia Costanzo
Supervisor: Dr. Nancy Ingabire Abayo

Under dynamic loading, especially earthquakes, soil response such as liquefaction poses a considerable threat to communities in seismically active zones as the soil loses strength, behaving like a liquid and leading to ground deformation. Fluvial environments are particularly vulnerable as such failures can cause damage to essential infrastructure like bridges. Previous research has previously established a relationship between liquefaction-induced deformation and geologic features such as point bars and active channels in fluvial environments. Fluvial deposits consist of inclined stratification with layers of all types of thickness, interbedding, and angles of inclination. However, the effects of these features are understudied. Building on the existing body of research, our study focuses on the influence of those features of soil strength to understand and mitigate the liquefaction susceptibility of soils. We layered specimens of Ottawa 50-70 sand using moist tamping. Testing data indicates that specimens with layers inclined opposite to the loading direction are strongest at constant volume (mimicking liquefaction conditions, i.e., no volume change). Observations have also confirmed that larger confining stresses cause an increase in shear strength proven both in horizontal and inclined specimens. This information could aid damage assessment, supporting the development of resilient infrastructure.

Poster Titles

The Perfect Formula: A Comparative Analysis of the Electric Vehicle Policies in China, South Korea, and Japan

Hope Basaman
Supervisor: Dr. Il Hyun Cho

The rise of electric vehicles has become a defining feature of East Asia's green technology agenda, showcased in China, Japan, and South Korea. Each nation has mobilized ambitious policies under their carbon neutrality goals, however their outcomes, measured in EV adoption rates, sales performance, and public perception, vary widely. This thesis argues that these differences cannot be explained by political factors or market dynamics; rather, successful EV market integration depends on the alignment of political strategy, cultural context, and individual psychological perceptions. Through a comparative, cross-national analysis, this research examines how government policies, national culture, and psychological factors intersect to shape EV market outcomes. Hofstede's cultural dimensions and the Unified Theory of Acceptance and Use of Technology (UTAUT) model frame the cultural and psychological foundations of policy effectiveness. Drawing from policy documents, scholarly literature, and market data, the study synthesizes analyses of state incentives, cultural values, and consumer perceptions, including range anxiety, environmental concern, and status symbols. Findings reveal that while China leads the market through strong state-led policies and infrastructure investment, its success is driven more by political will than by the incorporation of psychological perception. South Korea, positioned second, demonstrates the greatest harmony between policy and public sentiment through

Poster Titles

its collectivist innovation culture and government–industry collaboration. Japan, though technologically advanced, lags behind due to cautious consumer psychology and a preference for hybrid vehicles as a transitional technology. By bridging political analysis with cultural and psychological insights, this study adds to the scholarly debate on EV policy-making in East Asia and offers a full account of varied national approaches to green technology adoption.

Synthetic Homes: A Generative AI Framework for Urban Energy Data

Jackson Eshbaugh
Supervisor: Dr. Jorge Silveyra

Computational models have emerged as powerful tools for energy modeling research, touting scalability and quantitative results. However, these models require a plethora of data, some of which can be inaccessible, expensive, or can raise privacy concerns. We introduce a modular multimodal framework to produce this data from publicly accessible residential information and images using generative Artificial Intelligence (AI). Additionally, we provide a pipeline demonstrating this framework, and we evaluate its generative AI components. Our experiments show that our framework's use of AI avoids common issues with generative models. Our framework produces realistic multimodal data that could be used for machine learning tasks. By reducing dependence on costly or restricted data sources, we pave a path towards more accessible and reproducible research.

