



THE UNIVERSITY  
of NORTH CAROLINA  
at CHAPEL HILL

# 2024 DOCTORAL HOODING CEREMONY

SPRING COMMENCEMENT  
THE GRADUATE SCHOOL

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## MESSAGE *from the* INTERIM CHANCELLOR

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Welcome to your Hooding Ceremony. We are proud to celebrate with you today.

We gather today for this annual tradition marking the academic achievement of advancing from student to scholar and to acknowledge the commitment you — and your loved ones — have made to higher learning. Graduate studies enable us to test our limits, challenge our assumptions and collaborate with our professors and peers. That work results in life-changing research, ground-breaking innovations and inspirational excellence.

As we confer your doctoral degree today, you join a global network of experts who continually strive for knowledge and growth. UNC-Chapel Hill is the nation's oldest public university, and our mission is about service — to our state, the nation and the world. We fulfill this mission every day because of people like you, who come to our outstanding graduate and professional schools from all over the world and leave with the skills and desire to make a difference.

As you move into the next phase of your career, take pride in your achievements. And know that we — your mentors, colleagues and Tar Heels everywhere — are filled with admiration for all you have accomplished at Carolina. We celebrate you today and we are eager to see what you do next.

Congratulations indeed!



Lee H. Roberts

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## MESSAGE *from the* GRADUATE DEAN

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Dear graduates:

Congratulations! You have completed your graduate studies — a tremendous accomplishment — and we are delighted to celebrate you. Your curiosity, sense of wonder, dedication to our state, and to the University of North Carolina at Chapel Hill are inspiring. A graduate education positions you among the next generation of leaders. During your time at Carolina, we hope you have gained the knowledge, professional skills, and tenacity to contribute to solving grand challenges of our time. As a proudly public University, graduate students are at the intersection of research and impact. The knowledge you gained during your time as a graduate student — while balancing personal and professional obligations — is part of how we envision a thriving future for North Carolina and beyond.

Pursuing graduate education at UNC-Chapel Hill is a rigorous endeavor. Much as we have built community together as a University for all, you can continue to shape our world as a global citizen — beyond the low stone walls of our great University. We are honored to celebrate you and your innumerable accomplishments as you reach this significant milestone.



Beth Mayer-Davis

# ALMA MATER

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The words of “Hark the Sound,” UNC–Chapel Hill’s alma mater, were written in 1897 by William Starr Myers, a graduating senior. The Glee Club director asked Myers to put words to the tune “Amici,” and the song was first performed on June 2, 1897, as part of the Glee Club’s Commencement performance in Gerrard Hall.

Soon the song was almost forgotten. When a University quartet tried a few years later to remember the words, they could recollect only the first verse and the chorus of Myers’ original version. Two members of the quartet, Charles S. Mangum and Charles T. Woollen, added two verses to the one they remembered. Mangum later became a professor in the School of Medicine, and Woollen worked as the University’s business manager and comptroller.

Hark the Sound  
*Hark, the sound of Tar Heel voices  
Ringing clear and true,  
Singing Carolina’s praises,  
Shouting N.C.U.!*

*Hail to the brightest star of all!  
Clear its radiance shine!  
Carolina, priceless gem,  
Receive all praises thine.*

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## *For Your Information*

The Hooding ceremony will be captioned on video screens.\*

Every effort has been made to ensure the accuracy of this program’s content. Any omissions or errors are unintentional. The graduates’ names listed in this program were submitted prior to administering final examinations. Therefore, the inclusion of degree candidates’ names in this program does not represent certification that candidates have satisfactorily completed degree requirements.

Unless special arrangements have been made by departments, diplomas for all May degrees will be printed after graduation and mailed to graduates. For further information, visit the [Registrar’s website](#).

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## *Stay Connected with Carolina*





# THE OLD WELL

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At the heart of the campus stands the visual symbol of the University of North Carolina at Chapel Hill. For many years the Old Well served as the sole water supply for Old East and Old West dormitories. In 1897, the well was given its present decorative form at the direction of President Edwin A. Alderman, who described his beautification project as largely derived from the Temple of Love in the Garden of Versailles. In 1954, the well was given added beauty with brick walks, plantings and benches. Legend holds that students can bring good luck with a drink from the Old Well on the first day of classes.

# *The* DOCTORAL HOODING PROGRAM

## • Academic Procession

The Official Platform Party

The Deans

The Faculty

The Candidates for the Degree of Doctor of Philosophy, Doctor of Education, Doctor of Nursing Practice  
and Doctor of Public Health

## • Presiding

Lee H. Roberts, *Interim Chancellor, The University of North Carolina at Chapel Hill*

## • National Anthem

Lena Kantz, *Bachelor of Music*

## • Remarks

For the Board of Trustees of The University of North Carolina at Chapel Hill

David L. Boliek, *Chair*

## • Introduction of the Commencement Speaker

Lauren Hawkinson, *Graduate and Professional Student Government President, 2023–2024*

## • Commencement Address

Dr. Angeli Achrekar, *Deputy Executive Director for the Programme Branch, UNAIDS*

## • Conferring of Doctoral Degrees

Lee H. Roberts, *Interim Chancellor*

J. Christopher Clemens, *Provost*

Victoria “Tori” Ekstrand, *Caroline H. and Thomas S. Royster Distinguished Professor for Graduate Education;  
Associate Professor, UNC Hussman School of Journalism and Media*

Beth Mayer-Davis, *Dean of The Graduate School*

## • Presentation of the Faculty Award for Excellence in Doctoral Mentoring

Beth Mayer-Davis, *Dean of The Graduate School*

## • Chancellor’s Charge to the Graduates

Lee H. Roberts, *Interim Chancellor*

## • Recessional

Hark the Sound by Lena Kantz

# LEE H. ROBERTS

## *Interim Chancellor*

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Lee H. Roberts became interim chancellor for the University of North Carolina at Chapel Hill on Jan. 12, 2024. A dedicated public servant and a strong believer in the importance of a liberal arts education, Interim Chancellor Roberts is focused on initiatives that set graduates up for success and provide support to researchers, faculty and staff.

Roberts is a longtime advocate for higher education and for the state of North Carolina. He served as a member of the UNC System Board of Governors and as the chair of its budget committee. He has held positions on the State Board of Community Colleges, North Carolina's Banking Commission and the Board of Visitors at Duke University's Sanford School of Public Policy, where, for the last five years, he has taught public budgeting to graduate students. Roberts has also served as a board member at the Golden LEAF Foundation, which invests in educational and economic opportunities for North Carolina's rural communities. He was honored to serve as state budget director under Gov. Pat McCrory from 2014 to 2016.

Before serving as interim chancellor, he was the co-founder and managing partner of SharpVue Capital, a North Carolina investment firm that specializes in stewarding institutional funds and growing local economies.

# ELIZABETH “BETH” MAYER-DAVIS

*The Dean of The Graduate School*

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Elizabeth “Beth” Mayer-Davis became dean of The Graduate School in September 2022. As the Cary C. Boshamer Distinguished Professor of Nutrition and Medicine, she has focused her career on diabetes and nutrition, including the epidemiology, natural history and treatment of Type 1 and Type 2 diabetes in children and adults. Throughout her career, Mayer-Davis has mentored numerous graduate students. She is committed to diversity, equity, and inclusion and ensuring that our graduate students have access to professional development and mental health and well-being tools to support them during their time at Carolina. Formerly the chair of the Department of Nutrition at the UNC Gillings School of Global Public Health, she also co-directs the Nutrition Obesity Research Center.

Mayer-Davis believes that graduate students are capable and prepared to address humanity’s greatest challenges. Under her leadership, The Graduate School supports graduate students and advocates for the support of graduate education in our state.

# DR. ANGELI ACHREKAR

## *The Doctoral Hooding Ceremony Speaker*

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Angeli Achrekar ('13 DrPH) is the deputy executive director of the Programme Branch at the Joint United Nations Programme on HIV/AIDS (UNAIDS) and an assistant secretary-general of the United Nations.

Prior to joining UNAIDS in January 2023, Achrekar served as the principal deputy U.S. Global AIDS Coordinator for the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). Over the past 20 years, she has held prominent positions helping to lead the largest global health effort of the U.S. government to ensure life-saving HIV prevention and treatment services to millions of people around the globe and strengthen health and community systems across 50 countries.

She is a passionate public servant, dedicated to advancing global health and development, across sectors, especially for women and girls. Achrekar brings to the position extensive leadership and management experience in HIV/AIDS and public health. Over the years, she has helped evolve the program for more person-centered care, protecting and increasing HIV/AIDS gains while also capacitating countries for broader healthcare delivery. Her deep program, policy and partnership development experience at the global and country levels has cultivated strong multi-sectoral partnerships for large-scale and transformational impact, fundamental to ending the AIDS pandemic.

She holds a Doctor of Public Health from the UNC Gillings School of Global Public Health, a Master of Public Health from Yale University, and a Bachelor of Science from the University of California, Los Angeles.

Achrekar is married and the mother of beloved twin daughters. She loves poetry and nature. An unrelenting champion for health and rights for all, she believes in the power of service and partnership for change.



### *Board of Trustees*

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### *The Administrative Board of The Graduate School*

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### *Graduate and Professional Student Government Officers, 2023–2024*

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# CANDIDATES *for* GRADUATE DEGREES

May 2024

*Degree candidates' names are followed by their area of major study, dissertation or project title and the name of their doctoral advisor.*

## The Graduate School

ESTABLISHED 1903

Dean Beth Mayer-Davis

### DOCTOR OF PHILOSOPHY

**Samantha Abrams**, *Psychology*, Forgiving a Good Heart: The Role of Motives and Mind Perception in Lay Understandings of Divine Forgiveness. Professor Kurt Gray.

**Andrew Adair**, *Mathematics*, Categorification of Braid Group Representations. Professor David Rose.

**Susan Agostine**, *Occupational Science*, Relationship Building and Meaning Making: An Exploratory Study. Professors Nancy Bagatell and Karen Erickson.

**Nikki Aitcheson-Huehn**, *Human Movement Science*, Evaluating the Effect of Physical and Visual Load on Gaze Behavior and Performance in Ice Hockey. Professors Adam Kiefer and Jason Mihalik.

**Ernesto Aldana**, *Business Administration*, Essays in Commercial Real Estate Finance. Professor Jacob Sagi.

**Turk Al-Sabah**, *Business Administration*, Essays in Corporate Finance. Professors Paige Ouimet and Elena Simintzi.

**Megan Amason**, *Microbiology and Immunology*, Mechanisms of Innate Immunity: Cellular Death as an Altruistic Strategy. Professor Edward Miao.

**Keerthi Surej Anand**, *Biomedical Engineering*, High Framerate, GPU-Accelerated ARFI Log(VoA)-Based Carotid Plaque Characterization With Concurrent Vector Doppler-Derived Wall Shear Stress Estimation for Stroke Risk Assessment. Professors Caterina Gallippi and Gianmarco Pinton.

**David Aponte Díaz**, *Microbiology and Immunology*, Membrane and Lipidome Dynamics During Enterovirus Infection. Professor Craig Cameron.

**Stefani Nicole Baca-Atlas**, *Social Work*, Exploring Structural Racism as a Determinant of Violence Against Women. Professor Trenette Goings.

**Lauren Carol Bates-Fraser**, *Human Movement Science*, A Mixed Methods Approach to Understanding Context and Behavioral Determinants of Sedentary Behavior in Endometrial Cancer Survivors. Professor Erik Hanson.

**Wolfgang Beckabir**, *Microbiology and Immunology*, Understanding, Predicting, and Improving Immune Checkpoint Blockade Immunotherapy Response in Bladder Cancer. Professors William Kim and Benjamin Vincent.

**Griffin Jack Bell**, *Epidemiology*, Epidemiological, Geospatial, and Phylogenetic Evidence to Inform Acute HIV Infection Detection in Lilongwe, Malawi. Professor Kimberly Powers.

**Azza Yasmine Benyoussef**, *Romance Languages and Literatures*, Questionnement Identitaire, Langue(s) et Écriture Chez des Écrivain-E-S Maghrébin-E-S D'Expression Française et Arabe. Professor Hassan Melehy.

**Alex Billingsley**, *Biomedical Engineering*, Expanding the Dimensionality of Carbon Nanotube Imaging. Professor Yueh Lee.

**Zachary Paul Billman**, *Microbiology and Immunology*, An Evolutionary Perspective of Macrophages in Host Defense Against Intracellular Pathogens. Professors Edward Miao and Yuliya Pylayeva-Gupta.

**Elizabeth Bjornsen**, *Human Movement Science*, Effect of Development and Maturation on Biomechanical and Self-Reported Outcomes in Pediatric Patients Following an ACL Reconstruction. Professor Brian Pietrosimone.

**Courtney Blackington**, *Political Science*, Polarizing Protests: Democratic Backsliding and Mobilization. Professor Milada Vachudova.

**Xavier Armaund Bonner**, *Biochemistry and Biophysics*, Determining Genotypic and Phenotypic Factors Influencing Macrophage Tropism in the HIV-1 Envelope Protein. Professors Ronald Swanstrom and Brian Kuhlman.

**Christopher Bowers**, *Environmental Sciences and Engineering*, Generalized Newtonian Fluid Mechanics in Porous Medium Systems. Professor Cass Miller.

**Julia Brom**, *Chemistry*, Dry Proteins and Their Protection Assessed by LOVE NMR, Calorimetry, and Catalytic Activity. Professor Gary Pielak.

**Parker Brookie**, *Romance Languages and Literatures*, Queering Time in Latin America: The Gendered Afterlives of Dictatorship in 21st Century Literature and Visual Culture. Professor Carolina Sá Carvalho.

**Christopher Brooks**, *Education*, Three Essays on the Economics of Educational Opportunity. Professor Thurston Domina.

**Erik Jensen Brooks**, *Mass Communication*, A House Divided Cannot Stand: American Affective Polarization, Fundamental Worldview, and the Power of Story in American Politics. Professor Daniel Kreiss.

**Samantha Nicole Brosso**, *Psychology*, Closing the gap in Socioeconomic Disparities in Chronic Disease: Using Social Psychology to Improve Health Messaging. Professor Keely Muscatell.

**Madelyne Marie Brown**, *Mathematics*, Fourier Coefficients of Restricted Eigenfunctions. Professors Yaiza Canzani and Jeffrey Galkowski.

**Kyle Busse**, *Nutrition*, Ultra-Processed Foods During the Transition to Adulthood in Cebu, Philippines: Sociodemographic Patterns, Drivers of Intake, and Associations With Blood Pressure. Professors Alice Ammerman and Linda Adair.

**Changjia Cai**, *Biomedical Engineering*, Computational and Optical Methods for Fast Imaging, Recording, and Analysis of Neural Activity. Professor Caterina Gallippi.

