



THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

2022 Doctoral Hooding Ceremony

SPRING COMMENCEMENT • THE GRADUATE SCHOOL



MESSAGE *from the* CHANCELLOR

Welcome to your Hooding Ceremony. We are so pleased you are here.

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 pursue knowledge, attain excellence, and discover the truth. In the process, we test our limits, challenge our assumptions, and collaborate with our professors and peers. The result of that work is big ideas, ground-breaking innovations, and inspirational beauty.

As we confer your degree today, you join a global network who share our thirst for knowledge and growth. UNC–Chapel Hill is the nation's oldest public university and we are passionately public. We believe that our mission is about service — to our state, the nation, and the world. We live 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 a deep desire to make a difference.

As you move into the next phase of your academic careers, 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!



Kevin M. Guskiewicz

MESSAGE *from the* GRADUATE DEAN

Dear graduates:

Congratulations! You have completed your graduate studies — a triumph — amidst numerous challenges and complexities in our society. Your fortitude, compassion for others, and resilience have led you to this day, and we are thrilled to celebrate with you. Carolina's graduate students represent the next generation of leaders in our state and beyond. You have showcased your commitment to our students and your prowess for leading research and discovery, and you have shown how you value service in our communities and to our University. I am honored to help you celebrate this outstanding accomplishment, especially as we emerge from the COVID-19 pandemic.

Your Carolina education will serve you well, especially as you seek to better understand and illuminate humanity's most complex challenges. As you complete your studies, please remember to continue to care for your overall well-being, including your physical and mental health. You are a global citizen armed with a degree from Carolina, and you will enrich our University, our state, and our world. Congratulations on this remarkable achievement; it is an honor to recognize you today.



Suzanne Barbour

ALMA MATER

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.*

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](#).

Stay Connected with Carolina



THE OLD WELL



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**
Kevin M. Guskiewicz, *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**
Neel Swamy, *Graduate and Professional Student Government President, 2021-2022*
- **Commencement Address**
Meredith R. Evans, *Director of the Jimmy Carter Presidential Library and Museum*
- **Conferring of Doctoral Degrees**
Kevin M. Guskiewicz, *Chancellor*
J. Christopher Clemens, *Provost*
Victoria "Tori" Ekstrand, *Caroline H. and Thomas S. Royster Distinguished Professor for Graduate Education,
Associate Professor in the UNC Hussman School of Journalism and Media*
Suzanne E. Barbour, *Dean of The Graduate School*
- **Presentation of the Faculty Award for Excellence in Doctoral Mentoring**
Suzanne E. Barbour, *Dean of The Graduate School*
- **Chancellor's Charge to the Graduates**
Kevin M. Guskiewicz, *Chancellor*
- **Recessional**
Hark the Sound by Lena Kantz

KEVIN M. GUSKIEWICZ

Chancellor



Kevin M. Guskiewicz, a neuroscientist, academic leader, and concussion researcher, is the twelfth chancellor of the University of North Carolina at Chapel Hill.

Prior to his appointment as chancellor, Guskiewicz served as the interim chancellor and as dean of the College of Arts & Sciences. A Kenan Distinguished Professor of Exercise and Sport Science, he has been a member of Carolina's faculty since 1995. He is co-director of the Matthew Gfeller Sport-Related Traumatic Brain Injury Research Center. He is a nationally recognized expert on sport-related concussions, and his work has influenced concussion guidelines in the NFL, NCAA, and National Federation of State High School Associations. He has been recognized with numerous awards, including a MacArthur Fellowship.

Guskiewicz earned his Ph.D. in sports medicine from the University of Virginia. He lives with his wife Amy and children Jacob, Nathan, Adam, and Tessa in Chapel Hill.

Stay Connected

Follow [@KevinGuskiewicz](#) on Twitter and [@kevinguskiewicz](#) on Instagram

SUZANNE E. BARBOUR

The Dean of The Graduate School



Suzanne Barbour became dean of The Graduate School in September 2019. An accomplished scholar, she is a professor in the UNC School of Medicine Department of Biochemistry and Biophysics.

Prior to her arrival at Carolina, Barbour was dean of the Graduate School at the University of Georgia, where she oversaw 250 graduate programs. Before that, she served as program director in the Division of Molecular and Cellular Biosciences at the National Science Foundation and as a professor of biochemistry and molecular biology in the School of Medicine at Virginia Commonwealth University. Previously at VCU, she led the graduate program in biochemistry and molecular biology, directed research training at the Center on Health Disparities and held affiliate appointments in the departments of African American studies, biology, and microbiology and immunology.

Barbour is committed to student success at the highest levels, including serving for more than a decade on the education and professional development and minority affairs committees of the American Society for Biochemistry and Molecular Biology. She is a member of the Council of Graduate Schools Board of Directors and Graduate Education Advisory Council of the Educational Testing Service (ETS). Throughout her career, she has mentored dozens of students and received numerous awards for professional achievement and teaching excellence.

MEREDITH R. EVANS

The Doctoral Hooding Ceremony Speaker



Meredith Evans (Ph.D. 2006) is an archivist, historian, scholar, and the director of the Jimmy Carter Library and Museum in Atlanta, Georgia. Her work focuses on the African American experience in the United States, including the documentation of archival records from African American churches in the Atlanta area, and the preservation of social media from recent civil rights protests.

Evans earned a bachelor's degree in history and a master's degree in library science from Clark Atlanta University. She holds a master's degree in public history from North Carolina State University, and her doctorate in information and library science from the University of North Carolina at Chapel Hill.

Evans has taught classes in library, archives, and information sciences including at Clark Atlanta University and the University of North Carolina at Charlotte. While a curator at the Atlanta University Center Consortium, Evans was instrumental in obtaining an Andrew W. Mellon Foundation grant for the digitization of the papers of Martin Luther King Jr.

As an archivist, she has addressed the care and preservation of church archives and has worked as a director of special collections. She has written about the impact of new archival methods to “collect the now” as related to born-digital materials that are preserved by modern archives in a post-custodial era of archival science.

Board of Trustees

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CANDIDATES *for* GRADUATE DEGREES

May 2022

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 Suzanne Barbour

DOCTOR OF PHILOSOPHY

- Karl Martin Adam**, *Philosophy*, Justice, Colonialism, and The State. Professor Luc Bovens.
- Christian Agosto Burgos**, *Pathology*, Profiling the Heterogeneity of T Regulatory Cells in Patients With Anti-Neutrophil Cytoplasmic Autoantibodies (ANCA) Vasculitis. Professors Ronald Falk and David Williams.
- Elizabeth M. Allen**, *Education*, Giving up our Humanity for Whiteness: An Exploration of K-12 Teachers' Whiteness. Professors Jeffrey Greene and Jessica DeCuir-Gunby.
- Diana Allotey**, *Nutrition*, Factors Which Influence the Success of Infant and Young Child Feeding (IYCF) Social and Behavior Change Communication (SBCC) Programs in Low- and Middle-Income Countries: Evidence From Nigeria. Professor Stephanie Martin.
- Meggan A. Alston**, *Biology*, Performance and Fitness Consequences of Thermal Stress Across Development and Time in *Manduca sexta*. Professors Christopher Willett and Joel Kingsolver.
- Taylor Asher**, *Marine Sciences*, An Assessment of Uncertainties in Coastal Flooding. Professor Rick Luettich.
- Stephen Balevic**, *Pharmaceutical Sciences*, Novel Study Designs to Advance Population Pharmacokinetic Modeling and Simulation in Vulnerable Populations. Professor Daniel Gonzalez.
- Tracy Barbera**, *Business Administration*, Antecedents and Outcomes of Mental Illness Disclosure. Professors Matthew Pearsall and Jessica Christian.
- Lisa Bauer**, *Computer Science*, Analyzing and Improving Commonsense Tasks With Knowledge Augmentation. Professor Mohit Bansal.
- Jenna Beam**, *Microbiology and Immunology*, Immune-Mediated Antibiotic Tolerance and Persister Cell Formation in *Staphylococcus aureus*. Professor Brian Conlon.
- Dominik Berger**, *Philosophy*, Believing as Closing Inquiry. Professor Alex Worsnip.
- Anand Bhatia**, *Business Administration*, An Empirical Examination of Operational Paradigms in Healthcare Service Delivery. Professor Jayashankar Swaminathan.
- Rajesh Bista**, *Geography*, Socio-Environmental Dynamics of Community Forestry in the Middle Hills of Nepal: Understanding Forest Ecosystem Feedbacks, Rural Out-Migration, and Land Use. Professor Conghe Song.
- Jamie Blake**, *Musicology*, Architects of Russian America: Transnational Musical Networks in the Early Twentieth Century. Professor Annegret Fauser.
- Sarah Booker**, *Romance Languages and Literatures*, Mobile Embodiments: Tracing Translation in Contemporary Latin American Narrative. Professor Oswaldo Estrada.
- Molly C. Bost**, *Marine Sciences*, Drivers of Intertidal Oyster Reef and Tidal Creek Accretion Over the Last Century. Professor Antonio Rodriguez.
- S. Reece Boston**, *Physics*, Newtonian and Relativistic White Dwarf Asteroseismology. Professor Charles Evans.
- Kristen Bowen**, *Information and Library Science*, Sexual Violence, Black Survivors, and Moving Beyond Resilience: Developing Mental Health Support Spaces Based on Online Information Behavior. Professor Amelia Gibson.
- Lilian Guadalupe Bravo**, *Nursing*, Service Utilization Among Adolescents From Racial and Ethnic Minority Groups With Elevated Suicide Risk: Exploring the Roles of Trauma Exposure and Related Symptomology. Professor Cheryl Woods Giscombe.
- Maria Brietzke**, *Health Behavior*, Adolescent Stressful Life Event and Adult Depression: Disparities Within a National, Longitudinal Sample of Latina/x/o People. Professor Kurt Ribisl.
- Bethany Wagner Brown**, *Pathology*, Novel Mouse Models for Investigating Genetic Drivers and Influencers of Oral Squamous Cell Carcinomas. Professor Scott Williams.
- Gabrielle R. Budziszewski**, *Biochemistry and Biophysics*, Mechanisms of Chromatin Engagement by the Vaccinia-Related Kinase and M-Phase Phosphoprotein 8. Professor Robert McGinty.
- Nicholas Eugenevich Buglak**, *Toxicology*, Therapeutic Potential of Cinnamaldehyde-Mediated Nrf2 Activation to Inhibit Restenosis Using a Novel 3D Imaging Technique. Professor Edward Bahnson.
- Marketa Burnett**, *Psychology*, Black Girls' Stem Identity and Persistence: Understanding Developmental Processes in Context. Professor Shauna Cooper.
- Gina Calabrese**, *Biology*, Variation in Mate Preferences and Signals of the Spadefoot Toad (*Spea multiplicata*) Across Populations and Time: Influence of Reinforcement, Sexual Selection and Climate. Professor Karin Pfennig.