Poster Titles

The Poo-rifier: Extracting Potable Water for Developing Water-Stressed Areas

Keisha Orozco Lopez
Supervisor: Dr. Rachna Nath

Nearly ¼ of the world's population experiences water scarcity and inaccessibility to potable water technologies. Our goal was to create a low-cost, sustainable water-providing device for billions worldwide. During development, we refined different iterations, using oatmeal as a substitute for cow manure during testing. After addressing flaws, the final design demonstrated successful water extraction, thus we created two more. An experiment was conducted three times: three prototypes with manure, exposed to varying temperatures, in a fume hood with heat lamps for about four hours. The devices extracted five water samples, which were swabbed onto LB Agar Petri dishes. Following incubation, three of the five samples exhibited bacterial growth. Upon specifically testing for E. Coli - our main concern - we found no presence in the water. The results confirmed our goal, highlighting two factors impacting effectiveness: freshness and temperature. Fresher manure yields more water, and the device requires a minimum temperature threshold of 27°C. Future research should explore alternatives to the lid and adhesive for improved durability. Afterwards, use our Saharan contacts for user insight into the device's practicality.

Poster Titles

Ancestry-Specific Genetic Variants in the Homologous Recombination Repair Pathway are Linked to Frameshift Alterations and Decreased Expression of Tumor Suppressor Genes

Ferrah Reid
Fox Chase Cancer Center

Background: African Americans (AAs) have higher advanced lung cancer incidence rates than European Americans (EAs). DNA doubled-stranded breaks (DNA DSBs) are the most severe type of cancer-causing DNA damage. Homologous recombination (HR) is a key pathway used to repair DNA DSBs, and HR deficiency is a common cancer phenotype. In our previous work, unrelated AA lung cancer patients had higher frequencies of germline HRD when compared with EAs, suggesting the involvement of genetic ancestry. We hypothesize genetic ancestry drives germline pathogenic variant (gPV) frequency differences and changes to biological function in HR pathway genes.

Methods: Rare and common allelic frequency analyses were performed in both discovery and validation cohorts. The discovery cohort consisted of populations of African (n=37,545) and European (n=622,057) descent in the Genome Aggregation Database. The validation cohort included individuals with predominantly African (n=80,893) and European (n=275,453) genetic ancestry in the All of Us Research Program. The GroupMax AF metric represents the specific genetic ancestry group with the highest allele frequency (AF) at a particular genetic variant. GroupMax AF was used to profile 21 HR pathway genes. In silico RNA

Poster Titles

(SpliceA1, Pangolin, and PhyloP) and protein (VEP and CADD) annotation tools and the GTEx browser (expression quantitative trait locus (eQTLs)) were used to predict biological function.

Results: Rare genetic variant analyses included 21 HR pathway genes. In the African ancestry populations, 38 gPVs across eight HR genes were discovered. In comparison, 214 gPVs across 12 HR genes were observed in the European ancestry populations. Interestingly, there was no overlap between any of the ancestry-specific gPVs. In both populations, the most common predicted functional protein change based on the genetic ancestry-specific gPVs were frameshifts. Common genetic variant analyses were performed on 13 HR pathway genes. We identified a TOP3A variant with a higher GroupMax AF in the African compared to European genetic ancestry group (70% vs 42%). An eQTL analysis revealed this variant decreased expression in lung tissues, suggesting lower TOP3A tumor suppressor activity in lung cells.

Conclusion: Rare genetic variants that cause pathogenic frameshifts in proteins and common genetic variants linked to decreased mRNA expression of tumor suppressor genes were observed in African ancestry populations, suggesting genetic ancestry is associated with DNA repair deficiencies that increase lung cancer susceptibility and may drive health disparities.

Alumni Bios

Jefrey Alexander '23 (he/they)
Psychology
New York City Department of Education

Upon graduating from Lafayette College as a Posse Scholar, Jefrey Alexander took a gap year by working for the University of North Carolina as a College Adviser. In this position, he assisted high school seniors from underserved rural communities through the daunting college application process.

This experience cemented their desire to enroll in Columbia University's Graduate School of Arts & Sciences, where their work focused on using geographic information systems and econometrics to analyze how various policies and zoning practices influence educational outcomes. Upon the completion of his master's degree, he began working for the NYCDOE as a Community Outreach Coordinator for the Committee on Special Education.

As a foster child, Jefrey has always been passionate about expanding access to higher education. In the future, they plan to pursue a dual JD/PhD in hopes of bridging the divide between research and practice surrounding child welfare policy.