**Yuheng Cai**, *Biomedical Engineering*, Deep Learning-Based Automated Cell Detection and Classification in Fluorescence Microscopy Images. Professor Alon Greenbaum.

**Celeste Carberry**, *Environmental Sciences and Engineering*, Per and Polyfluoroalkyl Substances and Emerging Toxicity Mechanisms: Alterations in Liver- Derived Extracellular Vesicle Content, Regulation, and Function. Professor Julia Rager.

**Arianna Dame Cascone**, *Neurobiology*, Categorical and Dimensional Investigations of Dynamic Functional Connectivity and Behavior During Response Inhibition in Children With and Without ADHD. Professor Jessica Cohen.

**Colin Rafferty Case**, *Political Science*, Candidate Differentiation in Primary Elections. Professor Sarah Roberts.

**Kylie Chandler**, *Psychology*, Ready for Love: Commitment Readiness and Relationship Initiation in Close Relationships. Professor Sara Algoe.

**Naomi Yi-Ning Chang**, *Environmental Sciences and Engineering*, Dynamics of Ionic Per- and Polyfluoroalkyl Substances (PFAS) in the Indoor Environment: Implications for Exposure. Professor Barbara Turpin.

**Hui-Han Chen**, *Pharmaceutical Sciences*, Comparative Safety, Healthcare Expenditures, and Cost-Effectiveness Associated With Branded and Generic Imatinib for Chronic Myeloid Leukemia in the United States. Professors Sachiko Ozawa and Alan Kinlaw.

**Roy Chen-Zhang**, *Business Administration*, Beyond Steady States: Three Essays in Financial Economics. Professors Gill Segal and Yunzhi Hu.

**Xiao Cheng**, *Biomedical Engineering*, Functional Microparticles for Breast Cancer Metastasis: From Mechanistic Studies to Drug Development. Professor Ke Chen.

**Harrison Chicas**, *Business Administration*, The Intergenerational Effects of Phantom Lives: How the Forgone Professional Identities of Parents Influence the Self-Defeating Behaviors and Burnout of Their Children at Work. Professor Shimul Melwani.

**Seoyoon Cho**, *Biostatistics*, Bayesian Joint Modeling of Multivariate Longitudinal and Time-to-Event Outcomes and Joint Cure Rate Model With Multivariate Time-to-Event Outcomes Using Gaussian Copulas. Professors Joseph Ibrahim and Matthew Psioda.

**Youngmin Cho**, *Nursing*, Understanding Functional Decline in Older Adults: An Exploration of Coping, Trajectories of Daily Functioning, and Family Engagement in Care. Professor Anna Beeber.

**Mark Joseph Ciesielski**, *Marine Sciences*, Adapting and Developing Quantitative Molecular Tools to Characterize Environmental Pathogen Dynamics Relevant to Shellfish Aquaculture. Professor Rachel Noble.

**Addie Katherine Coleman**, *Health Policy and Management*, Alcohol and Substance Use Among American Indian/Alaska Native Birthing People: A Mixed Methods Study of Punitive Versus Treatment State Policies and Community Level Risk Factors. Professor Leah Frerichs.

**Joseph Compton**, *Mathematics*, T-Equivariant K-Theory of Partial Flag Varieties Associated to Kac-Moody Groups. Professor Shrawan Kumar.

**Johnathan Conzelmann**, *Public Policy*, Essays in Labor Economics and Postsecondary Education. Professor Steven Hemelt.

**Jason Marshall Cox**, *Biomedical Engineering*, Tissue Material Heterogeneity and Structural Organization in Trabecular Bone: New Insights Into Tissue Mechanics and Development. Professor Jacqueline Cole.

**Marshall Robison Davey**, *Bioinformatics and Computational Biology*, Construction of a Four-Chambered, Fluid-Structure Interaction Model of the Heart With Validation Studies of Physiologic Left Heart Performance. Professor Boyce Griffith.

**Hayden Cedric Dawes**, *Social Work*, Liberating Ourselves With #Radicalpermission: A Mixed-Methods Intervention Study of People in Digital Community. Professor William Hall.

**Erin Day**, *Chemistry*, Sequence-Structure Relationships in Disordered Peptoids: A Toolkit for Design and Discovery. Professor Abigail Knight.

**Prabhanka Deka**, *Statistics and Operations Research*, Local Weak Limits of Random Digraphs. Professors Sayan Banerjee and Mariana Olvera-Cravioto.

**Jacob Dillard**, *Microbiology and Immunology*, Safety and Efficacy of Inactivated SARS-CoV-2 Vaccines During Heterologous Infection by a SARS-Related Coronavirus. Professors Mark Heise and Victoria Baxter.

**Rachael Ann Jedlika Ditzler**, *Chemistry*, Editing of Polyester and Polyurethane Backbones via [3,3]-Sigmatropic Rearrangements. Professor Aleksandr Zhukhovitskiy.

**Elizabeth Louise Doherty**, *Biomedical Engineering*, Cell-Derived Matrix Platforms for Microphysiological Disease Modeling of Vascular Ehlers-Danlos Syndrome. Professor William Polacheck.

- Nathan Drapela**, *German Studies*, *Untimely Steps: The Modern Landscapes and Timescapes of Perambulatory Self-Narration*. Professor Eric Downing.
- Alexander Cole Edwards**, *Cell Biology and Physiology*, *Overcoming YAP1/TAZ-Driven Resistance to KRASG12C Inhibitors*. Professor Channing Der.
- Torrie Edwards**, *Education*, *Framing Hair: A Judicial Analysis of Dress Code Policy in American Public Schools, 1969 – 2023*. Professor Eric Houck.
- J. Andrew Ehlinger**, *Political Science*, *Social Networks and Party Identity*. Professor Timothy Ryan.
- Clara Eichler**, *Environmental Sciences and Engineering*, *Characterization of the Distribution and Fate of Neutral Per- and Polyfluoroalkyl Substances (PFAS) in Indoor Environments Including the Role of Clothing*. Professor Barbara Turpin.
- Samantha Eiffert**, *Pharmaceutical Sciences*, *Vaccine Utilization Patterns and Predictors Among Older Adults With a History of Guillain-Barre Syndrome*. Professors Betsy Sleath and Til Stürmer.
- Helal El-Zaatari**, *Biostatistics*, *Method of Moments for Exponential Random Graph Model Selection*. Professor Michael Kosorok.
- Angelyn Otteson Fairchild**, *Business Administration*, *Corporate Decarbonization and Climate Change Mitigation*. Professor Olga Hawn.
- Zishun Feng**, *Computer Science*, *Fusing Multiple Information Sources for Predictive Cardiac Modeling*. Professors Ashok Krishnamurthy and Stanley Ahalt.
- Nathan Field**, *Psychology*, *The Benefits and Consequences of High Status in Adolescence: Implications for Peer Influence Processes, Socioevaluative Concern, and Empathic Propensity*. Professor Mitchell Prinstein.
- Alexandria Bianca Forte**, *Social Work*, *Defining Food Security and Examining its Association With Mental Health Among Black Adolescents*. Professor Rainier Masa.
- Alexander Oneal Foster**, *Mathematics*, *Invariant Curves in Cherkis Bow Varieties*. Professor Richárd Rimányi.
- Anastasia Natalie Freedman**, *Environmental Sciences and Engineering*, *Impacts of Exposure to Single Metal and Metal Mixtures on the Placental Proteome and Transcriptome*. Professor Rebecca Fry.
- Michelle Freeman**, *Religious Studies*, *"Crowned in Word": Ritual, Social Consensus, and Diversity in Late Antique Homilies on Martyrs*. Professor Bart Ehrman.
- Kathleen Louise Furtado Selna**, *Microbiology and Immunology*, *Evaluating the Transcriptomic, Metabolic, and Dynamic Responses of *Clostridioides Difficile* to Mucus Using a Novel Primary Human Intestinal Epithelial Cell and Physiologic Mucus Model*. Professors Rita Tamayo and Virginia Miller.
- Manuel J. Galvan**, *Psychology*, *Understanding the Distribution of Anti-Black Discrimination: A Study of Hiring, Housing, Judicial Decisions, and Policy Beliefs*. Professors Keely Muscatell and Keith Payne.
- Grant Glass**, *English and Comparative Literature*, *Fidelity, Remix, and the Adaptive Potential: Leveraging AI and ML Techniques in Literary Adaptation Theory*. Professor Jeanne Moskal.
- Alexandra Goldych**, *Romance Languages and Literatures*, *Spacemaking and Placemaking: Franco-Algerian Gender, Language and Geography*. Professor Hassan Melehy.
- Quincy Grayton**, *Chemistry*, *Macromolecular Nitric Oxide Donors for the Treatment of Drug-Resistant Diseases*. Professor Mark Schoenfish.
- Jhonn Guerra-Banda**, *Romance Languages and Literatures*, *Geopolíticas de las Masculinidades e Identidades (Trans\*) Gresivas en ea Literatura y el Cine de América Latina (1999 – 2020)*. Professor Oswaldo Estrada.
- Ian Gutgold**, *History*, *"To Think Just Like You Do": Henry Highland Garnet, Maria Weston Chapman and the Meaning of Black Freedom*. Professor W. Fitzhugh Brundage.
- Chloe Celeste Hamer**, *English and Comparative Literature*, *Chains of Production: Labor and Literary Opacity in the Contemporary Haitian Novel*. Professors María DeGuzmán and Danielle Christmas.
- Eileen Hammond**, *Communication Studies*, *"Love in the Trenches": Intimacy and Identification at the Museum of Broken Relationships*. Professor Kumarini Silva.
- Daniel Han**, *Public Policy*, *Building Subnational Climate and Energy Policies on Household Energy Behaviors*. Professor Angel Hsu.
- Anusha Hariharan**, *Anthropology*, *"In Solidarity": Feminist Friendship, Ethical Life and Care in Southern India*. Professor Jocelyn Chua.
- Peter Hase**, *Computer Science*, *Interpretable and Controllable Language Models*. Professor Mohit Bansal.
- Lauren Elizabeth Hawkinson**, *Human Movement Science*, *Enhancing High School Coach Readiness to Implement Anterior Cruciate Ligament Injury Prevention Programs*. Professor Darin Padua.
- Liang He**, *Computer Science*, *Real-Time Multi-Agent Motion Planning for the Narrow Passage Problem*. Professor Dinesh Manocha.
- Lauren Hendy**, *Pharmaceutical Sciences*, *A Multi-Perspective Economic Analysis of Population Genetic Screening for Familial Hypercholesterolemia in the United States*. Professor Megan Roberts.
- Jenny Hill**, *Public Policy*, *Observing the Overlooked: Three Essays on Microenterprise, Prisoner, and Immigrant Entrepreneurs*. Professor Jeremy Moulton.
- Janine Hoelscher**, *Computer Science*, *Multi-Stage Motion Planning for Medical Steerable Needle Robots*. Professor Ron Alterovitz.



- Le Huang**, *Bioinformatics and Computational Biology*, Genetic Dissection of Complex Diseases and Traits With Omics. Professors Yun Li and Laura Raffield.
- Lu Huang**, *Economics*, Essays on the Economics of Mental Health. Professors Jane Fruehwirth and David Guilkey.
- Phillip Hughes**, *Pharmaceutical Sciences*, Who Gains and how? Assessing the Safety and Efficacy of Extending Prescriptive Authority to Psychologists. Professor Kathleen Thomas.
- Haeun Hwangbo**, *Bioinformatics and Computational Biology*, Understanding the Clinical Benefits of Combination Cancer Therapies in Heterogeneous Patient Populations. Professor Adam Palmer.
- Emily Ann Hynes**, *Musicology*, The Legacy of Incarceration: How Prison Music Became a Commodity in the Popular Music Industry. Professor Jocelyn Neal.
- Marwa Ibrahim**, *Public Policy*, Three Essays on Migration, Reservation Wages, and Political Targeting: Evidence From Cash Transfer Programs in Malawi and Peru. Professor Sudhanshu Handa.
- Aslihan Imamoglu**, *Psychology*, Investigating Resting-State Functional Connectivity in Children and Adolescents at High Familial Risk for Schizophrenia. Professor Kelly Giovanello.
- Brittany Marie Ingram**, *Human Movement Science*, The Impact of Social Determinants of Health on Sport-Related Concussion Care in Emerging Adults. Professor Johna Register-Mihalik.
- Kara Eileen Irvin**, *History*, German Military Orientalism: Third Reich Imperialism, the German Army, and the "Islam Question" in Eastern Europe. Professor Eren Tasar.
- Kedrian James**, *Computer Science*, Improving the Software Security Triaging and Remediation Processes Using Hybrid Techniques Along With Human-Readable Diagnoses. Professor Fabian Monroe.
- Deepika Jayaprakash**, *Oral and Craniofacial Biomedicine*, Defining Novel Roles of E3 Ligases in DNA Replication and DNA Damage Response in Cancer. Professor Cyrus Vaziri.
- Huijun Jiang**, *Biostatistics*, Statistical Methods for Classification of Disease Recurrence With Transition of Markers. Professor Feng-Chang Lin.
- Haoyang Jiao**, *Materials Science*, Strategies for Enhancing Stability of Perovskite Solar Cells and Modules. Professors Wei You and Jinsong Huang.
- Caitlin Victoria Johnson**, *Chemistry*, Expanding the Single-Molecule Fluorescence Toolbox to Visualize the Conformational Landscape of DNA Repair Proteins and Their Substrates. Professor Dorothy Erie.
- John Drake Johnson**, *Chemistry*, Metathesis Chemistry for the Controlled Synthesis of Nitrogen-Rich Polymers. Professor Aleksandr Zhukhovitskiy.
- Rachel M. Johnson**, *Chemistry*, Structure–Activity Relationship of Thiomarinol Antibiotics in Gram-Negative Bacteria. Professor Bo Li.
- Rebecca Lynne Johnson**, *Pharmaceutical Sciences*, Discovery and Characterization of Chemical Tools for Chromatin and Kinase Biology. Professors Lindsey James and Stephen Frye.
- Tara Jordan**, *Musicology*, "Mi, Monastir": Remembrance and Reconstruction of Interwar Monastir's Jewish Musical Life. Professor Michael Figueroa.
- Lauren Georgia Kanapka**, *Biostatistics*, Methods for Multi-Arm and Basket Clinical Trials. Professor Anastasia Ivanova.
- Caitlin Elizabeth Kearney**, *Education*, Three Essays on Coaching for School Improvement. Professor Thurston Domina.
- Kyungsoo Kim**, *Business Administration*, Essays on Human Capital Redeployment. Professor Isin Guler.
- Andrew Joseph King**, *Chemistry*, Organometallic and Organic Approaches for Precision Synthesis and Modification of Polymers. Professor Aleksandr Zhukhovitskiy.
- Kathryn Kirchoff**, *Computer Science*, Learning Improved Representations Through Informed Self-Supervision: Applications to Drug Discovery. Professors Shawn Gomez and Alexander Tropsha.
- Molly Rebecca Kulikauskas**, *Cell Biology and Physiology*, SMAD6 Balances BMP Signaling in Endothelial Cells to Promote Vascular Development and Function. Professor Victoria Bautch.
- Jacqueline M. Kumar**, *Education*, Three Studies of Teacher-Principal Trust, Including Teachers' Perspectives on Building Trust Across Differences of Race, Gender, and Sexual Orientation. Professor Jacqueline Kumar.
- Francesca Langer**, *History*, Creole Classicism: European and Indigenous Antiquities in the Early American Political Imagination. Professor Molly Worthen.
- Isabel G. Laterzo**, *Political Science*, From Campaigns to Policy: Politicians, Law Enforcement, and Citizen Insecurity in Latin America. Professor Jonathan Hartlyn.
- Dong Neuck Lee**, *Biostatistics*, Advancing Precision Medicine Through Machine Learning. Professors Michael Kosorok and J. S. Marron.
- Gregory Leonard**, *Business Administration*, Essays in Financial Economics. Professor Adam Reed.
- Chen Li**, *Biomedical Engineering*, Deep Learning-Based Intelligent Light-Sheet Fluorescence Microscopy Design. Professor Alon Greenbaum.
- Lang Li**, *Biostatistics*, Order-Restricted Design in Biomarker-Stratified Trials. Professor Anastasia Ivanova.
- Wenjun Li**, *Oral and Craniofacial Biomedicine*, Optimization of Adeno-Associated Virus Vectors Encoding Immune Checkpoint Protein for Arthritis Gene Therapy. Professors Chengwen Li and Shannon Wallet.
- Yilun Li**, *Biostatistics*, The Use of Mendelian Randomization in Causal Effect Estimations. Professor Danyu Lin.
- Bridget Lin**, *Biostatistics*, Methods for Integrative Analysis of Multi-Omics Data. Professor Di Wu.