- Kristina Kalevas Camp**, *Nutrition*, Impact of Surgical and Dietary Weight Loss Interventions on the Obesity-Gut Microbiome-Breast Cancer Links. Professor Stephen Hursting.
- Alexander Campbell**, *Philosophy*, How to Be a Relaxed Realist. Professor Geoff Sayre-McCord.
- Christian Caron**, *Political Science*, Three Essays on the Political Determinants of Public Policy in the U.S. States. Professor Frank Baumgartner.
- Ya-Ning Chan**, *Nursing*, Cancer-Related Cognitive Impairment in Older Adults With Acute Myeloid Leukemia Receiving Chemotherapy: Perspectives From Patients and Their Caregivers. Professor Ashley Bryant.
- Caroline Elizabeth Chandler**, *Maternal and Child Health*, Supporting Strong Starts: Associations Between Service Receipt and Developmental Outcomes Among Infants and Toddlers Involved With Child Protective Services. Professor Meghan Shanahan.
- Eunsuk Chang**, *Health Informatics*, Cohort Identification From Free-Text Clinical Notes Using SNOMED CT's Semantic Relations. Professor Javed Mostafa.
- Catherine Chen**, *Biology*, The Role of Hybridization in Shaping Male and Female Mating Behaviors. Professor Karin Pfennig.
- Abigail Cleveland**, *Cell Biology and Physiology*, Apoptosis Regulation in the Early Postnatal Brain and in SHH-Subgroup Medulloblastoma. Professor Timothy Gershon.
- Aaztli Coria**, *Biochemistry and Biophysics*, Rotavirus RNA Chaperone Mediates Global Transcriptome-Wide Increase in RNA Backbone Flexibility. Professor Alain Laederach.
- Rachel Corr**, *Neurobiology*, The Adolescent Neural Acute Stress Response — Psychosocial Correlates and the Influence of Polyvictimization. Professors Aysenil Belger and Martin Styner.
- Denali Kanhouwa Dahl**, *Biomedical Engineering*, Drug Delivery Systems for Female Sexual and Reproductive Health Applications. Professor Rahima Benhabbour.
- Nazli Deger**, *Biology*, Nucleotide Excision Repair Map of *Drosophila* at Single Nucleotide Resolution. Professor Aziz Sancar.
- Alexis C. Dennis**, *Sociology*, Racial/Ethnic Disparities in Depressive Symptomatology Among Young Adults in the United States. Professor Robert Hummer.
- Aaron Sriram Devanathan**, *Pharmaceutical Sciences*, Identifying Factors Influencing Antiretroviral Pharmacology and HIV Persistence in the Spleen. Professor Angela Kashuba.
- Hayden Giuliani Dewig**, *Human Movement Science*, Feasibility of Workload Monitoring Within Law Enforcement Officers and Its Relationship to Injury Risk and Job Performance. Professor Eric Ryan.
- Grace J. Di Cecco**, *Biology*, Understanding Biodiversity Responses to Global Change: Populations, Communities, and Species Distributions. Professor Allen Hurlbert.
- Alpha Oumar Diallo**, *Epidemiology*, Evaluation of Health Systems Performance and the Impact of a Population-Level Intervention on Mortality. Professor Emily Gower.
- Matthew Bradford Diem**, *English and Comparative Literature*, Doublespeak: Translational Doubling in the Wycliffite Bible and Other Old and Middle English Biblical Texts. Professors Patrick O'Neill and Theodore Leinbaugh.
- Zhipeng Ding**, *Computer Science*, Toward Solving Groupwise Medical Image Analysis Problems With Deep Learning. Professor Marc Niethammer.
- Hunter Dinkins**, *Mathematics*, Exotic Quantum Difference Equations and Integral Solutions. Professor Andrey Smirnov.
- Taylor Yvette Dismuke**, *Pathology*, Advancing Targeted Therapy for SHH Medulloblastoma by Addressing Resistance Mechanisms. Professor Timothy Gershon.
- Claire E. Dunn**, *Political Science*, Privileged Interests: Class-Based Variation in Government Responsiveness in Brazilian States. Professor Evelyne Huber.
- Montana Alan Eck**, *Geography*, The Influence of Precipitation on Car Crash Risk Across the Rural-Urban Continuum of the Carolinas. Professor Charles Konrad.
- Jeffrey Ehrhardt**, *Chemistry*, High-Throughput Methods for Interrogation of RNA Tertiary Structure. Professor Kevin Weeks.
- Isaiah Ellis**, *Religious Studies*, The Southern Gospel of Good Roads: Religion, Race, and Infrastructure in the American South. Professor Randall Styers.
- Isabelle Amber Engelberg**, *Pharmaceutical Sciences*, Discovery of First-in-Class Inhibitors for Polycomb Repressive Complex 2 Accessory Proteins PHF1 and PHF19. Professors Stephen Frye and Lindsey James.
- Taylor Paige Enrico**, *Pharmacology*, Control of Proliferation by the Ubiquitin Proteasome System. Professor Michael Emanuele.
- Megan S. Evans**, *Health Behavior*, Peer-Delivered Services and Support Reaching People With Schizophrenia: Considerations for Research and Practice. Professor Edwin Fisher.
- Elisa Faison**, *English and Comparative Literature*, Domesticating the Apocalypse: Motherhood and the Novel at the End of Time. Professor Florence Dore.
- Anne R. Fertig**, *English and Comparative Literature*, (Un)Secret Histories: Re-Fashioning and Self-Fashioning Mary Stuart in Eighteenth-Century Vindication Narratives. Professor Inger Brodey.
- Jonathan Fix**, *Epidemiology*, Recombinant Zoster Vaccine: Uptake and Safety Among the General Population and Immunocompromised Individuals. Professor Sylvia Becker-Dreps.
- Andrew Ford**, *Mathematics*, Molecular Dynamics Modeling of Heterogeneous Structure and Rheology of Human Lung Mucus. Professor Mark Forest.
- Mengyu Fu**, *Computer Science*, Efficient Motion and Inspection Planning for Medical Robots With Theoretical Guarantees. Professor Ron Alterovitz.

- Charles Earle Gaber**, *Epidemiology*, The Comparative Effectiveness of Trimodal Therapy Versus Definitive Chemoradiation in Older Adults With Locally Advanced Esophageal Cancer. Professor Jennifer Lund.
- Kylie Garber**, *Psychology*, Investigating the Hypothesized Skills and Classroom Practices That Sustain Pre-K Effects. Professors Beth Kurtz-Costes and Margaret Burchinal.
- Alexis Georgeson**, *Psychology*, Evaluation of Covariate-Informed Scores for Bivariate Latent Growth Models. Professor Patrick Curran.
- Jacqueline Gerhart**, *Pharmaceutical Sciences*, Application of Physiologically Based Pharmacokinetic Modeling to Understand Drug Disposition in Children With Obesity. Professor Daniel Gonzalez.
- Tyra Girdwood**, *Nursing*, Readiness for Transitions From Pediatric to Adult Health Care Among Caregivers and Adolescents and Young Adults With Cystic Fibrosis. Professor Mark Toles.
- Sarah Glier**, *Neurobiology*, Examining the Relationship Between Stress Responsivity and Anxiety During Adolescence: A Multidimensional Approach to Uncovering Latent Stress-Sensitive Phenotypes. Professor Aysenil Belger.
- Ani Govjian**, *English and Comparative Literature*, Tricks of Faith: Experiment, Proof, and Virtue on the Early Modern Stage. Professors Mary Floyd-Wilson and Shayne Legassie.
- Martin Johann Groff**, *English and Comparative Literature*, Royal Democracy: American Dignity and the Aristocratic Impulse. Professor Eliza Richards.
- Luke George Grossman**, *History*, Generalfeldmarschall Ewald von Kleist: Son and Soldier — The Formative Wilhelmine Years, 1881–1918. Professor Konrad Jarausch.
- Jiadong Gu**, *Economics*, Essays in Information Economics. Professors Fei Li and Peter Norman.
- Ting Guan**, *Social Work*, Patients, Caregivers, and Illness Uncertainty: Influences on Coping and Quality of Life. Professor Mimi Chapman.
- Brianna Anderson Guthrie**, *Art History*, Maternity and Matriarchy in English Family Portraits, 1603–1685. Professor Tatiana String.
- Ampson Hagan**, *Anthropology*, Deserving Humans in the Desert: How Black Trans-Saharan Migrants Experience the (Il)Logics of Liberal Humanism Via Humanitarian Care in Transit. Professors Jocelyn Chua and Peter Redfield.
- Andrew E. Hale**, *Microbiology and Immunology*, Novel Mechanisms of Transcriptional and Translational Control of Human Cytomegalovirus Gene Expression. Professor Nathaniel Moorman.
- Alina Marie Hamilton**, *Pathology*, Impact of the Breast Cancer Immune Microenvironment on Racial Disparities and Recurrence. Professor Benjamin Calhoun.
- Patrick O'Brien Hanafin**, *Pharmaceutical Sciences*, Teaching an Old Drug New Tricks: Modeling Approaches to Elucidate Polymyxin B Pharmacokinetics, Toxicodynamics, and Pharmacodynamics for Improved Dosing in Critically Ill Patients. Professor Gauri Rao.
- Jason Hannay**, *Psychology*, Economic Inequality Causes an Increased Preference to Make Upward Social Comparisons. Professor Keith Payne.
- Sharjil M. Haque**, *Economics*, Essays in Corporate Finance and Private Equity. Professor Anusha Chari.
- LaKeya Charmaine Hardy**, *Microbiology and Immunology*, Exploiting CD22 on B Cells to Prevent Sensitization and to Induce Lasting Immune Tolerance in Murine Models of Peanut Allergy. Professors Wesley Burks and Mark Heise.
- Manuel Hernandez Jr.**, *Geography*, Reconstruction of Asian Monsoon Circulation Over the Past Five Centuries. Professor Erika Wise.
- Carolina A. Herrera**, *Pathology*, Monocytes in Autoimmune Kidney Disease: Their Role as Biomarkers and Drivers of Anca Vasculitis and Systemic Lupus Erythematosus. Professors Ronald Falk and Dominic Ciavatta.
- Natalie Hewitt**, *Pharmacology*, Modulation of Active State Dynamics by Catalytic Glutamine Mutations in Large G Proteins. Professors Henrik Dohlman and Sharon Campbell.
- Elise Hickman**, *Toxicology*, Effects of Electronic Cigarettes on Respiratory Immune Homeostasis Using Translational in Vitro and in Vivo Approaches. Professor Ilona Jaspers.
- Robert Hill**, *Business Administration*, Hidden Potential: Three Essays on Entrepreneurial Prison Training. Professor Isin Guler.
- Andrew Hinton**, *Genetics and Molecular Biology*, Supervised Learning Methods for Association Detection, Biomarker Discovery, and Pattern Recognition in Compositional Omics Data. Professors Peter Mucha and Wesley Burks.
- Jessica Hobson**, *Biochemistry and Biophysics*, Urzymes — Minimal Aminoacyl-tRNA Synthetases: Addressing Their Catalytic Authenticity and Technical Challenges to Utilization. Professor Charles Carter Jr.
- Kentaro Hoffman**, *Statistics and Operations Research*, Borrowing From Your Neighbors: Three Statistical Techniques From Nontraditional Sources. Professors Kai Zhang and Cynthia Rudin.
- Yaqi Hou**, *Physics*, Automated Algebra for the Quantum Virial Expansion of Strongly Coupled Matter. Professor Joaquin Drut.
- Wei Huang**, *Neurobiology*, Perturbing the Neuronal Network Dynamics in the Higher-Order Thalamo-Cortical Network. Professor Flavio Frohlich.
- Khoi Minh Huynh**, *Biomedical Engineering*, Computational Tools for Studying Microstructural Development of the Human Brain With Diffusion Magnetic Resonance Imaging. Professor Pew-Thian Yap.

- Daria Alexandra Igudesman**, *Nutrition*, Associations of the Intestinal Microbiota With Diet, Glycemia, Adiposity, and Disordered Eating Among Young Adults With Type 1 Diabetes. Professors Elizabeth Mayer-Davis and Ian Carroll.
- Lakshita Jain**, *Economics*, The Unintended Consequences of Macroeconomic Policies on Firm Outcomes. Professor Anusha Chari.
- Sean Ryan James**, *Biology*, The Haunting Mystery of Stem Cell Regulation: Understanding the Role of Poltergeist and Receptor-Like Cytoplasmic Kinases in Plant Development. Professor Zachary Nimchuk.
- Jessica Alexandra Jimenez**, *Toxicology*, Age and Developmental Pyrethroid Exposure Influence Transcriptional and Behavioral Phenotypes in a Chd8 Haploinsufficient Autism Mouse Model. Professor Mark Zylka.
- John Andrew Jolly**, *German Studies*, A Transcendent View of Things: The Persistence of Metaphysics in Modern German Lyric Poetry, 1771–1908. Professor Thomas Pfau.
- Amy Jones**, *German Studies*, Metamorphoses of the Muse: Rethinking Gender and Creativity in German Poetry From 1800–1850. Professor Gabriel Trop.
- Elizabeth Jones**, *Romance Languages and Literatures*, The Difficulty of Desire: Disability, Women, and the Body in Contemporary Spanish American Literature and Cultural Production. Professor Juan Carlos González Espitia.
- Spinel Karas**, *Pharmaceutical Sciences*, Novel Method for Predicting Irinotecan-Induced Neutropenia Through Genomics Integrated With Population Pharmacokinetic/Pharmacodynamic Modeling. Professor Tim Wiltshire.
- Anwica Kashfeen**, *Computer Science*, Identifying and Characterizing Transposable Elements in the Genome. Professor Leonard McMillan.
- Adhy Kim**, *English and Comparative Literature*, Speculative Natural Histories: Environment and Cold War Memory in Japanese, Korean, and American Fiction. Professors Heidi Kim and Inger Brodey.
- Hyounghun Kim**, *Computer Science*, Multimodal and Embodied Learning With Language as the Anchor. Professor Mohit Bansal.
- Pyoungsik Kim**, *Economics*, Labor Market Search, Illness, and the Value of Employer-Sponsored Health Insurance. Professor Luca Flabbi.
- Samantha Kelsey King**, *Anthropology*, Sustainable Transitions in Agricultural Livelihoods: Global Change and Local Food Production in Dominica. Professor Colin West.
- Jacob Klimek**, *Economics*, The Dynamics of Health Behaviors, Pregnancies, and Birth Outcomes. Professor Donna Gilleskie.
- Amber Marie Kline**, *Neurobiology*, Neural Circuits Underlying Sensory Integration in Secondary Auditory Cortex. Professor Hiroyuki Kato.
- Collin Kofroth**, *Mathematics*, Local Energy Decay for Damped Waves on Stationary, Asymptotically Flat Space-Times. Professor Jason Metcalfe.
- Marwa Koheji**, *Anthropology*, Staying Cool in Bahrain: Heat, Air Conditioning, and Everyday Comfort. Professor Margaret Wiener.
- Neela Kumar**, *Health Policy and Management*, The Effects of High Deductible Health Plans and Preventive Drug Lists on Adherence and Cost-Sharing in Individuals With Type 2 Diabetes. Professor Marisa Domino.
- Rachel Taylor Kurtzman**, *Health Behavior*, Cessation Services Provided to Individuals Before Their Lung Cancer Screening Exam, and the Development of a Patient-Reported Outcome Measure for Use in Lung Cancer Screening. Professor Kurt Ribisl.
- Michael Joseph Lafferty**, *Bioinformatics and Computational Biology*, Genetic Variants Regulating MicroRNA Expression in the Developing Human Neocortex. Professor Jason Stein.
- Katharine Landers**, *English and Comparative Literature*, Dressing Authority: The Politics of Fashion in English Women's Writing, 1616–1676. Professors Megan Matchinske and David Baker.
- William Scott Langford**, *Public Policy*, Three Essays on Private Firms Under Duress Considering Local Context: How Financial Institutions and Opioid Use Affect Firms. Professor Maryann Feldman.
- Ben D. Lee**, *Occupational Science*, Exploring Sensory Processing and Sensory Experience in Everyday Life for Adults With Schizophrenia: A Collaborative Approach. Professor Antoine Bailliard.
- Sejin Lee**, *Health Policy and Management*, Real-World Treatment Patterns and Outcomes for Patients With Advanced Melanoma: Immunotherapy Versus Targeted Therapy. Professor Antonia Bennett.
- Jie Lei**, *Computer Science*, Video and Language Understanding: Datasets and Algorithms. Professors Mohit Bansal and Tamara Berg.
- Benjamin Leinwand**, *Statistics and Operations Research*, Novel Statistical Methods for Modeling Brain and Other Dense, Weighted Networks. Professors Vlas Pipiras and Guorong Wu.
- Ernesto Leon**, *Pharmacology*, Enhancing the Function and Delivery of Chimeric Antigen Receptor T-Cells: Implications for Treatment of Solid Tumors. Professors Barbara Savoldo and Adrienne Cox.
- Mike Levine**, *Musicology*, Lo Encontré en el Paquete: Reparto Music, Media Piracy, and Cultural Exchange in Cuba's Offline Internet. Professor David Garcia.
- Benjamin Emery Levy**, *Physics*, Toward Magnetomotive Ultrasound Elastometry of Thrombosis. Professor Amy Oldenburg.
- Zichao Li**, *Statistics and Operations Research*, Clustering and Classification With Feature Selection for High-Dimensional Data. Professor Nicolas Fraiman.