Eduardo Andrade '23 (he/him/his)
Civil Engineering
Deloitte

Eduardo started his career as a civil engineering grad from Lafayette, but then pivoted into the fast-moving world of cybersecurity. He is currently a consultant specializing in identity and access management, partnering with clients to modernize how their users interact with their own systems. He loves staying on top of the latest security trends and finds it really rewarding to see the difference after a company moves over to new identity solutions—it's a big change that impacts everyone for the better.

Alumni Bios

Outside the office, Eduardo loves to travel and see the world. He just returned from Ecuador, where his family is from, and enjoyed reconnecting with his roots and seeing family. Running is another big passion as he's currently gearing up to run the New York City Marathon this year. Above all, Eduardo values building genuine connections, whether it's with colleagues or clients, and always sees passion in learning new things whenever possible.

Wanos Bahiru '25 (she/her/hers)
Mathematics/Economics
Morgan Stanley

Wanos is currently a new Analyst, covering various deal teams within Risk Management. Her academic and professional interests center on developing data-driven approaches to assess reputational and franchise risk, with a particular focus on understanding worst-case scenarios and identifying effective mitigants to address potential challenges.

Outside of work, Wanos enjoys activities that provide balance and inspiration. Having recently transitioned to life in a large city, she has found the experience of making new connections and building community after college both exciting and challenging. She is also exploring new ways to stay active and pursue personal interests beyond the workplace.

Wanos values collaboration and the exchange of ideas, believing that engaging with diverse perspectives is one of the most meaningful ways to promote both personal and professional growth. She looks forward to participating in the "Hot Seat" session and sharing insights from her experiences.

Alumni Bios continued

Harshil Bhavsar '23 (he/him/his)
Neuroscience/Biochemistry
Albert Einstein College of Medicine MD-PhD Program

Harshil graduated in 2023 with degrees in Neuroscience and Biochemistry. Afterward, he spent two years at MGH working in a translational neuroscience lab studying Alzheimer's disease using mouse models, molecular biology techniques, and patient-derived samples. A few months ago, Harshil joined the Medical Scientist Training Program (MSTP) at the Albert Einstein College of Medicine to pursue an MD-PhD. His research interests include molecular neuroscience and cell biology, and he is considering clinical fields such as neurology, neuro-oncology, or hematology-oncology. In the future, Harshil hopes to practice at an academic medical center, lead a basic-science focused research lab, and teach courses to the medical or graduate school students.

At Einstein, Harshil is involved in several organizations, including the South Asian students' group and the first-generation student club, and he serves as the first-year representative on the MSTP Student Council. In his free time, he enjoys exploring NYC and picking up new sports like tennis.

Harshil grew up in North Jersey and loves staying active – lifting, running, and playing volleyball or spikeball.

Victoria Binz '17 (she/her)
Chemical Engineering
Dynamic Air Quality Solutions

Victoria Binz is a dedicated Manager of Product Development at Dynamic Air Quality Solutions, overseeing the company's Gas Phase Filtration Department. She joined Dynamic AQS in 2017 as a Product Development Engineer, focusing on the development of a patented, gas phase removal technology.

In addition to her work at Dynamic, Victoria is an active member of ASHRAE and serves on the leadership team for TC2.3 Gaseous Air Contaminants and Gas Contaminant Removal Equipment, as well as TRG4 Indoor Air Quality Procedure Development. Her involvement extends to ASHRAE committees, including ASHRAE Standard 62.1 Ventilation for Acceptable Indoor Air Quality and ASHRAE Standard 145.2 Laboratory Test Method for Assessing the Performance of Gas-Phase Air-Cleaning Systems: Air-Cleaning Devices.

Victoria graduated from Lafayette College in 2017 with a B.S. in Chemical Engineering and completed a dual MBA & Engineering degree from Lehigh University in Spring 2023. With her experience, she is committed to fostering enhanced indoor air quality across diverse environments.