- Qunqun Liu**, *Physics*, Effects of Quasiparticle-Vibration Coupling on Gamow-Teller Strength and  $\beta$  Decay. Professor Jonathan Engel.
- Minxin Lu**, *Biostatistics*, Addressing Practical Challenges in the Application of Precision Medicine Methods to Observational Data. Professor Michael Kosorok.
- Xinran Lu**, *Computer Science*, 3D Eye Tracking for AR Glasses. Professor Henry Fuchs.
- Anna Lukyanova**, *History*, Queens of Heaven and Earth: Marian Devotion and Aristocratic Culture in Twelfth-Century France. Professor Marcus Bull.
- Lan Luo**, *Psychology*, Evaluating Forecasting Methods for Binary Outcomes With a Small Sample Size in Psychology. Professors Kathleen Gates and Kenneth Bollen.
- Noah Lyman**, *Economics*, Turnover, Selection, and Incentives in the Market for CEOs. Professor Andrés Hincapié.
- Haixu Ma**, *Statistics and Operations Research*, Flexible Machine Learning and Reinforcement Learning in Decision Making. Professors Yufeng Liu and Donglin Zeng.
- Jisan Mahmud**, *Computer Science*, Utilizing Appearance and Geometric Cues for Structure-Aware Scene Understanding Towards 3D Reconstruction. Professor Jan-Michael Frahm.
- Courtney Maierhofer**, *Epidemiology*, HIV Care Linkage, Care Retention, and Viral Suppression Among Persons Living With HIV in North Carolina Before and After the Start of the COVID-19 Pandemic. Professor Kimberly Powers.
- Devon V. Maloney**, *Geography*, Cultivated Borders: Strategic Dryland Agricultural Reclamation as Territorial Development. Professor Aaron Moody.
- Brennan Mange**, *Public Policy*, Three Essays on College Student Academic Success and Well-Being. Professor Steven Hemelt.
- Rebecca Jane Manning**, *Business Administration*, Do Private Equity Fund Managers Opportunistically Smooth Fund Performance? Professor Wayne Landsman.
- Katrina Ann Marks**, *Communication Studies*, Remembering What Unfolds: Negotiating Identification and Genre at two Plantation Memorial Museums. Professor Carole Blair.
- Kelsey Martin**, *Art History*, Les Graveuses en Taille-Douce: Professional Women Printmakers in Paris, 1660 – 1789. Professors Melissa Hyde and Mary Sheriff.
- Syed Osama Masood**, *Toxicology*, Mechanisms of Oxidative Stress in Human Airway Epithelial Cells Exposed to an Environmental Peroxide. Professor Avram Gold.
- Margaret C. Maurer**, *English and Comparative Literature*, Everyday Alchemy. Professor Mary Floyd-Wilson.
- Terence McElroy**, *Business Administration*, Crossing Borders and Bridging Divides: How International Experiences Reduce Affective Polarization Between Democrats and Republicans. Professor William Maddux.
- Minna Hikaru McFarland**, *Neurobiology*, Allopregnanolone Regulation of Phasic Dopamine Release and Motivated Behavior. Professor Donita Robinson.
- Jane McGrail**, *English and Comparative Literature*, The Rhetoric of Mobile Libraries: Circulating Meaningful Literacy Experiences to Build Individual Social Capital. Professor Jordynn Jack.
- Noah Dean McMillion**, *Chemistry*, Ligand Design in Rhenium-Mediated Nitrogen Fixation. Professor Alexander Miller.
- Hernan Mendez**, *Cell Biology and Physiology*, Investigating the Effects of the Central Nucleus of the Amygdala Corticotropin Releasing Factor (CRF) and Corticotropin Releasing Factor Type 1 Receptor (CRFR1) on Binge Drinking Behavior and the Time-Dependent Impact of Abstinence After Binge Drinking in a Targeted Gene Expression Screen. Professor Thomas Kash.
- Meredith Grace Meyer**, *Marine Sciences*, The Influence of Phytoplankton Productivity and Molecular Physiology on Biogeochemical Dynamics of two Contrasting Ocean Environments. Professor Adrian Marchetti.
- Sarah K. Miles**, *History*, One and the Same Struggle: Francophone Intellectuals, Global Solidarity, and Third Worldist Publishing From Paris to Algeria and Québec, 1959 – 1974. Professor Lloyd Kramer.
- Mackenzie E. Mitchell**, *Psychology*, A Longitudinal Investigation of Change in Mental Health Across the Transition to Adolescence: The Roles of Puberty, Working Memory, and Functional Brain Network Organization. Professor Jessica Cohen.
- Nina A. Moiseiwitsch**, *Biomedical Engineering*, Fibrin Structure and Function: New Insights in Coagulopathy and Cardiovascular Therapies. Professor Ashley Brown.
- Jose Manuel Moreno Vega**, *History*, Negotiating Peace Within a Context of Violence: Native Strategies and Colonial Diplomacy in the Borderlands of Northwestern New Spain. Professor Cynthia Radding.
- Camille Morgan**, *Epidemiology*, Spatial and Molecular Epidemiology of Hepatitis B Virus in the Democratic Republic of Congo. Professor Michael Emch.
- Hannah Lori Morgan**, *Psychology*, The Mechanisms Involved in Distractor Suppression During Attentional Processing. Professor Joseph Hopfinger.
- Isabel Morgan**, *Maternal and Child Health*, Mapping Fertility Trajectories: An Endarkened Narrative Inquiry of Black Women's Fertility Experiences and Pathways Through Infertility Treatment. Professor Christine Tucker.
- Jessica Danielle Morgan**, *Pharmaceutical Sciences*, Harnessing Endogenous Epigenetic Machinery to Chemically Control Adeno-Associated Virus Transgene Expression In Vitro. Professor Nathaniel Hathaway.
- Wancen Mu**, *Biostatistics*, Statistical Learning Methods for Uncovering Gene Regulation Mechanisms. Professor Michael Love.
- Corban Graef Edward Murphey**, *Chemistry*, Silicon Nanowires as Templates for Hybrid Plasmonics and Advanced Photonics. Professor James Cahoon.

- William Alan Murphy, Jr.**, *Pharmaceutical Sciences*, Elucidating Hepatocyte Transporter Alterations in Nonalcoholic Fatty Liver Disease (NAFLD): A Prerequisite for Precision Dosing in Liver Disease. Professor Kim Brouwer.
- Danielle Nader**, *Speech and Hearing Sciences*, Making Meaning With AAC: Examining Interactions Between Exemplary AAC SLPs and Children Who Use AAC. Professor Karen Erickson.
- Tsuyoshi Nakano**, *Economics*, Currency Competition as a Discipline Device for the Government. Professor Stanislav Rabinovich.
- Martin Naunov**, *Political Science*, Stereotypes, Subtypes, and Stratification: Unpacking the Influence of Gender and Sexuality in Politics. Professors Timothy Ryan and Milada Vachudova.
- Nathan Patrick Nelson-Maney**, *Cell Biology and Physiology*, Lymphatic G Protein-Coupled Receptors in Health and Disease. Professor Kathleen Caron.
- Prajwol Nepal**, *Health Policy and Management*, Non-Prescription Antibiotics use Among Children in Nepal: Evidence and Interventions in Community Settings. Professor Sean Sylvia.
- Irene Newman**, *American Studies*, "Home of Hate": White Power Organizing in North Carolina, 1979 – 2003. Professor Seth Kotch.
- Khoa Huan Nguyen**, *Chemistry*, Examining the Impact of Nitric Oxide on Bacterial Physiology in Complex Biological Environments. Professor Mark Schoenfisch.
- Katsuhiko Nishiyama**, *Economics*, Medical Debt, Self-Insurance, and the Value of Health Insurance for the Non-Elderly. Professor Luca Flabbi.
- Silviya Nitsova**, *Political Science*, Oligarchs, Politicians, and the Public: Examining Oligarchic Networks of Influence and Public Attitudes Towards the Superrich in Post-Euromaidan Ukraine. Professor Graeme Robertson.
- Connor O'Fallon**, *Psychology*, The Immorality of Self-Harm: When the Self is Not Alone. Professor Kurt Gray.
- Emily Cottle Ommundsen**, *Political Science*, Investing in Expertise: The Role of Staff in Strengthening Congressional Capacity. Professor Jason Roberts.
- Michelle Eirini Padley**, *Geography*, Military Pasts, City Futures: The Transition of Brooks, San Antonio From Military Base to Urban hub. Professor Banu Gökariksel.
- Meagan Paige Padro**, *School Psychology*, Development of a Questionnaire to Survey Adolescent Experiences With and Perceptions of Sexual Health Education. Professors Sandra Evarrs and Dorothy Espelage.
- Junsu Pan**, *Economics*, Econometric Analyses of Tensor Data. Professors Eric Ghysels and Andrii Babii.
- Rebecca Alexandra Patterson-Markowitz**, *Geography*, Whose Body, What Score? Analyzing Embodied Geographies of Trauma, Politicized Healing, and Health Justice in the U.S. Professor Elizabeth Olson.
- Erik Pena**, *Biomedical Engineering*, Optimizing the Development of an Acetalated Dextran Microparticulate Subunit Broadly Reactive Influenza Vaccine. Professors Kristy Ainslie and Yevgeny Brudno.
- Susan Penman**, *American Studies*, Natural Law: Politics, Race, and Legal Culture in 20th Century New Orleans. Professor Seth Kotch.
- Kennedy M. Peter-Marske**, *Epidemiology*, Associations of Social Relationships With Self-Rated Health and Heart Failure. Professor Wayne Rosamond.
- Thanh Thanh Nguyen Phan**, *Biochemistry and Biophysics*, Design, Characterization and Immunogenicity of Soluble Envelope Proteins From Dengue Viruses as Subunit Vaccines. Professor Brian Kuhlman.
- Courtlyn Pippert**, *Communication Studies*, Channeling History: The History Channel and the Role of Popular Historical Knowledge in Understandings of U.S. National Identity. Professor Michael Palm.
- Contia' Janetta Prince**, *Mass Communication*, "Average at Best:" Tracing Themes of Scientific Racism and "Defectiveness" in Historical Scientific Discourses on Black Female Bodies in Contemporary Narratives of Black Beauty Aesthetics in Social Media. Professor Francesca Carpentier.
- David L. Probst**, *Biomedical Engineering*, Development and Characterization of Enzymatic Sensors for Real-Time Monitoring of Levodopa. Professors Koji Sode and Michael Daniele.
- Timothy Qi**, *Pharmaceutical Sciences*, Using Quantitative Systems Pharmacology to Unravel Variation in Patient Response to Novel Cancer Therapies. Professor Yanguang Cao.
- Yunzhi Qian**, *Nutrition*, Intestinal Energy Harvest as Potential Mediator for Gut Microbiota Facilitated Weight Loss in Bariatric Surgery Patients. Professor Ian Carroll.
- Mark Abraham Radin**, *Environmental Sciences and Engineering*, Understanding the Costs and Benefits of Community-led Total Sanitation in Eliminating Open Defecation. Professor Dale Whittington.
- Jefferson Ross Ramsey**, *Education*, Public Science Events: Gatekeepers of Science Capital. Professor Janice Anderson.
- Irina Arimanana Randriamiadana**, *Romance Languages and Literatures*, Des Goûts (Dégoût) des Autres - Analyse Décoloniale du Discours Sensoriel et de sa Représentation. Professor Hassan Melehy.
- Katherine Kyle Reed**, *Nutrition*, The Role of the Intestinal Microbiota in Weight, Anxiety-Related Behavior, and Energy Harvest in Anorexia Nervosa. Professors Ian Carroll and Cynthia Bulik.
- Matthew J. Regner**, *Bioinformatics and Computational Biology*, The Identification of Oncogenic Enhancer Elements in Human Breast and Gynecologic Cancers. Professors Hector Franco and Natalie Stanley.