- Van Rynald Talavera Liceralde**, *Psychology*, An Algorithm for Classifying Mislocated First-Pass Fixations in Reading. Professor Peter Gordon.
- Autumn Lorimer Linford**, *Mass Communication*, Extra: The History of America's Girl Newsies. Professor Barbara Friedman.
- Siyaoy Liu**, *Bioinformatics and Computational Biology*, Objective Class Discovery and Feature Selection in Single Cell RNA-seq Data. Professors Charles Perou and J.S. Marron.
- Yunjuan Liu**, *Economics*, Physicians' Financial Incentives and Treatment Choices. Professors Luca Maini and Brian McManus.
- Evans Kirkwood Lodge**, *Epidemiology*, Social and Environmental Risk Factors for Elevated Serum Metals and Their Role in Epigenetic Aging. Professor Allison Aiello.
- Brooke Lombardi**, *Social Work*, Sexual Victimization and the Perinatal Period: Recognizing and Reducing Retraumatization. Professor Mimi Chapman.
- David K. Ma**, *Political Science*, Three Papers on the Political Economy of Judicial Independence in Dominant-Party Democracies. Professor Evelyne Huber.
- Yuanye Ma**, *Information and Library Science*, Relatedness and Compatibility: Semantic Dimensions of the Concept of Privacy in Chinese and English Corpora. Professor Stephanie Haas.
- Amber Majors Ladipo**, *Education*, Doin' It for the Culture: Do Parental Racial Socialization and Communal Value Orientation Protect Against Racial Discrimination Toward Educational Persistence? Professor Dana Griffin.
- Emily Rose Mangone**, *Health Policy and Management*, The Development and Assessment of Contraceptive Ideational Profiles Among Urban Senegalese Women: Implications for Health Communication. Professor Kristen Hassmiller Lich.
- Shelsa S. Marcel**, *Bioinformatics and Computational Biology*, Identification of Genome-Wide Cancer-Specific Chromatin Patterns and Exploration of the Effect of SETD2 on Transcription and Histone Methylation in the Context of ccRCC. Professors Ian Davis and Joel Parker.
- Laura March**, *Information and Library Science*, Behind the Screens: Social Media Managers at Cultural Institutions. Professors Marijel Melo and Brian Sturm.
- Nicholas Martinez**, *Biochemistry and Biophysics*, Characterization of RAS Interactions With PI3K. Professor Sharon Campbell.
- Sophie Emma Mayer**, *Epidemiology*, Bias Due to Differential Outcome Screening in Pharmacoepidemiology Research. Professor Til Stürmer.
- Farnosh Norooz Mazandarani**, *Mass Communication*, A Longitudinal Content Analysis of Heterosexual Relationship Dynamics in Popular Pornography From the Golden Age to the Internet Age (1970–2020). Professor Francesca Dillman-Carpentier.
- Olive M. Mbah**, *Health Policy and Management*, Impact of the Affordable Care Act (ACA) on Colorectal Cancer Outcomes Among Medicare Beneficiaries: The Role of Race/Ethnicity and Community-Level Social Risk. Professor Cleo Ryals.
- Christian Tyler McHugh**, *Physics*, Characterization of Ultrasound Contrast Agents as HyperCEST Agents for Molecular MRI. Professor Rosa Branca.
- Ian Alexander McLean**, *German Studies*, Storm, Stress, and Sexual Revolution: Economies of Desire in the German Literary Avant-Garde of the 1770s. Professor Stefani Engelstein.
- Clare Meernik**, *Epidemiology*, Assisted Reproductive Technology Use After Adolescent and Young Adult Cancer in North Carolina. Professor Hazel Nichols.
- Laetitia Meyrueix**, *Nutrition*, Assessment of the Effect of Gestational Diabetes Mellitus and Metals Exposure in the Soweto First 1000 Days Cohort on Placental Epigenetic Programming and Placental and Birth Outcomes. Professor Folami Ideraabdullah Meyrueix.
- Nolan Miller**, *Physics*, Applications of Chiral Perturbation Theory to Lattice Quantum Chromodynamics. Professor Amy Nicholson.
- Smita Misra**, *Communication Studies*, Curating Believability in a Culture of Disbelief: Migrant Health, Elite Interstitial Witnesses, and Coalitional Possibilities in Asylum Medicine and Migrant Essays. Professor Sarah Dempsey.
- Stephanie Claire Anais Monroy-Eklund**, *Biology*, The Role of Structure in Conserved Long Noncoding RNA MALAT1. Professor Alain Laederach.
- Gary Moon**, *Mathematics*, Analysis of Water Waves in the Presence of Geometry and Damping. Professor Jeremy Marzuola.
- Carrie Brandon Moore**, *School Psychology*, Seeds of Creativity: Assessing the Impact of an Integrated Pilot Nature Preschool Program on Children's Creative Development. Professor Rune Simeonsson.
- Eddie Al-Tariq Moore**, *English and Comparative Literature*, Black Queer Homelessness and Horror in the Novels of Ralph Ellison, James Baldwin, and Randall Kenan. Professor Rebecka Fisher.
- Samantha Casya Moore**, *Mathematics*, On the Structure of Multiparameter Persistence Modules. Professor Richard Rimanyi.
- Grace Evelyn Mulholland**, *Epidemiology*, Using Enriched Clinical Cohort Data to Inform Interventions for TB Control in the Lake Victoria Region of East Africa. Professor Jessie Edwards.
- Trey Daniel-Aaron Murphy**, *Geography*, Rights, Benefits, and Access to the Subsurface: Legal Processes and the Making of Oil and Gas Resources. Professor Elizabeth Havice.
- Lewis Clark Naisbett-Jones**, *Biology*, Magnetic Navigation, Magnetoreception, and Migration in Fishes. Professor Kenneth Lohmann.
- Aliza Kamman Nedimyer**, *Human Movement Science*, Information Seeking in Athletic Trainers Related to Exertional Heat Illness. Professor Zachary Kerr.
- Chris Needham**, *Education*, A Review of Funding for Special Education in North Carolina, 2010–2016, Applying the Values in Tension Framework. Professor Eric Houck.
- Christopher Neubert**, *Geography*, Queering Modern Agriculture: Enduring Crises and Optimistic Futures in Rural America. Professor Sara Smith.

- Robert J. Niewoehner**, *Business Administration*, The Human Factor: The Behavioral Drivers and Operational Impact of Discretion. Professor Bradley Staats.
- Brady Nifong**, *Biostatistics*, The Scale Transformed Power Prior for Use With Historical Data From a Different Outcome Model. Professors Joseph Ibrahim and Matthew Psioda.
- Pavel Ilkov Nitchovski**, *Philosophy*, On Intimacy. Professor Luc Boven.
- Xinyuan Niu**, *Statistics and Operations Research*, Market Microstructure: From Equilibria to VAR Models. Professor Chuanshu Ji.
- Susan Maire O'Rourke**, *English and Comparative Literature*, Project Illumine: The History and Writing of Women in Early Modern England and Ireland. Professors Megan Matchinske and David Baker.
- Mark Ortiz**, *Geography*, Transnational Youth Activism and the Intergenerational Politics of Climate Change. Professors Elizabeth Olson and Elizabeth Havice.
- Catherine Jooyoung Paek**, *Business Administration*, Essays on Entrepreneur Mobility. Professors Michelle Rogan and Isin Guler.
- Shveta Parekh**, *Psychology*, Hippocampal Neuroimmune Interactions Mediate Heroin Withdrawal-Enhanced Fear Learning. Professor Donald Lysle.
- Jihye Park**, *Epidemiology*, Adjuvant Radiation Therapy and Outcomes Among Older Women With Early-Stage Endometrial Cancer. Professor Hazel Nichols.
- William Edgar Patton**, *Political Science*, Voter Decision-Making in Post-Reform Presidential Primaries. Professor Sarah Treul.
- Ashley Peles**, *Anthropology*, How to Make a Meal: Late Woodland Gathering at the Feltus Mounds Site, AD 700–1100. Professors C. Margaret Scarry and Vincas Steponaitis.
- Hannah J. Perrin**, *Genetics and Molecular Biology*, Chromatin Accessibility Context Identifies Regulatory Mechanisms for Cardiometabolic Traits. Professor Karen Mohlke.
- Erica Nicole Pino**, *Pharmaceutical Sciences*, Discovery, Formulation, and Characterization of Host-Directed Therapies for the Treatment of Intracellular Pathogens. Professor Michael Jarstfer.
- Jeffrey D. Plumlee**, *Ecology*, The Role of the Estuarine Habitat Mosaic in the Trophic Ecology and Secondary Production of Coastal Marine Consumers. Professor F. Joel Fodrie.
- Teeranan Pokaprakarn**, *Biostatistics*, Machine Learning Methods for Modern Biomedical Data: Deep Learning and Reinforcement Learning in Precision Health. Professor Michael Kosorok.
- Andres Porras Chaves**, *Romance Languages and Literatures*, El Imperio en Disputa: Diálogos Entre Crónica, Novela y Cine en la España Postcrisis (2008–2020). Professor Oswaldo Estrada.
- Michael Madden Prinzing**, *Philosophy*, The Experimental Philosophy of the Good Life. Professors Luc Bovens and Barbara Fredrickson.
- Yousef Qan'ir**, *Nursing*, Factors Influencing Pelvic Floor Muscle Exercise Engagement Among Patients With Prostate Cancer After Radical Prostatectomy. Professor Lixin Song.
- Jonathan Rader**, *Biology*, Effects of Body Size, Morphological Modularity, and Flight Behavior on the Evolution of Avian Wing Shape. Professor Tyson Hedrick.
- Kathleen Shaindel Metz Reed**, *Genetics and Molecular Biology*, Gene Regulation in Time and Space. Professor Douglas Phanstiel.
- Dawn Rivers**, *Anthropology*, Real Work: Self-Employment, Labor Markets, and Economic Identities in a Mature Capitalist Economy. Professor Rudolf Colloredo-Mansfeld.
- Kailey Rocker**, *Anthropology*, Translational Justice: Facing the Past to Take on the Present in Albania. Professor Michele Rivkin-Fish.
- Jonathan David Rosen**, *Biostatistics*, Moving Beyond Genome-Wide Association Studies. Professor Yun Li.
- Emma Z. Rothberg**, *History*, “To Make a Splendid Showing”: Parading and Contesting Citizenship in Turn of the Century American Cities. Professor W. Fitzhugh Brundage.
- Bryce Rowland**, *Biostatistics*, Statistical Methods Improving the Clinical Utility of Omics Data. Professor Yun Li.
- Karly Schmidt-Simard**, *Geography*, Tree Rings and Oxygen Isotopes as Climatic Indicators in the U.S. Pacific Northwest. Professor Erika Wise.
- Garrett Scott**, *Economics*, Pricing Dynamics and Screening Mechanisms. Professors Fei Li and Jonathan Williams.
- Ian Seim**, *Bioinformatics and Computational Biology*, Multi-Scale Studies of Molecular Self-Assembly in Biology. Professors Amy Gladfelter and Daphne Klotsa.
- Melanie Sheehan**, *History*, Opportunities Foregone: U.S. Industrial Unions and the Politics of International Economic Policy, 1949–1983. Professor Benjamin Waterhouse.
- Victoria Shelus**, *Health Behavior*, Perceptions and Use of Malaria Rapid Diagnostic Tests at Drug Shops in Rural Uganda: A Mixed Methods Study. Professor Clare Barrington.
- Hannah Silverstein**, *Maternal and Child Health*, Disability, Caregiver Ability, and the Impact of Cash Transfer Programs on Child-Level Outcomes. Professor Gustavo Angeles.
- Jane Smith**, *English and Comparative Literature*, Popular Royalism and Cheap Print in Interregnum England. Professor Megan Matchinske.
- Andrea C. Snow**, *Art History*, A Language of Snakes: Supernatural Objects in Viking Age Scandinavia. Professor Donald Haggis.
- Danai Eleni Soulioti**, *Biomedical Engineering*, Ultrasound in Reverberating and Aberrating Environments: Applications to Human Transcranial, Transabdominal, and Super-Resolution Imaging. Professor Gianmarco Pinton.
- Adam J. Sowers**, *Chemistry*, Design of an Abiotic, Stimulus-Responsive, Foldamer for the Study of Latent Free Energy and Frustration. Professor Marcey Waters.