Victoria lives in Princeton, New Jersey with her cat Yoshi and loves to travel.

Micheal Bonnah '23 (he/him/his)
Mechanical Engineering
Schneider Electric

Originally from the Bronx, Micheal Bonnah earned his B.S. in Mechanical Engineering from Lafayette College, where he was an active member of organizations such as the National Society of Black Engineers. Micheal is currently a Manufacturing Engineer at Schneider Electric, based in Nashville, TN. He has been with Schneider Electric for about three years and is on track to complete the company's three-year full-time engineering rotation program.

After graduating from Lafayette College, Micheal began his career as an EHS and Logistics Engineer at a distribution center in Harrisburg, PA, focusing on ergonomic improvements and optimizing flow efficiency. He later relocated to the Nashville area, where he spent two years at a startup plant as a Manufacturing Engineer, designing and implementing new production lines and processes. His most

significant project to date has been leading the implementation of a new switchgear product line at Schneider Electric's Mount Juliet plant in Tennessee.

Outside of work, Micheal enjoys running and playing intramural sports such as Ultimate Frisbee and basketball. He is also a classical music enthusiast and plays the piano in his free time.

Elliot Daniels '25 (he/him)
Mechanical Engineering
The Poole & Kent Corporation

Elliot is a Project Engineer at The Poole and Kent Corporation, which is a mechanical contractor/ general contractor on construction projects in the Maryland/Virginia area. He is working with a project management team to install a new gas turbine at Johns Hopkins Hospital. Outside of work he loves going to the climbing gym, reading, and watching racecars. While at Lafayette, Elliot was a member of Delta Upsilon, LOSt, and Cubing Club. Elliot graduated in May 2025.

Mallory Downs '25 (she/her)
Neuroscience
Nathan Kline Institute

Mallory currently does research at Nathan Kline Institute for Psychiatric Research. She will be attending medical school in August 2026.

She graduated Summa Cum Laude from Lafayette in May 2025 with a Bachelors of Science in Neuroscience. At Lafayette, she was a Marquis Scholar, Chemistry Supplemental Instructor, Bertucci Lab researcher, played Club Soccer, and was a member of Pi Beta Phi. Since then, she has started a job doing Alzheimer's research at Nathan Kline Institute for Psychiatric Research in Orangeburg, New York. The

Alumni Bios continued

institute studies mitovesicles, a newly discovered type of extracellular vesicle derived from mitochondria, and their role in Alzheimer's phenotypes. She has also been accepted into medical school and will begin that in August 2026.

In her free time, Mallory loves to run, lift, play soccer, and spend time with friends and family.

Shannon Dyke '22 (she/they)
Chemical Engineering
Secant Group & SanaVita Medical (both under Solesis)

Shannon is a '22 Chemical Engineering graduate, now working as a Quality Engineer in medical device component and contract manufacturing. She is a Certified Six Sigma Green Belt through the American Society for Quality and supports two companies that manufacture medical devices, Secant Group and SanaVita Medical. They work with the development team to make new innovations and with the operations team to make sure all products going out the door to patients are high quality and safe. At Lafayette, Shannon was on the women's swim team, part of the Marquis Players and Marquis Lit Mag, and co-chair of the Family Weekend Committee.

Abigail (Abby) Harr '25 (she/her)
Neuroscience
National Institute on Drug Abuse

Originally from Medford, NJ, Abby graduated from Lafayette in 2025 with a major in neuroscience and a minor in German. On campus she was involved with percussion ensemble and DiscipleMakers Christian fellowship and worked as an America Reads tutor and a tour guide. During her summers, Abby studied abroad in Bonn, Germany, participated in the LEARN summer research program at the University of Pennsylvania, and interned at the National Institute on Drug Abuse. During her senior year, she conducted honors thesis research with Dr.

Alumni Bios continued

Hallock, studying how the insula and frontal cortex support attention in mice.