- Blythe E. Rhodes**, *Health Behavior*, Syringe Services Programs in Central Appalachia: Implementation and County-Level Health Effects. Professor Kathryn Moracco.
- Rani Richardson**, *Cell Biology and Physiology*, Binge-Like Alcohol Drinking: The Intersection of Ghrelin, Stress, and Alcohol use Disorder. Professors Lorenzo Leggio and Leandro Vendruscolo.
- Brittany Rickard**, *Toxicology*, Perfluoroalkyl Substances (PFAS) Induced Therapy Resistance in Ovarian Cancer and Intervention via Photochemical Targeting of Mitochondria. Professors Imran Rizvi and Suzanne Fenton.
- Nina Ritchie**, *Chemistry*, Harnessing the Reactivity of N-Sulfonyl Hydrazones to Access Intermediates for Small and Medium Ring Syntheses. Professor Sidney Wilkerson-Hill.
- Eric William Roos**, *Chemistry*, Leveraging Silyl-Palladium Cations for Catalytic C-O Bond Reduction and Functionalization. Professor Michel Gagné.
- Matthew Scott Ross**, *Economics*, Economic Analysis of Telecommunications Markets and Policy. Professor Jonathan Williams.
- Patric William Sadecki**, *Chemistry*, Multiomic Strategies Towards the Analysis of Natural Products, Bacterial Antimicrobial Response, and Non-Canonical Peptide Translation. Professor Leslie Hicks.
- Gavin Schmitz**, *Pharmacology*, Identifying the Neurophysiological Mechanisms Underlying the Potential Therapeutic Effects of Psychedelic Compounds. Professors Bryan Roth and Melissa Herman.
- Emily Rebekah Seiger**, *Nutrition*, A Mixed Methods Analysis of Adolescent Girls' Diet Quality, Diet Practices, Nutrition Status, and Ideas for Improving Diet in the Context of the Dual Burden of Malnutrition in an Urban Informal Settlement in Kenya. Professor Stephanie Martin.
- Lorenzo Serafin**, *Chemistry*, Fundamental Investigations of the Interactions Between Hybrid Perovskites and Amine Vapors. Professor James Cahoon.
- Carlos Serrano**, *Geography*, Policing Black Miami: Geographies of Rebellion and Carceral Development. Professor Sara Smith.
- Rui Shan**, *Environmental Sciences and Engineering*, Innovation in Energy Storage: Technology, Value, and Cost. Professor Noah Kittner.
- Devan Joe Shell**, *Pharmaceutical Sciences*, Advancements in Small Molecule Hit Discovery Technology Based on a Target Class Approach for Methyl Lysine Reader Proteins. Professor Kenneth Pearce.
- Yueqi Shen**, *Biostatistics*, Incorporating Historical Information in Bayesian Clinical Trial Design Using the Normalized Power Prior. Professor Joseph Ibrahim.
- Christopher C. Shepard**, *Chemistry*, First Principles Study of Nonequilibrium Electron Dynamics in Complex Extended Systems Using Time-Dependent Maximally Localized Wannier Functions. Professor Yosuke Kanai.
- Yoojeong Shin**, *Business Administration*, Essays on Gender Inequality in Creative Industries. Professor Isin Guler.
- Emily Renee Shives**, *Biostatistics*, Methods for Global Tests for a Novel Clinical Trial Design and Exposure Adjusted Rate Differences for Integrated Analyses. Professor Gary Koch.
- Mykhailo Shvets**, *Computer Science*, Improved Representations for Object Detection and Segmentation. Professor Alexander Berg.
- Saumitra Sinha**, *City and Regional Planning*, Muddling Through to Uphold the Right to Water? An Examination of Delhi's Free Water Policy. Professor Dale Whittington.
- Anne Margaret Smiley**, *Marine Sciences*, Nitrogen Processing in Urban Coastal Environments: Evaluating Resilience Amidst a Changing Climate. Professor Michael Piehler.
- Timothy James Smith**, *Religious Studies*, Clean Minds, Messy Realities: Shifting Trends in Contemporary Tenrikyō. Professor Barbara Ambros.
- DeeAnn Spicer**, *Philosophy*, Look Who's Talking: Essays on Speaker Social-Identity and Politically Significant Language. Professor Tom Dougherty.
- Matthew Jared Stevenson**, *Genetics and Molecular Biology*, Interrogating Wilms Tumor Transcriptional Regulatory Programs and the Embryonic Origin of The Mammalian Kidney. Professor Lori O'Brien.
- Jennifer K. Stone**, *Speech and Hearing Sciences*, Reading Power With and Through Dolly Parton's Imagination Library: A Critical Content Analysis. Professor Karen Erickson.
- Alexis Victoria Stutzman**, *Genetics and Molecular Biology*, Epigenetic Determinants of Heterochromatic 3D Genome Organization. Professors Jill Downen and Daniel McKay.
- Rahul Suhag**, *Business Administration*, Marketing for Entrepreneurs. Professor Rajdeep Grewal.
- Ann Norinne Suk**, *Anthropology*, Forced Displacement and Health: Directions for Considering Chronic Health Concerns Among Communities Experiencing Forced Displacement. Professor Amanda Thompson.
- Chuyi Sun**, *Business Administration*, Personal Experience Effects Across Markets: Evidence From NFT and Cryptocurrency Investing. Professor Camelia Kuhnén.
- Quan Sun**, *Biostatistics*, Increasing Diversity With Statistical Methods in Genetics Studies. Professor Yun Li.
- Cavender Sutton**, *History*, Combined Action in Vietnam: U.S. Marine Corps Counterinsurgency Thought and Practice, 1965–1971. Professor Wayne Lee.
- David Takamura**, *German Studies*, Egoism in the Age of Romanticism. Professors Gabriel Trop and Stefani Engelstein.
- Natalie Tanke**, *Cell Biology and Physiology*, Endothelial Cell Cycle Responses to Laminar Shear Stress are Critical to Maintain Vascular Homeostasis. Professor Victoria Bautch.
- Sierriana Terry**, *Musicology*, Harmony and Hues: Blerd Views on the Fusion of Black Culture and Japanese Animation. Professor David Garcia.



**Jewell B. Thomas**, *English and Comparative Literature*, Digital Reading: A Computational Approach to Literary Studies With Applications in British Literary History. Professor Daniel Anderson.

**Zachary Thornton**, *Philosophy*, Identity and its Significance. Professor John Roberts.

**Christopher Richard Travis**, *Chemistry*, Investigation Into the Binding Mechanisms of Histone Reader Protein Recognition of Post-Translational Modifications. Professor Marcey Waters.

**Ashley Elizabeth Trojniak**, *Pharmaceutical Sciences*, Development of Kappa Opioid Receptor Agonists for Non-Addictive Pain Relief. Professor Jeffrey Aube.

**Tatum Tullis**, *History*, Power Couples: The Substance and Representation of Royal Power in England, 1272–1377. Professor Marcus Bull.

**Amanda Narhi Ullman**, *City and Regional Planning*, Measuring the Just Transition: Case Studies and Tools to Evaluate Justice in a Changing Energy System. Professors Noah Kittner and Allie Thomas.

**Christopher John Urban**, *Psychology*, Modeling Intensively Measured, Longitudinal, and Multidimensional Item Responses: Capturing Continuous-Time Latent Change Processes via Neural Stochastic Differential Equations. Professor Daniel Bauer.

**Alan Franco Vasquez Soto**, *Physics*, Exploring the Fast Transient Optical Sky and Developing New Technologies for the Argus Array. Professor Nicholas Law.

**Tibor Vegh**, *City and Regional Planning*, Improving Market-Based and Government Run Adaptation Solutions for Mitigating Flood Risk Using Natural Infrastructure. Professor Todd BenDor.

**Elena Vidrascu**, *Psychology*, Probing Associations Between Adolescent Alcohol use, Behavioral Flexibility, and Underlying Neurocircuitry Among Adults. Professor Charlotte Boettiger.

**Julio Cesar Villa-Palomino**, *Anthropology*, Mental Health, Suspicion, and Care in a Peruvian Community. Professor Jocelyn Chua.

**Peter Voorhees**, *Pharmaceutical Sciences*, Bacteriophage Vectors for In Situ Microbiome Engineering. Professor Shawn Hingtgen.

**Michael Walker**, *Computer Science*, The Design of Virtual and Mixed Reality Interfaces for Human-Robot Interaction. Professor Daniel Szafr.

**Philip Warncke**, *Political Science*, Cohesion, Dimensionality, and Signals – Understanding Mass Ideology in Applied Contexts. Professors Liesbet Hooghe and Timothy Ryan.

**Mercedes Warren Norris**, *Microbiology and Immunology*, Rho-Mediated Transcription Termination in *Clostridioides* Difficile Phase Variation. Professor Rita Tamayo.

**Ann Marie K. Weideman**, *Biostatistics*, Canopy2: Tumor Phylogeny Inference by Bulk DNA and Single-Cell RNA Sequencing and Blinded and Partially-Unblinded Sample Size Re-Estimation for Registry-Based Randomized Controlled Trials With Incomplete Event Adjudication. Professors Xianming Tan and Kevin Anstrom.

**Xingbang Weng**, *Economics*, Essays in Economics of Mental Health. Professor Jane Fruehwirth.

**Taylor West**, *Psychology*, What Good is Positivity Resonance With Weak Ties and Strangers? An Investigation of Benefits for Intellectual Humility and Altruism Toward Similar and Dissimilar Others. Professor Barbara Fredrickson.

**Waverly Roze Lynch Whisenant**, *Education*, Attitudes and Perceptions of Student Teaching Placements: A Mixed Methods Study of Relationships Between Perceptions and Outcomes. Professor Cheryl Bolick.

**Caitlin R. Williams**, *Maternal and Child Health*, Implementation Sustainability: Institutionalizing Maternal Health Projects Through Public Policy in Ghana. Professor Carolyn Halpern.

**Andrew C. Willoughby**, *Biology*, CLE Signalling in Root Development and its Cytoplasmic Requirements. Professor Zachary Nimchuk.

**Kendall Hatch Winter**, *Musicology*, Suffragist and Antisuffragist Songs in the United States, 1867–1920. Professors Annegret Fauser and Andrea Bohlman.

**Eugenia Wong**, *Epidemiology*, Trajectories of Psychological Well-Being and Cardiovascular Health in the Women's Health Initiative. Professor Wayne Rosamond.

**Amanda Wylie**, *Psychology*, Examining the Effects of Prenatal Urinary Lead on Child Outcomes in Context. Professor Cathi Propper.

**Yangjianchen Xu**, *Biostatistics*, Statistical Methods for Analyzing Interval-Censored Data. Professors Danyu Lin and Dongling Zeng.

**Yi Xu**, *Pharmacology*, Defining the Kinome Landscape in Pancreatic Cancer for Precision Medicine. Professor Jen Jen Yeh.

**Rina Alyse Yarosh**, *Epidemiology*, Long-Term Outcomes Among Breast Cancer Survivors in North Carolina. Professor Eboneé Butler.

**Shekhar Yeshwante**, *Pharmaceutical Sciences*, Systems-Based Approach to Design and Optimization of Treatment for Pulmonary Infections: Strategy to Combat Antimicrobial Resistance. Professor Gauri Rao.

**Haidong Yi**, *Computer Science*, Set-Based Modeling and Applications in Single-Cell Bioinformatics. Professor Natalie Stanley.

**Lu Yi**, *Economics*, The Evolution of Equity Ownership: Declining IPOs, the Rise of Private Markets, and Economic Dynamism. Professors Gregory Brown and Anusha Chari.

**Ying Yu**, *Environmental Sciences and Engineering*, Bridging the Gap Between Residential Energy Data and Policy for Vulnerable Communities Under Climate Change. Professor Noah Kittner.

**William Zahran**, *Education*, Three Studies on Public University Financial aid and Student Success. Professor Daniel Klasik.

**Eden Yitbarek Zewdie**, *Pharmacology*, Mertk Induces Tolerogenic Dendritic Cells by Metabolic Reprogramming. Professor H. Shelton Earp.

**Wan Zhang**, *Statistics and Operations Research*, Statistical Learning Using Binary Expansion. Professor Kai Zhang.

**Beibo Zhao**, *Biostatistics*, Finding Subgroups With Differential Treatment Effect With Multiple Outcomes. Professor Anastasia Ivanova.

**Jieni Zhou**, *Psychology*, Listen to Resonate: Testing Listening's Reciprocal Links to Sensory Connection, Perceived Safety and Interpersonal Positivity Resonance. Professor Barbara Fredrickson.

**Ruiyi Zhou**, *Chemistry*, First-Principles Theoretical Study of Non-Equilibrium Electron Dynamics and Electronic Excitation. Professor Yosuke Kanai.

**Tarek M. Zikry**, *Biostatistics*, Manifolds and Decision Theoretic Methods for Precision Medicine. Professors Michael Kosorok and Jeremy Purvis.

**Pavlos Zoubouloglou**, *Statistics and Operations Research*, Large Deviation Principles for Some Stochastic Dynamical Systems With Asymptotically Vanishing Noise. Professor Amarjit Budhiraja.

## DOCTOR OF EDUCATION

**Keyla Nohemy Cueto**, *Educational Leadership*, An Exploration of the Relationship Between the Mathematical Academic Achievement of Hispanic Multilingual Learners and Hispanic Non-Multilingual Learners. Professor Eric Houck.

**Jameya Quontrel Green**, *Educational Leadership*, Advancement via Individual Determination and the Development of Student Agency. Professors Eric Houck and Sherick Hughes.

**Jennifer Lynn Hicks Hall**, *Educational Leadership*, Characteristics and Perspectives of North Carolina Local Education Agency School Business Officers. Professor Eric Houck.

**Jennifer Petty**, *Educational Leadership*, Induction for new Educators: Exploring the Needs of Beginning Teachers Seeking Alternative Pathways to Certification. Professor Martinette Horner.

**Beth Rhodes**, *Educational Leadership*, an Investigation of the Middle School Principal's Role and Self- Efficacy as Literacy Instructional Leaders. Professor Chris Scott.

**Kendra B. Woods**, *Educational Leadership*, Exploring North Carolina Educators & Administrators Understanding of Esser Funding in Title I Charter Schools. Professor Eric Houck.

## DOCTOR OF NURSING PRACTICE

**Candace Beddard**, *Nursing Practice*, Identifying and Treating Obesity in a Rural Primary Care FQHC. Professor Carrie Palmer.

**Karina E. Bermudez**, *Nursing Practice*, Implementation of an Obesity Risk Assessment Tool in a Pediatric Primary Care Clinic. Professor Audra Rankin.

**Joseph Michael Biddix**, *Nursing Practice*, Implementing Prewarming to Reduce Intraoperative Hypothermia. Professor Rebecca Kitzmiller.

**Sarah Constance Billiar**, *Nursing Practice*, Evaluating Implementation of the Collaborative Care Model Within the North Carolina Army National Guard G1 Medical's Health Readiness Program. Professor Rebecca Kitzmiller.

**Dana Bjuro**, *Nursing Practice*, Improving Pharyngitis Care in School-Based Virtual Care Clinics: A Quality Improvement Initiative. Professor Jean Davison.

**Jurate Brigham**, *Nursing Practice*, A Quality Improvement Initiative to Increase Provider Utilization of Apps for Patient Self-Management of Anxiety and Depression. Professor Rebecca Kitzmiller.

**Hayley Marie Brott**, *Nursing Practice*, Implementation of Standardized Pediatric Safety Alerts. Professor Ashley Kellish.

**Amanda Hayes Burk**, *Nursing Practice*, Increasing Goals of Care Conversations and Documentation. Professor Carrie Palmer.

**Susan Cavanaugh**, *Nursing Practice*, Development of a Comprehensive Program for Pulmonary Hypertension Regarding End-of-Life Care. Professor JoAn Stanek.

**Kellie Anne Clifton**, *Nursing Practice*, Improving Adolescent Depression Screening and Documentation Compliance at a Pediatric Primary Care Clinic. Professor Rebecca Kitzmiller.

