

CLASS OF 2025

Commencement



28 APRIL 2025

DOCTOR OF PHILOSOPHY

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This program is for ceremonial purposes only and is not to be considered an official confirmation of degree information. It contains only those details available at the publication deadline. Please note that not all graduates' names are listed, as some students opt out of having their names appear in Northeastern publications.

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A UNIVERSITY ENGAGED WITH THE WORLD

THE HISTORY OF NORTHEASTERN

Founded in 1898, Northeastern is a global research university, the recognized leader in experiential learning, and renowned for its innovative approach to education. Yet it had humble beginnings.

At the end of the 19th century, immigrants and first-generation Americans constituted more than half of Boston's population. Chief among the city's institutions committed to helping those new to the country improve their lives was the Boston YMCA, where young men gathered to hear lectures on literature, history, music, and other subjects considered essential to intellectual growth.

In response to the enthusiastic demand for these lectures, the directors of the YMCA organized the "Evening Institute for Young Men" in May 1896. Frank Palmer Speare, a well-known teacher and high-school principal with considerable experience in public schools, was hired as the institute's director. Two years later, under Speare's direction, the YMCA advertised the creation of the "Department of Law of the Boston YMCA," and on October 3, 1898, Robert Gray Dodge taught the first class. The program, an immediate success, marked the birth of Northeastern University. Speare would later remark, "We started with an eraser and two sticks of chalk."

When demand for other courses grew, Speare moved to add more programs, and in 1909 the full-time day colleges began instruction. That same year, the Evening Polytechnic School announced "cooperative engineering courses," in which students would have an opportunity to apply classroom knowledge in the workplace—the beginning of Northeastern's signature cooperative education program.

Decades of expansion

The school continued to grow, and in 1922 the College of Business was founded. More space was needed. The university purchased the former home of the Boston Red Sox in 1929, and in 1934 the Boston architectural firm Shepley, Bulfinch, Richardson, and Abbott was awarded the contract to design Richards Hall. Using what was to become the campus signature—white brick—Shepley, Bulfinch presented plans for a neoclassical building. Opened in 1938, Richards Hall was the first building to appear on the front quadrangle.

As the campus grew, so did Northeastern's programs. In 1935, the College of Liberal Arts was added, signaling that Northeastern was on its way to becoming a major university.

When Speare stepped down as president in 1940, he was replaced by Carl Stephens Ell, dean of the College of Engineering. It was under Ell's leadership that Northeastern first admitted women to full-time day programs.

In the postwar world, Northeastern, like its peer institutions, saw a phenomenal increase in the number of people attending college. The university expanded its programs to

accommodate this growing population of increasingly diverse students. In rapid succession, additional programs and colleges were established: College of Education, 1953; University College, 1960; College of Pharmacy, 1962; College of Nursing, 1964; Boston Bouvé College, 1964; College of Criminal Justice, 1967; and College of Computer Science, 1982.

This expansion of programs brought with it a need for more buildings—and land. When Ell retired as president in 1959, he was succeeded by Asa S. Knowles. Under his leadership, suburban properties in Weston, Nahant, and Burlington were acquired. The Boston campus blossomed with new buildings, including various undergraduate dormitories designed to accommodate the increasing number of residential students at what had been primarily a commuter campus.

Transforming the Boston campus

When Knowles retired in 1975, he was succeeded by Kenneth G. Ryder, who had begun his career at Northeastern as a member of the history department and had risen through the ranks to become executive vice president before his election as president. Under his leadership, the university expanded and enriched its programs, particularly in the arts and humanities, and continued to improve its facilities. Plans for the Snell Library were finalized during Ryder's tenure, and the campus was beautified. During these years, Northeastern also deepened its commitment to Boston and its neighborhoods.

In 1989, Ryder stepped down as the fourth president of the university. He was succeeded by John A. Curry, Northeastern's executive vice president and its first alumnus to become president. With President Curry in charge, the university embarked on a series of ambitious undertakings, including a new science and engineering research center, a state-of-the-art classroom building, a recreation complex, and several new graduate and undergraduate programs.

To support these new ventures, Curry led Northeastern in a successful fundraising campaign. His years of leadership also featured significant restructuring as the university prepared to enter its second century. In June 1996, after four decades of service, Curry retired from Northeastern. To succeed him, the trustees elected Richard M. Freeland as the university's sixth president.

Elevating experience

A distinguished historian and administrator, President Freeland brought to the university a renewed sense of energy and mission. His programs were designed to support his vision of Northeastern as a university that would be student-centered, practice-oriented, and urban. Northeastern developed the West Campus with architecturally acclaimed residence halls and teaching facilities for the health sciences and computer science, and added new spaces to enrich student life on campus.

When Freeland stepped down in 2006, he was succeeded by Joseph E. Aoun, an internationally known linguistics scholar. Northeastern's seventh president came from the University of Southern California, where he served as dean of the College of Letters, Arts, and Sciences. President Aoun developed an academic plan outlining the university's vision in several areas: experiential learning, global outreach, use-inspired research, urban

engagement, and intellectual life. He greatly expanded global co-op opportunities. He also aligned the university's research with three worldwide imperatives—health, security, and sustainability—with a focus on interdisciplinary solutions.

A rising global profile

Under Aoun's leadership, Northeastern launched a system of campuses designed to be platforms for lifelong learning aligned with area economies. The first two opened in Charlotte, North Carolina (2011), and Seattle (2013). Additional campuses followed in Silicon Valley, California (2015), and in Toronto (2016).

In 2016, Aoun led the development of a new academic plan, Northeastern 2025. The plan was a blueprint for transforming the university into a global university system—featuring networks of learners and innovators—designed to empower people to succeed in this era of unprecedented technological change. Accordingly, the university expanded the role of its global campuses to serve as platforms for learning, research, and industry partnerships. In 2019, it opened another location in Vancouver and acquired New College of the Humanities in London, now officially Northeastern University London and offering undergraduates a unique opportunity to earn a dual U.S./U.K. degree. Later in 2019, Northeastern launched a research campus in Arlington, Virginia, an addition to two existing research campuses in Nahant and Burlington, Massachusetts (formed in 1967 and 2012 respectively).

Then in January 2020, technology entrepreneur David Roux and his wife, Barbara, made an investment in the university to open the Roux Institute in Portland, Maine. The institute focuses on graduate studies and research in fields such as AI, digital engineering, and advanced life sciences, amplified by industry partnerships. It was specifically designed to be a model of how higher education can ignite economic development in regions of the country largely bypassed by the innovation economy, setting a new bar for what the global university system could achieve.

Resilience and momentum

The same revolutionary vision for global learning and discovery that inspired Northeastern 2025 infuses the university's latest academic plan, Experience Unleashed. The plan is designed to deepen the impact of Northeastern's global network by maximizing the power of experience to understand and solve the world's interconnected, ever-evolving challenges.

In 2022, the university took a significant step in realizing the potential for its global system by merging with Mills College in Oakland, California, becoming the first university with comprehensive residential campuses for undergraduate and graduate students on both U.S. coasts. In 2023, Northeastern opened a campus in Miami, with graduate education and innovation partnerships aligned with South Florida's economic growth. The following year, the university announced the addition of a campus in New York City through a merger with Marymount Manhattan College.

Thanks to the dedication and hard work of our university community, Frank Palmer Speare's "eraser and two sticks of chalk" have evolved into one of the world's most innovative universities. Our faculty collaborates more fluidly with experts across industry, government,

and community-based organizations. Ideas and solutions can be scaled. And our students are empowered to be true global citizens, scientists, entrepreneurs, and creators—prepared to make an impact wherever they go.

PROGRAM

Presiding

David Madigan

Provost and Senior Vice President for Academic Affairs

Prelude

Processional

The audience is requested to remain seated during the processional of the graduates and faculty. Upon a signal from the Chief Marshal, the audience will rise and remain standing until instructed to be seated.

Music provided by

Majestic Brass

Eric Berlin, *trumpet*

Takatsugu Hagiwara, *tuba*

Whitacre Hill, *horn*

Greg Spiridopoulos, *trombone*

Richard Watson, *trumpet*

We kindly ask those in attendance to silence their electronic devices.