Catherine Spangler, *Biochemistry and Biophysics*, Exploring the Mechanistic Basis of Nucleosome Interactions. Professor Robert McGinty.

Caroline Sprecher, *Business Administration*, Spillover Effects of Peer Incentives on Co-Worker Productivity: Evidence From Patent Examiner Target Difficulty. Professors Stephen Glaeser and Mark Lang.

Denise Trésha St. Jean, *Epidemiology*, Policy-Relevant Estimates of Oral Rotavirus Vaccine Performance in Low- and Middle-Income Countries. Professor Sylvia Becker-Dreps.

Lucía Isabel Stavig, *Anthropology*, A New Dawn for Good Living: Women's Healing and Radical Resurgence in The Andes. Professor Florence Babb.

Dayton Steele, *Business Administration*, An Empirical Examination of New Innovative Processes in Retail. Professor Saravanan Kesavan.

Kristin Sullivan, *Epidemiology*, Optimizing Safe Strategy Components for Trachoma Elimination. Professor Emily Gower.

Feiya Suo, *Public Policy*, Three Essays on Gender Role Socialization, Gender Equality, and Gendered Policy. Professor Rebecca Kreitzer.

Thomas Swiderski, *Public Policy*, The Impact of Three College-Preparatory Policies and Programs on Secondary and Postsecondary Education Outcomes. Professor Douglas Lauen.

Quentin Dean Tercenio, *Chemistry*, Nickel- and Silver-Catalyzed Carbon-Carbon Bond-Forming Reactions of Unactivated Alkyl Electrophiles. Professor Erik Alexanian.

Aatish Thennavan, *Oral and Craniofacial Biomedicine*, Adapting Bulk and Single Cell RNA Sequencing for Molecular Analysis of Breast Pathology. Professor Charles Perou.

Aleksandr Igorevich Touzov, *Statistics and Operations Research*, Echelon Forms and Reformulations of Pathological Semidefinite Programs. Professor Gabor Pataki.

Maxine Allison Vande Vaarst, *American Studies*, Unlocking New York: Squatters, Urban Explorers, and the Right to The City. Professor Patricia Sawin.

Luis Guillermo Vargas, *Biomedical Engineering*, Evoked Somatosensory Feedback for Closed-Loop Control of Prosthetic Hand. Professor Xiaogang Hu.

Miguel M. Vargas, *Religious Studies*, Predicting Revolt: The Oniad Sibyl of Ptolemaic and Early Roman Egypt. Professor Zlatko Pleše.

Ava Mariah Vargason, *Pharmaceutical Sciences*, Delivery Strategies for Live Therapeutic Microbes. Professor Kristy Ainslie.

Arti Virkud, *Epidemiology*, Estimating the Comparative Effect of Loop Diuretics Using Traditional Pharmacoepidemiological and Precision Medicine Statistical Learning Methods. Professor Emily Gower.

Carlie Wetzel, *English and Comparative Literature*, Cliché and Ritual in Nineteenth-Century British Elegies for Children. Professor Jeanne Moskal.

Avery Wilson, *Mathematics*, Geometric Invariant Theory and Moduli of Principal Bundles. Professor Prakash Belkale.

Emily Anne Witt, *Psychology*, The Effects of Cocaine Self-Administration and Nicotinamide on Astroglial Mitochondria. Professor Kathryn Reissner.

Maya Wright, *Epidemiology*, Appropriateness of Hysterectomy for Treatment of Noncancerous Gynecologic Conditions. Professor Andrew Olshan.

Zhaopeng Xing, *Health Informatics*, Investigating Effects of Aging and Task Complexity on Spoken Conversational Search Behaviors and Perceptions. Professor Javed Mostafa.

Dina Yamaleyeva, *Biomedical Engineering*, Poly(2-oxazoline)-Based (POx) Platform for Gene Delivery. Professor Alexander Kabanov.

Eunice Y. Yang, *Health Policy and Management*, Effect of Competition Among Fully Capitated Medicaid Managed Care Plans on Healthcare Utilization and Quality of Care. Professor Marisa Domino.

Julia J. Yi, *Speech and Hearing Sciences*, The State of Literacy in Speech-Language Pathology. Professor Karen Erickson.

DOCTOR OF EDUCATION

Sheliah Kristen Burnette, *Educational Leadership*, Restart as a North Carolina School Reform Model: A Quantitative Policy Analysis Exploring the Relationship Between Restart and School Improvement in North Carolina Persistently Low-Performing Schools. Professor Eric Houck.

Evan Hill, *Educational Leadership*, Culturally Relevant Practices Within a Suburban/Rural School District. Professor Kathleen Brown.

Kathryn Lois Murchison, *Educational Leadership*, Strategic Agency of School-Level Leaders: Exploring the Implementation Process of the Learning-Focused Schools Instructional Model at the Elementary Level. Professor Kathleen Brown.

Timothy Scott Rhue, *Educational Leadership*, "See It, Name It, Do It" Instructional Coaching Model's Influence on Student Achievement and Teacher Job Satisfaction. Professor Kathleen Brown.

Kate S. Sullivan, *Educational Leadership*, Achievement Via Individual Determination (AVID) and Development of Student Agency. Professor Kathleen Brown.

DOCTOR OF PUBLIC HEALTH

Lindsey Angelats, *Health Policy and Management*, Advancing the Quadruple Aim in Medi-Cal Managed Care: Provider and Health Plan Leader Perspectives Regarding the Inclusion of Paraprofessionals on Care Teams for Developmental Screening and Care Coordination. Professor Sandra Greene.

Chad Justin Brown, *Health Policy and Management*, Rural Hospital Sustainability: Meeting the Challenges of Healthcare Transformation and Strategies for Effective Implementation: Perspectives of Rural Healthcare Leaders. Professors George Pink and Mark Holmes.

Karla Hoppmann Buru, *Health Policy and Management*, Public Health Accreditation Board's Changes in Response to COVID-19: Exploring the Site Visitor Model. Professor Leah Devlin.

Sepheem Byron, *Health Policy and Management*, State Medicaid Policy Levers Related to Successful Health Information Exchange Among Providers. Professor Christopher Shea.

John D. Catalano, *Health Policy and Management*, College Student Depression, Anxiety Disorder, and Suicide: Institutional Trends, Associations, and Mitigation Interventions. Professor Susan Helm-Murtagh.

Emilee Ione Coulter-Thompson, *Health Policy and Management*, The Impact of Health Care Discrimination Against LGBTQ Parents on the Screening and Diagnosis of Their Children With Disabilities. Professor Rebecca Slifkin.

Kalina Duncan, *Health Policy and Management*, Facilitators Enabling Sustainable Cervical Cancer Control Programs in Low- and Middle-Income Countries: Strengthening Health Systems in Zambia. Professor Angela Stover.

Bryan G. Hatcher, *Health Policy and Management*, Accelerating Trauma-Informed Care Practices in Behavioral Health Settings to Address Patients' Adverse Childhood Experiences. Professor Susan Helm-Murtagh.

Tracie Lauren Shing, *Biostatistics*, Marginal Modeling and Multiple Imputation Methods for Correlated Binary Data Generated From Clinical Periodontal Examinations. Professor John Preisser.

DOCTOR OF NURSING PRACTICE

Elizabeth Bell-McClure, *Nursing Practice*, Using a Simple Risk Assessment Tool to Screen Patients for New Onset Diabetes After Lung Transplant: A Quality Improvement Project. Professor Carrie Palmer.

Emily Morgan Brown, *Nursing Practice*, Incorporating Positive Parent Training Into an ADHD Clinic: A Pilot Quality Improvement Project. Professor Elizabeth Walters.

Gerardo Erece Cagas, *Nursing*, Stop the Bleed: Addressing Anticoagulation Therapy Before Elective Surgery to Reduce Surgery Cancellation. Professor Ashley Kellish.

Seth Cox, *Nursing Practice*, Improving Colorectal Cancer Screening Rates Via MyChart Message Outreach. Professor Carrie Palmer.

Leanne Gonzalez, *Nursing Practice*, Implementation of Simulation With Meaningful Debriefing During New Nurse Orientation Pilot Program. Professor Maureen Baker.

Donald Thomasson Haire, *Nursing Practice*, Decreasing Moral Distress in New Graduate Neonatal ICU Nurses Providing End-of-Life Care. Professor Katherine Peppers.

Breanne Hamlet, *Nursing Practice*, Improving Discharge Education Through Use of the Teach-Back Method in a Pediatric Emergency Department: A Quality Improvement Project. Professor Ashley Kellish.

Emily Herrick Kassam, *Nursing Practice*, Implementing Survivorship Care Plans in Adult Allogeneic Bone Marrow Transplant Patients. Professor Ashley Kellish.

Karen Deanne Keisler, *Nursing Practice*, A Program Evaluation of Routine Depression Screening of Adults Between Ages 18–65 in Primary Care. Professor Leslie Sharpe.

Ashley Pfannenstiel Kern, *Nursing Practice*, Intervening to Improve Completion of Advance Directives and Documentation in a Primary Care Practice: A Quality Improvement Project. Professor Ashley Bryant.

Theresa Mamone Liipfert, *Nursing Practice*, Improving Adherence to Evidence-Based Guidelines for Advanced Practice Providers Treating Patients With Bipolar Disorder: Exploring a Practice Change. Professor Victoria Soltis-Jarrett.

David Areri Manyura, *Nursing Practice*, Implementation of a Standardized Delirium Screening and Management Algorithm in the Emergency Department. Professors Joan Stanek and Carrie Palmer.

Maclean M. Masese, *Nursing Practice*, Implementation of Standardized Suicide Severity Rating Scale (C-SSRS) Screening Tool in Outpatient Veterans Affairs Mental Health Clinics. Professor Grace Hubbard.

Kelby Lomax McDaniel, *Nursing Practice*, Training and Retaining Rural Neurosurgical Advanced Practice Providers Through a Specialty Fellowship Program. Professor Meg Zomorodi.

Shantai McDermott, *Nursing Practice*, Implementation of a Structured Communication Tool to Improve Handoff Report Among Certified Nursing Assistants in the Long-Term Care Setting: A Practice Change. Professor Victoria Soltis-Jarrett.

Naumi Mbuli Munyoki, *Nursing Practice*, Evaluation of a Mindfulness-Based Stress Reduction Program to Reduce Stress, Burnout, and Insomnia for Behavioral Healthcare Staff. Professors Cheryl Giscombe and Grace Hubbard.

Jennifer Nance, *Nursing Practice*, Standardizing Nurse Telephone Triage Documentation for Children With Sore Throat in a Pediatric Outpatient Setting. Professor Elizabeth Walters.

Piper Rogers, *Nursing Practice*, Implementation of a Peer Mentor Program in New Graduate Pediatric Intensive Care Unit Nurses to Reduce Burnout: A Practice Change. Professor Ashley Kellish.

Sabrina Renee Sasser, *Nursing Practice*, Advance Care Planning and Improving Documentation in the Outpatient Setting. Professor Carrie Palmer.

Vanessa Sillaman, *Nursing Practice*, Pamper: Promoting Alternative Methods for Postoperative Empowering Recovery Improving Postoperative Pain Management for the Older Adult Orthopedic Population: A Quality Improvement Project. Professor Joan Stanek.

Deanna Andrea Stewart, *Nursing Practice*, Implementing a Safe Space for African American Employees to Develop Individualized Racism Recovery Plans. Professor Shielda Rodgers.

Lauren Hillam Wittwer, *Nursing Practice*, Improving Pediatric Asthma Care Through the Use of Pediatric-Specific Asthma Apps: A Quality Improvement Initiative. Professor Elizabeth Walters.

Jennifer M. Wynn, *Nursing Practice*, Needs Assessment and Implementation of Health Screenings at Community Based Food Pantries: A Rural Health Initiative. Professor Jean Davison.