**Jessica Lauren Demick**, *Nursing Practice*, Let's Talk! Communicating to Address Vaccine Hesitancy. Professor Carrie Palmer.

**Hannah Fenn**, *Nursing Practice*, Continuous Blood Glucose Monitoring in Primary Care. Professor Leslie Sharpe.

**Fiona Catherine Graves**, *Nursing Practice*, Transitioning the UNC Mobile Health Clinic From the PHQ-2 to the PHA-4: A Quality Improvement Project. Professor Leslie Sharpe.

**Hanna Hallbauer**, *Nursing Practice*, An Evaluation of Changes in a new Graduate Nurse Residency Program. Professors Ashley Kellish and Grace Hubbard.

**Amber Jean Hammer**, *Nursing Practice*, Food Insecurity Among Perinatal People With Substance Use Disorders: Integration of a Clinical Community Partnership. Professor Lorinda Coombs.

**Helen Bernice Hayes**, *Nursing Practice*, Provider Adherence to Metabolic Syndrome Screening Guidelines. Professor Grace Hubbard.

**Olivia Henderson**, *Nursing Practice*, Adolescent Eating Disorder Screening: Implementation of Scoff in Pediatric Primary Care. Professor Grace Hubbard.

**Jamie Line Hollowell**, *Nursing Practice*, Increasing Accessibility of a Central Line Change-Over-Wire Protocol. Professor Maureen Baker.

**Aaron David Lemmon**, *Nursing Practice*, Using Targeted Interventions to aid in the Reduction of Blood Product Wastage in the Operating Room. Professor Ashley Kellish.

**Alicia Smith Lever**, *Nursing Practice*, Increasing the Uptake of Catch-Up Human Papillomavirus Vaccinations. Professor Rachel McInerney.

**Caroline Martineau**, *Nursing Practice*, Implementation of a Postpartum Depression Screening and Mental Health Resource Guideline in the Neonatal Intensive Care Unit. Professor Rachel McInerney.

**Edwina McCray**, *Nursing Practice*, Nurse Professional Certification: Evaluating Achievement Program Implementation. Professor Rebecca Kitzmiller.

**Lesley Ann McGraw**, *Nursing Practice*, Improving Early Career Nurse Resilience With a Resilience Toolkit: A Pilot Project. Professor Jennifer Alderman.

**Lindsay Powell**, *Nursing Practice*, Three Good Things: A Practice to Improve Well-Being and Mitigate Burnout in Solid Organ Transplant Advanced Practice Providers. Professor Margaret Carman.

**Carmen Raborn**, *Nursing Practice*, Improving Fall Risk Screening in Oncology Patients: Implementing an Oncology-Specific Fall Risk Screening Tool in an Outpatient Adult Blood Cancer Center. Professor Ashley Kellish.

**Myla Deandra Ward**, *Nursing Practice*, Evaluating Adolescent Suicide Screening in a Community Emergency Department Using the CIPP Model. Professor Rebecca Kitzmiller.

**Katie Marie Wardenburg**, *Nursing Practice*, Reach out and Read: Program Delivery Evaluation at an Outpatient Pediatric Clinic for Identifying Parent Concerns in Development. Professor Audra Rankin.

**Jane Warstler**, *Nursing Practice*, Implementing Adverse Childhood Experience (ACE) Screening in a Primary Care Family Practice Setting. Professor Audra Rankin.

**Sarah Lorraine White**, *Nursing Practice*, Monitoring Metabolic Syndrome in Pediatric Patients in a Local Community Mental Health Agency. Professor Grace Hubbard.

**Kelly Yow**, *Nursing Practice*, Life in the Fast Lane: Fast Track Program Evaluation at an Urgent Care Clinic. Professor Ashley Kellish.

## DOCTOR OF PUBLIC HEALTH

**Evelyn Abayaah-Issah**, *Health Policy and Management*, How Effective has the Ghana National Health Insurance Scheme (NHIS) Been in Improving Healthcare Access for the Economically Vulnerable? Professor Benjamin Meier.

**Rosemarie Almonte**, *Health Policy and Management*, Cervical Cancer Screening in Rural Pennsylvania Health Centers: Implementation Barriers and Facilitators for Electronic Health Record-Based Guidelines. Professors Lisa Spees and Sandra Greene.

**Pierre R. Berastain Ojeda**, *Health Policy and Management*, The Impact of and Responses to Scarcity Among Domestic Violence Organizations in the United States. Professor Kristen Hassmiller Lich.

**Charity Chenge**, *Health Policy and Management*, Promoting More Effective Resource Allocation Decision Making in Development Assistance for Global Health (DAH). Professor Susan Helm-Murtagh.

**Athena Cross**, *Health Policy and Management*, Killing Black Mothers: Examining the Barriers, Facilitators, and Strategies to Address Maternal Mortality and Severe Maternal Morbidity of Black Women in the United States. Professor Pam Silberman.

**Julie Emerson Farmer**, *Health Policy and Management*, Systematized Adaptation of Interventions to Increase Prostate Cancer Risk Awareness Among Black Men in North Carolina. Professor Erin Kent.

**Amy Garrett**, *Health Policy and Management*, Understanding Barriers and Facilitators Affecting Participation in Cancer Clinical Research Studies for Racially and Ethnically Diverse Populations in Rural North Carolina. Professor Sandra Greene.

**Christopher L. Hardesty**, *Health Policy and Management*, Using Modified Universal Health Coverage Principles to Assess Innovations in Lower Middle-Income Countries: Parallel Case Studies in Nigeria and Indonesia. Professors Kristin Reiter and Thomas Ricketts.

**Diane Renee Johnson**, *Health Policy and Management*, Health Communications Matter: A Comparative Case Study of Best Practices to Combat Misinformation and Disinformation During the COVID-19 Pandemic. Professors John Weisman and Sandra Greene.

**David Benjamin Joyce**, *Health Policy and Management*, Maine's Risk-Based Firearm Restriction Statute: Opportunities for Improvement in the Wake of a Mass Shooting. Professor Pam Silberman.

**Kendall LaSane**, *Health Policy and Management*, Barriers to and Facilitators for Equitable Uptake of Over-the-Counter Naloxone: A Qualitative Case Study of New York and Texas. Professor Susan Helm-Murtagh.



**Elma Racquel Racadio**, *Health Policy and Management*, Participants Representing United States Racially and Ethnically Minoritized Communities in Research: How can Mobile Health Technology Reduce Barriers to Enrollment in Cancer Clinical Trials? Professor Erin Kent.

**Jessica Faye Wallace**, *Health Policy and Management*, Organizational Strategies and Opportunities to Reduce Provider Burnout and Improve Satisfaction in FQHCs. Professor Christopher Shea.

**Jamine Weiss**, *Health Policy and Management*, An Exploratory Study of the Use of Implementation Science Frameworks in Public Health Settings in Sub-Saharan Africa. Professor Karl Umble.

**Terry Gene Williams**, *Health Policy and Management*, The Roles and Key Actions of Healthcare Organizations Participating in Transformational Community Efforts to Improve Health, Well-Being, and Health Equity. Professor Justin Trogdon.





# GRADUATE DEGREES

August 2023

*Graduates' names are followed by their area of major study, dissertation or project title, and the name of their doctoral advisor.*

## The Graduate School

ESTABLISHED 1903

Dean Beth Mayer-Davis

### DOCTOR OF PHILOSOPHY

**Lily Elizabeth Adams**, *Microbiology and Immunology*,

Investigating the Factors that Influence Pan-Betacoronavirus Infection and Immune Protection. Professors Ralph Baric and Mark Heise.

**Selin Altinok**, *Pharmacology*, Domain-Specific Changes in CHIP Function Explain Distinct Clinical Features in SCA48 Patients. Professor Jonathan Schisler.

**Gabriella M. Alvarez**, *Psychology*, From Inequality to Inflammation: Exploring Internal and External Contributions to Affective Processing. Professor Keely Muscatell.

**Marissa C. Ashner**, *Biostatistics*, Evaluating Various Estimating Equation Approaches to Handle Right-Censored Covariates in Regression. Professor Tanya Garcia.

**Sarah Barr**, *Microbiology and Immunology*, Investigating Characteristics of Bacterial Two-Component Regulatory Systems. Professor Robert Bourret.

**Colleen Betti**, *Anthropology*, "Go Ahead and Erect the Buildings Themselves": An Archaeological Study of Three Black Schools in Gloucester County, Virginia. Professor Anna Agbe-Davies.

**Grant Broussard**, *Genetics and Molecular Biology*, Characterization of the Role of Innate Immune Regulators in Control of Gammaherpesvirus Latency. Professor Blossom Damania.

**Jordan Alexander Brown**, *Mathematics*, Modeling Transcatheter Aortic Valve Replacement in Patient-Specific Anatomies: Fluid-Structure Interaction Models Using the Immersed Finite Element-Difference Method. Professor Boyce Griffith.

**Nolan Brown**, *Genetics and Molecular Biology*, Large-Scale Library Generation of Unnatural Amino Acid Biosynthetic Enzymes. Professors Dorothy Erie and Eric Brustad.

**Alyssa Browne**, *Sociology*, "It's a White Man's Sport": Examining Medical Specialization Through an Intersectional Lens. Professors Lisa Pearce and Tania Jenkins.

**Nicholas Bryden**, *Physics*, Magnetic Resonance Applications of Hyperpolarized Xenon at Low Field Strengths. Professor Rosa Branca.

**Richard Van Burgess**, *Business Administration*, Never Too

Much: The Dynamic Nature of Inclusion Perceptions During Chief Executive Transitions. Professors Jessica Christian and Matthew Pearsall.

**Michael Anthony Carlson**, *Musicology*, "Musica Fatta Spirituale": Aquilino Coppini, Claudio Monteverdi, and Madrigal Contrafacts in Early Seventeenth-Century Milan. Professor Annegret Fauser.

**Tara Carr**, *Nutrition*, Help Me Feed Me: A Mixed Methods Study of Factors Associated With Infant and Toddler Child Care Teachers' Responsive Feeding Style. Professor Dianne Ward.

**Alice Fiona Cartwright**, *Maternal and Child Health*, Neighborhood Structural Deprivation and Contraceptive Use in the United States: National Variation and Changes as a Result of Medicaid Expansion. Professor Ilene Speizer.

**William Raymond Cassels**, *Chemistry*, Productively Leveraging the Acidity of  $\beta$ -Dicarbonyls in Nontraditional Stereoconvergent Reactions. Professor Jeffrey Johnson.

**John Caughman**, *Mathematics*, Data Analysis and Material Property Inferences From Passive Microscopic Probe Experiments in Heterogeneous Biological Systems. Professor M. Gregory Forest.

**Minne Chen**, *Sociology*, Sexuality Education in Vocational High Schools in China: Stratified Exposure, Effects, and Potential Barriers. Professors Yong Cai and Kathleen Harris.

**Siyuan Chen**, *Psychology*, Modeling Growth When Measurement Properties Change Between Persons and Within Persons Over Time: A Bayesian Regularized Second-Order Growth Curve Model. Professor Daniel Bauer.

**Esther Chung**, *Epidemiology*, Grandmother Caregiving, Family Dynamics, and Child Development in Rural Pakistan: A Mixed Methods Approach. Professor Joanna Maselko.

**Sang Hun Chung**, *Biomedical Engineering*, 19F Magnetic Resonance Imaging of Lung Ventilation Dynamics and Cell Tracking. Professors David Lalush and Yueh Lee.

**Aaron Timothy Crain**, *Genetics and Molecular Biology*, Systematic Analysis of Histone H4 Lysine 20 Modification Function in Gene Regulation, Cell Proliferation, and Animal Development. Professor Robert Duronio.

**Gabrielle Jean Dardis**, *Biochemistry and Biophysics*, EZH2 Co-Activates Nf-kB Targets With RelA in a PRC2-Independent Manner in Triple Negative Breast Cancer Cells. Professor Albert Baldwin.