DOCTOR OF PHILOSOPHY COMMENCEMENT CEREMONY

MATTHEWS ARENA, THREE O'CLOCK

The National Anthem

Mia Martin

D'Amore-McKim School of Business

Invocation

Alexander Levering Kern, *Executive Director for the Center for Spirituality, Dialogue and Service*

Opening Remarks

David Madigan, *Provost and Senior Vice President for Academic Affairs*

Introduction of the Commencement Speaker

Sara Wadia-Fascetti, *Vice Provost of the PhD Network*

Commencement Speaker

Margaret M. Faul

Degrees in Course

Debra Franko, *Senior Vice Provost for Academic Affairs*

Conferral of Degrees

David Madigan, *Provost and Senior Vice President for Academic Affairs*

COLLEGE OF ARTS, MEDIA AND DESIGN

Elizabeth Hudson, *Dean*

Casper Harteveld, *Associate Dean*

KHOURY COLLEGE OF COMPUTER SCIENCES

Elizabeth D. Mynatt, *Dean*

Alan Mislove, *Associate Dean*

COLLEGE OF ENGINEERING

Gregory Abowd, *Dean*

Mark Niedre, *Associate Dean*

BOUVÉ COLLEGE OF HEALTH SCIENCES

Carmen Sceppa, *Dean*

Jennifer L. Kirwin, *Associate Dean*

COLLEGE OF SCIENCE

Hazel Sive, *Dean*

Carla Mattos, *Associate Dean*

COLLEGE OF SOCIAL SCIENCES AND HUMANITIES

Kellee Tsai, *Dean*

Jun Ma, *Associate Dean*

Recessional

The audience is requested to remain seated during the recessional. All graduates, guests, and other participants are invited to a reception immediately following the ceremony.

COMMENCEMENT SPEAKER

Margaret M. Faul

Margaret M. Faul is a prominent leader in drug development and an internationally recognized expert in green chemistry. Through decades of pioneering work, she has advanced both the technical and ethical dimensions of pharmaceutical research—translating complex science into life-changing therapies while championing sustainability across the biotechnology industry.

Originally from Ireland, Faul relocated to the United States in 1987 to pursue doctoral studies in synthetic organic chemistry. Since then, she has established herself as a trailblazer in both scientific achievement and responsible innovation.

Faul began her professional journey at Eli Lilly and Company in 1993, where she honed her expertise in process development, manufacturing, and commercialization. In 2003, she joined Amgen Inc., where she has continued to rise through roles of increasing leadership and responsibility. Currently serving as vice president of drug substance technologies and site head for Amgen Massachusetts, Faul plays a pivotal role in the development and large-scale production of biopharmaceuticals designed to treat serious illnesses such as cancer, asthma, and cardiovascular disease.

Beyond her technical contributions, Faul has been instrumental in cultivating a culture of sustainability at Amgen. Under her guidance, the company has adopted green chemistry practices that significantly reduce environmental impact while increasing efficiency in drug development. These efforts helped propel Amgen to 34th place in the 2015 *Newsweek* Green Rankings—up from 106th—and earned the company a place on the Dow Jones Sustainability World Index. In recognition of her work, the Environmental Protection Agency awarded Amgen the 2017 Green Chemistry Challenge Award for advancements in the production of the drug etelcalcetide, used to treat hyperparathyroidism in patients with chronic kidney disease who are on dialysis.

A prolific contributor to the scientific community, Faul has authored more than 100 articles in peer-reviewed journals. She has held leadership roles in influential organizations such as the International Consortium for Innovation and Quality in Pharmaceutical Development, where she served as chair of the board. In 2025, she became editor-in-chief of *Organic Process Research & Development*, further strengthening the bridge between industrial and academic research. Her contributions have earned her election to the National Academy of Engineering and recognition as a Fellow of the American Chemical Society. In 2019, Thieme Chemistry and the editors of *Science of Synthesis* established an award in her name to honor early-career women in chemical research.

Faul holds bachelor's and master's degrees in organic chemistry from University College Dublin, and a doctorate in synthetic organic chemistry from Harvard University.

DOCTOR OF PHILOSOPHY CANDIDATES AND DISSERTATION TITLES

COLLEGE OF ARTS, MEDIA AND DESIGN

In the field of Interdisciplinary Design and Media

Skye Elizabeth Moret, BS, Oregon State University; MFA, Northeastern University

Dissertation: The Scalar Complexity of Climate Visualization: Exploring Research-through-design Strategies within Climate Change Knowledge Exchange

Advisors: Paolo Ciuccarelli and Brian Helmuth

KHOURY COLLEGE OF COMPUTER SCIENCES

In the field of Computer Science

Ondrej Biza, Bc, Czech Technical University in Prague; MS, Northeastern University
Dissertation: Sample-Efficient Representation and Reinforcement Learning in Robotic Manipulation

Advisors: Robert Platt, Lawson Wang, and Jan-Willem van de Meent

Sung-En Chang, MS, Fu Jen Catholic University
Dissertation: A Novel Model Quantization Scheme for Efficient Deep Neural Networks Inference and Training
Advisor: Yanzhi Wang

Jay DeYoung, BS, MSE, Johns Hopkins University
Dissertation: Automation Assistance for Systematic Reviewers
Advisor: Byron Wallace

Grace Fan, BS, Brown University; MS, Northeastern University
Dissertation: Table Discovery in Data Lakes
Advisor: Renée Miller

Daniel Goldfarb, BA, Cornell University; MS, Northeastern University
Dissertation: Analysis of Catastrophic Forgetting
Advisor: Paul Hand

Katherine Marie Hough, BS, MS, George Mason University
Dissertation: Leveraging Dynamic Data Relationships to Amplify Software Tests
Advisor: Jonathan Bell

Tianrui Hu, MS, Virginia Tech; BE, Beijing University of Posts and Telecommunications
Dissertation: Understanding Privacy and Security Threats in Smart Homes: A Network-Based Measurement Approach
Advisor: David Choffnes

Peter Ivanov, BS, University of Illinois at Urbana-Champaign
Dissertation: The Power of Weak Models
Advisor: Emanuele Viola

Matthew Douglas Jones, BS, MS, Tufts University
Dissertation: Socially Sensitive Algorithms for Decision Making and Optimization
Advisor: Huy Le Nguyen

Colin Whitfield Keil, BS, MEng, Cornell University
Dissertation: Haptic Teleoperated Robotic Underwater Manipulation for Low-Visibility Environments
Advisor: Hanumant Singh

Aamod Khatiwada, BE, Tribhuvan University; MS, Northeastern University

Dissertation: Table Discovery and Integration in Data Lakes

Advisor: Renée Miller

David Martin Klee, BS, Massachusetts Institute of Technology

Dissertation: Equivariant Networks for 3D Reasoning From Images and Point Clouds

Advisor: Robert Platt

Colin Patrick Kohler, BS, Northeastern University

Dissertation: Symmetric Models for Dexterous Robotic Manipulation

Advisor: Robert Platt

Abdelrahman Amr Madkour, BA, St. Olaf College; MS Northeastern University

Dissertation: Covering Designers' Bayesian needs: Probabilistic Semantics for Structured Design Spaces

Advisor: Stacy Marsella

Felix Muzny, BS, BA, University of Washington; MS, Stanford University

Dissertation: Teaching Assistants in Computing: Analysis and Implications for Broadening Participation

Advisor: Carla Brodley

Hai Huu Nguyen, BS, Hanoi University of Science and Technology; MS, University of Southampton

Dissertation: Leveraging Privileged Information, Mixed Observability, and Symmetry Under Partial Observability

Advisors: Christopher Amato and Robert Platt

Thien Hang Nguyen, BS, University of California, Irvine

Dissertation: Stochastic Optimization for Machine Learning: Stronger Convergence Guarantees and More Efficient Training

Advisor: Huy Le Nguyen

Liudas Panavas, BS, University of South Carolina; MS, Northeastern University

Dissertation: Bridging the Gap: Visualization Tools for Democratizing Differential Privacy

Advisor: Cody Dunne

Yisu Peng, MS, Indiana University

Dissertation: Machine Learning Methods for FDR Estimation in Mass-Spectrometry Proteomics

Advisor: Predrag Radivojac

James Louis Perretta, PhD, Columbia University

Dissertation: Improving Tutoring and Evaluation of Software Testing in the Classroom

Advisor: Jonathan Bell

Matthew J. Piekenbrock, MS, Wright State University

Dissertation: Topology-Guided Learning: Accelerating Persistence for Applications

Advisor: Jose Perea

Donald John Pinckney, BS, University of California, Davis; MS, University of Massachusetts Amherst
Dissertation: Improving Dependency Management via Formal Semantics
Advisor: Arjun Guha

Amogh Pradeep, BTech, International Institute of Information Technology Hyderabad; MS, Northeastern University
Dissertation: Understanding and Improving Data Security and Privacy of Mobile Applications
Advisor: David Choffnes

Schuyler T. Rosefield, BS, Northeastern University
Dissertation: Efficient Threshold Multiparty Computation Schemes
Advisor: Abhi Shelat

William Schultz

Giorgio Severi, BS, MS, Sapienza University of Rome
Dissertation: On the Robustness of Machine Learning Training in Security Sensitive Environments
Advisor: Alina Oprea

Anthony Bruce Sicilia, BS, University of Pittsburgh
Dissertation: Quantifying and Managing Uncertainty in Dialogue With Language Models
Advisor: Malihe Alikhani

Steven Wayne Sprecher Jr., BS, MS, University of Michigan
Dissertation: Advancing Web System Security and Privacy Through Large-Scale Empirical Measurement
Advisor: Engin Kirda

