

CLEMSON UNIVERSITY

Doctoral Hooding Ceremony

DECEMBER 15, 2021



Candidates appearing in this program may not be certified graduates. Certification of graduation must come from the Registrar of the University.

DOCTORAL HOODING CEREMONY

WEDNESDAY, DECEMBER 15, 2021

3:00 P.M.

BROOKS CENTER FOR THE PERFORMING ARTS

CLEMSON, SOUTH CAROLINA

ORDER OF CEREMONIES

PROCESSIONAL

Please stand as you are able for the processional and the National Anthem.

NATIONAL ANTHEM

WELCOME AND INTRODUCTIONS

John Lopes

Associate Provost and Dean of the Graduate School

GRADUATE ADDRESS

Jameka N. Jackson

Ph.D. Candidate: Educational Leadership

Selected by the Graduate Student and Postdoctoral Advisory Committee

REMARKS

John Lopes

Associate Provost and Dean of the Graduate School

and

Robert H. Jones

Executive Vice President for Academic Affairs and Provost

CONFERRING OF DEGREES

President James P. Clements

ALMA MATER

Please stand as you are able and remain standing for the recessional.

RECESSIONAL

Today's ceremony is being streamed live with captioning at tv.clemson.edu/live and at youtube.com/ClemsonUniversity, where it will be archived after the ceremony.

Sign language interpreting available in the front right corner of theater.

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Special Assistant to the President for Inclusive Excellence

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Assistant Vice President and Executive Director
Office of Institutional Excellence

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Vice President for University Relations
Chief Marketing and Communications Officer

Graham Neff
Acting Director of Athletics

Tracy Arwood
Chief Ethics and Compliance Officer

THE GRADUATE SCHOOL

John Lopes
Associate Provost and Dean of the Graduate School

Natasha N. Croom
Associate Dean

Brian N. Dominy
Associate Dean

William G. Ferrell
Associate Dean

ASSOCIATE DEANS AND DEPARTMENT CHAIRS

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Jean Bertrand
Associate Dean of Undergraduate Studies

Thomas Dobbins
Associate Dean of Outreach and Engagement

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Charles F. Rosenkrans, Jr..... Animal and Veterinary Sciences
Charles R. Santerre..... Food, Nutrition, and Packaging Sciences
Todd Petty..... Forestry and Environmental Conservation
Carlyle C. Brewster Plant and Environmental Sciences

COLLEGE OF ARCHITECTURE, ARTS AND HUMANITIES

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Interim Associate Dean for Undergraduate and Graduate Studies

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Associate Dean for Research and Academic Affairs

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Valerie A. Zimany..... Art
John A. Gaber..... City Planning and Real Estate Development
N. Mike Jackson..... Nieri Family Department of Construction
Science and Management

William Stockton English
Amit Bein..... History
Salvador A. Oropesa Languages
Linda Dzuris Performing Arts
Kelly C. Smith..... Philosophy and Religion

WILBUR O. AND ANN POWERS COLLEGE OF BUSINESS

Gregory M. Pickett
Associate Dean, Director of M.B.A. Programs and Greenville ONE
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Associate Dean for Academic Affairs

Sally K. Widener School of Accountancy
Scott L. Baier Economics
Angela G. Morgan..... Finance
Charles “Chip” Tonkin..... Graphic Communications
Craig Wallace Management
Jennifer D. Siemens Marketing

COLLEGE OF BEHAVIORAL, SOCIAL AND HEALTH SCIENCES

Rachel M. Mayo
Associate Dean for Research and Graduate Studies

Denise M. Anderson
Associate Dean for Undergraduate Studies, Faculty Affairs
and Inclusive Excellence

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Jeffrey Hallo, interim..... Parks, Recreation and Tourism Management
Jeffrey S. Peake Political Science
Patrick H. Raymark..... Psychology
Sarah F. Griffin, interim Public Health Sciences
Katherine E. Weisensee Sociology, Anthropology and
Criminal Justice

COLLEGE OF EDUCATION

Jeff C. Marshall
Associate Dean for Research and Graduate Studies

Michelle P. Cook
Associate Dean for Undergraduate Studies
and Faculty Engagement

Debi M. Switzer Education and Human Development
Hans W. Klar, interim Educational and Organizational
Leadership Development
Cynthia Deaton Teaching and Learning