- Patricia Dawson**, *History*, Our Hearts are Straight: Cherokee Clothing in Early America. Professor Kathleen DuVal.
- Nikolaos Dokmetzoglou**, *Physics*, Conformal Yangian and Tree Amplitudes in Scalar and Gauge Field Theories. Professor Louise Dolan.
- Wayana Dolan**, *Geological Sciences*, Dynamics of Functional Lake-to-Channel Connectivity in Arctic and Boreal Deltas. Professor Tamlin Pavelsky.
- Emily Welker Duffy**, *Nutrition*, Estimating the Effects of the Shock of the COVID-19 Pandemic and a Fruit and Vegetable Benefit Increase on Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Participants in North Carolina: A Mixed Methods Study. Professor Lindsey Smith Taillie.
- Daniel Quinn Earixson**, *School Psychology*, An Investigation of Non-Evidence Based Autism Intervention Representations in the Media: A Content Analysis. Professor Kara Hume.
- Sarah H. V. Eisenlohr**, *Classics*, The Trauma of Ovid's Mythic Women: Rape, Captivity, Silence. Professor Sharon James.
- Mary C. Figgatt**, *Epidemiology*, Infections and Mortality Among People who use Drugs. Professor Yvonne Golightly.
- Yasmine Flodin-Ali**, *Religious Studies*, Race, Religion, and the Making of American Muslims, From the Mid-Nineteenth to Mid-Twentieth Centuries. Professor Julianne Hammer.
- Andrew Jeon Garbisch**, *Education*, Contesting Liminality: A Counter Oral History of Asian American Adopted People. Professor Xue Lan Rong.
- Julie Geyer**, *Biology*, Temporal and Within-Host Variability of Host Microbiota: Interactions With Plant Disease. Professor Charles Mitchell.
- Bineet Kumar Ghosh**, *Computer Science*, Design and Verification of Autonomous Systems in the Presence of Uncertainties. Professor Parasara Sridhar Duggirala.
- Ricardo Daniel Gonzalez**, *Pharmaceutical Sciences*, One Drug, Two Drugs: Synergism or Antagonism? A Pharmacogenetic Investigation of the Genetic Etiology of Differential Chemotherapy Responses. Professors Tim Wiltshire and Erin Heinzen.
- Alexandra Goriounova**, *Pharmacology*, ELD607 is a Novel, Specific Inhibitor of the Orai1 Calcium Channel. Professor Robert Tarran.
- Katelyn Jean Gould**, *Biology*, Variation in Thermal Sensitivity Among Coral Genotypes, Species, and Habitats: Implications for Improved Restoration. Professor John Bruno.
- Yu Gu**, *Biostatistics*, Statistical Methods for Analyzing Interval-Censored Multi-State Data. Professors Danyu Lin and Donglin Zeng.
- Karen Hall**, *School Psychology*, Youth on the Autism Spectrum Hospitalized for Suicide Related Thoughts and Behaviors: Characteristics and Perspectives From The Field. Professor Marisa Marraccini.
- Mairead Kathleen Heavy**, *Pharmaceutical Sciences*, Engineering Probiotic Yeast Drug Delivery Systems. Professor Julianne Nguyen.
- Beck A. Henriksen**, *Religious Studies*, Precarious Peace: Gender, Queerness, and the Peace Plan in Contemporary Rwanda. Professor Todd Ramón Ochoa.
- Samuel E. Honeycutt**, *Cell Biology and Physiology*, The Role of Stromal Netrin-1 in Kidney Development and Renal Neurovascular Patterning. Professor Lori O'Brien.
- Yucheng Hou**, *Health Policy and Management*, Peer Participation, Spillover Effects, and Evaluation of the Medicare Shared Savings Program. Professor Justin Trogdon.
- Brittany Huffman**, *Chemistry*, Electrochemical Characterization of Immobilized Organometallic Complexes on Metallic and Semiconducting Electrodes. Professor Jillian Dempsey.
- Geoffrey Ryan Hughes**, *Anthropology*, Affecting Identity: Salem's Moravian Potters and the Technologies of Identity Making, 1793–1831. Professor Anna Agbe-Davies.
- Tania Hutt Cabello**, *Sociology*, A New Dimension of the Motherhood Penalty: Perceptions of Future Childbearing Risk. Professor Katherine Weisshaar.
- Katherine M. Ingram**, *Education*, Preventing the Next Sext: A Behavioral Economic Approach to Understanding Non-Consensual Nude Photo Sharing Decisions in a High School Community. Professors Dorothy Espelage and Marisa Marraccini.
- Minji Jang**, *Philosophy*, Fitting Blame Without Blameworthiness. Professor Susan Wolf.
- Yizheng Jiao**, *Computer Science*, Building Efficient and Secure Storage Systems With Write-Optimized Dictionaries. Professor Don Pote.
- John Douglas Johnson**, *Chemistry*, Sulfur (VI) Reagents as Carbene Equivalents for the Synthesis of Orphaned Cyclopropanes. Professor Sidney Wilkerson-Hill.
- Karl Johnson**, *Health Policy and Management*, Public Health Governance to Advance Public Health 3.0: Interrogating the Strategies and Structures of Local Governmental Health Departments to Address the Social Determinants of Health in North Carolina and Across the Country. Professor Kristen Hassmiller Lich.
- Chinmaya Joisa**, *Biomedical Engineering*, Towards Leveraging Inhibition State of the Kinome for Precision Oncology. Professor Shawn Gomez.
- Nicholas David Jones**, *German Studies*, Revolution and the City: Marxist Anthropologies in the Interwar Realist Novel. Professor Richard Langston.
- Donruedee Kamkhood**, *Nursing*, Nutritional Status, Eating Behaviors, and Gastrointestinal Symptom Cluster Among Thai Children Receiving Cancer Chemotherapy. Professor Sheila Santacroce.
- Kellen A. Kane**, *Public Policy*, Health, Wealth, and Representation: Three Essays on LGBTQ+ Policies and Politics in the U.S. Professor Rebecca Kreitzer.
- Hawa Keita**, *Chemistry*, Efficient and Selective Transition-Metal Free C–C Bond Forming Methods With Boron-Stabilized Nucleophiles. Professor Simon Meek.

- Megan Elizabeth Kern**, *Physics*, Combined Atomic Force Microscopy and Light Sheet Microscopy Characterize the Mechanobiology of Phagocytosis. Professor Richard Superfine.
- Mary Kathleen Killela**, *Nursing*, Examining the Use of Medical Crowdfunding to Address the Costs of Childhood Cancer. Professor Sheila Santacroce.
- Keon Ho Kim**, *Mathematics*, Immersed Peridynamics Method. Professor Boyce Griffith.
- Siyeon Kim**, *Biostatistics*, On Development of Statistical Learning Methods in Precision Medicine. Professor Michael Kosorok.
- Theodore Langhorst**, *Geological Sciences*, Advancing Remote Sensing of Fluvial Sediment Transport and Storage. Professor Tamlin Pavelsky.
- Tyler Scott Larson**, *Chemistry*, Mass Spectrometry Analysis of 2D and 3D Cell Cultures. Professors Gary Glish and Matthew Lockett.
- Christopher George Law**, *Business Administration*, Three Essays on Entrepreneurial Organizing. Professor Chris Bingham.
- Sandra Lee**, *Psychology*, From the Individual to the Group - Exploring the Generalizeability of Idiographic Network Modeling Approaches for Analyzing Time Series Data in Psychology. Professor Kathleen Gates.
- Joseph Leshin**, *Psychology*, Context Effects on the Neural Correlates of Emotion. Professor Kristen Lindquist.
- Undraa Lhamsuren**, *German Studies*, The Colors of my Skin: The Making of Black German Identity. Professor Priscilla Layne.
- Yuan Li**, *Information and Library Science*, Stopping and Resuming: How and Why Do People Search Across Sessions for Complex Tasks? Professor Robert Capra.
- Kaixin Liang**, *Oral and Craniofacial Biomedicine*, Unraveling the SARS-CoV-2 Induced Cell Death in Lung Epithelial Cells. Professor Jenny Ting.
- Yiyang Susanna Liang**, *Chemistry*, Acridinium Catalysis in Total Synthesis and Ketone-Olefin Coupling. Professor David Nicewicz.
- Nikolai Lipscomb**, *Statistics and Operations Research*, Optimization of Stochastic Models in Health Care: Appointment Scheduling and Disease Testing. Professors Vidyadhar Kulkarni and Serhan Ziya.
- Mochuan Liu**, *Biostatistics*, Incorporating Benefit-Risk Consideration and Feature Selection Into Optimal Dynamic Treatment Regimens. Professor Donglin Zeng.
- Peirong Liu**, *Computer Science*, Perfusion Imaging via Advection-Diffusion. Professor Marc Niethammer.
- Andrea Lorenz**, *Mass Communication*, Perspectives on Local News in Democracy: A Comparative Study of Stakeholders' Conceptions of Roles and Impacts. Professor Barbara Friedman.
- Caitlin Marie Lowery**, *Nutrition*, Sugar, Substitution, and Perceived Beverage Healthfulness: Insights From the Philadelphia and San Francisco Beverage Taxes. Professor Shu Wen Ng.
- Yifei Lu**, *Epidemiology*, Liver Integrity Over the Adult Lifespan and Risk of Alzheimer's Disease and Related Dementias. Professor Priya Palta.
- Yubo Luo**, *Computer Science*, Scaling up Task Execution on Resource-Constrained Systems. Professor Shahriar Nirjon.
- James Machado**, *Mass Communication*, Digital Content Marketing's Role in the Consumer Journey in Deciding to Enlist in the United States Army. Professor Suman Lee.
- Nicholas M. Mallek**, *Toxicology*, In Vitro Model Development for Inhalation Toxicology Research and Their Applicability for Novel Insights Into the Cellular and Molecular Exposure Response of Wood Smoke Particulate Matter Exposure. Professors Shaun McCullough and Ilona Jaspers.
- Joseph Paul Mancinelli**, *Chemistry*, Exploring Novel Modes of Activation via Main-Group Elements. Professor Sidney Wilkerson-Hill.
- John D. Martin III**, *Information and Library Science*, Agree, Disagree, Agree: Spatial Agency Bias in Online Survey Instrument Design. Professor Sandra Hughes-Hassell.
- Katelin McCullough**, *Classics*, The Re-Contextualization of Female Commemoration in the Civic and Religious Spaces of Cyrene. Professor Jennifer Gates-Foster.
- Isaac D. Mehlhaff**, *Political Science*, The Natural Origins of Mass Opinion: An Argumentative Theory of Political Reasoning. Professor Marc Hetherington.
- Michael Zhe Miao**, *Oral and Craniofacial Biomedicine*, Temporospatial Precision of Integrin Response to Fibronectin Matrikine: Unveiling an Osteoarthritis-Perpetuating Pathway. Professor Richard Loeser.
- Brantly Hancock Moore**, *Art History*, Articulate Furnishings: German Cabinetmakers and the Construction of Elite Experience and Intellectual Culture, 1550–1650. Professor Marika Keblusek.
- Carson Mosso**, *Statistics and Operations Research*, Latent Variable Models for Binary and Count-Valued Data With Applications to Single-Cell RNA-Sequencing Data. Professors Andrew Nobel and Fred Wright.
- Franklin Robert Muntis**, *Nutrition*, Bridging Sports Nutrition and Diabetes Care: Assessing the Role of Protein Intake and Timing on Glycemia During and Following Physical Activity Among Adolescents and Adults With Type 1 Diabetes. Professor Elizabeth Mayer-Davis.
- Alexander Craig Murph**, *Statistics and Operations Research*, Fiducial Statistics on Differentiable Manifolds. Professors Jan Hannig and Jonathan Williams.
- India Watkins Nattermann**, *Classics*, Mismarked Flesh: The Interpretability of the Male Body in Julio-Claudian Literature. Professor Sharon James.

- Kathleen Riley Neff**, *Chemistry*, Kat-alysis: Tuning the Electrophilic Behavior of P-Si<sup>+</sup>, M-Si<sup>+</sup>, and M – I<sup>+</sup> Complexes. Professor Michel Gagne.
- Rebecca Neshkes**, *School Psychology*, Examining the Psychometric Properties of the Dialectical Thinking Scale Adult Version and the Relationship Between Dialectical Thinking and Well-being in School Mental Health Professionals. Professor Steven Knotek.
- Derrick Nowak**, *Mathematics*, Local Smoothing of the Schrödinger Equation on a Multi-Warped Product With Degenerate Trapping. Professor Hans Christianson.
- Kelsey Jane Oeler**, *Biomedical Engineering*, Advancing Imaging Techniques for Assessing Pulmonary Mucus Macrostructure and Microstructure. Professor Amy Oldenburg.
- Linnea Teresa Olsson**, *Epidemiology*, Patient- and Tumor-Level Factors Impacting Chemotherapy Use and Effectiveness. Professor Melissa Troester.
- Sims Hill Osborne**, *Computer Science*, Using Simultaneous Multithreading to Support Real-Time Scheduling. Professor James Anderson.
- Samantha Ashley Ottavi**, *Pharmaceutical Sciences*, Efforts Toward the Discovery and Development of Novel Tuberculosis Therapeutics. Professor Jeffrey Aubé.
- Zhenyu Ouyang**, *Chemistry*, Elucidation of Carrier Transport in Perovskites Solar Cells With Nonlinear Time-of-Flight Spectroscopies. Professor Andrew Moran.
- Patricia Pagan Lassalle**, *Human Movement Science*, The Effects of Psychosocial Factors on Cardiometabolic Risk in Non-Hispanic Black Adults. Professor Michelle Meyer.
- Catherine Elizabeth Paquette**, *Psychology*, Open Trial of a Behavioral Activation Telepsychology Intervention for People who Inject Drugs. Professor Stacey Daughters.
- Shanetta Marchae Pendleton**, *Technology and Communication*, Friend or Faux: Exploring the Perceived Authenticity of Corporate Socio-Political Activism on Instagram Through The Lens of Black Lives Matter. Professor Joseph Czabovsky.
- Taylor Michael Petty**, *Statistics and Operations Research*, Bayesian Forensic DNA Mixture Deconvolution With a Novel String Similarity Measure. Professors Jan Hannig and Hari Iyer.
- Ratchanok Phonyiam**, *Nursing*, Self-Management and Breastfeeding in Women With Preexisting Type 2 Diabetes Mellitus From Thailand. Professor Marianne Baernholdt.
- Lauren C. Pinkerton**, *English and Comparative Literature*, “Wander[Ing] From the Studious Walls”: Itinerant Scholars in British Literature, 1850–1930. Professor Kimberly Stern.
- Cari Pittleman**, *School Psychology*, Care, Be Nice, and Keep an Eye on that Kid: Multiple Perspectives on School Professional Roles Supporting Students With Suicide-Related Thoughts and Behaviors. Professor Marisa Marraccini.
- Mugdha Sunil Polimera**, *Physics*, Investigating Active Galactic Nuclei in Dwarf and Giant Galaxies in the Nearby Universe. Professor Sheila Kannappan.
- Yiran Qian**, *Pharmaceutical Sciences*, Discontinuation of Disease-Modifying Therapies and Health Outcomes in Midlife Patients With Multiple Sclerosis in the United States. Professor Joshua Thorpe.
- Alexander Quanbeck**, *Philosophy*, Kierkegaard and the Ethics of Belief. Professor Alex Worsnip.
- Michele Robinson**, *English and Comparative Literature*, Writing and Righting Rooms in Nineteenth-Century British Literature. Professor Kimberly Stern.
- Samuel P. Rosin**, *Biostatistics*, SARS-CoV-2 Seroprevalence and Vaccine Correlate of Protection Standardization. Professor Michael Hudgens.
- Nikki Roulo**, *English and Comparative Literature*, “Changeling Humorists:” The Speech Acts of the Early Modern English Fool. Professor David Baker.
- Jose Angel Sanchez Gomez**, *Statistics and Operations Research*, Estimation of Hub Structures in Individual and Multiple Gaussian Graphical Models. Professor Yufeng Liu.
- Peyton Sandroni**, *Pharmacology*, The Alpha-1A Adrenergic Receptor Regulates Oxidative Metabolism in The Mouse Heart. Professor Brian Jensen.
- Eduardo Sato**, *Musicology*, Modernist Crossings in Brazilian Music, 1918–1954. Professor Annegret Fauser.
- Carly Schnitzler**, *English and Comparative Literature*, Generations: Creative Computation, Community, and the Rhetorical Canon. Professor Daniel Anderson.
- Alison Marie Schreiber**, *Psychology*, The Role of Neurocomputational Decision Processes in Affect-Based Impulsivity in Borderline Personality. Professor Michael Hallquist.
- Kushal S. Shah**, *Biostatistics*, Statistical Machine Learning Methodology for Individualized Treatment Rule Estimation in Precision Medicine. Professors Michael Kosorok and Haoda Fu.
- Jamshaid A. Shahir**, *Bioinformatics and Computational Biology*, Unraveling Single-Cell Heterogeneity Through Graph Neural Networks and Multiplexed Imaging. Professor Jeremy Purvis.
- Garrett Christopher Sharpe**, *Ecology*, Competitive and Metabolic Strategies of Marine Bacteria and Their Influence on Ocean Ecology and Biogeochemistry. Professors Scott Gifford and Alecia Septer.
- Ehsan Sheikholharam Mashhadi**, *Religious Studies*, Building Pluralism: Cultural Politics of the Aga Khan Award for Architecture. Professor Carl Ernst.
- Hui Shen**, *Statistics and Operations Research*, Consistency of Statistical Learning Techniques: Unsupervised Learning and Network Change Point. Professors Shankar Bhamidi and Yufeng Liu. Niethammer.
- Wenzheng Shi**, *Materials Science*, Physics of Curvature Sensing in Septin Assemblies. Professor Ehssan Nazockdast.
- Yifeng Shi**, *Computer Science*, Representation Learning With Additional Structures. Professor Marc



**Zachary Ryan Sitte**, *Chemistry*, Developing New Approach Methodologies to Increase the Physiological Relevance and Utility of Scaffold-Based 3D Cell Culture Techniques. Professor Matthew Lockett.