Uzma Haque Syeda, MS, Northeastern University
Dissertation: Leveraging Visualization Learners to Facilitate Design and Replication Studies and Bridging the Gap between Visualization Pedagogy and Research
Advisor: Michelle Borkin

Yunus Terzioğlu, BS, MS, Middle East Technical University
Dissertation: Human Routine Behavior Modeling for In-situ Opportunistic Health Interventions Using Mobile Robotic Platforms
Advisor: Timothy Bickmore

Nikolaos Tziavelis, Diploma, National Technical University of Athens
Dissertation: Efficient Ranked Access Over Joins
Advisors: Mirek Riedewald and Wolfgang Gatterbauer

Max von Hippel, BS, University of Arizona; MS, Northeastern University
Dissertation: Verification and Attack Synthesis for Network Protocols
Advisor: Cristina Nita-Rotaru

Benjamin Loren Weintraub, BS, University of Iowa; MS, Northeastern University
Dissertation: Attacks, Predatory Trading, and Scams on Blockchain Systems
Advisor: Cristina Nita-Rotaru

Chengguang Xu, BS, MS, Nankai University
Dissertation: Robot Navigation With Coarse Domain Knowledge Under Partial Observability
Advisors: Lawson Wong and Christopher Amato

Daniel Laurance Zeilberg, BSE, University of Michigan
Dissertation: Learning Calibrated Classifiers From Nonrepresentative Data
Advisor: Predrag Radivojac

In the field of Cybersecurity

Johanna Trisnawati Gunawan, BA, MS, Northeastern University
Dissertation: Understanding and Regulating Design: Dark Patterns as Case Study
Advisor: David Choffnes

Tommaso Innocenti, BS, MS, Politecnico di Milano
Dissertation: Identity Is the New Perimeter: Strengthening Authentication Protocols Through Standard Improvement
Advisor: Engin Kirda

Changming Liu, BEng, MEng, Huazhong University of Science and Technology; MS, Northeastern University
Dissertation: Securing System Software With Automated Testing
Advisor: Engin Kirda

Clifton Paul Robinson, BS, Bridgewater State University; MS, Northeastern University
Dissertation: AI-Driven Solutions for Spectrum Sensing and Over-the-Air Security
Advisor: Tommaso Melodia

Narmeen Shafqat, BS, MS, National University of Sciences & Technology
Dissertation: Privacy Attacks and Defenses in the IoT and Mobile Ecosystems
Advisor: Aanjan Ranganathan

Marinos Vomvas, Diploma, National Technical University of Athens
Dissertation: Enhancing Security and Privacy in Future Wireless Systems: Addressing External, Internal, and Spectrum-Level Threats
Advisor: Guevara Noubir

KHOURY COLLEGE OF COMPUTER SCIENCES AND BOUVÉ COLLEGE OF
HEALTH SCIENCES

In the field of Personal Health Informatics

Jixin Li, BA, University of Michigan; MA, Columbia University
Advisor: Stephen Intille

COLLEGE OF ENGINEERING

In the field of Bioengineering

Mohamad Motaz Fouad Al Samman, BS, North Carolina State University; MD, Aleppo University Faculty of Medicine

Dissertation: Investigating the Relationship Between Biomechanics and Symptomatology of Chiari Malformation Type I

Advisor: Francis Loth

Ronak Ansaripour, BS, Sahand University of Technology; MS, Clarkson University

Dissertation: Addressing Retinal Diseases: A Vascularized Retina-on-Chip Model and Exploration of Regeneration-Permissive Cues in the Retinal Microenvironment

Advisor: Rebecca Carrier

Xinqi Kang

Christian Edward Winskell Kirkup, BS, MS, Northeastern University

Dissertation: Computer Vision for Quantitative Cancer Histopathology

Advisor: Herbert Levine

Andrew David Leduc, BS, Lehigh University

Dissertation: Massively Paralleled Droplet Sample Preparation for Single Cell Proteomics Facilitates Analysis of Complex Samples

Advisor: Nikolai Slavov

Deng Li, MS, National Taiwan University

Dissertation: Understanding the Molecular Mechanisms of SP-D Assembly and Binding Specificity of Pathogenic Surface Glycan Through Full-Atomistic Modeling

Advisor: Mona Minkara

Chang Liu, BS, Southern Medical University; MS, Boston University

Dissertation: Microscopic Characterization of Inflammation-Driven Changes in a Preclinical Model of Alzheimer's Disease

Advisor: Mohammad Abbas Yaseen

Yifang Liu, BS, Jilin University

Dissertation: Development of Single-Molecule RNA FISH for Virion Detection and Biochemical Analysis of Transcription Activation

Advisor: Sara Rouhanifard

Quentin Antoine Meslier*, MS, University of Technology of Compiègne

Dissertation: Tools for Investigation of Bone Mechanoadaptation

Advisor: Sandra Shefelbine

*LEADERs Fellow, awarded the Experiential PhD Leadership Graduate Certificate

Mina Pakzadmanesh, BS, Arak University; MS, University of Tehran

Dissertation: Nuclei Deformation in Tricuspid Valve Interstitial Cells: The Role of Extracellular Matrix Microstructure and the Importance of Elastin

Advisor: Rouzbeh Amini

Tanvi Vinod Pathrikar, BS, Worcester State University

Dissertation: Surface-Engineered Exosomes for Targeted Drug and Gene Delivery to Cartilage

Advisor: Ambika Bajpayee

Frederick Sebastian, BSE, MS, Arizona State University

Dissertation: Sex, Glaucoma, and Iris Biomechanics

Advisor: Rouzbeh Amini

Shira Tsour, BS, MS, New York University

Dissertation: Post-Transcriptional Amino Acid Substitutions in the Human Proteome

Advisor: Nikolai Slavov

Edward Xu, BS, University of California, Los Angeles; MS, Northeastern University

Dissertation: Development of Instrumentation and Image Reconstruction Techniques for High-Density Diffuse Optical Imaging of the Human Brain and Breast

Advisor: Qianqian Fang

Shaobo Yang, BS, China Agricultural University; PhD, Cornell University

Dissertation: Engineering the Surface of Non-Pathogenic E. coli: A Novel and Efficient Platform for Cancer Prevention and Immunotherapy

Advisor: Jiahe Li

Narges Yazdani, BS, MS, Iran University of Science and Technology; MS, The University of Akron

Dissertation: The Influence of Integrin-Mediated Mechanotransduction on Neural Stem Cell Self-Renewal and Differentiation

Advisor: Rebecca Willits

In the field of Chemical Engineering

Rudolf Gaballa Abdelmessih, BS, Alexandria University; BS, City University of New York, Brooklyn College

Dissertation: Investigating Strategies for Engineering More Efficient Drug Nanocarriers for Treatment of Human Metastatic Breast Cancer

Advisor: Debra Auguste

Christopher John Blais, BS, University of New Hampshire

Dissertation: Microkinetic Modelling and Uncertainty Quantification on Differing Crystal Facets

Advisor: Richard West

Dominick Peter Guida, BChE, University of Delaware

Dissertation: Characterizing and Modeling Heterogeneity in Alkaline Zn-MnO₂ Batteries Using Synchrotron CT and EDXRD

Advisor: Joshua Gallaway

Mohammad Hamrangsekachae, BS, Azad University Science and Research Branch; MS, Iran University of Science and Technology; MS The University of Akron
Dissertation: Endothelial Glycocalyx: Response to Fluid and Solid Mechanics in Its Environment
Advisor: Eno Ebong

Justin Alexander Hayes, BS, BA, University of Rhode Island
Dissertation: Leveraging Synthetic Biology and Gut-on-Chip Systems to Interrogate and Modulate Intestinal H₂S
Advisors: Ryan Koppes and Benjamin Woolston

Kathryn Olivia Hoyt, BS, MS, Montana State University
Dissertation: Investigation of the Metabolic Flexibility of *Eubacterium limosum* to Improve Methanol Utilization
Advisor: Benjamin Woolston

Yuan Li, BS, Central South University
Dissertation: Establishing a Physiologically Relevant Upper Gastrointestinal in Vitro Model Incorporating Bile Salts and Simplified Commensal Microbial Consortium
Advisor: Rebecca Carrier

Olukayode Titus Majekodunmi, BTech, Ladoke Akintola University of Technology; MS, Izmir Institute of Technology
Dissertation: Discontinuous Colloidal Clogging in Tapered Microchannels
Advisor: Sara Hashmi

Ronodeep Mitra, BS, Georgia Institute of Technology
Dissertation: Therapeutic Target of the Endothelial Glycocalyx to Restore Proper Endothelial Functionality and Prevent Downstream Effects of Atherosclerosis
Advisor: Eno Ebong

Patrick August Sanford, BS, Northeastern University
Dissertation: Developing *Eubacterium Limosum* as a Platform for Anaerobic Natural Product Biosynthesis
Advisor: Benjamin Woolston