Abby currently works at the National Institute on Drug Abuse in Baltimore, MD as a post-baccalaureate research fellow studying how disruptions to the secretory pathway affect the dopamine system using rodent and cell culture models. Outside of work, she has recently taken up running (slowly) and playing guitar (poorly) and also enjoys reading and baking. She plans to apply to PhD programs in neuroscience this fall.

Stephanie Ingwer '24 (she/her)
Biochemistry
Lewis Katz School of Medicine

Stephanie graduated in 2024 with a degree in Biochemistry and a psychology minor. She is currently a first year medical student and Lewis Katz School of Medicine, after a gap year where she worked as a dermatology medical assistant. Outside of school she likes to cook and bake, run, and read.

Oscar Jopp '22 (he/him)
Mechanical Engineering/Physics
Victaulic

Oscar Jopp graduated in 2022 with a degree in Mechanical Engineering as well as a degree in Physics. Since then, he's been solving problems as a Global Quality Assurance Engineer at Victaulic, where he develops and implements quality control procedures for their innovative products.

Beyond his professional pursuits, Oscar is an avid outdoor enthusiast. Kayaking, skiing/snowboarding, rock climbing, and camping are just a few ways he loves exploring the world around him. These activities provide him with physical and mental rejuvenation and cultivate focus

Alumni Bios continued

and resilience – invaluable traits in any challenging endeavor. When he's not outdoors, Oscar enjoys music production, exploring new culinary creations, and indulging in a good book.

Throughout his career, Oscar has learned the immense value of building strong relationships. He is incredibly grateful for the guidance from his mentors and strives to pay it forward by supporting the next generation. He's immensely thankful for the exceptional education and experiences he gained at Lafayette. His time here laid the foundation for the fulfilling career he has today, and he is excited to see what the future holds for all of you.

Jess Langlois '24 (she/her)
Psychology
Villanova University

Jess is a second year counseling graduate student at Villanova University, with a concentration in school counseling. She is a graduate assistant at Villanova's Office of Fraternity and Sorority Life and completing her internship hours at Valley Forge Elementary School. While in grad school, she has also interned at Great Valley High School and the Lafayette College Office of Student Involvement. Jess will graduate in May and is hoping to be an elementary school counselor this time next year!

She graduated from Lafayette in 2024 with a Honors and a Bachelor's of Science in Psychology, and a minor in Anthropology & Sociology. She researched physical activity as an alternative mental health treatment in college for her honors psychology thesis. While at Laf, she was president of her sorority (AGD) and the Psychology Honors Society, and was a LEO, Excel Scholar, PLA and musician.

Outside of school and work, Jess enjoys watching shows, talking with friends and touching grass. She is so excited to be here today!

Alumni Bios continued

Danielle Lindsley '25 (she/her)
Mechanical Engineering
Lutron Electronics Co

Danielle is currently working as a manufacturing engineer at Lutron. She started in August and has enjoyed it very much. She has a good work life balance and gets to do lots of fun things after work and on weekends! She goes to Zumba, takes dance classes, volunteers with high school kids, and bakes lots of little sweet treats. She hasn't done homework in months and couldn't be happier!!

Bria London '24 (she/her)
Psychology/Anthropology
Widener University

Bria London is a second-year PsyD student at Widener University, located just outside of Philadelphia. She is pursuing a Doctorate in Clinical Psychology and a Master's degree in Criminal Justice, with a strong passion for serving individuals at the intersection of the criminal justice and mental health systems.

Bria is currently completing her second-year practicum at an inpatient psychiatric hospital, where she provides individual and group therapy to participants with severe and persistent mental health conditions, including schizophrenia. She is excited to be here today and looks forward to answering questions about the graduate school application process, transitioning to graduate school life, and pursuing a career in psychology.

Emily Mastroly '25 (she/her/hers)
Engineering Studies & Environmental Science
Herbert, Rowland, & Grubic, Inc. (HRG)

Emily Mastroly currently works at HRG as a Staff Engineer I. This employee-owned engineering firm has several locations throughout

Alumni Bios continued

Pennsylvania, and Emily works out of the King of Prussia office on the Water & Wastewater team. She has contributed to projects involving water main replacement, sanitary sewer force main extensions, and pump stations upgrades. As a young engineer, Emily is gaining experience with design projects and is currently studying to receive her EIT certification.