COLLEGE OF ENGINEERING, COMPUTING AND APPLIED SCIENCES

Daniel L. Noneaker
Associate Dean for Research

Bradley J. Putman
Associate Dean for Undergraduate Studies

Oliver J. Myers
Associate Dean for Inclusive Excellence – Undergraduate

Melissa C. Smith
Associate Dean for Inclusive Excellence – Graduate

Zoran S. Filipi Automotive Engineering
Martine LaBerge Bioengineering
David A. Bruce Chemical and Biomolecular Engineering
Jesus M. de la Garza Civil Engineering
Amy W. Apon School of Computing
Hai Xiao Electrical and Computer Engineering
Cindy M. Lee Engineering and Science Education
David L. Freedman Environmental Engineering and
Earth Sciences
R. Joe Watkins General Engineering
Kevin M. Taaffe..... Industrial Engineering
Kyle S. Brinkman Materials Science and Engineering
Atul Kelkar..... Mechanical Engineering

COLLEGE OF SCIENCE

Stephen E. Creager
Associate Dean for Discovery, Graduate Education,
Space Optimization and Faculty Success

Calvin L. Williams
Associate Dean for Undergraduate Excellence, Global Engagement,
Community Engagement and Inclusive Excellence

Saara DeWalt Biological Sciences
William T. Pennington Chemistry
David F. Clayton Genetics and Biochemistry
Kevin L. James School of Mathematical and Statistical Sciences
Sean D. Brittain Physics and Astronomy

GRADUATE STUDENT GOVERNMENT

Robert O’Hara, President
Abi Roberts, Vice President

Special Thanks to Graduate Program Directors and Staff. Although there are too many to list, the graduate program coordinators, graduate faculty, administrative contacts, and student services coordinators for each graduate degree program are essential to the success of graduate education at Clemson University. We thank each and every one of you.

POSTHUMOUS DEGREE

Ph.D. in Bioengineering Awarded Posthumously to
Melissa McCullough

Today's ceremony includes the awarding of a posthumous degree to Melissa McCullough, who was nearing completion of her Ph.D. in Bioengineering when she passed away earlier this year. In recognition of her accomplishments, dedication, perseverance, and contributions, her advisory committee, department chair, college dean, and the dean of the Graduate School unanimously supported the awarding of her degree today. Clemson University is proud to present the Ph.D. degree to Dr. Melissa McCullough. Accepting the degree on her behalf are her father, Tim McCullough, and her brother, Jason McCullough.

DOCTORAL PIN

Earning a doctoral degree is never easy. Finishing a program in the midst of a global pandemic is truly remarkable. To honor the extraordinary dedication and achievement of today's graduates, each one will receive a lapel pin designed for our doctoral graduates.

The pin features a block "C" logo that was in use in 1955 when Clemson offered its first doctoral degree program. Across the C are three stripes like the ones graduates are wearing on their sleeves today, a feature of Clemson's official doctoral regalia.

DOCTORAL HOODING

The doctoral hood is a symbolic honor of distinction bestowed upon scholars who have attained the highest level of formal education available in the world, representing a typical range of five to seven years of study beyond the bachelor's degree. Clemson's 46-inch-long doctoral hood is draped over the shoulders by the faculty member who, as chair of the advisory committee, has formally mentored and guided the student's research and education. You will note that faculty members are wearing gowns, caps and hoods of many colors and designs. These academic costumes of medieval origin are, for faculty with degrees from U.S. institutions, specified by a uniform code maintained by the American Council on Education. Caps are black and are usually mortar boards or tams with tassels. Doctors of philosophy wear gold tassels usually of metallic thread; those with other degrees wear black or discipline colors. Those who have received their degrees from institutions outside the United States wear regalia specified by the awarding institutions.

Doctors' gowns are full, with bell-like sleeves. The front is bordered with velvet panels and the sleeves are marked by three velvet bars. While some gowns are black with black velvet, one variation is to replace black velvet with velvet in the discipline color. A second variation is a colored gown usually of the university's colors.