**Morgan Souza**, *English and Comparative Literature*, Early English Monstrosity: Francis Bacon and his Interlocutors. Professor Jessica Wolfe.

**Brooke S. Staley**, *Epidemiology*, Population-Based Study of Plasma Metabolites as Mediators of the Relationship Between Socioeconomic Status and Incident Diabetes: A Social Metabolomic Approach to Health Disparities. Professor Christy Avery.

**William C. Stanford**, *Neurobiology*, Topological and Computational Mechanisms of Resilience in the Aging Human Brain. Professor Eran Dayan.

**Rebeca T. Stiepel**, *Pharmaceutical Sciences*, Kinetics of Drug Release From Acetalated Dextran Microparticles and Applications in Immune Engineering. Professor Kristy Ainslie.

**Sarah Courtney Sutton**, *Chemistry*, Pump-Probe Microscopy Investigations of Anisotropic Carrier Dynamics in ReS<sub>2</sub> Nanoflakes and Effects of Surface Passivation in Si Nanowires. Professor James Cahoon.

**Katie Tardio**, *Classics*, Feeding Tarraco: A Zooarchaeological Approach to the Economy of Roman Spain. Professors Jennifer Gates-Foster and Benjamin Arbuckle.

**Taylor Tibbs**, *Microbiology and Immunology*, The Genetics and Immunological Influences of Infectious Disease Outcome. Professor Jason Whitmire.

**Kelsey Urgo**, *Information and Library Science*, Investigating the Influence of Subgoals on Learning During Search. Professor Jaime Arguello.

**Juliana Lee Vanderburg**, *Education*, Exploring and Augmenting Family Engagement in a Teacher-Led, Task-Shifted System of Child Mental Health Care in India. Professors Steve Knotek and Christina Cruz.

**Riley Vickers**, *Environmental Sciences and Engineering*, Molecular-Scale Analysis of the Morphology, Topology, and Performance of Crosslinked Aromatic Polyamide Used in Reverse Osmosis Membranes. Professor Orlando Coronell.

**Sergey Voronov**, *Computer Science*, Scheduling Real-Time Graph-Based Workloads. Professor James Anderson.

**Sarah Schaefer Walton**, *English and Comparative Literature*, Guiding ‘The Intelligent English Traveller’: The Collaborative and Interactive Victorian Serialized Handbook. Professor Kimberly Stern.

**Rachel Cara Warner**, *English and Comparative Literature*, Transmasculine Modernism: Inverts, Tomboys, and Drag Kings, 1890–1940. Professor Heidi Kim.

**Marc Herman Webb**, *Environmental Sciences and Engineering*, Water-Soluble Species in Residential Air, Air-Surface Dynamics and the Influence of Surface Films and Water. Professor Barbara Turpin.

**Joshua M. Weinstein**, *Health Policy and Management*, Evaluating the Health and Economic Consequences of Inequitable Access to Continuous Glucose Monitoring Technology for Patients With Type 1 Diabetes. Professor Christopher Shea.

**Joshua Gilbert Welfare**, *Chemistry*, Exploration and Expansion of the Photolytic Properties of Cobalamin. Professor David Lawrence.

**John Thomas West**, *Psychology*, Are Emotionally Granular Individuals Emotion Experts? Evidence From an Experiment of True and False Emotional Memory. Professor Neil Mulligan.

**Emilie Wheatley**, *Chemistry*, Copper-Catalyzed Allyl Addition Methods for The Enantioselective Synthesis of Quaternary Stereocenters. Professor Simon Meek.

**Megan M. Wood**, *Communication Studies*, Dispatches From an Apocalypse: Essays on Political Culture in the Late United States. Professor Lawrence Grossberg.

**Cameron Worthington**, *Chemistry*, Utilizing Ion Mobility to Understand and Improve Mass Spectrometry Analyses. Professor Gary Glish.

**Christian Xander**, *Microbiology and Immunology*, Understanding the Role of the Secreted Phosphatase SapM in Phagosome Maturation Arrest and its Delivery to its Host Target in Mycobacterium Tuberculosis and BCG. Professor Miriam Braunstein.

**Junhua Yan**, *Computer Science*, Analyzing Data-Center Application Performance via Constraint-Based Models. Professors Jasleen Kaur and Van Jacobson.

**Shiyue Zhang**, *Computer Science*, Towards Reliable and Inclusive Natural Language Generation. Professor Mohit Bansal.

**Liang Zhao**, *Materials Science*, Perovskite Detectors for Gamma-Ray Spectroscopy. Professor Jinsong Huang.

**Xiang Zhou**, *Computer Science*, Towards Reliable and Generalizable Natural Language Understanding. Professor Mohit Bansal.

**ManHua Zhu**, *Neurobiology*, Cellular and Behavioral Effects of Nicotine Vapor Exposure on Mouse Mesolimbic Reward Circuitry. Professors Melissa Herman and Thomas Kash.

**Alexandra Lillian Ziegler**, *Art History*, Religion, Rhetoric, and Representation: Portraits of Women During France’s Grand Siècle. Professor Christoph Brachmann.

**Haotian Zou**, *Biostatistics*, Dynamic Prediction With Multivariate Longitudinal Outcomes and Longitudinal Magnetic Resonance Imaging Data. Professors Sheng Luo and Donglin Zeng.

**DOCTOR OF EDUCATION**

**Huanyu Cong**, *Curriculum and Instruction*, Online Learner's Identity Development: Narrative Inquiry Study in online Learning Community. Professor Xue Rong.

**Jamillia Breanne Gillespie**, *Education*, An Investigation of Factors that Influence Principal Mentor Selection for Black Women Principal Preparation Candidates at Predominately White Institutions. Professor Chris Scott.

**Jaimi West**, *Educational Leadership*, Characteristics and Conditions of Successful K-8 Summer Programs. Professor Eric Houck.

**DOCTOR OF NURSING PRACTICE**

**Rebecca Baldwin**, *Nursing*, Review of Evidence-Based Practice Projects in A New Graduate Nurse Program. Professor Meg Zomorodi.

**DOCTOR OF PUBLIC HEALTH**

**Grace Ghantous**, *Health Policy and Management*, Psychological Distress and Type 2 Diabetes Risk in High-Risk Adults With Low Social Determinants of Health (SDOH): A Qualitative Study. Professor John Wiesman.

**Lisa C. Strader**, *Health Policy and Management*, Outpatient Behaviors and Perceptions that Influence Adherence to Proper Antibiotic Stewardship Practices: Indications for Future Intervention Development. Professor Leah Devlin.



# GRADUATE DEGREES

December 2023

*Graduates' names are followed by their area of major study, dissertation or project title, and the name of their doctoral advisor.*

## The Graduate School

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Dean Beth Mayer-Davis

### DOCTOR OF PHILOSOPHY

**Sebastian Acosta-Calle**, *Chemistry*, Leveraging Non-Covalent Interactions for Switchable Catalysis in Organometallic Chemistry. Professor Alexander Miller.

**Ishrat Zarin Alam**, *Epidemiology*, Risk and Protective Factors of Rapid Opioid Reduction or Discontinuation and its Association With Self-Harm Outcomes Among High-Dose Long-Term Opioid Therapy Patients in North Carolina. Professor Shabbar Ranapurwala.

**Kimberly Anne Alley**, *Chemistry*, Asymmetric Synthesis of Salicylaldehyde Equivalents to Generate Molecular Complexity. Professor Jeffrey Johnson.

**Ashwaq Alzamel**, *Speech and Hearing Sciences*, Digging Beneath the Surface: A Multidimensional Approach to Understanding Sex Differences in Social-Pragmatics in School-age Children With Autism Spectrum Disorder and Typically Developing Children. Professor Elizabeth Crais.

**Pulasthi Shamantha Amarasinghe**, *Economics*, Migration and Transfers in Extended Family Networks. Professor David Guilkey.

**Sarah Shamim Asad**, *Health Policy and Management*, Addressing Multi-Level Determinants of Endometrial Cancer Diagnosis in Black Women. Professor Sarah Birken.

**Joëlle Atere-Roberts**, *Epidemiology*, Structural Racism Across the Life Course and Cardiometabolic Health Among Black and White Young Adults. Professor Chantel Martin.

**Fiona Balsa**, *School Psychology*, Reimagining Autism in the School Years: An ICF-CY Core Set for Interdisciplinary Services. Professor Rune Simeonsson.

**Matthew M. Bowler**, *Pharmaceutical Sciences*, Biocatalytic Diversification of Peptide Libraries Displayed on RNA. Professors Albert Bowers and Nate Hathaway.

**Burcu Bozkurt**, *Health Policy and Management*, Three Essays Exploring Black-White Racial/Ethnic Disparities in Postpartum Care in the United States. Professor Sarah Birken.

**Aki Kean Bracerros**, *Biochemistry and Biophysics*, Epigenetic Regulation of Gene Expression by Long Non-Coding RNAs. Professor Mauro Calabrese.

**Taron Marie Bradshaw**, *Chemistry*, Dual Foreign Body Response Mitigation Strategies for Improving the Analytical Performance of Implantable Glucose Biosensors. Professor Mark Schoenfisch.

**Jacob Thomas Brooks**, *Physics*, Design, Fabrication, and Actuation of a Magnetic Micro-Actuator Platform for Passive Fluid Flow, Active Fluid Flow, and Cell Motility Studies. Professor Richard Superfine.

**Benjamin Brown**, *Statistics and Operations Research*, Every Bit as Good: Resolution-Based Inference, Binary Model Representations, and A Boolean Framework for Explainable Decisions. Professors Kai Zhang and Jan Hannig.

**Ana Elisa Cartaya Tellechea**, *Pharmacology*, Antioxidant Response Activating Nanoparticles (ARAPAs): Treating Arterial Disease in 3D. Professor Edward Moreira Bahnson.

**Xiaoyan Chen**, *Chemistry*, Biosynthesis of Dithiolopyrrolone Natural Products and Discovery of Antibiotic Combinations. Professor Bo Li.

**Qian Cheng**, *Statistics and Operations Research*, A Data-Driven Approach to Describe, Predict, and Reduce Crowding and Health Disparities in an Emergency Department. Professors Nilay Argon and Serhan Ziya.

**Rachel Elizabeth Cherney**, *Genetics and Molecular Biology*, Recruitment of PRC2 by lncRNAs. Professor Joseph Calabrese.

**Morgan Clark**, *Physics*, Development of a Characterization Facility and Analysis Process for LEGEND-200 HPGe Detectors. Professor John Wilkerson.

**Collin Knox Coleman**, *Environmental Sciences and Engineering*, Advancing Test Methods for Point-of-Use Disinfection of Water and Wastewater. Professor Jill Stewart.

**Matthew Combs**, *Pathology*, The Role of GRAF RHOA-GAPs in Maintaining Highly Energetic Tissues via Regulation of Mitochondrial Quality Control. Professor Joan Taylor.

**Margaret Louise Daly**, *Materials Science*, The Design and Emergent Properties of Supramolecular Peptide-DNA Materials. Professor Ronit Freeman.

**Aimee Deconinck**, *Biology*, Impact of Mitonuclear Interactions on Hypoxia Tolerance in Populations of *Tigriopus californicus*. Professor Christopher Willett.

**Ryan Mitchell DeRuiter**, *Biomedical Engineering*, Developing Imaging Methods and Processing Techniques for Super-Resolution Ultrasound Microvascular Applications. Professor David Lalush.



- John Kiprian DiEugenio**, *History*, The Creation of the Maritime Strategy: The U.S. Navy, National Strategy, and the end of the Cold War. Professors Wayne Lee and Joseph Glatthaar.
- Carolina Grace Downie**, *Epidemiology*, Inflammatory Mediators of Type 2 Diabetes Risk. Professor Christy Avery.
- Michelle S. Dromgold-Sermen**, *Sociology*, A Hierarchical Pathway to Permanence: Temporary Nonimmigrants' Navigation of the U.S. Immigration System, 2007–2021. Professors Jacqueline Hagan and Charles Kurzman.
- Devin Effinger**, *Pharmacology*, Sex-Specific Effects of Psychedelic Drug Administration on Stress-Related Brain Region Reactivity and Behavioral Responding. Professor Melissa Herman.
- Mohammad Hossein Eybposh**, *Biomedical Engineering*, Deep Learning Methods in Computer-Generated Holography. Professor Nicolas Pegard.
- Inbar Fried**, *Computer Science*, Towards Robot Autonomy in Medical Procedures via Visual Localization and Motion Planning. Professor Ron Alterovitz.
- Hannah Friedman**, *Health Policy and Management*, Quality of Care and Hospital Bypass Among Rural Heart Failure Patients. Professor G. Mark Homes.
- Nathan William Galliher**, *Physics*, Enabling the Future of Fast Transient Characterization: Building ArgusSpec and Prototyping the Argus Array. Professor Nicholas Law.
- Madison Rose Glass**, *Neurobiology*, Cross-Site Reproducibility and Fidelity of Human Cerebral Organoids. Professor Jason Stein.
- Jessica Elizabeth Goldblum**, *Psychology*, The Toddler Remote Assessment of Virtual Eye Tracking and Language (Travel) Study: An Eye Tracking and Behavioral Assessment of Joint Attention at Home. Professor Cathi Propper.
- Amanda Leigh Graboski**, *Pharmacology*, Characterization and Inhibition of Gut Microbial Tryptophanase and its Implications in Chronic Kidney Disease. Professor Matthew Redinbo.
- Lauren Graybill**, *Epidemiology*, The Impact of Youth Friendly Health Services on Pregnancy Risk Among Adolescent Girls and Young Women in Lilongwe, Malawi. Professor Daniel Westreich.
- Jennifer Miller Green**, *School Psychology*, Service Disparities Among Preschool Students With Autism. Professor Sandra Evarrs.
- Zakiya M. Haji-Noor**, *Epidemiology*, Classifying Eligibility for Minimally Invasive Hysterectomy in the Carolina Hysterectomy Cohort, 2014–2017. Professor Audrey Pettifor.
- Breanne Marie Hatfield**, *Chemistry*, Characterizing RNA-Protein Interactions and Defining Proximity-Mediated Function of RNA Regulatory Proteins. Professor Kevin Weeks.
- Christopher Randolph Haufe**, *Physics*, A Study of Majorana Demonstrator Backgrounds With Bayesian Statistical Modeling. Professor John Wilkerson.
- Paloma Hauser**, *Biostatistics*, Bayesian Models for High-Dimensional Discrete Multivariate Data. Professors Joseph Ibrahim and Xianming Tan.
- Hillary Michaela Heiling**, *Biostatistics*, Scalable Statistical Methods for Cell Type Deconvolution and Mixed Models Applied to High Dimensional Genomic Data. Professors Naim Rashid and Joseph Ibrahim.
- Dylan Andrew Hendy**, *Pharmaceutical Sciences*, Improved Delivery of a Broadly Active Influenza Subunit Vaccine. Professors Kristy Ainslie and Julianne Nguyen.
- David Alberto Hervás Aguilar**, *Physics*, Characterizing Bulk Signals in an Inverted Coaxial Point-Contact Detector to Inform Rare-Event Searches. Professor John Wilkerson.
- April Highlander**, *Psychology*, Behavioral Parent Training Outcomes in Families With Low Income: Exploring the Role of the Family Stress Model. Professor Deborah Jones.
- Yun-Chung Hsiao**, *Environmental Sciences and Engineering*, Exploration on Biotransformation and Metabolic Modulation by the Gut Microbiome. Professor Kun Lu.
- Lex Hurley**, *Health Behavior*, Assessing Depression and Attributional Styles as Determinants of Engagement in Digital Behavior Change Interventions. Professor Deborah Tate.
- Sabrina Elizabeth Iskandar**, *Pharmaceutical Sciences*, Expanding the Chemical Diversity of mRNA Display Libraries With Orthogonal Aminoacyl tRNA Synthetases. Professor Albert Bowers.
- Melissa Renee Jenkins**, *Social Work*, Sex Trafficking Prevention Education for Youth With Intellectual and Developmental Disabilities: Promising Practices. Professor Cynthia Fraga Rizo.
- Aldo M. Jordan**, *Chemistry*, Electrochemical Characterization of Electrode Devices: Towards Enhanced Stability in Energy Storage and Photoelectrochemical Catalysis Applications. Professor Jillian Dempsey.
- Thomas Herbert Keefe**, *Statistics and Operations Research*, Unsupervised Machine Learning With Applications to Disease Phenotyping. Professor J. S. Marron.
- Dae-eun Kim**, *Epidemiology*, Biological and Clinical Implications of Obesity Genomics in Ancestrally Diverse Populations. Professor Kari North.
- Tae-bin Kim**, *Statistics and Operations Research*, Statistical Inference in Computational Pathology. Professors J. S. Marron and Yao Li.
- Jasmine King**, *Pharmaceutical Sciences*, Harnessing a Platform Hydrogel Technology and Stem Cell Therapies for Cancer Treatment and Regenerative Medicine. Professor Soumya Benhabbour.
- Karina Alexandra Kinghorn**, *Cell Biology and Physiology*, Vesicle Trafficking and Secretion Regulate FLT1 Function in VEGF Signaling During Vascular Development. Professor Victoria Bautch.