GRADUATE DEGREES

August 2021

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 Suzanne Barbour

DOCTOR OF PHILOSOPHY

- Brian Adam**, *Mathematics*, Data-Driven Computational Homogenization of Polymer Networks to Hyperelastic Material Models. Professor Sorin Mitran.
- Cameron Adams**, *Microbiology and Immunology*, Qualities of the Protective Antibody Response Against Dengue Virus Infection. Professor Aravinda de Silva.
- Tanya Marie Amert**, *Computer Science*, Enabling Real-Time Certification of Autonomous Driving Applications. Professor James Anderson.
- Matthew Michael Anttila**, *Chemistry*, Development of a Photoactivatable Reporter to Perform Temporally Controlled Measurements of Enzyme Activity in Single Cells. Professors Nancy Allbritton and David Lawrence.
- Cara Joy Arizmendi**, *Psychology*, Clustering Individuals Based on Similarity in Idiographic Factor Loading Patterns. Professor Kathleen Gates.
- Calvin Arter**, *Environmental Sciences and Engineering*, Quantifying the Impact of Transportation Sector Emissions on Regional Air Quality. Professors Marc Serre and Saravanan Arunachalam.
- Megan Catherine Barry**, *Maternal and Child Health*, Pre-Pregnancy Allostatic Load and Subsequent Adverse Birth Outcomes: A Latent Class Analysis Approach. Professor Carolyn Halpern.
- Rachel Anne Battaglia**, *Cell Biology and Physiology*, Proteostasis of Glial Intermediate Filaments: Disease Models, Tools, and Mechanisms. Professors Natasha Snider and Carol Otey.
- Jessica Ferra Benton**, *Education*, How School Community Members Discuss Power During a Community School Implementation: A Case Study. Professor Brian Gibbs.
- Tegan R. Bratcher**, *Media and Communication*, Power to the Podcasts: Publics, Opinions, and the Economy of Black Podcasts. Professor Joseph Cabosky.
- Lucy Britt**, *Political Science*, A Political Aesthetic of Commemoration. Professor Susan Bickford.
- Austin Bussing**, *Political Science*, The Strategic Construction of the Legislative Agenda: Mitigating the Risks of Party Brands. Professor Sarah Treul.
- Benjamin Allen Carpenter**, *Chemistry*, Exploration of Multivalency in Noncovalent Coiled-Coil Coupled Covalent Exchange and Development of Sensor Arrays Utilizing a Systems Based Approach. Professor Marcey Waters.
- Megan Tara Casebolt**, *Maternal and Child Health*, Use of Contraception and Maternal Health by Women With Disabilities in Rajasthan, India: Analysis of the Annual Health Survey. Professor Kavita Singh.
- Clayton Bruce Casper**, *Chemistry*, Quantifying Tip-Sample Interactions in Near-Field Microscopy. Professor Joanna Atkin.
- Tia Cervarich**, *Chemistry*, Hydroallylation of 1,3-Dienes Catalyzed by Rhodium and Nickel Complexes. Professor Simon Meek.
- Drew Cesta**, *Pharmaceutical Sciences*, Synthesis and Biological Evaluation of the Unnatural Enantiomer of Penicillin and Isosteres of Cephalosporin. Professor Jeffrey Aubé.
- YoungWoon Cha**, *Computer Science*, Egocentric Reconstruction of Human Bodies for Real-Time Mobile Telepresence. Professor Henry Fuchs.
- Yun Chen**, *Psychology*, Cross Cultural Dissemination of Behavioral Activation Treatment: From Assessment to Efficacy Testing Among Clinical Samples. Professor Stacey Daughters.
- Hunyong Cho**, *Biostatistics*, Precision Medicine Methodology Development With Application to Survival and Genomics Data. Professors Michael Kosorok and Di Wu.
- Danbi Choe**, *School Psychology*, A Qualitative Feasibility Study of a Culturally Focused Social-Emotional Learning Program for Korean Immigrant Adolescents. Professor Steve Knotek.
- Gerard Siew Keong Chung**, *Social Work*, Risk Factors of Subsequent Allegations of Child Maltreatment. Professor Paul Lanier.
- Giovanni Cocco**, *Business Administration*, Insider Trading Rights: Short-Termism and Trading Constraints. Professors Jesse Davis and Paolo Fulghieri.
- Catherine Crawford**, *Nursing*, Labor and Delivery Nurses' Experiences of Traumatic Events and Institutional Support: A Multimethod Study. Professor Jessica Williams.
- Clark Hamilton Cunningham**, *Genetics and Molecular Biology*, Detection and Population Genetics of the Plasmodium Falciparum dhps 581G Variant Associated With High-Level Sulfadoxine Resistance in the Democratic Republic of the Congo. Professor Corbin Jones.
- Ashley Currin**, *Education*, Engagement of Students in the IEP Process; Perceptions of Parents and Teachers. Professor Steven Knotek.

- Martin Dawson**, *German Studies*, *Transports of Imagination: Poetry and the Rehabilitation of Experience, 1830–1860*. Professor Gabriel Trop.
- Calvin Deutschbein**, *Computer Science*, *Mining Secure Behavior of Hardware Designs*. Professor Cynthia Sturton.
- Sean DiLeonardi**, *English and Comparative Literature*, *Improbable Realism: The Postwar American Novel and the Digital Aesthetic*. Professor Florence Dore.
- Kenneth H. Dinnon**, *Microbiology and Immunology*, *Development and Application of Models for Study of Emergent and Pre-Emergent Coronaviruses*. Professor Ralph Baric.
- Willa Dong**, *Health Behavior*, *Gender Minority Stress, Aspiration Strain and Depressive Symptoms Among Transgender Women and Transfeminine People in China: A Mixed-Methods Study*. Professor Kathryn Muessig.
- Lauren Donoghue**, *Genetics and Molecular Biology*, *Identifying Regulators of Asthma-Associated Airway Remodeling Traits Using Systems Genetics in Mice*. Professor Samir Kelada.
- Kevin Morrell Donovan**, *Biostatistics*, *Extensions of Independent Component Analysis to Analyze Functional Connectivity and Neural Spike Train Data*. Professor Kinh Truong.
- Tyler John Easterbrook**, *English and Comparative Literature*, *The Rhetoric of Conspiracism in User-Centered Democracy*. Professor Jordynn Jack.
- Kirsten Adams Eddy**, *Media and Communication*, *The Righteous and the Woke: “Racists,” “Radicals,” and the Moralization of American Political Communication*. Professor Daniel Kreiss.
- Jasmine Edelstein**, *Biomedical Engineering*, *Durable Immunity Through B Cell Reprogramming*. Professor Samuel Lai.
- Alejandro Stephano Escalante**, *Religious Studies*, *Madness: Gender, Race, and Religion in Loíza, Puerto Rico*. Professor Todd Ochoa.
- Shiwei Fang**, *Computer Science*, *Using Radio Frequency and Motion Sensing to Improve Camera Sensor Systems*. Professor Shahriar Nirjon.
- Yumeng Fang**, *School Psychology*, *Friendship Across Contexts: The Impact of Friends’ Race on School Belonging*. Professor Rune Simeonsson.
- Timothy John Fazekas**, *Chemistry*, *Intermolecular C–H Diversification Via Amidyl Radical Reactivity*. Professor Erik Alexanian.
- Erica Catherine Fedor**, *Musicology*, *Sounding Statecraft: U.S. Cultural Diplomacy Programs in the Twenty-First Century*. Professor Mark Katz.
- Andrew Carl Ficklin**, *Classics*, *Venus’ Other Son: The Figure of Cupid in Augustan Literature and Art*. Professor James O’Hara.
- Clare Marie Fieseler**, *Ecology*, *Putting Resilience to Work in Climate-Threatened Protected Areas*. Professors Karl Castillo and Jaye Cable.
- Tiffany Jamie Foster**, *Psychology*, *Peer Effects in the Preschool Classroom: Examining the Role of Child and Peer Characteristics*. Professors Beth Kurtz-Costes and Margaret Burchinal.
- Luke Gallion**, *Chemistry*, *Improving the Accessibility of Chemical Cytometry Assays for the Investigation of Sphingosine Kinase Activity in Single Cells*. Professors Nancy Allbritton and David Lawrence.
- Guzel Garifullina**, *Political Science*, *Selecting Wise Rulers? Institutional Determinants of Political Leaders’ Preferences and Behavior*. Professor Graeme Robertson.
- Christopher James Genito**, *Microbiology and Immunology*, *Generation of Immune Tolerance With Combined Pharmacological Agents*. Professor Kristy Ainslie.
- Danielle Giovenco**, *Epidemiology*, *Social and Behavioral Predictors of Adherence to Oral Antiretroviral Pre-Exposure Prophylaxis for HIV Prevention Among Adolescent Girls and Young Women in Southern Africa*. Professor Audrey Pettifor.
- David Gorelick**, *Environmental Sciences and Engineering*, *Joint Mitigation of Supply and Financial Risk in Regional Water Supply Management Under Uncertainty*. Professor Gregory Characklis.
- Jasmine Gray**, *Media and Communication*, *A “Disruption of how we Tell our Stories”: The Feasibility of Life Plotting With a “Double Burdened” Vulnerable Population*. Professor Maria Leonora Comello.
- Molly Green**, *Anthropology*, *“The Garden is a Laboratory:” Climate Smart Agriculture and the Cultivation of Just Futures in Cauca, Colombia*. Professor Florence Babb.
- Lexie Grove**, *Health Policy and Management*, *Permanent Supportive Housing for Adults With Disabilities: Effects on Health Service Use and Determinants of Program Retention*. Professor Marisa Domino.
- Alyssa Marie Grube**, *Environmental Sciences and Engineering*, *Characterization of the Environmental Resistome in the Galapagos Islands, Ecuador: A One Health Perspective*. Professor Jill Stewart.
- Iliya Gutin**, *Sociology*, *A Growing Risk: Clinical, Epidemiologic, and Subjective Ambiguity in the Relationship Between Weight and Health*. Professor Robert Hummer.
- Rachel Haake**, *Psychology*, *The Effects of Transcranial Alternating Current Stimulation on Prelimbic Cortex to Nucleus Accumbens Core Oscillatory Dynamics and Cocaine Seeking*. Professor Regina Carelli.
- Tate Halverson**, *Psychology*, *Brief Battery of the Social Cognition Psychometric Evaluation Study (BB-SCOPE): Development and Validation in Schizophrenia*. Professor David Penn.
- Carolyn Lorraine Hartley**, *Chemistry*, *Investigations of the Redox Chemistry of Colloidal Semiconductor Quantum Dots*. Professors Jillian Dempsey and Michel Gagné.
- Tianshe He**, *Statistics and Operations Research*, *Community Detection in Multimodal Networks*. Professors Shankar Bhamidi and Andrew Nobel.
- Ashley Hedrick**, *Media and Communication*, *Recognize and Resist: A Health Intervention to Promote Writing About Sexual Consent and Egalitarian Gender Roles Among One Direction Fanfiction Writers*. Professor Barbara Friedman.