All hoods specify the level of degree, the type of discipline studied and the awarding institution. The width of the velvet trim conveys the degree. In addition, the degree is indicated by the color of the trim edging the hood to form the throat over the gown. The most frequently seen color is dark blue, which designates the Doctor of Philosophy (Ph.D.) degree. Finally, the color of the hood's lining is specific to the awarding institution. The colors are displayed in combinations that are drawn from heraldry. Notice that the Clemson University hood is lined with purple through which is an orange chevron (a "V"). Although many combinations are duplicated by dozens of institutions, Clemson is presently the only institution with that registered combination of purple and orange.

The officers, trustees and honored guests wear academic, ecclesiastical or military regalia as set forth by their professions. The president of Clemson University wears a purple gown with four velvet bars piped in orange and the University seal embroidered on the panels. Each trustee wears a similar gown with three velvet bars piped in orange for doctorates and an embroidered palmetto tree on each sleeve for those who do not hold doctorates. Trustee hoods are either from Clemson or from the awarding school.

A BRIEF HISTORY OF GRADUATE EDUCATION AND THE GRADUATE SCHOOL AT CLEMSON UNIVERSITY

[Clemson's faculty] would engage in original and important research, by which knowledge would be increased, whilst the immediate objects... would be the diffusion of facts on all scientific subjects. It would be vain to attempt to fix a limit to the benefits that would thus be conferred upon mankind and their effects upon society...
— THOMAS GREEN CLEMSON¹

In conceptualizing a “high seminary of learning” for South Carolina, Thomas Green Clemson knowingly set the stage for graduate education to emerge as an engine of economic development in the state. Graduate education quickly became synonymous with the application of theory to improving the practices of education and agriculture. The analysis of fertilizer, a contracted activity of the chemistry department that began in the late 1930s, would help restore depleted South Carolina soils, increase agricultural production, and spur a rapid development in opportunities for students at Clemson College to study beyond the baccalaureate degree.

Graduate coursework initially responded to the needs of veterans and to the interests of teachers wanting to improve their classroom skills, but also – from its inception – attracted international students’ attention. On June 3, 1924, Patrick Hobson of Sandy Springs, South Carolina, earned the first master’s degree awarded at Clemson. He used his degree in vocational education to serve as a high school principal and later as superintendent of schools in York County, South Carolina and Mitchell County, North Carolina. The third graduate degree, a master’s in textile industrial education awarded to Ko-Chia Li from Mukden, China, on June 1, 1926, initiated an enrollment trend that has catapulted China to its present status as the number-one sending country for international graduate students at Clemson. Mr. Li returned to China and taught as a professor of textile engineering at Peking University, and served as head of the construction department in LiaoBei Province.

From 1938 until 1945, all aspects of graduate education (courses, programs, policies, procedures, admission, and graduation) developed under the auspices of the Committee on Graduate Instruction, chaired by F.H.H. Calhoun, Dean of the School of Chemistry and Geology. Twice during these years the University’s attempts to formalize graduate education were thwarted because of the challenges to the Committee to maintain the necessary standards of quality. Clemson faculty recognized early that to establish a graduate program that enabled Clemson alumni to enroll would require strengthening the undergraduate curriculum and courses to prevent knowledge gaps “between the two.”²

On March 14, 1945, President Poole received the Committee’s resolution requesting the appointment of a Dean of the Graduate School. It had been ascertained by that time that 19 courses could be offered immediately by the schools of agriculture, chemistry, engineering, textiles, and arts and sciences. On July 27, 1946, the Board of Trustees approved the Committee’s proposed graduate program of study and, that fall, formally admitted the first class of students into “the Graduate School.” However, it would not be until June 15, 1951, that Herbert J. Webb, Chair of the Department of Chemistry and Toxicology, was appointed as the first Dean of the Graduate School.

Masterfully stewarded by President Poole himself and modeled initially after several prestigious southern institutions, Clemson’s graduate programs grew cautiously but steadily, introducing the first doctoral degree, in plant pathology, in 1955. Today, the Graduate School proudly enrolls more than 5,000 graduate students and is committed to continued growth at both the master’s and doctoral levels.