Emily graduated from Lafayette in 2025 with a dual degree in Engineering Studies and Environmental Science. While at Lafayette, she was involved with the Landis Center for Community Engagement, as well as the Engineering Department through SWE, BEST Society, and the Peer Mentor Program.

Outside of work, Emily enjoys reading and getting outdoors as much as possible.

Natalie Montes '25 (she/her)
Neuroscience
Northeastern University

Natalie just graduated from Lafayette College last year with a degree in Neuroscience and a minor in Art History. Currently, she's living in Boston doing a postbac at Northeastern University as she works on applying to medical school. While at Lafayette, she was lucky enough to obtain a wealth of experiences ranging from volunteering in elementary school classrooms, to doing neuroscience research, to shadowing in Vanderbilt's oncology department! These experiences and more helped to further cement her interests and motivations following graduation.

Outside of academic settings, some of Natalie's favorite things to do are painting, traveling, and going to museums (especially art museums).

Alumni Bios continued

Rachel Mumford '25 (she/her)
Neuroscience
Moravian University
St Luke's Anderson and Easton Emergency Squad

Rachel is a student in Moravian University's Accelerated BSN program, and she's excited to graduate in December 2026 to start her career as an RN! She's been working as a tech at St. Luke's Hospital - Anderson Campus for about two and a half years, and as an EMT at Easton Emergency Squad for about four years.

Outside of work, Rachel loves to run, and she's currently training for a 77.7 mile relay (split between 7 people). She also loves to sew, quilt, and do other crafts. While at Lafayette, she was most involved in the Lafayette EMS Club and Lafayette Dance Company.

Shannon Nitroy-Saia '14 (she/her)
Mathematics/Economics
Spotify

Shannon Nitroy-Saia is a Senior Data Analytics Manager at Spotify, leading a team that focuses on data supporting music and audiobook royalties as well as premium subscription revenue. Lafayette's liberal arts degrees prepared her well for her role, which blends data analysis, finance sensibility, product management, and people management skills. She joined Spotify in 2018 as a Data Scientist, one month post IPO, and has had the privilege of growing her career while the company matures.

Before Spotify, she spent four years assisting economic research at the Federal Reserve Board of Governors in Washington DC, during which she also completed a remote master's degree in Statistics at Texas A&M. She now lives in West Orange, NJ, with her husband Joe (whom she met while working at the Fed), her 11 month old daughter Sybil, and cats Bjorn and Siggi. In her limited spare time, she enjoys fitness, baking, and spending time with friends.

Alumni Bios continued

Julie Schramm '24 (she/her)
Neuroscience
NYU Steinhardt School of Education

Julie Schramm is a graduate of the Class of 2024 from Montclair, NJ. She is currently pursuing her Master's in Math Education at NYU Steinhardt School of Education and is student teaching in the NYC Public Schools. Following her graduation next spring, she plans to begin her teaching career in NYC. Prior to NYU, she spent one year teaching English at a rural Japanese high school as an Assistant Language Teacher with the Japan Exchange and Teaching (JET) Program. Her experience working in a different educational environment enriched her perspective on teaching and learning.

Julie credits her involvement with Lafayette's America Reads Program and math coursework for sparking her interest in math education. She continues to tutor with the America Reads Program at NYU. She is excited to be back at Laf for the retreat and share about her journey into STEM education!

Matthew Stern '20 (he/him)
Computer Science
AMD

Matthew Stern is currently a Software Engineering Manager at Advanced Micro Devices (AMD). At AMD, Matthew works on the design, manufacturing, and rack-scale system implementation of data center GPUs for AI training and inference workloads, including the upcoming AMD Helios MI450 Rack-scale GPU solution. His team includes 5 software development engineers who work cross-functionally within AMD and with external customers to ensure a fast time-to-market and high level of quality for AMD's GPU solutions.