- Wei Yi Kong**, *Health Behavior*, Clinical Determinants of Health Care Professionals' Recommendation of Human Papillomavirus Vaccination. Professor Melissa Gilkey.
- Elaine Kearney Kowalewski**, *Biostatistics*, Methods to Address Control to Test Treatment Switching for Multi-Visit and Time-to-Event Clinical Trials. Professor Gary Koch.
- Youngjoong Kwon**, *Computer Science*, Modeling Efficient Deep Representations for Human Digitization With Affordable Setup. Professor Henry Fuchs.
- Brandon David Le**, *Bioinformatics and Computational Biology*, Genetic Effects in Context: Cellular and Molecular Quantitative Trait Loci in Stimulated Human Neural Progenitor Cells. Professor Jason Stein.
- Jiaying Li**, *Statistics and Operations Research*, Statistical Arbitrage and Algorithmic Trading. Professor Chuanshu Ji.
- Junlang Li**, *Biomedical Engineering*, Minimally Invasive Delivery of Stem Cells and Exosomes for Heart Repair. Professor Ke Cheng.
- Tzu-Chi Lin**, *Statistics and Operations Research*, Modeling Dynamic Processes on Complex Networks. Professors Mariana Olvera-Cravioto and Nicolas Fraiman.
- Marguerite Little**, *Pharmacology*, Determination of Cross-Species Immune Responses From Outer Membrane Vesicle-Based Meningococcal Vaccines to *Neisseria Gonorrhoeae*. Professors Joseph Duncan and Robert Nicholas.
- Allison S. Lowe Reed**, *Public Policy*, Competitors and Collaborators: Exploring Inter-University Effects in the Academic Discipline of Biomedical Engineering. Professor Maryann Feldman.
- Tianyou Luo**, *Biostatistics*, Statistical Learning Methods in Imaging Genomics. Professors Hongtu Zhu and Yun Li.
- Natalia Maldonado-Vazquez**, *Pharmacology*, Exploring Protein Folding Patterns: Characterization and Functional Insights of Zinc Finger Domain Containing Protein ZC4H2. Professor Daniel Dominguez.
- Joseph Marincel**, *Physics*, Sign Optimization and Quantum Field Theories: Lessons From QCD-Like Models. Professor Gokce Basar.
- Rae Anne M. Martinez**, *Epidemiology*, Exploring the Operationalization of Biological Age and its Relationship to Childhood Adversity and Depression. Professor Allison Aiello.
- Laura Elyse McCormick**, *Cell Biology and Physiology*, The E3 Ubiquitin Ligase TRIM9 Regulates Actin Dynamics and Synaptic Function. Professor Stephanie Gupton.
- Austin Miller**, *Chemistry*, Key C–C Disconnections Realized via Site-Selective Amidyl Radical Mediated C–H Functionalization. Professor Erik Alexanian.
- Adil Muneer**, *Biochemistry and Biophysics*, Non-Canonical Translation Regulatory Function of G9a in Chronic Inflammation Associated Diseases. Professor Xian Chen.
- Andrew Roderick Murray**, *Geography*, Groundwater Vulnerability in the United States: Identifying Inequitable Contaminants and Water Sources. Professor Diego Riveros-Iregui.
- Matthew Niederhuber**, *Genetics and Molecular Biology*, Fine-Tuning Enhancer Activity in Development. Professor Daniel McKay.
- Carli Opland**, *Neurobiology*, Investigating Tau Mediated Toxicity in Alzheimer's Disease and the Protein Complex Responsible for Tau Cleavage. Professor Todd Cohen.
- Micah Papanikolas**, *Materials Science*, Supramolecular Assembly of Mucins Instructs Health and Disease. Professor Ronit Freeman.
- Emily Eidenier Pearce**, *Health Behavior*, The Experience and Management of Medical Uncertainty in Telomere Biology Disorders. Professors Melissa Gilkey and Kurt Ribisl.
- Victoria Petermann**, *Nursing*, Evaluating the Role of Contextual Factors in Access to Care for Endometrial Cancer Patients. Professor Jennifer Leeman.
- Jackson Jon Peterson**, *Microbiology and Immunology*, The Molecular Basis of HIV-1 Latency Initiation and Maintenance. Professors Edward Browne and David Margolis.
- Haley Elizabeth Plaas**, *Environmental Sciences and Engineering*, Understanding the Impacts of Harmful Cyanobacterial Blooms on Air Quality. Hans Paerl.
- Yiqing Qian**, *Health Behavior*, Understanding the Psychological Well-Being of Black American Family Caregivers: A Multi-Method Investigation of Choice, Stressors, Coping, Adverse Psychological Impacts, and Meaning-Making. Professor Edwin Fisher.
- Kaitlyn Maffuid Quebbemann**, *Pharmaceutical Sciences*, Catch me if you can: Detecting Immune-Cancer Cell Interactions for Better Immunotherapy. Professors Michael Jarstfer and Yanguang Cao.
- Gouthami G. Rao**, *Environmental Sciences and Engineering*, Expanding the Reach of Wastewater Surveillance Through Improved Pathogen Detection and Passive Sampling Methods. Professor Joe Brown.
- Anna Leigh Reine**, *Physics*, An Improved Background Model and Two-Neutrino Double-Beta Decay Measurement for the Majorana Demonstrator. Professor John Wilkerson.
- Alfredo Rojas**, *Anthropology*, Cashews and Cooperation: Land use and Land Cover Change, Household Labor, and Local Perspectives in Northwestern Côte D'Ivoire. Professor Colin West.
- Neyen Romano**, *Chemistry*, Transition Metal-Based Silylium Transfer Mechanisms for Catalysis. Professor Michel Gagne.
- Selena Elaine Romero**, *Cell Biology and Physiology*, Uncovering Novel Mechanisms of Neuronal Axon Pruning. Professor Mohanish Deshmukh.
- Emma M. Rosen**, *Epidemiology*, Phthalates and Replacements: Longitudinal Assessment of Levels, Sources, and Associations With Placental Measures. Professors Stephanie Engel and Kelly Ferguson.
- Ryan Sayko**, *Chemistry*, Coarse-Grained Molecular Dynamics Simulations of Degradation of Block Copolymers and Scaling Theory of Polymer Solution Characterization. Professor Andrey Dobrynin.

**Erin Graham Sley**, *Epidemiology*, Modifiable Risk Factors for Orofacial Clefts Among Hispanic and Non-Hispanic Individuals in the United States. Professor Andrew Olshan.

**John Sperger**, *Biostatistics*, Experimental Designs for Precision Health and Medicine. Professors Michael Kosorok and Eric Laber.

**Maria A. Stevens**, *Health Policy and Management*, The Influence of Vulnerability on the Treatment and Outcomes for Opioid Use Disorder Among People who Present to the Emergency Department With an Opioid-Related Diagnosis. Professors Kristin Reiter and Valerie Lewis.

**Yuan Tian**, *Chemistry*, Bulk and Interfacial Properties of Soft Polymer Materials. Professor Andrey Dobrynin.

**Thanh Vu**, *Computer Science*, Toward Efficient and Robust Computer Vision for Large-Scale Edge Applications. Professor Jan-Michael Frahm.

**Ian Andrew Windham**, *Cell Biology and Physiology*, Lipid Droplet Targeting and Function of Apolipoprotein E. Professor Sarah Cohen.

**Jennifer Wu**, *Art History*, The Metapictorial Portrait in Early Modern Britain, 1520–1620. Professor Tatiana String.

**Yubo Zhang**, *Computer Science*, Computer Vision Aiding Colonoscopy. Professors Stephen Pizer and Jan-Michael Frahm.

**Chao Zhao**, *Computer Science*, Text Summarization Under Low Supervision. Professor Snigdha Chaturvedi.

## DOCTOR OF NURSING PRACTICE

**Christine Detwiler**, *Nursing Practice*, Delirium Risk Assessment and the Effect on Administration of Four Adjuvant Anesthetics. Professor Ashley Kellish.

**Christina Greeson**, *Nursing Practice*, Pediatric Feeding Disorder: A Quality Improvement Initiative to Improve Documentation in the Psychosocial Domain. Professor Eric Hodges.

**Poonam Rai Gupta**, *Nursing Practice*, Implementing a Standardized Diuretic Titration Protocol to Manage Heart Failure Exacerbation in an Ambulatory Setting. Professor Tracy Vernon-Platt.

**Madison Morgan**, *Nursing Practice*, Piloting Ethics-Focused Debriefing to Address Nurse Manager Moral Distress: A Quality Improvement Project. Professor Ashley Bryant.

## DOCTOR OF PUBLIC HEALTH

**Anthony Shawn Abrantes**, *Biostatistics*, Novel Ways of Analyzing RNA for Genetic Psychiatry. Professors Paola Giusti-Rodriguez and Yun Li.

**Joseph L. Barker**, *Health Policy and Management*, Effective Public Health Strategies to Optimize HIV Testing Services Among men Ages 15 Years and Older in Kenya. Professor Sandra Greene.

**Melanie Gleiman Phelps**, *Health Policy and Management*, Expanding the use of Doulas to Improve Maternal and Birth Outcomes in North Carolina. Professors Christopher Shea and Valerie Lewis.

**Joshua Rutsohn**, *Biostatistics*, Estimating the Conditional Hazard Function of Joint Latent Class Mixed Models Using Hazard Regression With Applications to Psychology and Neuroscience. Professor Young Truong.

## Academic Dress

The following information, based in part on An Academic Costume Code and Ceremony Guide (published by the American Council on Education), may be helpful in identifying academic attire worn during today's Doctoral Hooding ceremony.

**Degree Candidates' Regalia.** The hooded doctoral gown features three bars across each sleeve. The doctoral gown for Carolina graduates is Carolina blue, with facings and crossbars of dark blue outlined in white piping. The facings bear the shield of the University supported by the torches of learning. The hoods of master's and doctoral degree candidates vary in color according to the field of study (see list below).

**Faculty Regalia.** Faculty wear the regalia of the institution that conferred their highest degree. The doctoral gowns are usually faced with black velvet, although the color of the velvet may vary according to the field of study. Hoods, which differ in length according to the level of the degree held, are lined with official colors of the university or college that conferred the degree, usually with one color forming a chevron pattern over the other. Some colors you will see on faculty and administrators' robes are, for example, the crimson of Harvard, the maroon of Chicago, the orange and black of Princeton, the dark blue of Yale, and the light blue and white of North Carolina. Like the hoods of master's and doctoral degree candidates, faculty hoods are edged and bound with velvet in the color appropriate to the field of study.

The colors in the hoods and gowns of faculty and administrators represent the following fields in which degrees were taken:

Apricot: Nursing	Lemon Yellow: Library Science	Purple: Law
Brown: Fine Arts	Light Blue: Education	Sage Green: Physical Education
Citron: Social Work	Lilac: Dentistry	Salmon Pink: Public Health
Crimson: Journalism	Olive Green: Pharmacy	Scarlet: Theology
Dark Blue: Philosophy	Orange: Engineering	Yellow Brown: Commerce, Business, Accountancy
Golden Yellow: Science	Peacock Blue: Public Administration	White: Arts, Letters, Humanities
Green: Medicine	Pink: Music	

## Commencement Committee

Ronald P. Strauss, <i>Chair</i>	Douglas S. Dibbert	Darrell Jeter Sr.	Valerie A. Price
Jay Aikat	Lauren M. DiGrazia	Beth Keith	Desirée Rieckenberg
Tiffany Bailey	Michael (Keith) Ellington	Derek Kemp	Charles "Charlie" Robinette
Brandon W. Bieltz	Jeffrey W. Fuchs	S. Katy Lucci	Samuel Robinson
Brett Botta	Elizabeth Hall	Kelly Miller	Keisha Solanki
Bonita Brown	Amy L. Hertel	Mark Moon	James I. Spurling
Juan Castro	Stacey Harris Warner	Jill D. Moore	Neel Swamy
Mimi V. Chapman	Deborah L. Hawkins	Tanya Moore	Julie Thompson
Jenny Cobb	Christi Hurt	Katie Musgrove	Kartik Tyagi
Jeni Cook	Sarah Elizabeth Jacobson	Theodore Nollert	Taliajah Vann

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