1. Holmes, A. and G. R. Sherrill. *Thomas Green Clemson: His Life and Work*. 1937, p. 129.

2. Clemson University Library System archives. *Minutes of the Committee on Graduate Instruction, 1945-1953*, p. 7.

CANDIDATES FOR THE DOCTORAL DEGREE

John Lopes, Dean of the Graduate School

COLLEGE OF AGRICULTURE, FORESTRY AND LIFE SCIENCES

DOCTOR OF PHILOSOPHY

Food, Nutrition, and Packaging Sciences

Jeffrey Allen Bowles..... Bethel, OH

B.S., College of Mount Saint Joseph; M.B.A., Xavier University; M.S., University of Iowa

Adviser: Dr. William Whiteside

Dissertation: Effects of Food-Grade Nonionic Surfactants on the Iron-Catalyzed Oxidative Stability of Lycopene in Oil-in-Water Emulsions

Plant and Environmental Sciences

Wanfang Fu..... Weifang, China

B.Sc., Central South University of Forestry and Technology; M.S., Clemson University

Adviser: Dr. Ksenija Gasic

Dissertation: Enabling DNA-Informed Breeding for Disease Resistance in Peach

Dr. Fu has four peer-reviewed publications and was awarded the Wade Stackhouse Fellowship in 2018–2021 and a Doctoral Dissertation Completion Award in 2020–2021. She plans to pursue a career in academia.

Bhupinder Singh Jatana..... Faridkot, India

B.Sc., Punjabi University; M.Sc., Punjab Agricultural University

Adviser: Dr. Nishanth Tharayil

Dissertation: Recapture and Reuse of Nitrogen and Phosphorus from Rendered Animal Materials to Enhance Nutrient Use Efficiency and Produce Quality in Agricultural Crops

Dr. Jatana has four peer reviewed publications and has accepted a postdoctoral research associate position at Cornell University.

Maria Mercedes Rossi Buenos Aires, Argentina

B.S., Universidad de Buenos Aires; M.S., Clemson University

Adviser: Dr. Dale Layfield

Dissertation: An Assessment of the Needs of School-Based Agricultural Educators and Other Professionals in Agricultural Service Agencies for a Professional Online Master's Degree in Agricultural Education

Wildlife and Fisheries Biology

Jeremy S. Dertien.....Austin, TX

B.S., Colorado State University; M.S., Colorado State University

Adviser: Dr. Robert Baldwin

Dissertation: Wetland, Avian, and Landscape Connectivity Indicators for Conservation Planning

Dr. Dertien has seven peer-reviewed publications and has accepted a postdoctoral position with Tigers United University Consortium at Clemson University researching human-tiger conflict in southern Asia.

Bradley Paul Wilkinson Tallmadge, OH
B.S., Miami University; M.S., San Jose State University
Adviser: Dr. Patrick Jodice
Dissertation: cological Outcomes of Movement Behavior in Brown Pelicans from the South Atlantic Bight
Dr. Wilkinson has five peer-reviewed publications, was awarded the Columbus Hammond Townsend Fellowship and Douglas R. Phillips Award for Graduate Student Excellence, and is currently a postdoctoral associate at Duke University.

COLLEGE OF ARCHITECTURE, ARTS AND HUMANITIES

DOCTOR OF PHILOSOPHY

Planning, Design, and the Built Environment

Sida Dai.....Pingxiang, China
B.Arch., Huaqiao University; M.Arch., University of Virginia
Adviser: Dr. Michael Carlos Barrios Kleiss
Dissertation: Reinforcement Learning Based Design Methodology for Building Performance: A Case of Building Facades with Kinetic Elementss

Rhetorics, Communication, and Information Design

Chelsea Megan Slack New Orleans, LA
B.A., Southern Arkansas University; M.A., University of Memphis; M.A.T., Southern Arkansas University
Adviser: Dr. Bryan Denham
Dissertation: Cultivation 2.0: The Mediated Environment as Message in the 21st Century
Dr. Slack is a full-time faculty member at Southeastern Louisiana University in Hammond, LA.

COLLEGE OF BEHAVIORAL, SOCIAL AND HEALTH SCIENCES

DOCTOR OF PHILOSOPHY

Applied Health Research and Evaluation

Smith Foster Heavner-SullivanSimpsonville, SC
B.S.N., M.S., Clemson University
Advisers: Dr. Sarah Griffin; Dr. Ann Blair Kennedy
Dissertation: “I Thought I was Going to War”: Experiences of Health-Care Workers During the COVID-19 Pandemic – An Exploration of *ProjectCOPE*
Prisma Health honored Dr. Heavner with the Award for Excellence in Nursing for his leadership of initiatives in response to COVID-19. He has accepted a position as scientific director of an international research consortium and two faculty appointments. He will continue his education in a postgraduate program at Harvard Medical School.