- Abby Furr Hoffman**, *Health Policy and Management*, Skilled Nursing Facility Market Dynamics in the Era of Health Reform. Professors Paula Song and George Holmes.
- Lindsay Margaret Holman**, *History*, Herzog's Roman Tesserae: Their Nature and Purpose Revisited. Professor Richard Talbert.
- Ward Spruill Howard**, *Physics*, Investigating Exoplanet Habitability and the Stellar Magnetism of Cool Stars Across Half the Southern Sky Via Superflares, Starspots, and Stellar Rotation. Professor Nicholas Law.
- Micah Aaron Hughes**, *Religious Studies*, Religion's Revolution: Islam, Social Science, and the University in the Republic of Turkey. Professor Juliane Hammer.
- Robert Hunt**, *Mathematics*, Part I: Diffusion-Induced Flows and Particulate Aggregation. Part II: Experiments and Modeling of Replacement Aortic Valves. Part III: Enhanced Diffusion in Wall-Driven Shear Flows. Professors Roberto Camassa, Richard McLaughlin, and Boyce Griffith.
- Amber Hurson**, *Epidemiology*, RNA-Based TP53 Pathway Function, Estrogen Receptor Status, and Breast Cancer Risk and Progression. Professor Melissa Troester.
- Karam Hwang**, *Sociology*, Transforming Affinities: Sociability, Solidarity, and Friendships on Three College Campuses. Professor Karolyn Tyson.
- Michael Itzkin**, *Geological Sciences*, Anthropogenic Influences on Coastal Dune Dynamics: Exploring Past and Future Effects of Management Interventions on a Developed Barrier Island. Professor Laura Moore.
- Joshua Conrad Jackson**, *Psychology*, Moral Concept Theory: Cultural Evolution, Social Cognition, and the Bridge From Cooperation to Morality. Professor Kurt Gray.
- Parth Balvant Jariwala**, *Chemistry*, Elucidating the Interactions Between Gut Bacterial D-Glucuronidases and Approved Drugs. Professor Matthew Redinbo.
- Shelley Anne Jazowski**, *Health Policy and Management*, Low-Income Subsidies: Impact on Disparities, Anticancer Treatment Use, and Spending Among Medicare Beneficiaries With Multiple Myeloma. Professor Stacie Dusetzina.
- Beilin Jia**, *Biostatistics*, Statistical Learning Methods for Subgroup Discovery With Survival Outcome. Professors Donglin Zeng and Joseph Ibrahim.
- Wulin Jiang**, *Pharmaceutical Sciences*, Developing Induced Neural Stem Cell Therapy to Treat Triple-Negative Breast Cancer and Brain Metastases. Professor Shawn Hingtgen.
- Monica Jimenez**, *Epidemiology*, Neighborhood-Level Social Deprivation and the HIV Care Continuum Among Persons Newly Diagnosed With HIV in North Carolina, 2013-2017. Professor Brian Pence.
- Erin Raashel Jones**, *School Psychology*, The Impact of Behavioral Activation on Teacher Stress and Burnout: A Multiple Probe Single Case Design. Professors Sandra Evarrs and Steven Knotek.
- Andreas Jozwiak**, *Political Science*, Gender, Family Policy, and Politics. Professors Rahsaan Maxwell and Pamela Conover.
- Elizabeth Kamai**, *Epidemiology*, Lead and Children in North Carolina: Patterns of Lead Testing Across the State and a Case Study of Point Sources in Forsyth County, North Carolina. Professor David Richardson.
- Melody Kessler**, *Chemistry*, Quantitative Methods for Examining Ligand Reaction Mechanisms at Semiconductor Nanocrystal Surfaces. Professor Jillian Dempsey.
- John Cameron Kidd**, *Biostatistics*, Mediation Analysis in Genetic Studies. Professor Danyu Lin.
- Kayla W. Kilpatrick**, *Biostatistics*, Causal Inference in Cluster-Randomized Trials and Observational Studies With Partial Interference. Professor Michael Hudgens.
- Hyojin Kim**, *Neurobiology*, Preclinical Development of Genetic Normalization Strategies to Treat Pitt-Hopkins Syndrome. Professors Benjamin Philpot and Paul Manis.
- Sinhye Kim**, *Nursing*, The Conditions of Work, Healthcare Worker Safety and Well-Being, and Patient Safety in Hospitals. Professor Cheryl Jones.
- Nicholas John Klus**, *Pharmaceutical Sciences*, Synthesis and Biological Evaluation of Small Molecule Therapy for Huntington's Disease and the Asymmetric Synthesis of a New Class of 2-Azaisocephalosporins. Professors Jeffrey Aubé and Michael Jarstfer.
- Tavleen Kaur Kochar**, *Chemistry*, Development and Characterization of Ambient Ionization/Separation Techniques Combined With Mass Spectrometry for Improved Analyte Detection. Professor Gary Glish.
- Clare Kordyback**, *School Psychology*, The ABC's of School Re-Entry: An Assessment of Perceptions of Feasibility of an Innovative Intervention Which Targets the Psychosocial and Emotional Needs of Childhood Fighters and Survivors of Cancer. Professor Steven Knotek.
- Stephen Bela Kovacs**, *Microbiology and Immunology*, Inflammasomes and Gasdermins in Immune Defense and Pathology. Professor Edward Miao.
- Eroll Kuhn**, *Political Science*, Enforcement, Burden-Sharing, and Barriers to Mobility: The Effect of Immigration Policies on the Integration of Newcomers. Professor Rahsaan Maxwell.
- Courtney Kwan**, *School Psychology*, Negative/Intrusive Parenting as a Predictor of Internalizing Symptoms in Preschool-Aged Children Living in Rural Areas of High Poverty. Professor Margaret Swingler.
- Yunjia Lai**, *Environmental Sciences and Engineering*, Multi-Omics to Illuminate Signaling Molecules of the Gut Microbiota-Brain Axis. Professor Kun Lu.
- Paige Landau**, *School Psychology*, Misconceptions About Traumatic Brain Injury: A Survey of Endorsements by North Carolina School Psychologists. Professors Peter Duquette and Rune Simeonsson.
- Stephanie Langella**, *Psychology*, Functional Hippocampal Redundancy as a Measure of Resilience to Pathological Aging. Professors Kelly Giovanello and Eran Dayan.

- Khoa Le Nguyen**, *Psychology*, Safe and in Sync: Evidence for the Antecedents and Social Outcomes of Perceived Positivity Resonance Across Contexts. Professor Barbara Fredrickson.
- Christina Choon Ling Lee**, *English and Comparative Literature*, Therapoetics in Late Nineteenth-Century American Literature. Professor Eliza Richards.
- Wenshuai Li**, *Geological Sciences*, Tracing Chemical Weathering Using Lithium and Potassium Isotopes. Professor Xiao-Ming Liu.
- Michael Zhiyang Liang**, *Chemistry*, New Enantio- and Diastereoselective Carbon-Carbon Bond Forming Methodologies Utilizing 1,1-Organodiboronate Esters. Professor Simon Meek.
- Cesar Augusto Lopez**, *Microbiology and Immunology*, Zika Virus Pathogenesis at Sites of Vector-Independent Transmission and a Foray Into Applied Seroprevalence. Professors Helen Lazear and Aravinda de Silva.
- Jitong Lou**, *Biostatistics*, Machine Learning Methods for Precision Medicine Using Patient Electronic Health Records and Mobile Sensor Data. Professor Donglin Zeng.
- Kelsey Ann Ludwig**, *Psychology*, Why Loneliness Matters in Psychosis: A Comprehensive and Integrative Approach to Research and Intervention. Professor David Penn.
- Jordan Lukins**, *Education*, Preparation, Perception, and Professional Wisdom: Driving Forces in Novice Teachers' Implementation of Evidence-Based Practices for Students With Autism. Professor Harriet Able.
- Jason Patrick Malizia**, *Chemistry*, Spatiotemporal Carrier Dynamics of Molybdenum Disulfide Nanoflakes: A Detailed Investigation Using Pump-Probe Microscopy. Professor John Papanikolas.
- Justin S. Marcum**, *Chemistry*, New Catalysts for the Stereoselective Functionalization of Unsaturated Hydrocarbons. Professor Simon Meek.
- Marjorie Margolis**, *Health Behavior*, Provider Communication for HPV Vaccination: Geographic Disparities and Response to Parental Declination. Professor Melissa Gilkey.
- Deborah Maron**, *Information and Library Science*, The Standpoint Practitioner: How Black and White Metadata Librarians at Predominantly White Academic Libraries Articulate Personal, Professional, and Social Experiences Relating to Their Work With African American Collections. Professor Ryan Shaw.
- Abe Martin**, *Economics*, Assessing the Benefits of Micromobility. Professor Andrew Yates.
- Maya Massing-Schaffer**, *Psychology*, Adolescent Peer Relations: New Research Directions for Contemporary Youth. Professor Mitchell Prinstein.
- Kelly Irene McArdle**, *Classics*, Habeo Tergum: Humor About Brutality and the Elite Viewership of Plautine Comedy. Professor Sharon James.
- Bryan McQueen**, *Microbiology and Immunology*, The Innate Immune Response Against Chlamydia Infection: Contribution of Triggering Receptor Expressed on Myeloid Cells-1 and Indoleamine 2,3-Dioxygenase (IDO). Professors Uma Nagarajan and Toni Darville.
- Alison Rose Mercer-Smith**, *Pharmaceutical Sciences*, Tumor-Homing Cytotoxic Induced Neural Stem Cells for the Treatment of Primary and Metastatic Non-Small Cell Lung Cancer. Professor Aaron Anselmo.
- Kristin Nicole Meyer**, *Psychology*, Cognitive Control Over Reward: Cognitive and Neural Mechanisms of Reward-Driven Responses That Conflict With Goals. Professors Margaret Sheridan and Joseph Hopfinger.
- Jonathan Meyers**, *Chemistry*, Vapor-Phase Synthesis and Modification of Hybrid Perovskites. Professor James Cahoon.
- Emily Mihalko**, *Biomedical Engineering*, Fibrin-Targeting Microgel Therapeutics for Thrombotic and Bleeding Complications. Professor Ashley Brown.
- Katherine Miller**, *Health Policy and Management*, Effects of Social and Financial Supports on Veterans who are Caregivers: Physical and Mental Health and Economic Status. Professor Sally Stearns.
- Christopher Moakler**, *Physics*, The Hydra String Method and its Application to High Dimensional Potential Energy Surfaces Arising From Granular Systems. Professor Katherine Newhall.
- Amanda Danielle Moehlenpah**, *Romance Languages and Literatures*, A Republic of Dancers: The Contredanse and the Choreography of Identity in Enlightenment-Era France. Professors Ellen Welch and Edward Nye.
- Tessa Moyer**, *Chemistry*, Discovery of Botanical Antimicrobial Peptides Via Mass Spectrometric Approaches: An Exploration of Amaranthus Spp. Professor Leslie Hicks.
- Riley Edward Mulhern**, *Environmental Sciences and Engineering*, Point-Of-Use Water Treatment for Private Wells in North Carolina: Risks and Solutions for Lead, Per- and Polyfluoroalkyl Substances (PFASs), and Microbial Contaminants. Professor Jacqueline MacDonald Gibson.
- Sara Musetti**, *Pharmaceutical Sciences*, Remodeling the Tumor Microenvironment of Triple Negative Breast Cancer With Novel Nanoformulations. Professors Leaf Huang and Philip Smith.
- Carolyn Njeri Muthoni**, *Nursing*, The Role of Family and Community Factors on Early Sexual Debut Among Adolescent Girls in Nairobi's Urban Informal Settlements, Kenya. Professor Shawn Kneipp.
- Lauren Clara Nareau**, *Anthropology*, Thriving in Ruins: Marabú and its Entanglement With Cuba's Colonial Past. Professor Christopher Townsend.
- Kimberly Nellenbach**, *Biomedical Engineering*, Neonatal Fibrin Clot Formation: Mechanisms and Clinical Implications. Professor Ashley Brown.
- Catherine Nemitz**, *Computer Science*, Efficient Synchronization for Real-Time Systems With Nested Resource Access. Professor James Anderson.

- Isabel Grace Newsome**, *Biomedical Engineering*, Toward Clinical Translation of Microvascular Ultrasound Imaging: Advancements in Superharmonic Ultrasound Technology. Professors Paul Dayton and David Lalush.
- Spencer Leonard Nystrom**, *Genetics and Molecular Biology*, Epigenetic Control of Developmental Timing by Temporal Transcription Factors. Professor Daniel McKay.
- Jacqueline Paniccia**, *Psychology*, Hippocampal Neuroimmune Mechanisms Mediate Heroin-Conditioned Suppression of Peripheral Nitric Oxide. Professor Donald Lysle.
- Thomas Newton Phillips II**, *Romance Languages and Literatures*, The Desert in Maria Teresa Andruetto: A Literal and Figurative Space. Professor Alicia Rivero.
- Jack Benjamin Prothero**, *Statistics and Operations Research*, Data Integration Via Analysis of Subspaces. Professors J.S. Marron and Jan Hannig.
- Jeromy James Rech**, *Chemistry*, Rational Design of Conjugated Polymers for Organic Solar Cells Based on Structure-Property Relationships. Professor Wei You.
- Marcus H. Reis**, *Chemistry*, Reimagining Polymer Synthesis Through the Combination of Continuous-Flow Chemistry, Reactor Engineering, and Automation. Professor Frank Leibfarth.
- Morgan Miller Richey**, *Epidemiology*, Surveillance of Occupational Fatality Trends Among Vulnerable Populations in North Carolina. Professor David Richardson.
- David Rigby**, *Sociology*, How Interest Groups Shaped a New Immigration Politics in the United States, 1945–2015. Professor Kenneth Andrews.
- Earl Ritchie**, *Chemistry*, Nanoscopic Characterization of Silicon Nanowire Superlattices With Near-Field Optical Microscopy. Professor Joanna Atkin.
- Victor Ritter**, *Biostatistics*, Time-To-Event Methods for Complex Survey Data With Focus on Non- and Semi-Parametric Inference for National Health Surveys. Professor Jianwen Cai.
- Ricardo Rivera-Soto**, *Genetics and Molecular Biology*, Characterization of the Role of Cellular Signaling Pathways on the Pathogenesis of Kaposi's Sarcoma-Associated Herpesvirus. Professor Blossom Damania.
- Kevin Roach**, *Political Science*, Representing Equity. Professor Frank Baumgartner.
- Mya-Lee Roberson**, *Epidemiology*, Evaluating Geographic Variation in Breast Cancer Surgical Treatment Among Black Women in the U.S. South. Professor Whitney Robinson.
- Rachel Sandercock**, *Psychology*, Dyadic Vocal Contingency in Infants at High Risk for Autism Spectrum Disorder. Professor Laura Klinger.
- Katherine Witte Saylor**, *Public Policy*, Fairness-Informed Cost-Utility Analysis Methods to Assess the Potential of Population Genetic Screening to Improve Health and Reduce Disparities. Professor Douglas MacKay.
- Nosipho Shangase**, *Epidemiology*, The Influence of Quality of Caregiver-Adolescent Relationship on Sexual Behavior, Sexually Transmitted Infections and on Pregnancy Among Young Rural South African Women. Professor Audrey Pettifor.
- Bianca Shieu**, *Nursing*, Health-Related Quality of Life Among Nursing Home Residents in Western Canada. Professor Ruth Anderson.
- Bhawana Shrestha**, *Microbiology and Immunology*, Vaginal Delivery of Multivalent Anti-Sperm Antibodies for Effective Non-Hormonal Contraception. Professor Samuel Lai.
- Khimendra Singh**, *Business Administration*, Essays on Product Recall Decision and Effect. Professor Rajdeep Grewal.
- Michael A. Skalski**, *History*, Building a Socialist Neighborhood: Efforts at Integration Among Poland, East Germany, and Czechoslovakia, 1969–1989. Professor Konrad Jarausch.
- Aaron Joseph Smith**, *Computer Science*, Receiver-Driven Video Adaptation. Professor Ketan Mayer-Patel.
- Paul Scott Soma**, *Chemistry*, Unraveling the Complexity of Gas-Phase Lithium-Cationized Carbohydrate Chemistry and Structures. Professor Gary Glish.
- Hannah Sorscher**, *Classics*, Pro Filia, Pro Uxore: Young Women in the Conventional and Unconventional Families of Roman Comedy. Professor Sharon James.
- Effua Erica Sosoo**, *Psychology*, Psychophysiological and Affective Reactivity to Vicarious Discrimination. Professor Enrique Neblett.
- Bethany Aspacia Stafford**, *Public Policy*, Three Essays on the Politics and Economics of Education. Professors Daniel Gitterman and Steven Hemelt.
- Madeline Shea Stark**, *Chemistry*, Investigation of Intercalation in Graphite Electrodes With In-Situ Imaging. Professor Scott Warren.
- Shirish J. Sundaresan**, *Business Administration*, Innovation Adoption and Performance: Examining the Antecedents and Performance Implications of Externally Generated Innovations in the U.S. Hospital Industry. Professor Atul Nerkar.
- Hao Tan**, *Computer Science*, Pre-Training Methods for Vision and Language. Professor Mohit Bansal.
- Travis Peter Varner**, *Chemistry*, Stereoselective Cationic Polymerization of Vinyl Ethers Through Asymmetric Ion-Pairing Catalysis. Professor Frank Leibfarth.
- Evgeniya Victorova**, *Business Administration*, Essays on Vertically Contracted Industries – Empirical Analyses of the U.S. Cable Industry. Professor Sriram Venkataraman.
- Sanah Vohra**, *Epidemiology*, Molecular and Clinical Characterization of Postpartum-Associated Breast Cancer. Professor Melissa Troester.
- Alexis Romero Walker**, *Media and Communication*, Decolonizing Media Higher Education: Building Critical Media Literacy Principles That Adopt Understandings of the Body and Performance. Professor Barbara Friedman.