Ian Matthew Smith, BS, Worcester Polytechnic Institute
Dissertation: A Primary Intestinal Model to Assay Lymphatic Drug Transport
Advisor: Rebecca Carrier

Changyu Wang, MS, Nanjing University
Dissertation: Surface Engineered Porous Geopolymer to Remove Anionic Contaminants in Water
Advisor: Ming Su

Chao Xu, BS, Dalian Jiaotong University; MS, Northeastern University
Dissertation: Advancing Microkinetic Modeling Methods for Heterogeneous Catalysis
Advisor: Richard West

Shicheng Yang, BS, Southern Medical University; MS, Northeastern University
Dissertation: Drug Delivery Systems in Oncology: From Polymeric Implants to Nanomedicine Approaches
Advisor: Srinivas Sridhar

Peng Zhao, BS, Sichuan University; MS, University of Rochester
Dissertation: Impact of ECM-Based Hydrogel Delivery Vehicle Properties on Cell Survival in a 3D in Vitro Injection Model for Retinal Progenitor Cell Transplantation
Advisor: Rebecca Carrier

In the field of Civil and Environmental Engineering

Robert Bailey Bond, BS, The University of Texas at Austin; MS, Northeastern University
Dissertation: Physics-Reinforced Machine Learning for Structural Metamodeling
Advisor: Jerome Hajjar

Yiming Jia, BE, Zhejiang University of Technology; MS, Northeastern University
Dissertation: Probabilistic and Machine Learning-Based Multi-Hazard Resilience Assessment
Advisor: Mehrdad Sasaki

Michael Bruce Knapp, BS, Clarkson University; MS, Northeastern University
Dissertation: Application of Liquid Chromatography and Mass Spectrometry Toward the Identification of Forensic Markers in PFAS Source Materials and Electrochemical Breakdown Products of Energetic Compounds
Advisor: Loretta Fernandez

In the field of Civil Engineering

Wesley Hayes, BS, North Carolina State University; MS, Northeastern University
Dissertation: Exploring Water Insecurity in Understanding Drinking Water Systems in the United States
Advisor: Kelsey Pieper

Dehui Lin, BS, MS, Tongji University
Dissertation: Influence of Geometric Imperfections on Local Buckling of Thin-Walled Tubes: Scanning and Experiments
Advisor: Andrew Myers

John Takuma Moody, BS, The Ohio State University; MS, Massachusetts Institute of Technology
Dissertation: Improving Outcomes of Urban Railway Maintenance Through Planning, Operations, and Evaluation
Advisor: Haris Koutsopoulos

Milad Tahmasebi, BS, Sadra University; MS, Imam Khomeini International University
Dissertation: Reducing Speeding With Safe Waves Arterial Signal Timing: Techniques and Case Studies
Advisor: Peter Furth

Lei Zhang, BEng, MEng, Tongji University

Dissertation: Performance-Based Wind Engineering of Super-tall Building Towers Equipped with External Guy Wires

Advisor: Luca Caracoglia

In the field of Computer Engineering

Kubra Alemdar, BS, MS, Fatih (Istanbul) University

Dissertation: Overcoming and Engineering Wireless Signals for Communication and Computation

Advisor: Kaushik Chowdhury

Amani Nemer Al-shawabka, BS, Yarmouk University; MBA, German Jordanian University; MS, Northeastern University

Dissertation: Channel-and-Adversary-Resilient Radio Fingerprinting Through Data-Driven Approaches at Scale

Advisor: Tommaso Melodia

Yuhui Bao, BS, Guangdong University of Technology; MS, Northeastern University

Dissertation: A Design Methodology for Producing Highly-Adaptable and High-Performance Simulation Frameworks

Advisor: David Kaeli

Rohan Basu Roy, BTech, University of Calcutta

Dissertation: Toward Improving Productivity, Cost Effectiveness, and Sustainability of Large-Scale Computing Systems

Advisor: Devesh Tiwari

Mauro Belgiovine, BS, MS, University of Bologna

Dissertation: Wireless Intelligence: AI-Driven Solutions for Channel Estimation, Beam Refinement, Traffic Classification, and Advanced Optimization in Next Generation Networks

Advisor: Kaushik Chowdhury

Yunus Bicer, BS, MS, Istanbul Technical University

Dissertation: Novel Methods for Electromyographic Hand Gesture Recognition: Expressive Gestures Sets with Minimal Calibration

Advisor: Deniz Erdogmus

Nicolas Bohm Agostini, BS, Universidade Federal do Rio Grande do Sul; MS, Northeastern University

Dissertation: Hardware/Software Co-Design and Compiler Techniques for Efficient Hardware Acceleration of Dense Linear Algebra Kernels and Machine Learning Applications

Advisor: David Kaeli

Armand Comas Massague, BS, MS, Universitat Politècnica de Catalunya

Dissertation: Towards Identifying Interpretable, Manipulable, and Composable Representations for Controlled Data Generation

Advisor: Octavia Camps

Ruyi Ding, BS, Zhejiang University; MS, Georgia Institute of Technology
Dissertation: Towards Robust and Secure Deep Learning: From Training Through Deployment to Inference
Advisor: Yunsi Fei

Malith Jayaweera Don Satarasinghege, BS, University of Moratuwa; MS, Northeastern University
Dissertation: Energy-Aware Transformations for Affine Programs on GPUs
Advisor: David Kaeli

Peiyan Dong, MS, Northeastern University
Dissertation: Software-Hardware Co-Design: Towards Ultimate Efficiency in Deep Learning Acceleration
Advisor: Yanzhi Wang

Shijin Duan, BS, Xi'an Jiaotong University; MS, University of Illinois Chicago
Dissertation: Towards Practical and Ultra-Lightweight Binary Vector Symbolic Architecture Design and Its Real-World Applications
Advisor: Xiaolin Xu

Yifan Gong, BS, Xidian University; MAsC, University of Toronto
Dissertation: Towards Efficient and Trustworthy Deep Learning on the Edge
Advisor: Yanzhi Wang

Shuo Jiang, BS, Shandong University; MS, University of Bremen
Dissertation: Tactile Intelligence in Robotics
Advisor: Lawson Wong

Yiyue Jiang, MS, Illinois Institute of Technology
Dissertation: FPGA-Based Accelerator of Neural Networks for Digital Predistortion
Advisor: Miriam Leeser

Zhenglun Kong, BS, Huazhong University of Science and Technology
Dissertation: Towards Energy-Efficient Techniques and Applications for Universal AI Implementation
Advisor: Yanzhi Wang

Andrea Lacava, BS, MS, Sapienza University of Rome
Dissertation: Enabling Intelligent NextG Cellular Networks Through the Open RAN architecture
Advisor: Tommaso Melodia

Yanyu Li, BS, Tsinghua University; MS, Boston University
Dissertation: Accelerating Large-Scale Generative AI: A Comprehensive Study
Advisor: Yanzhi Wang

Zhengang Li, BS, Zhejiang University; MS, Northeastern University
Dissertation: Deep Learning Model Acceleration Based on Hardware-Algorithm Co-optimization
Advisor: Yanzhi Wang

Kyle Charles Lockwood, BS, BS, University of Connecticut; MS, Northeastern University
Dissertation: Leveraging Submovements for Prediction and Trajectory Planning in Human-Robot Handover
Advisor: Deniz Erdogmus

Rui Luo, BS, Xi'an Jiaotong University; MS, Northeastern University
Dissertation: Systems and Methods for Shared Control in Human-Robot Teaming
Advisor: Taskin Padiir

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Dissertation: Efficient Deep Neural Networks and Applications
Advisor: Raymond Fu

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Dissertation: Cost-aware Integrated Caching Strategies in Networks With Diverse Cache Resources
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Dissertation: High-Performance ASIC Accelerators for Neural Networks: Design and Evaluation Using Different Computational Paradigms
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Dissertation: Low-Contrast Visual Sensing and IMU-Aided Navigation
Advisor: Hanumant Singh

Durga Suresh-Menon, BS, University of Madras; MS, Saint Joseph's University
Dissertation: Network Security Management and Threat Mitigation in the Open Cloud
Advisor: Miriam Leeser

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Dissertation: RF Channel Models for Static and Mobile Scenarios: From Simulations to Models for Large-Scale Emulations
Advisor: Stefano Basagni

Ziheng Wang, BS, Harbin Institute of Technology; MS, University of Pennsylvania
Dissertation: Multi-Dimensional Schemes for Reliable and Efficient Neural Networks: Analysis, Design, and Evaluation
Advisor: Fabrizio Lombardi

Mehrshad Zandigohar, MS, Northeastern University
Dissertation: Deployable and Multimodal Human Grasp Intent Inference in Prosthetic Hand Control
Advisor: Gunar Schirner

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Dissertation: Towards Efficient Deep Learning for Ubiquitous On-Device Intelligence
Advisor: Yanzhi Wang

Xiang Zhang, MS, Northeastern University

Dissertation: Confidentiality and Privacy-Preserving: Intertwining Deep Learning and Side-Channel Analysis