Healthcare Genetics

Megan Delaney McCoy..... Midlothian, VA
B.S., James Madison University
Advisers: Dr. Sara Sarasua; Dr. Jane DeLuca
Dissertation: The Genetics of Kidney Disorders in Phelan-McDermid Syndrome

Industrial/Organizational Psychology

Brandon R. McIntyre Myrtle Beach, SC
B.S., M.S., Clemson University
Adviser: Dr. Cynthia Pury
Dissertation: The Development of the Adaptable Self-Disclosure Scale (ASDS):
A Multidimensional Approach to Disclosure Assessment

International Family and Community Studies

Lyudmyla Tsykalova Clemson, SC
B.A., M.A., KROK University; M.A., University of Palermo
Adviser: Dr. Natallia Sianko
Dissertation: The Future of Humankind: Comparative Cross-Cultural Study of Youth
Environmental Engagement and Environmental Outcomes

Parks, Recreation and Tourism Management

Jamie Lynn Cathey..... Nashville, TN
B.S., University of Tennessee; M.A., Adelphi University
Adviser: Dr. Lori Dickes
Dissertation: “You Can’t Hide Behind Being a House”: Examining the Policy Process,
Design, and Implementation of Short-Term Rental Regulations, a Case Study of
Nashville, TN
Dr. Cathey was a lecturer in her departmentt for four years and currently works as a lecturer in the
Leisure and Sport Management Program at Middle Tennessee State University.

WILBUR O. AND ANN POWERS COLLEGE OF BUSINESS

DOCTOR OF PHILOSOPHY

Economics

Peiyun Jin Philadelphia, PA
B.S., Tianjin Polytechnic University; M.S., Penn State Great Valley
Adviser: Dr. Gerald Dwyer
Dissertation: Arbitrage Among Stablecoins

Yanchao Li Qingdao, China
B.A., Fudan University
Adviser: Dr. Gerald Dwyer
Dissertation: Housing Price Fluctuation in Different Tiers of Cities in China

Bob Shihao Wen.....Guangzhou, China
B.S., Sun Yat Sen University
Adviser: Dr. Curtis Simon
Dissertation: The Causal Effects of Growing up in a Two-Parent Household: Evidence from
the PSID on Schooling, Earnings, and Labor Force Participation
Dr. Wen won the Best Paper award at the Northeast Business and Economics Association's 48th
annual meeting in 2021. He has one peer-reviewed publication and is the father of two daughters.

COLLEGE OF EDUCATION

DOCTOR OF EDUCATION

Education Systems Improvement Science

James Lerae Goude.....Summerville, SC

B.A., Clemson University; Ed.S., M.A., the Citadel
Adviser: Dr. Jane Clark Lindle
Dissertation: A Critical Analysis of the Discourse of Culturally Responsive Curriculum
Within South Carolina's Secondary U.S. History and Constitution Standards

Takara Illana Hart.....Charleston, SC

B.S., University of South Carolina; Ed.S., The Citadel; M.Ed., Charleston Southern
University
Adviser: Dr. Reginald Wilkerson
Dissertation: Interventions to Increase Prospective Teacher Candidates' Praxis II Content
Exam Scores
Dr. Hart is a District Evaluator with the Berkeley County School District in Moncks Corner, SC.

Tiffany Erin Webb OsborneAnderson, SC

B.A., Clemson University; Ed.S., M.A., Furman University
Adviser: Dr. Reginald Wilkerson
Dissertation: Impact of Interventions on Student Performance Among Eighth Graders in
Algebra 1

DOCTOR OF PHILOSOPHY

Educational Leadership

Lori B. CorleySaluda, SC

M.Ed., Clemson University
Adviser: Dr. Hans Klar
Dissertation: Building Leadership Capacity in an Instructional Coach: A Principal's
Contribution to the Growth of a Leader Through the Lens of Complexity Leadership
Theory

Jameka N. JacksonAiken, SC

B.A., University of South Carolina Aiken; M.P.A., Augusta University
Adviser: Dr. Natasha Croom
Dissertation: Lifting as We Climb: A Hermeneutic Phenomenology on How Black Women
Administrators Develop Their Leader Identity at Predominantly White Institutions