Connor Martin Wander, *Pharmacology*, Potential Mechanisms of Hippocampal Resilience to Alzheimer's Disease Pathology. Professor Thomas Kash.

Guan Wang, *Education*, a Multi-System Approach to Examine the Association Between Prenatal Stress and Birth Outcomes. Professor Roger Mills-Koonce.

Alfredo Watkins, *Philosophy*, Immanent Structuralism: A Neo-Aristotelian Account of Mathematics. Professor Marc Lange.

Corinne Elisabeth Wiesner-Friedman, *Environmental Sciences and Engineering*, Find, Inform, and Test (Fit): A Spatial Modeling Framework to Estimate Contributions of Spatially Distributed Sources to Microbial Contaminants in the Environment. Professors Marc Serre and Jill Stewart.

Henry Artez Willis, *Psychology*, Developing Culturally-Adapted Mobile Mental Health Interventions: A Multi-Study, Mixed Methods Approach. Professor Enrique Neblett.

Jian Cheng Wong, *Chemistry*, First Principles Simulation of Excited Charge Carrier Dynamics and Role of Decoherence. Professors Yosuke Kanai and James Cahoon.

Yuzhi Xi, *Epidemiology*, U.S. Dialysis Patients and PM_{2.5} Exposure. Professor David Richardson.

Xi Yang, *Statistics and Operations Research*, Machine Learning Methods in HDLSS Settings. Professor Steve Marron.

Hang Yu, *Statistics and Operations Research*, Sparse Machine Learning Methods for Prediction and Personalized Medicine. Professors Donglin Zeng and Kai Zhang.

Zhechen Yu, *Economics*, Uncertainty and Incomplete Contracts in Procurements. Professor Brian McManus.

Daixuan Zhang, *Materials Science*, Stimuli-Responsive Bottlebrush Elastomers With Tissue-Mimetic Mechanical Properties. Professor Sergei Sheiko.

Ninghao Zhou, *Chemistry*, Elucidation of Carrier Transport in Layered Perovskites With Nonlinear Action Spectroscopies. Professor Andrew Moran.

Paul Nicholas Zivich, *Epidemiology*, Risk of Influenza Under Realistic Influenza Vaccination Interventions Among University Students. Professor Allison Aiello.

Emilia Zywot, *Pharmaceutical Sciences*, Pre-Clinical Development of Vitamin B12 Photoactivatable Therapeutics. Professor David Lawrence.

DOCTOR OF NURSING PRACTICE

Henry Lazaro Delgado Avila, *Nursing Practice*, Implementing the Stop-Bang Screening Tool to Screen Heart Failure Patient for Sleep-Related Breathing Disorders. Professor Margaret Carman.

Georgette Awo Gbeddy, *Nursing Practice*, Using Mindfulness-Based Practice to Reduce Work-Related Stress and Burnout Among Psychiatric Nurses. Professor Cheryl Giscombe

Beatriz Martinez, *Nursing Practice*, Fighting the War on Asthma: Incorporating Asthma-Control Screening in a Military Primary Clinic. Professor Julee Waldrop.

Lauren Louise O'Neill, *Nursing Practice*, Five-Minutes of Mindfulness: Utilizing Guided Meditation to Supplement ADHD Treatment Plans in Adolescents. Professor Katherine Peppers.

DOCTOR OF PUBLIC HEALTH

Hanna Tesfasyone, *Health Policy and Management*, Approaches to Strengthen Linkage-To-Care Referral Networks for Youth Living With HIV. Professor Byron Powell.

GRADUATE DEGREES

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

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DOCTOR OF PHILOSOPHY

- Shaina Joan Alexandria**, *Biostatistics*, Methods for Multivariate Exposures With Application to Network Interference and Exposure Mixtures. Professors Michael Hudgens and Clarice Weinberg.
- Abrar E. Al-Shaer**, *Nutrition*, An Integrative Approach for Translating Resolvin E1 to Improve Obesity-Related Outcomes. Professor Saame Shaikh.
- Ethan Mackenzie Alt**, *Biostatistics*, Bayesian Methods for the Use of Historical Data and Prior Information in Clinical Trials. Professors Joseph Ibrahim and Matthew Psioda.
- Ali Altitnchi**, *Oral and Craniofacial Biomedicine*, Immunomodulatory Strategies as Adjunctive Therapies to the Treatment of Periodontal Disease. Professor Shannon Wallet.
- Darcy M. Anderson**, *Environmental Sciences and Engineering*, Implementation and Adaptation in Rural Water, Sanitation, and Hygiene Programs. Professor Jamie Bartram.
- Ranita Anderson**, *Speech and Hearing Sciences*, Exploring Decision-Making Practices and Parental Activation Within the IEP Process: Consideration for Racial Differences. Professors Linda Watson and Kathleen Thomas.
- Aman Barot**, *Statistics and Operations Research*, Techniques in Network Embedding and Gaussian Comparison for High-Dimensional Statistics. Professors Shankar Bhamidi and Andrew Nobel.
- Samopriya Basu**, *Statistics and Operations Research*, Inverse Problems for a Class of Stochastic Ordinary Differential Equations in a Generalized Fiducial Framework. Professor Jan Hannig.
- Bryan Blette**, *Biostatistics*, Causal Inference for Error-Prone Exposures. Professor Michael Hudgens.
- Amanda Carroll**, *Occupational Science*, Examining the Relationships Between Military Service, Occupation, Resilience, and Successful Aging for Older U.S. Military Veterans: A Mixed Methods Study. Professor Antoine Bailliard.
- Andrew Jian-Bing Chin**, *School Psychology*, Resistant Capital, Activism, and the Mental Health and Well-Being of Adolescents. Professors Steven Knotek and Rune Simeonsson.
- Bethany Skelton Cosgrove**, *Nursing*, Development and Initial Testing of a Care Coordination mHealth Application for Families of Children With Down Syndrome. Professor Marcia Van Riper.
- Candice Jenette Crilly**, *Chemistry*, Development and Application of Liquid-Observed Vapor Exchange NMR to Study Dehydrated Protein Structure and Protection at the Residue-Level. Professor Gary Pielak.
- Martha Grace Cromeens**, *Nursing*, Endometriosis Diagnosis Pathways and Disability Considerations. Professor Suzanne Thoyre.
- Joseph Delesantro**, *Ecology*, Urbanization Controls on Non-Point Source Nutrient Loading Along the Rural to Urban Gradient of the North Carolina Piedmont. Professors Diego Riveros-Iregui and Lawrence Band.
- Sophia Caroline Dent**, *Anthropology*, Trends in Dietary Composition, Immunostimulation, and Nutritional Deficiency in Piedmont North Carolina and Virginia, A.D. 800-1710. Professor Dale Hutchinson.
- Thomas Joseph DiProspero**, *Chemistry*, Development of In Vitro Liver Culture Techniques to Integrate a Physiologically Relevant Microenvironment Recapitulating Liver Lobule Zonation. Professor Matthew Lockett.
- Melissa Suzanne Dollman**, *American Studies*, Changing Lanes: A Reanimation of Shell Oil's Carol Lane. Professor Bernard Herman.
- Bailee Donahue**, *Political Science*, Adaptation in Border Markets Under Pressure. Professor Mark Crescenzi.
- Meichen Dong**, *Biostatistics*, Deconvolution and Network Construction by Single Cell RNA Sequencing Data. Professors Fei Zou and Yuchao Jiang.
- Crisma Jazmin Emmanuel**, *Nursing*, Understanding Well-Being Among Children Born Extremely Preterm and Their Caregivers. Professor Hudson Santos.
- Tanner Christian Fadero**, *Biology*, Improving Long-Term, Live-Cell Fluorescence Microscopy. Professor Paul Maddox.
- Shane David Falcinelli**, *Microbiology and Immunology*, Measurement and Disruption of HIV Latency in Cure Strategies. Professor David Margolis.
- Varun Goel**, *Geography*, Are Deep Tubewells Safe and Equitable? A Geographic Examination of Impacts of Deep Tubewell Interventions on Provision of Safe Drinking-Water and Diarrheal Diseases in Rural Bangladesh. Professor Michael Emch.