Advisor: Yunsi Fei

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Dissertation: Efficient Optical Flow for Edge Computing Devices

Advisor: Hanumant Singh

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Dissertation: Making Deep Neural Networks Transparent
Advisor: Jennifer Dy

Ankit Mittal, BTech, Dayalbagh Educational Institute

Dissertation: Energy Detection-Based Radio Frequency (RF) Circuits for Ultra-low Power Operation and Enhanced Security of IoT Devices

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Dissertation: Learning and Optimizing Set Functions

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Dissertation: Advancements in Retinal Imaging and Eye Tracking: Instrumentation and Optical Techniques

Advisor: Charles DiMarzio

Eric Douglas Robinson, BSEE, MSEE, Georgia Institute of Technology

Dissertation: Techniques for the Modeling, Design, and Fabrication of Wideband Dipole Arrays

Advisor: Carey Rappaport

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Advisor: Purnima Ratilal Makris

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Jiacheng Shi, BS, Tsinghua University; MS, Columbia University

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Advisor: Tommaso Melodia

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Dissertation: Grain Boundary Engineering Using Magnetic Insulating Inclusions for High-Efficiency Magnetic Power Cores at High Frequency

Advisors: Vincent Harris and Yunume Fitchorova

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Dissertation: Optimizing State Estimation in Complex Networks: Combinatorial and Machine Learning Techniques

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Dissertation: Analytical and Data-Driven Monitoring for Power Systems

Advisor: Ali Abur

Ugur Can Yilmaz, BS, MS, Middle East Technical University

Dissertation: Enhancing State Estimation in Three-Phase Power Systems: A Methodological Approach

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Dissertation: Silica Microsystems for Physical and Gas Sensing Applications

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Dissertation: Human Body and Activity Analysis

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In the field of Industrial Engineering

Nathan O. Adeyemi, BS, University of Massachusetts Amherst

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Advisor: Kayse Maass

Rohit Bokade, BS, Nagpur University, India; MS, Northeastern University

Dissertation: Multi-Agent Reinforcement Learning for Large-Scale Traffic Signal Control

Advisor: Xiaoning Jin

Arnold W. Chang*, BS, Northeastern University

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Advisor: Craig Ferris

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Advisor: Shahin Shahrampour

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Advisor: Yingzi Lin

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Dissertation: Towards Ethical and Resilient Agricultural Supply Chains: Interdicting Labor Trafficking and Mitigating Disruptions
Advisor: Kayse Maass

Nithesh Bharadwaj Javvaji*, BTech, Indian Institute of Technology (Indian School of Mines), Dhanbad; MS, Northeastern University
Dissertation: Exploring Human-AI Interaction Through AI as Play
Advisor: Casper Harteveld

Lluvia Weijia Jing*, BS, Beijing Institute of Technology; MS, Northeastern University
Dissertation: Enhancing the Effectiveness and Responsiveness of Humanitarian Food Aid Delivery—A Data-Driven Optimization Framework for USAID's Supply Chain
Advisor: Ozlem Ergun

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Advisor: Xiaoning Jin

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Youbang Sun, BEng, University of Science and Technology of China; MS, Texas A&M University
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Advisor: Shahin Shahrampour

Peiqi Wang, BE, Beijing Institute of Technology; MS, Northeastern University
Dissertation: Application of Geometric Optimization in Solving Logistics Problems
Advisor: Mehdi Behroozi

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Dissertation: Task Aware Machine Learning for Objective Informed Algorithm Design
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In the field of Interdisciplinary Engineering

Puja Das, BS, Bangladesh University of Engineering and Technology; MS, Northeastern University

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Advisor: Auroop Ganguly

Bhavya Duvvuri, MS, Carnegie Mellon University

Dissertation: Integrating Remote Sensing and Machine Learning to Estimate Monthly, Near-Global River Discharges

Advisor: Edward Beighley

Nadia Farsaeivahid, MS, Northeastern University

Dissertation: A Rapid Label-free Disposable Electrochemical Salivary Point-of-Care Sensor for Respiratory Pathogen Detection and Quantification

Advisor: Ming L. Wang

Kunind Sharma, BSc, University of Mississippi; MSc, Northeastern University

Dissertation: Beyond Static Comfort Models: Data-Driven Modeling of Dynamic Occupant Override Behavior for Demand Response Applications

Advisor: Michael Kane

In the field of Mechanical Engineering

Saeed Alborzi*, BSc, MSc, Sharif University of Technology

Dissertation: Clogging of Soft-Rigid Granular Mixtures in a 2D Hopper

Advisor: Sara Hashmi

Thomas Joseph Barrett, BS, University of Rochester; MS, Northeastern University

Dissertation: Towards the Multiscale Modeling of Blended Polymer Nanocomposite Films and Fibers

Advisor: Marilyn Minus

Ammar Abdullah A. Batwa, BS, King Abdulaziz University; MS, Northeastern University

Dissertation: Mechanics of 3D Printed Multi-material Metamaterials With Cooperative Components

Advisor: Yaning Li

Sohayb Batwa, BS, King Abdulaziz University; MS, Northeastern University

Dissertation: Mechanical and Tribological Properties of Cold Sprayed Ni/CrC-NiCr Metal Matrix Composites

Advisor: Sinan Muftu

Andrew George Caratenuto, BSE, University of Connecticut

Dissertation: Thermal, Optical, and Materials Design for Water and Energy Sustainability

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Ilia Chiniforooshan Esfahani, BS, Sharif University of Technology; MS, Northeastern University

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Advisor: Hongwei Sun

Conor Michael Doyle, BS, Northeastern University

Dissertation: On Defining Structure-Process Relationships for Non-Woven Polymer-Nanocarbon Composites

Advisor: Randall Erb

Haoan Fan, BS, South China University of Technology; MS, Northeastern University

Dissertation: Robotic Consensus With Delay-Based Controllers Against Multiple Unintentional Delays

Advisor: Rifat Sipahi

Turner Whitt Jennings, BS, MS, Northeastern University

Dissertation: Relevant Factors in Helmet Design: Helmet Fit, Vibration Mechanics, and Materials

Advisors: Sinan Muftu and Rouzbeh Amini

Siqi Ji, MS, University of Florida

Dissertation: Theory and Application of Quartz Crystal Microbalance With Micro/Nanopillars

Advisor: Hongwei Sun

Chastity Marie Kelly*, BS, University of Mississippi

Dissertation: Liquid Crystal Electrorheological Fluids in Geometrically Patterned Microvalves

Advisor: Carol Livermore

Xiaoli Li

Advisor: Yi Zheng

Zhenyu Lu, BS, Shanghai Jiao Tong University; MS, Northeastern University

Dissertation: Determination of Laminar Burning Speed of Normal Decane/Air, Methane/Hydrogen/Air, Propane/Hydrogen/Air, and Propylene/Carbon Dioxide/Air Mixtures

Advisor: Hameed Metghalchi

Katiso Jeremy Mabulu, BS, Hampton University

Dissertation: Design and Evaluation of User-Centered Human Machine Interfaces Through Experiential Learning

Advisor: Taskin Padir

Ying Mu, BS, Hefei University of Technology; MS, Stony Brook University

Dissertation: On the Study of Process-Structure Optimization of Supercritically Dried Polymer-based and Polymer Nanocomposite-based Aerogels

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Dissertation: Development and Characterization of Wet Spinning PAN/CNT Composite Fibers

Advisor: Yiannis Levendis

Raman Gaudas Vaidya, BE, Pune University; MS, University of Massachusetts Amherst

Dissertation: Bio-inspired Active Faceted Origami Using Engineered Thermal Differential Expansion

Advisor: Moneesh Upmanyu

Chunpeng Wang, BS, Beijing Institute of Technology; MS, Northeastern University

Dissertation: Low Impedance Robotic Manipulators Control for Physical Human-Robot Interaction

Advisor: John Whitney

Ying Wang, BS, Hubei University; MS, Northeastern University

Dissertation: Development and Investigation of Printing Technology for Cathode Electrodes in Fast-Charging Batteries

Advisor: Hongli Zhu

Yuwei Zhang, MS, Huazhong University of Science and Technology; MS Northeastern University

Dissertation: An Application for the Photonics-based Nanohole Array Calorimetry: Floating Calorimetry

Advisor: Gregory Kowalski

BOUVÉ COLLEGE OF HEALTH SCIENCES

In the field of Biomedical Science

Reed Reyes Masakayan, BS, University of Tampa; MS, New York University

Dissertation: Investigating the Effect of Hypoxia and Adenosine on the Function of Invariant Natural Killer T Cells

Advisor: Stephen Hatfield

Evan Carlton Smith, BS, University of Massachusetts Amherst

Dissertation: Interaction between Cannabinoid Agonists and Fentanyl: A Neurochemical and Behavioral Analysis