Eric T. Pernotto.....Greenville, SC
B.A., Roanoke College; M.Ed., University of Notre Dame
Adviser: Dr. Michelle Boettcher
Dissertation: Embracing the Role of Educator: The Experiences of Housing and Residence
Life Staff in Implementing a Curriculum Model

Altheia Lesley RichardsonAnderson, SC
B.S., University of South Carolina; M.B.A., Clemson University
Adviser: Dr. Natasha Croom
Dissertation: The Impact of Interlocking Systems of Oppression on the Leadership and
Decision-Making Experiences of Black Women in Executive-Level Leadership Positions
at Predominantly White Public Research Institutions in the United States

Myles SurretGreenville, SC
B.A., Furman University; M.A., George Washington University
Adviser: Dr. Michelle Boettcher
Dissertation: The Problematic Myth of Student Affairs Attrition: A Regression Analysis

COLLEGE OF ENGINEERING, COMPUTING AND APPLIED SCIENCES

DOCTOR OF PHILOSOPHY

Automotive Engineering

Sean Jeffery MoserAlbuquerque, NM
B.S., Colorado State University; M.S., Clemson University
Advisers: Dr. Zoran Filipi; Dr. Laura Redmond
Dissertation: Coupled Thermal Mechanical Analysis Methodology for Thermal
Performance Evaluation and Failure Mode Identification of Thermal Barrier Coatings
for Heavy Duty Diesel Engines
Dr. Moser has eight peer-reviewed papers and has accepted a postdoctoral research position at
Clemson University.

Sai Aditya PradeepBengaluru, India
B.Tech., SRM University; M.S., Clemson University
Adviser: Dr. Srikanth Pilla
Dissertation: Understanding Process-Structure-Property-Performance Relationships of
Thermoplastic Olefins (TPO) Foams Through a Novel Manufacturing to Response
Pathway
Dr. Pradeep has six peer-reviewed publications and received five prestigious scholarships, including
the Automotive and Composites Division ACCE Scholarship and the Salvatore J. Monte
Thermoplastics Materials and Foams Division Scholarship from the Society of Plastics Engineers.
He plans to work as a manufacturing engineering specialist at the Clemson Composites Center.

DoHyun Daniel YoonGreenville, SC
B.S., Mercer University
Adviser: Beshah Ayalew
Dissertation: Cooperative Perception for Social Driving in Connected Vehicle Traffic
Dr. Yoon has eight peer-reviewed publications. He won the American Society of Mechanical
Engineers Advanced Vehicle Technologies Best Paper Award in 2019 and was named his
department's Outstanding Ph.D. Student of the Year in 2020. He currently works in the automotive
industry as a software engineer.

Bioengineering

Elizabeth Elaine Gianino..... Leawood, KS

B.S., Wake Forest University

Adviser: Dr. Jordon Gilmore

Dissertation: Influencing the Inflammatory Response Through Multi-Scale Geometry, Antibiotic Release, and Fluid Management in a Textile-Based Biomaterial Wound Dressing

Dr. Gianino served as president of the Clemson Bioengineering Organization and vice president of the Clemson Circle of the Omicron Delta Kappa National Leadership Honor Society. She has two peer-review publications and plans to work in the medical device industry.

Melissa A. McCullough[†]Charleston, SC

B.S., Old Dominion University; M.S., Clemson University

Adviser: Dr. Delphine Dean

Dissertation: To Pee or Not to Pee: Device Design for Current Public Health Disparities

[†]Awarded posthumously

Craig Levar Miller..... Holly Hill, SC

B.S., The Citadel; M.S., Clemson University

Adviser: Dr. Jordon Gilmore

Dissertation: Development of Solution Blow Spun Nanofibers as Electrical and Whole Cell Biosensing Interfaces

Timothy M. Samec, Jr.Drums, PA

B.S., M.S., Slippery Rock University of Pennsylvania; M.S., Clemson University

Adviser: Dr. Angela Alexander-Bryant

Dissertation: Novel Peptide Biomaterials for Enhanced Delivery of siRNA Cargo for Treatment of Ovarian Cancer

Dr. Samec has two peer-reviewed publications and a provisional patent under review. He is the first Medical University of South Carolina-Hollings Cancer Center Lowvelo Fellowship recipient and was awarded the Clemson Bioengineering Eugene M. Langan III Service Award, Austin T. Moore Leadership Award, and Omicron Delta Kappa Jerome V. Reel Award for Academic Excellence. He has accepted a position at Iovance Biotherapeutics developing T-cell therapies to treat metastatic cancers.