Alumni Bios continued

Jenna Tempkin '24 (she/her/hers)
Physics
Liberty Science Center

After graduating from Lafayette in 2024, Jenna Tempkin started her job as a STEM Educator at Liberty Science Center (LSC) in Jersey City, NJ. LSC is one of the largest science centers in the NJ/NY area, and the STEM department is one of the largest teams onsite. In her role specifically, Jenna travels offsite to schools to teach 45-minute lessons to students grades 3-12 in a variety of different subjects including physical science, life science, earth science, and engineering. When she is not offsite, she is at the museum teaching lessons to school groups or doing fun mini lab workshops/experiences for the public. Additionally, Jenna helps to write camp curriculum for LSC Science camp, as well as plan, organize, and work certain building-wide initiatives. Most notably, Jenna helped develop LSC's first ever Math Madness weekend in celebration of Pi Day.

In her free time, Jenna continues her passion for dance as a member of Extensions Dance Project. She also enjoys watching Formula 1 and hanging out with friends.

Evan Vu '23 (he/him/his)
Computer Science and Neuroscience
Foursquare, AcuityMD

Evan Vu graduated from Lafayette College in 2023 with a B.A. in Computer Science and a B.S. in Neuroscience. Originally from Ho Chi Minh City, Vietnam, he was actively involved in campus life as a Resident Advisor for McKeen Hall, Kamine Hall, and 635 High Street. He was also a member of the International Students Association and the Chi Phi Fraternity.

After graduating, Evan joined Foursquare – a leading location intelligence company in New York City – where he helped build a crowdsourcing platform to curate one of the world's most widely used

open-source place databases. He now works as a software engineer at AcuityMD, a Series B startup dedicated to accelerating the adoption of medical technologies. AcuityMD's platform is used by sales operations teams at 8 of the 10 largest global MedTech companies to identify high-value opportunities, develop strategic plans, and expand their pipelines. AcuityMD has been named in Forbes' 2025 edition of "Next Billion Dollar Startups".

Evan is passionate about emerging technologies, particularly the intersection of machine learning, AI, healthcare, and neuroscience. Outside of work, he's an avid soccer fan and enjoys running around Philadelphia.

Jill Warabak '22 (she/her)
Mechanical Engineering
BR+A Consulting Engineers

Jill is an Energy Engineer at BR+A Consulting Engineers in NYC, an industry leader in MEP design with a focus on high-performance buildings such as laboratories, hospitals, proton cancer therapy centers, and higher-education STEM buildings (one of which is RISC). As an in-house sustainability expert, she has experience with various green building organizations such as: LEED, as a LEED AP in Building Design & Construction; WELL, as a WELL AP; AEE, as a Certified Energy Manager; and, her favorite, Passive House, as a Certified Phius Consultant. With 4 years of experience in the industry, she has been involved with dozens of certified projects across North America and is working towards her Professional Engineering license as an Engineer in Training.

As an advocate for diversity and inclusion in STEM fields, she is part of various professional organizations such as the Council on Women in Energy and Environmental Leadership (CWEEL), the Northeast Sustainable Energy Association's (NESEA) Diversity Caucus, Women in ASHRAE (WiA), Women in Sustainability and Engineering (WISE), and more.

Alumni Bios continued

At Lafayette, she was a hurdler on the track and field team and the president of Athlete Ally. Now, she continues to run, watch women's sports, and explore New York City.

Ryan Wedeking '23 (he/him/his)
Math and Psychology
UMass Amherst
Institute for Community Inclusion at UMass Boston

Ryan is currently a Data Analyst at the Institute for Community Inclusion at UMass Boston and is concurrently pursuing a Master's Degree in Statistics at UMass Amherst. His main responsibilities are helping people with disabilities get jobs through analyzing data and making research and policy recommendations based on the findings. Outside of work he enjoys making music. While at Lafayette he was involved in several music department ensembles, some Marquis Players' productions, among many other things that he doesn't remember off the top of his head but will be happy to talk about.