Advisor: Alexandros Makriyannis

In the field of Counseling Psychology

Babatunde Osawaru Aideyan, BA, Emory University; MA, Northwestern University

Dissertation: Machine Learning Classification of Retinal Imaging of Neuropsychiatric and Healthy Cases in a Subset of the UK Biobank Cohort

Advisor: Jessica Edwards George

Jaylan Abd O. Elrahman

Dissertation: Twisted Tongues: The Psychological Impact of Language Attrition Among Second Generation Immigrants in the U.S. and Implications for Counseling Psychology

Advisor: Tracy Robinson-Wood

Chantal Yvonne Muse, MA, Chatham University

Dissertation: 'This is my body, and I get to decide what I am going to do with it': African American Women Breast Cancer Survivors' Experiences Within Perceived Positive and Negative Patient-Provider Encounters

Advisor: Tracy Robinson-Wood

Briana Alexandre Paulo, BA, University of Rhode Island; MA, University of Massachusetts Dartmouth

Dissertation: A Dating Violence Prevention Program for Juvenile Justice-Involved Females: Effectiveness for Adolescents With Minoritized Gender and Sexual Identities

Advisor: Christie Rizzo

Isabella Sereno, BS, University of Central Florida; MA, Virginia Polytechnic Institute and State University

Dissertation: Family-Centred Care as a Moderator to Presence at the Bedside Among Underrepresented Caregivers During Intensive and Post-Acute Pediatric Admissions

Advisor: Jessica Edwards George

In the field of Human Movement and Rehabilitation Sciences

Minxin Cheng, MA, New York University

Dissertation: Immersive Virtual Reality for Motor Rehabilitation in Individuals with Neurodevelopmental Disorders

Advisor: Leanne Chukoskie

In the field of Medicinal Chemistry

Markos Orestis Georgiadis, BPharm, MSc, University of Athens
Dissertation: Design and Synthesis of Novel Cannabinoid Ligands
Advisor: Alexandros Makriyannis

In the field of Pharmaceutical Sciences

Shashank Kamlesh Deepa Bhangde, BS, Institute of Chemical Technology; MS, Northeastern University
Dissertation: Formulation Development and In Vivo Evaluation of Novel Emulsion Adjuvants Containing Immune Potentiators for Subunit Vaccines
Advisor: Mansoor Amiji

In the field of Pharmaceutics and Drug Delivery

Jose Estevam, BS, Boston University; MS, Harvard University
Dissertation: Leveraging Droplet Microfluidics and Multi-omic Profiling to Decipher Anti-Tumor Mechanisms in T Cell and NK Cell Killers
Advisor: Tania Konry

Michael Scott Regan, BS, University of Vermont; MS, Northeastern University
Dissertation: Spatial Insights into Brain Tumor Treatment: MALDI Mass Spectrometry Imaging for Advanced Pharmacokinetic and Pharmacodynamic Profiling in Neurosurgery
Advisor: Jeffery Agar

In the field of Pharmacology

Bryce Gordon Johnson, BS, BA, University of Washington; MS, Northeastern University
Dissertation: The Role of Serotonin in Modulating Epithelial Barrier Function in Inflammatory Bowel Disease
Advisor: Raymond Booth

Jahnavi Simhadri, PharmD, Rajiv Gandhi University of Health Sciences
Dissertation: Targeting GIRK Channels to Treat Common and Rare Epilepsies
Advisor: Diomedes Logothetis

Joseph Milton Steingold, BS, Ohio State University
Dissertation: Effects of the OTC-Available cAMP-Elevating Agent Forskolin on T Cell Activation and Tumor Growth, in Consideration of the Immunosuppressive and cAMP-Mediated Hypoxia-A2AR Axis
Advisor: Michail Sitkovsky

In the field of Population Health

Farbod Alinezhad, MD, MPH, Tabriz University of Medical Sciences
Dissertation: The Determinants and Results of Vertical Integration of Hospitals and Physicians and Methods on the Use of Diffusion Models for Causal Inference
Advisor: Brady Post

Alexandra C. Hinton, MPH, Columbia University

Dissertation: Embracing Change: Social Determinants, Service Delivery, and Health Outcomes in Cystic Fibrosis

Advisor: Sara Lopez-Pintado

Quynh T. Vo, MPH, The George Washington University

Dissertation: Antibiotic Use in U.S. Nursing Homes

Advisor: Becky Briesacher

Michael P. Williams, BS, BA, University at Buffalo

Dissertation: Neighborhood and Digital Immersion Effects on PrEP Adherence Through a Digital Intervention in Young Sexual and Gender Minorities Who Have Sex With Men

Advisor: Justin Manjourides

Ting-Ting Wu, BS, Taipei Medical University; PharmD, University of Minnesota

Dissertation: Psychoactive Medication Prescribing and Psychiatric Condition Occurrence in Survivors of an ICU Admission Requiring Invasive Mechanical Ventilation

Advisor: John Devlin

In the field of School Psychology

Abigail Elizabeth Goodridge, MA, EdS, Tufts University

Dissertation: Evaluating the Effects of a Combined Math Achievement and Growth Mindset Intervention

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Emily Elizabeth Hill, BS, Virginia Tech; MS, Northeastern University

Dissertation: An Evaluation of Check-In/Check-Out for Students Exhibiting Social Withdrawal

Advisor: Robert Volpe

Felicia Maria Waldron, BA, Stonehill College; MEd, Harvard University

Dissertation: Immediate and Long-Term Effects of the Sisters of Nia Intervention on Social-Emotional Health and Positive Identity In Black Girls: A Mixed Methods Study

Advisor: Chieh Li

COLLEGE OF SCIENCE

In the field of Biology

Jinna Bai, BS, Fudan University

Dissertation: Targeting Essential Proteins in *Acinetobacter Baumannii*: Discovery of a Lipid Metabolism Regulator Critical for Invasive Disease

Advisor: Edward Geisinger

Andrew Felipe Farinha, BS, Emmanuel College

Dissertation: Unique Proteins Orchestrating Cell Division in *Acinetobacter baumannii*

Advisor: Edward Geisinger

Michael Francis Gates, BS, University of Massachusetts Boston

Dissertation: Energy Expenditure Underlies Antibiotic Tolerance

Advisor: Kim Lewis

Brian Hieu Nguyen*, BA, Boston University

Dissertation: Regulation of Error-prone DNA Polymerases in *Acinetobacter baumannii*

Advisor: Veronica Godoy-Carter

Jason Ashley Nichols, BS, North Carolina State University; MA, University of North Carolina at Chapel Hill

Dissertation: Mitochondria as Tools and Targets in Combating Disease

Advisor: Dori Woods

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Norman Pitt, BS, University of California at San Diego; MS, University of California at San Diego

Dissertation: Bacterial Membrane Vesicles Ameliorate Colitis and Restore Anaerobiosis

Advisor: Kim Lewis

Nicole Elisabeth Raustad, BS, University of Massachusetts Boston

Dissertation: Genome-wide Transcriptional Control by BfmR, the Global Regulator of *Acinetobacter Baumannii* Resistance and Virulence

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Adrianna Livia Marie Julia Vandeuren, BS, MS, Vrije Universiteit Brussel

Dissertation: The Influence of Chromatin Modifications on G-quadruplex DNA Formation and

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Associated Genomic Instability

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Yuyan Xu*, BMed, Fudan University

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Dissertation: Defining Fragmentation Mechanisms and Ion Assignment Rules for Deep Proteoform Characterization in Top-down Proteomics

Advisor: Jeffrey Agar

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Dissertation: Using Electron Microscopy and Exogenous Protein Expression to Explore Cephalopod Chromatophore Granules as Inspiration for Adaptive Materials

Advisor: Leila Deravi

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Dissertation: Mass Spectrometry and Mathematical Methods for Covalent Drug Bioanalysis

Advisor: Jeffrey Agar

Ryan J. Dilworth, BA, Southern Illinois University Edwardsville

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Advisor: Penny Beuning

Michael Edward Dolan, BS, Boston College; MS, Columbia University

Dissertation: Toward a Molecular-Level of Understanding of Challenging Host Cell Protein Impurities in Bioprocessing, Enabled by Affinity Capture and Enrichment

Advisor: Zhaohui Zhou

Daniel Joseph Donnelly III, BS, Salve Regina University

Dissertation: Atomistic Characterization of Hydration-Dependent Nafion Nanostructure by Molecular Simulation and Vibrational Spectroscopy

Advisor: Eugene Smotkin

Daniel Heffernan Fallon, BS, MS, University of Massachusetts Amherst

Dissertation: Discovery and Development of an Agonistic Anti-NKG2D Antibody

Advisor: Sunny Zhou

Lili Huang, MS, Wuhan University

Dissertation: Total Synthesis of Ommatins, Hit-to-lead Optimizations of Antimalarials, and Development of Chalcogen Click Chemistry Towards Kinetic Target-guided Synthesis