Dipasha Sinha..... Durgapur, India

B.Tech., M.Tech., Indian Institute of Technology Kharagpur

Adviser: Dr. Naren Vyavahare

Dissertation: Development of Tissue Engineered Scaffolds for Cardiovascular Repair and Replacement in Pediatric Patients

Ailin Wei..... Clemson, SC

B.S., Shandong University; M.S., Clemson University

Adviser: Dr. Bruce Gao

Dissertation: Time-Lapse Observation of Sarcomeric Addition in Hypertrophic Models Based on a Tissue Like Cardiomyocyte Culture

Chemical Engineering

Maxwell Hilbert Bethesda, MD
B.S., Virginia Polytech Institute and State University; M.Engr., University of Maryland
Adviser: Dr. Mark Blenner
Dissertation: Towards Understanding Protein Immobilization Rules Through Site-Specific
Covalent Immobilization of T4 Lysozyme

Civil Engineering

Sereen Akram Majdalaweyh Amman, Jordan
B.S., Mutah University; M.S., University of Jordan
Adviser: Dr. Weichiang Pang
Dissertation: Seismic Performance Assessment of Building Contents: Monetary Losses and
Injuries
Dr. Majdalaweyh has four peer-reviewed journal papers and five conference papers. She was awarded
an Engineering and Science Education certificate and plans to work in the catastrophe modeling
and risk management industry.

Computer Engineering

Pei Huang Nanjing, China
B.S., Xidian University; M.S., State University of New York-Binghamton
Adviser: Dr. Linke Guo
Dissertation: Secure Data Collection and Analysis in Smart Health Monitoring
Dr. Huang has five first-author peer-reviewed publications and will be working as a research scientist
in industry.

Ju Lin Jining, China
B.S., Liaocheng University; M.S., Beijing Language and Culture University
Adviser: Dr. Melissa Smith
Dissertation: Deep Learning Based Speech Enhancement and Its Application to Speech
Recognition

Benjamin Thomas Sherman Shealy Irmo, SC
B.S., Clemson University
Adviser: Dr. Melissa Smith
Dissertation: Intelligent Resource Prediction for HPC and Scientific Workflows
Dr. Shealy has nine peer-reviewed publications in collaboration with multiple research groups and
was a recipient of a Graduate Assistance in Areas of National Need (GAANN) Fellowship. He plans
to pursue a career in the technology industry.

Computer Science

Farah Mahmoud Alshaniq Irbid, Jordan
B.S., Jordan University of Science and Technology; M.S., Clemson University
Adviser: Dr. Amy Apon
Dissertation: Enhancing the Performance of Text Mining
Dr. Alshaniq received a scholarship from Jordan University of Science and Technology and has
accepted an assistant professor position at Jordan University of Science and Technology

Jason William Anderson..... Alpine, TX
B.S., Clemson University
Advisers: Dr. Amy Apon; Dr. Ken Kennedy
Dissertation: Methods and Applications of Synthetic Data Generation

Robert Raymond Underwood..... Lexington, SC
B.S., M.S., Clemson University
Advisers: Dr. Amy Apon; Dr. Jon Calhoun
Dissertation: Approachable Error Bounded Lossy Compression
Dr. Underwood has six peer-reviewed publications on data compression. He was selected to participate the U.S. Department of Energy Office of Science Graduate Student Research Program at Argonne National Laboratory, and was a National Science Foundation Resilient Infrastructure and Environmental Systems Fellow at Clemson University.

Electrical Engineering

Huu Phuong Hoang Nghe An, Vietnam
B.S., Hanoi University of Science and Technology; M.S., Gwangju Institute of Science and Technology
Adviser: Dr. Christopher Edrington
Dissertation: Integrating Degradation Forecasting and Abatement Framework into Advanced Distribution Management System
Dr. Hoang has four peer-reviewed publications and has accepted a research engineer position.