- Angelica Maria Gomez**, *Geography*, Effects of Extensive Agriculture on the Hydrologic Cycle in Tropical Lowlands. Professors Erika Wise and Tamlin Pavelsky.
- Philip Joseph Grayeski**, *Genetics and Molecular Biology*, 5'-UTR Structure and Implications in Gene Regulation. Professors Kevin Weeks and Alain Laederach.
- Andrew L. Hamilton**, *Environmental Sciences and Engineering*, Multi-Objective Management of Financial Risks in Food-Energy-Water Systems. Professor Gregory Characklis.
- Kaylee Kotwis Helfrich**, *Nutrition*, Interaction of Alcohol and Iron Status in Pregnancy. Professor Susan Smith.
- Heather Henderson**, *Epidemiology*, Antimicrobial-Resistant Enterobacteriales in People With HIV in the UNC Health System, 2000–2018. Professors Emily Gower and Sonia Napravnik.
- Michelle Sarah Hoffner**, *Genetics and Molecular Biology*, Delineating Defects in the Regulatory Landscape Underlying Abnormal Mucosal Immune Responses in Inflammatory Bowel Disease. Professor Shehzad Sheikh.
- Chiung-Wei Huang**, *Chemistry*, Nanoscale Spectroscopy and Imaging of Chemically Disordered Semiconductor Surface. Professor Joanna Atkin.
- Minh Vien Huynh**, *Biochemistry and Biophysics*, Biochemical and Functional Characterization of Oncogenic KRAS Mutants. Professors Channing Der and Sharon Campbell.
- Anthony Albert Iannetta**, *Chemistry*, The Dynamics of Post-Translational Modifications and Protein-Protein Interactions in Essential Signaling Networks for Stress Response and Survival. Professor Leslie Hicks.
- Amy Irving Ising**, *Health Informatics*, Leveraging Syndromic Surveillance Emergency Department Visit Data for Local Chronic Disease and Mental Health Surveillance. Professor Leah Frerichs.
- Lance Jubic**, *Genetics and Molecular Biology*, Arabidopsis Helper NLRs Signal Both Downstream of Sensor NLRs and Exhibit Inter Helper Family Interactions. Professor Jeff Dangl.
- Sandeep Kandikuppa**, *Ecology*, Rural Indebtedness in India: Dimensions, Causes, and Perceptions. Professor Clark Gray.
- Patrick W. Kelly**, *Biology*, Adaptive Plasticity as a Fitness Benefit of Mate Choice. Professors David Pfennig and Karin Pfennig.
- Sophie Kelmenson**, *City and Regional Planning*, Challenges to and From Scale in Alternative Food Systems. Professor Nichola Lowe.
- Kevin M. Knight**, *Pharmacology*, Structural Mechanisms of G Protein Activation and Suppression. Professor Henrik Dohlman.
- Jayashree Kumar**, *Bioinformatics and Computational Biology*, The Effect of Variants on Alternative Splicing Through the Lens of Pre-Messenger RNA Structure. Professor Alain Laederach.
- Evan Kwiatkowski**, *Biostatistics*, Statistical Methods for Sequential Monitoring and Incorporating Real-World Evidence in Bayesian Clinical Trial Design. Professor Matthew Psioda.
- Juanita Celestina Limas**, *Pharmacology*, Adaptation to Overexpression of Cyclin E in Epithelial Cells. Professor Jeanette Cook.
- Tim Liu**, *Business Administration*, Three Essays in Corporate Finance. Professors Anil Shivdasani and Paige Ouimet.
- Lacey Lopez**, *Microbiology and Immunology*, Evaluation of Escherichia Coli Specialized Metabolites Implicated in Inflammatory Bowel Disease Complications. Professor Janelle Arthur.
- Angela Lovett**, *Pharmacology*, Analysis of the Cervicovaginal Microbiome in Neisseria Gonorrhoeae Infections and its Contribution to Disease Presentation. Professor Joseph Duncan.
- Yueting Luo**, *Materials Science*, Image Reconstruction for Stationary Head CT With CNT X-Ray Source Arrays. Professors Jianping Lu and Sean Washburn.
- Sara Elizabeth Maloney**, *Chemistry*, Multi-Action Nitric Oxide-Release Systems for Biomedical Applications. Professor Mark Schoenfish.
- Min Mao**, *Human Movement Science*, The Effects of Tai Chi Lower Extremity Movements on Balance, Functional Mobility, Ankle Proprioception, and Muscle Strength in Older Adults. Professor Bing Yu.
- Fernanda Mediano**, *Mass Communication*, Soda Advertising Effects on Children's Beverage Preferences as Mediated by Attitudes Toward the Ad and Product: Comparing Impacts of Child- Vs. Non-Child-Directed Targeting Strategies and Use of Emotional Appeals. Professor Francesca Dillman Carpentier.
- Katherine Merriman**, *Religious Studies*, Forty Houses of Giving: Muslim Charitable Practice in the United States. Professor Juliane Hammer.
- James Omondi Meyo**, *Genetics and Molecular Biology*, Trapping KSHV in Latency-Exploring Kinase Inhibitors as a Class of Anti-Virals That Target the KSHV Lytic Cycle. Professors Dirk Dittmer and Albert Baldwin.
- Dan Emerson Michaud**, *Cell Biology and Physiology*, The Mechanisms Underlying Regulatory B Cell Function in the Progression of Pancreatic Ductal Adenocarcinoma. Professor Yuliya Pylayeva-Gupta.
- Cedar Mitchell**, *Epidemiology*, Understanding the Influence of the Environment and Human Land Use on Malaria Transmission Dynamics Across the Sub-Saharan African Landscape. Professor Michael Emch.
- Michael Joseph Mortelliti**, *Chemistry*, Ultrathin Metal Oxide Coatings by Atomic Layer Deposition: Fabrication, Characterization, and Interfacial Electron Transfer. Professor Jillian Dempsey.
- John Daniel Murphy**, *Epidemiology*, Refining the ABC Method for Gastric Cancer Risk Stratification in Japan and China. Professor Andrew Olshan.
- Ryan Mary Murphy**, *Pharmacology*, Biomarkers in Squamous Cell Carcinoma. Professor Antonio Amelio.
- Evan Marshall Ney**, *Physics*, Towards a Complete Theory of Beta Decay in Density Functional Theory. Professor Jonathan Engel.
- Xuan Binh Minh Nguyen**, *Health Behavior*, Drinking, Mental Health and HIV Outcomes Among People With HIV and Hazardous Alcohol Use in Vietnam. Professor Vivian Go.

- Jesse Niehaus**, *Neurobiology*, Single-Cell RNA-Sequencing Reveals Novel Spinal Cord Contributions to Neuropathic Pain. Professor Mark Zylka.
- Keiko Nishimura**, *Communication Studies*, Communication Robot: Animating a Technological Solution in Twenty-First Century Japan. Professor Lawrence Grossberg.
- Kevin O'Connor**, *Statistics and Operations Research*, Computation and Consistent Estimation of Stationary Optimal Transport Plans. Professors Andrew Nobel and Kevin McGoff.
- Samuel Wade Olson**, *Chemistry*, Hidden Structural Dynamics of Human 7SK RNA Revealed by Deconvolution and Annotation of Ribonucleic Conformational Ensembles (DANCE-MaP). Professor Kevin Weeks.
- Michael Segundo Ortiz**, *Information and Library Science*, Eye-as-an-Input for Improving Interactive Information Retrieval. Professor Javed Mostafa.
- Gulden Othman**, *Physics*, The Cage Scanner: Investigating Surface Backgrounds in High-Purity Germanium Detectors. Professor Reyco Henning.
- Jon Patteson**, *Chemistry*, Biosynthesis of *Pseudomonas* Aeruginosa Natural Products. Professor Bo Li.
- Evan M. Paules**, *Nutrition*, Choline Availability and Regulation of SOX4 in the Developing Cortex. Professor Steven Zeisel.
- Kia Zoleé Pérez-Vale**, *Genetics and Molecular Biology*, Defining the Mechanism of Action of the Adheren Junction-Cytoskeletal Linker Canoe/Afadin During *Drosophila* Morphogenesis. Professor Mark Peifer.
- Nhan Huu Pham**, *Statistics and Operations Research*, New Stochastic and Randomized Algorithms for Nonconvex Optimization in Machine Learning. Professor Quoc Tran-Dinh.
- Melissa Plooster**, *Cell Biology and Physiology*, Endosomal Trafficking in Schizophrenia: Determining the Function of the High-Confidence Gene Candidate TSNARE1. Professors Patrick Brennwald and Stephanie Gupton.
- Kunyu Qiu**, *Pharmaceutical Sciences*, Delivery Systems for Therapeutic Microbes. Professor Aaron Anselmo.
- Yan Qu**, *Mass Communication*, Issues, Publics, Organizations, and Personal Networks: Toward an Integrated Issue Engagement Model. Professor Adam Saffer.
- Tine Rassalle**, *Religious Studies*, Coin Deposits From Ancient Synagogues in Late Antique Palestine. Professor Jodi Magness.
- Natalia Isadora Rebollo Fuentelba**, *Nutrition*, Quantifying the Longitudinal Changes of Non-Sugar Sweeteners in Purchases and Dietary Intake After the Implementation of Chile's Law of Food Labeling and Advertising. Professor Lindsey Smith Taillie.
- Jacob Gabriel Robins**, *Chemistry*, Efforts in Natural Product Total Synthesis Via Dearomatization of Functionalized Arenes: I. Tetrodotoxin and II. Veratrum Alkaloids. Professor Jeffrey Johnson.
- Pooja Saha**, *Biostatistics*, Using the CRM, POCRM, and Quasi-Likelihood to Design Single and Multi-Agent Dose-Finding Immunotherapy Trials. Professor Anastasia Ivanova.
- Yue Shan**, *Biostatistics*, Statistical Methods for Brain Imaging Genomics. Professors Hongtu Zhu and Yun Li.
- Alyssa Skarbek**, *History*, Becoming Zapatista in San Andrés Larráinzar: Conflict and Political Mobilization in Chiapas, 1959–1996. Professor Miguel La Serna.
- Alexey Slinkin**, *Mathematics*, Twisted de Rham Complex on Line and sl_2 Singular Vectors. Professor Alexander Varchenko.
- Joanna Sierks Smith**, *Religious Studies*, The Opened Vein: Slaughterhouses as Sites of the Hidden Sacred. Professor Todd Ochoa.
- Maximilian Georg Spiegel**, *Communication Studies*, Only the Sun Knows: Collectivity and Experimentation in Popular Music. Professor Lawrence Grossberg.
- Derrek W. Spronk**, *Materials Science*, Development and Evaluation of a Stationary Head Computed Tomography Scanner. Professors Otto Zhou and Jinsong Huang.
- Bethany Marie Stratakes**, *Chemistry*, Tuning Overpotential for Molecular Photoelectrocatalysts of Iridium and Nickel. Professor Alexander Miller.
- Katherine Elizabeth Tait**, *Sociology*, Secure Work in the Worker-Cooperative Sector. Professor Neal Caren.
- Qishun Tang**, *Materials Science*, Structure and Rheological Properties of Airway Mucus and Counterion Condensation Around Charged Nanoparticles. Professor Michael Rubinstein.
- Anze Testen**, *Neurobiology*, The Effects of Cocaine Self-Administration on Structural Plasticity of Astrocytes. Professor Kathryn Reissner.
- Kandace Thomas**, *Genetics and Molecular Biology*, Adherens Junction Engagement Regulates Functional Patterning of the Cardiac Pacemaker Cell Lineage. Professor Michael Bressan.
- Mallory Wolfe Turner**, *Maternal and Child Health*, Association Between North Carolina Pre-Kindergarten and School Exclusionary Discipline From Kindergarten Through Ninth Grade. Professor Carolyn Halpern.
- Alejandro Valencia**, *Environmental Sciences and Engineering*, Evaluation and Application of Geostatistical Data Fusion Methods to Improve Spatiotemporal Resolution of Air Pollution Exposures From Complex Transportation Environments. Professors Saravanan Arunachalam and Marc Serre.
- Alexi Ann Van Ess**, *Microbiology and Immunology*, Investigating the Multifaceted Interactions of Environmental Microbes. Professors Elizabeth Schoenborn and Janelle Arthur.
- Natasha Vinod**, *Biomedical Engineering*, High-Capacity Poly(2-Oxazoline) Nanoformulations for Reprogramming Tumor Microenvironments. Professor Alexander Kabanov.
- Rachel White Walmer**, *Biomedical Engineering*, Characterizing Disease With Contrast-Enhanced Ultrasound: Applications in Oncology and the Kidney. Professors Paul Dayton and Kennita Johnson.
- Rylee Wander**, *Pharmaceutical Sciences*, Analyzing the Substrate Specificities and Inhibition of 3-O-Sulfotransferases for the Chemoenzymatic Synthesis of Structurally Defined Heparan Sulfate. Professor Jian Liu.

Ke Wang, *Computer Science*, Federated Detection of Cross-Site Credential Vulnerabilities and Attacks. Professor Michael Reiter.

Rujin Wang, *Biostatistics*, Statistical Methods for Single-Cell Omics and Integrative Genomics. Professors Yuchao Jiang and Danyu Lin.

Xifeng Wang, *Biostatistics*, Statistical Learning Methods for Diffusion Magnetic Resonance Imaging. Professor Hongtu Zhu.

Adrien Wilkie, *Epidemiology*, Maternal Gestational Exposure to Coal-Fired Power Plant-Related Air Pollution and Associations With Preterm Birth. Professor Julie Daniels.

Catherine Wolff, *Epidemiology*, A Comprehensive Examination and Burden Assessment of Firearm-Related Injury and Death in North Carolina From 2010–2017. Professor Stephen Marshall.

Jiawei Xu, *Biostatistics*, Bayesian Methods for Clinical Trial Design: Approaches for Joint Models. Professors Joseph Ibrahim and Matthew Psioda.

Lindsey Yates, *Health Policy and Management*, Racial Differences in Immediate Postpartum Long-Acting Reversible Contraception in North Carolina. Professor Morris Weinberger.

Kailei Ye, *Business Administration*, Essays in Corporate Finance. Professor Paige Ouimet.

Jibo Zhang, *Biochemistry and Biophysics*, Elucidating the Biological Functions of Yeats Domain Containing Proteins in Metabolism Driven Transcriptional Regulation. Professor Brian Strahl.

Menghan Zhang, *Pharmaceutical Sciences*, Molecular Hybridization Used to Design and Synthesize Neotanshinlactone Derivatives as PD-1/PD-L1 Inhibitors. Professor Kuo-Hsiung Lee.

Jing Zhu, *Pharmaceutical Sciences*, The Ongoing Quest for Precision: Tacrolimus Dosing in Adult Allogeneic Hematopoietic Stem Cell Transplant Recipients. Professor Daniel Crona.

Barbara Alvarez Martin, *Health Policy and Management*, Improving Public Health Communication in a Politically Polarized Environment: Exploring the Use of Moral Values in Message Framing. Professor Sandra Greene.

Megan McGuire, *Health Policy and Management*, Data and Technology in Humanitarian Organizations: Patient Data Protection and Privacy in the Digital Era. Professor Susan Helm-Murtagh.

Yvette Williams, *Health Policy and Management*, Emergency Department High-Utilization: Best Practices for Management in the Medicaid Population. Professor Pam Silberman.

DOCTOR OF NURSING PRACTICE

Polly Kanoy, *Nursing Practice*, Nurse-Driven Spiritual Care Referrals for Poststroke Depression. Professor Leslie Sharpe.

Kristen Smith Mabe, *Nursing Practice*, Implementing a Virtual Animal Assisted Therapy Intervention to Improve Stress in Trauma Intensive Care Unit Nurses During COVID-19. Professor Margaret Carman.

DOCTOR OF PUBLIC HEALTH

Mary Christiane Hurt, *Health Policy and Management*, Sexual Violence in Higher Education: How Can Schools Orient Their Sexual Misconduct and Title IX Processes to Address Risk, Prevent Future Harm, and Promote Campus Safety? Professor Pam Silberman.

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

Credits

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