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Melissa Lizette Liriano, BS, University of Massachusetts Boston; MS, Tufts University
Dissertation: Characterizing the Effects of Conformational Dynamics on DNA Loading of the Beta Sliding Clamp

Advisor: Penny Beuning

Emily Micheloni

Dissertation: Enzymes Unveiled: Computational and Biochemical Analysis to Engineer Proteins and Determine the Cause of Molecular Disease

Advisors: Mary Jo Ondrechen and Penny Beuning

Caroline Chambers Millard, BS, Hanover College

Dissertation: Tropical Disease Drug Discovery: Multi-parameter Optimization Against Neglected Diseases

Advisors: Lori Ferrins and Michael Pollastri

Brandon Charles Miller, BS, University of New Haven

Dissertation: Explorations of Synthetic Methodologies for Two Therapeutic Frameworks: Synthesis Optimizations of First-Generation Streptothricin F Intermediates, a Second-Generation Formal Synthesis of Streptothricin

Advisor: Roman Manetsch

Mengqi Ren, BS, Tianjin University; MS, The State University of New York at Buffalo

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Advisor: Ke Zhang

Ahmed Khalifa Said, BS, Misr International University; MS, American University in Cairo

Dissertation: Structural Investigation of GIRK1 Channels by Cryo-Electron Microscopy

Advisor: Diomedes Logothetis

Sadiqua Shadbar, BPharm, Savitribai Phule Pune University; MS, Northeastern University

Dissertation: Development of a Multidimensional Immune Monitoring Approach for the Evaluation of Therapeutic Protein Immunogenicity

Advisors: Jared Auclair and Daniel Dadon

Sam Jackson Smith, BS, Georgetown University

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Advisor: Eugene Smotkin

Patrick Adrian Sullivan, BS, Tufts University

Dissertation: From Particles to Prints: Using Nature as Inspiration for Dynamic Optical Materials

Advisor: Leila Deravi

Alicia Nicole Wagner, BS, University of New Haven

Dissertation: Design, Synthesis, and Optimization of Compounds With Blood-Stage Activity Against Drug-Resistant Malaria
Advisor: Roman Manetsch

In the field of Marine and Environmental Sciences

Johanna L'Heureux Champagne, BS, University of Massachusetts Amherst
Dissertation: Lessons From the Marsh: Human-Driven Environmental Change and Consequences for Sustainability
Advisor: Jennifer Bowen

Helen Cheng, BS, Stony Brook University; MS, University of New Hampshire
Dissertation: Identifying the Socioeconomic and Ecological Impacts of Range-Expanding Species on the American Lobster Fishery in Coastal New England, U.S.A.
Advisor: Jonathan Grabowski

Brecia A. Despard, BS, Northeastern University
*Dissertation: Understanding the Roles of RNAs in White Band Disease Challenged Staghorn Coral *Acropora cervicornis* and the Current State of microRNA Machinery in Cnidaria*
Advisor: Steven Vollmer

Brian Russell Donnelly Jr., BS, Villanova University
Dissertation: Tidal Wetland Microbial Community Responses to and Recovery From Climate-Driven Environmental Change
Advisor: Jennifer Bowen

Mackenzie Morgan Fiss-Nealley, BS, BS, North Carolina State University
Dissertation: Characterizing Carbon Cycling Dynamics in Salt Marshes: The Sources and Fates of Natural and Plastic-Derived Organic Carbon
Advisor: Aron Stubbins

Aubrey Elizabeth Foulk, BS, Iowa State University
Dissertation: Quantifying Extreme Temperatures From the Perspective of an Organism
Advisor: Brian Helmuth

Hillary Sullivan Marchwinski, BA, MS, Clark University
Dissertation: The Influence of Natural, Altered, and Restored Hydrology on Salt Marsh Biogeochemical Processes
Advisor: Jennifer Bowen

Katherine Prothero Sperry, BA, Carleton College
Dissertation: Intraspecific Variation and Restoration in Southern New England's Salt Marshes
Advisor: Randall Hughes

Savannah Hanes Swinea, BS, University of North Carolina at Chapel Hill
Dissertation: Co-producing Science Through Public Participation in Coastal Social-Ecological Systems Research
Advisor: Steven Scyphers

Sarit Breanne Truskey, BA, St. Mary's College of Maryland

Dissertation: Integrating Experimental Restoration and Genetic Assessments to Support the Efficacy of Eastern Oyster, Crassostrea Virginica, Reef Restoration in Rhode Island
Advisor: Randall Hughes

Charlotte Louise Wiman, BS, Northeastern University; MS, Northern Arizona University
Dissertation: A Multidisciplinary Approach to Reconstructing Flood and Streamflow History of the Mississippi River Basin
Advisor: Samuel Munoz

In the field of Mathematics

Dezhou Li, MS, Virginia Tech; MA, University of Southern California
Dissertation: The Cartan-Leray Spectral Sequence for the Braid Group
Advisor: Ben Knudsen

Yujia Shi, BA, Columbia University
Dissertation: Quantum State Transfer With Energy Potential
Advisor: Gabor Lippner

Vsevolod Sergeyevich Zadorozhnyy, BS, MS, Lomonosov Moscow State University
Dissertation: Random Graph Models and Applications
Advisor: Gabor Lippner

In the field of Network Science

Ayan Chatterjee, BE, Jadavpur University; Mtech, Indian Institute of Science
Dissertation: Enhancing Generalizability in Static and Temporal Link Prediction With Applications in Drug Discovery
Advisor: Tina Eliassi-Rad

Lucas da Silva Almeida*, BS, University of Brasília; MS, University of São Paulo
Dissertation: Guns, Drugs, and Samba
Advisor: David Lazer

Adina Marisa Gitomer, BA, Wesleyan University
Dissertation: On Panic and Power: Disruption and Dissent in Youth Digital Networks
Advisor: Brooke Foucault Welles

Kishore Vasan, BS, University of Washington
Dissertation: Unifying Human Behavior Puzzles in Diverse Systems Using Networks
Advisor: Albert-László Barabási

Samuel Westby, BS, University of Wisconsin-Madison
Dissertation: Focused and Panoramic Perspectives on the Future of Work
Advisor: Alicia Sasser Modestino

In the field of Physics

Joshua David Baktay, BS, Duquesne University

*LEADERs Fellow, awarded the Experiential PhD Leadership Graduate Certificate

Dissertation: Characterization of Quasi-Fermi Liquids Using Matrix Product State Methods in the Thermodynamic Limit

Advisor: Adrian Feiguin

Nathaniel Morck Beaver, BA, Gustavus Adolphus College; MS, Illinois Institute of Technology

Dissertation: Advanced Drive Methods for Sensing With Diamond NV Centers

Advisor: Paul Stevenson

Sandra Byju, BS, MS, Indian Institute of Science Education and Research Thiruvananthapuram

Dissertation: Quantifying the Dynamics and Functional Relationships of Collective Processes in a Biomolecular Assembly

Advisor: Paul Whitford

Benjamin Allan Cashen, BS, University of Texas at Dallas

Dissertation: Characterizing Multi-modal Interactions of Single-Stranded Nucleic Acid Binding Proteins From T4 Bacteriophage and the LINE-1 Retrotransposon

Advisor: Mark Williams

Nica Jane Baluyot Ferrer, BS, University of the Philippines Diliman; Postgraduate Diploma, Abdus Salam International Centre for Theoretical Physics; MS, Northeastern University

Dissertation: Theory of Magnetocrystalline Anisotropy for Equiatomic Ferrous Compounds and Correlated Systems

Advisor: Gregory Fiete

John Phillip Ferrier Jr., BS, University of Central Arkansas; MS, Northeastern University

Dissertation: Harnessing Machine Learning and Computational Modeling for Optimizing the Experimental Synthesis of 2D Quantum Materials

Advisor: Swastik Kar

Helena Rose Gien*, BS, University of Georgia

Dissertation: The HIV-1 Nucleocapsid Protein Induces an Exceptionally Strong dsDNA Condensation for Provirus Encapsidation

Advisor: Mark Williams

Yixiao Han, BS, Lanzhou University

Dissertation: Study of ZZ Production in pp Collision at 13 TeV

Advisor: Darien Wood

Rebecca Christopher Harman, BS, Harvey Mudd College

Dissertation: Tumor-Immune Microenvironment Imaging and Photomedicine Development With Hyperspectral Fluorescence Microendoscopy and Image Processing

Advisor: Bryan Spring

Samuel James Milner, BS, Northeastern University

Dissertation: Properties of Strongly Correlated One Dimensional Chains Beyond the Hubbard Model

*LEADERS Fellow, awarded the Experiential PhD Leadership Graduate Certificate

Advisor: Adrian Feiguin

Guðfríður Björg Möller, BA, Mount Holyoke College

Dissertation: Single Molecule Studies of Metallo-insertors and E. coli SSB Mutants

Advisor: Mark Williams

Kevin Ng Chau, BS, MS, Universidad Simón Bolívar

Dissertation: Integrating Structural Features Into a T-cell Receptor Model for Specificity Prediction and Analyzing Antigenic Cooperation in Viral Immune Evasion

Advisor: Herbert Levine

Wesley Cole Roberts, BS, University of Pittsburgh; MSt, Oxford University

Dissertation: Quantum Magnetism in and out of Equilibrium

Advisor: Gregory Fiete

Seyedehmaedeh Seyedolmohadesin, BS, Sharif University of Technology

Dissertation: Neural Dynamics of Developmental Decision Making and Sexually Dimorphic Behaviors in *C. elegans*

Advisor: Vivek Venkatachalam

In the field of Psychology

Meishan Ai, BS, Beijing Normal University

Dissertation: Examining the Relationship Between Multidomain Healthy Lifestyle Engagement and Cognitive and Brain Health in Later Life

Advisor: Arthur Kramer

Matthew Coleman, BS, Tulane University

Dissertation:

Advisor: David DeSteno

Alessia Iancarelli, BS, University of L'Aquila; MS, University of Geneva

Dissertation: Integral Anger Predicts Non-physical Punitive Attitudes

Advisor: Ajay Satpute

Julia Ruth Mitchell, BA, Colby College; MS, Northeastern University

Dissertation: Deconstructing the Darter Phenotype: Examining the Behavioral and Neural Contributors to Darting as a Conditioned Response in Pavlovian Fear Conditioning

Advisor: Rebecca Shansky

Kerri Ann Walter, BS, University of Delaware; MS, Northeastern University

Dissertation: Insights into Processing Challenges Characterized in Cerebral Visual Impairment

Advisor: Peter Bex

Hannah Elizabeth Wolfe, BS, University of Richmond

Dissertation: The Relative Cognitive Effort, Prerequisites, and Outcomes of Acceptance and Other Emotion Regulation Tactics in Adulthood and Old Age

Advisor: Derek Isaacowitz

COLLEGE OF SOCIAL SCIENCES AND HUMANITIES

In the field of Criminology and Justice Policy

Kayla Michelle Bates, BS, MS, Grand Valley State University

Dissertation: The Trauma of Corrections: The Impact of Occupational and Childhood Trauma on Correction Officers

Advisor: Natasha Frost

Chase P. Childress, BA, Brown University; MS, Towson University; MS, JD, Northeastern University

Dissertation: Exploring the Role of Corporations in Labor Trafficking and Exploitation: Understanding the Issue and Improving Our Responses

Advisor: Amy Farrell

Nathaniel Lee Lawshe, BA, MA, University of South Florida

Dissertation: A Comprehensive Framework for Understanding the Contextual, Structural, and Cultural Predictors of Police Officers' Perceptions of Organizational Justice

Advisor: Gregory Zimmerman

Candace D. Wills, BA, MID, University of Pittsburgh

Dissertation: Relationship Between Sex Work Policies and Response to Human Trafficking

Advisor: Amy Farrell

In the field of Economics

Zachary Adam Finn, BS, Tufts University

Dissertation: Three Essays on the Empirical Microeconomics of Household Finance: Examining Medical Debt, Childcare, and Birth Cohort Size

Advisor: Robert Triest

Diana Li, MS, Northeastern University

Dissertation: Three Essays in Applied Microeconomics: Topics in Subsidy Program, Transportation, and Cultural Economics

Advisor: James Dana

Yushuo Pan, MA, Northeastern University

Dissertation: Estimating the Demand for Differentiated Products and the Efficiency of the Production Line

Advisor: James Dana

In the field of English

Avery Kristina Blankenship, BA, BS, Rhodes College; MA, Northeastern University

Dissertation: Marginal Spaces: The Cookbook in the American Political Imagination

Advisor: Sari Altschuler

Cherice Escobar Jones, MA, Northeastern University

Dissertation: Healing Words: The Role of Writing and Rhetoric in the Pursuit of Racial Health Equity

Advisor: Mya Poe

Kyle William Wholey, BA, University of Massachusetts Boston; MA, Northeastern University

Dissertation: Queer Digital Culture

Advisor: Hillary Chute

In the field of History

Huseyin Kurt, BA, Istanbul University; MA, Binghamton University; MA, Hartford

International University for Religion and Peace

Dissertation: Popular Piety and Subaltern Publicity of Islamic Revival in Early Republican Turkey, 1925–1960

Advisor: Heather Salter

In the field of Law and Public Policy

Vaishali Kushwaha, BE, Gujarat Technological University; MS, Texas A&M University; MPA, National University of Singapore

Dissertation: Innovative Frameworks for Urban Water Security: Bridging Gaps in Planning, Management, and Governance

Advisor: Matthias Ruth and Gavin Shatkin

In the field of Political Science

Levi Justin Watts, BA, MA, California State University, Chico

Dissertation: State Constitutional Development and State Policy Outcomes: Do Echoes of the Past Persist in the Area of Education and Reproductive Rights?

Advisor: Michael Tolley

In the field of Public Policy

Sushant Kumar, BTech, MTech, Indian Institute of Technology Delhi

Dissertation: No Country for Large Families: The Construction and Continuation of the Two-Child Norm in India

Advisor: Matthew Nisbet

In the field of Sociology

Ezgi Deniz Rasit

Advisor: Liza Weinstein

Rebekah Lorenz Getman, AB, MEd, Harvard University

Dissertation: Uncertain Institutions: Policy, Risk, and Reward in Childbirth During COVID-19

Advisor: Alisa Lincoln

Grace M. Poudrier, BA, Sarah Lawrence College; MA, Northeastern University

Dissertation: Constructing Chemical Essentiality in Consumer Life and the Military: The Case of Per- and Poly-Fluoroalkyl Substances (PFAS)

Advisor: Phil Brown

Shavaun Sondi Sutton, BS, Andrews University; MPH, State University of New York,
Downstate Health Sciences University

Dissertation: I'm Building Me a Home: World-Building in Black Staten Island

Advisor: Liza Weinstein

Shunan You, BA, Beijing Language and Culture University; MA, University College London

Dissertation: Negotiating Pathways: Talent and Knowledge Flows Between China and the U.S.
in the Global Biopharmaceutical Industry

Advisor: Doreen Lee

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The Registrar of the university maintains the official list of all graduates.

This program is for ceremonial purposes only.

PROGRAM NOTES

HISTORICAL NOTES ON ACADEMIC DRESS

Academic dress appears to have originated at the universities of Oxford and Cambridge more than 600 years ago, and, to this day, the most colorful gowns in the world are those worn at Oxford functions. European institutions show great diversity in their academic costume, since each adopted or initiated its own dress.

In contrast, American colleges and universities follow a single system of academic apparel. In 1894, a group of leading American educators met to draft guidelines on apparel. Known as the Intercollegiate Code, these guidelines were adopted the following year and amended slightly in 1932.

The distinctions set up by the Intercollegiate Code are simple. Gowns for the bachelor's degree are to be fashioned from "worsted stuff" with a yoke, pleated front, and intricate shirring across the shoulders and back. Worn closed, the bachelor's gown is distinguished primarily by its long, pointed sleeves. The master's gown has the same yoke effect and long, crescent-shaped sleeves; it may be worn open or closed.

The doctor's gown, which may also be worn open or closed, has velvet panels draped around the neck. Three horizontal velvet bars are stitched on full bell-shaped sleeves. This velvet trimming may be black or in the color that indicates the field of study to which the degree refers.

Northeastern University's distinctive doctoral gown is crimson with black velvet panels and sleeve bars. The crimson cap, or mortarboard, bears a gold metallic tassel. In accordance with academic custom, recipients of the doctor's degree, members of the university's governing boards, and government officials in the procession are entitled to wear the official regalia.

The bachelor's and master's hoods have a similar shape, while the doctor's hood has a rounded base. The length of the hood indicates the level of academic achievement, with the doctor's hood being longest; the width of the border distinguishes the degree, with the doctor's being widest. The color of the border indicates the field of study; the lining color indicates the institution conferring the degree.

At Northeastern, where only the master's and doctor's hoods are worn, a black chevron on a crimson background is used for the lining.

When colors were first assigned to signify a particular field of study, historical associations were retained as much as possible. For example, white, for arts, refers back to the white fur edging of the Oxford hood; red, for theology, to the traditional color of the church; and green, for medicine, to the color of herbs.

The tassel on the mortarboard may be black or in a color that indicates the graduate's major field of study.

ALMA MATER

Oh, Al - ma Ma - ter, here we throng, And

sing your prais - es strong; Your child - ren ga - ther far and near And

seek your bless - ings, dear; Fair mem - o - ries we cher - ish now And

will for - ev - er - more. Come, let us raise our voi - ces strong, North -

east - ern we a - dore.

Oh, Alma Mater, here we throng,
And sing your praises strong;
Your children gather far and near
And seek your blessings, dear;
Fair memories we cherish now
And will forevermore.
Come, let us raise our voices strong,
Northeastern, we adore.