Jianan Tang Central, SC
B.S., Tsinghua University
Advisers: Dr. Hai Xiao; Dr. Fei Peng
Dissertation: Deep Learning-Guided Prediction of Material's Microstructures and Applications to Advanced Manufacturing

Engineering and Science Education

Baker Andrew Martin.....Bristol, VA
B.S., Virginia Tech; M.S., University of Tennessee-Knoxville
Adviser: Dr. Marisa Orr
Dissertation: An Investigation of Engineering Majors: Graduates' Enrollment Timelines and First-Year Students' Perceptions and Exploration
Dr. Martin has twelve peer-reviewed conference paper publications and one journal publication. He was named his department's Outstanding Graduate Researcher in 2021. Baker currently teaches general engineering at Clemson University.

Human Centered Computing

Megan Elaine Fowler Fair Play, SC
B.S., Clemson University; M.A.T., Clemson University
Adviser: Dr. Murali Sitaraman
Dissertation: A Human-Centric System for Symbolic Reasoning About Code
Dr. Fowler has four peer-reviewed publications and is currently a computer science educator at Walhalla High School.

Divine Maloney..... Middleburg, FL
B.A., Sewanee: The University of the South
Advisers: Dr. Andrew Robb; Dr. Guo Freeman
Dissertation: A Youthful Metaverse: Towards Designing Safe, Equitable, and Emotionally Fulfilling Social Virtual Reality Spaces for Younger Users
Dr. Maloney is a leading scientist on youth in the metaverse and broader interactivity in the metaverse. He has over 20 peer-reviewed publications, received over \$320,000 in Ph.D. fellowship funding, and plans to join Apple as a research scientist.

Industrial Engineering

Alexey A. Bochkarev Tiksi-3, Russia
B.Sc., Moscow Institute of Physics and Technology; M.Sc., Moscow Institute of Physics and Technology; M.A., New Economic School
Adviser: Dr. J. Cole Smith
Dissertation: Selected Topics in Network Optimization: Aligning Binary Decision Diagrams for a Facility Location Problem and a Search Method for Dynamic Shortest Path Interdiction

Materials Science and Engineering

Linyu Pan Nantong, China
B.S., Nanjing Tech University; M.S., Chinese Academy of Science, M.S., Clemson University
Adviser: Dr. Luiz Jacobsohn
Dissertation: Investigation and Characterization of New Optically Stimulated Luminescence (OSL) Dosimetric Materials

Yanting Xing Taiyuan, China
B.S., North University of China
Adviser: Dr. Feng Ding
Dissertation: Understanding and Modulating Amyloid Aggregation

Mechanical Engineering

Saheem Absar Sylhet, Bangladesh
B.S., Bangladesh University of Engineering and Technology; M.S., Georgia Southern University
Adviser: Dr. Hongseok Choi
Dissertation: Controlling Size and Shape of Pores During Metal Solidification for Manufacturing of Functionally Graded Metal Foams

Priyanka Balkrishna Bhovad.....Navi Mumbai, India
B.Tech., Indian Institute of Space Science and Technology
Adviser: Dr. Suyi Li
Dissertation: Developing Design and Analysis Framework for Hybrid Mechanical-Digital Control of Soft Robots: from Mechanics-Based Motion Sequencing to Physical Reservoir Computing
Dr. Bhovad has eight peer-reviewed publications in the field of origami soft robotics and currently works for medical device company Bionaut Labs, Inc.

Anmol Kothari..... Jaipur, India
M.S., Indian Institute of Technology; B.Tech., Rajasthan Technical University
Adviser: Dr. Gang Li
Dissertation: Mechanical Interfacial Locking and Multiscale Modeling of Reinforced
Thermoplastic Composites for Structural Applications
Dr. Kothari has five peer-reviewed publications and plans to work in the automotive industry.

Saiful Islam Tamim..... Dhaka, Bangladesh
B.Sc., Bangladesh University of Engineering and Technology
Adviser: Dr. Joshua Bostwick
Dissertation: Capillary Driven Transport in Soft Solids
Dr. Tamim has five peer-reviewed publications and plans to pursue a career in the field of
fundamental research in fluid mechanics.

Mengyuan Yuan..... Yibin, China
B.S., University of Science and Technology China
Adviser: Dr. Chenning Tong
Dissertation: Investigation of Scalar Mixing in Turbulent Jets and Flames

Chao Zhang Taiyuan, China
B.S., North University of China; M.S., Harbin Institute of Technology
Adviser: Dr. Hongseok Choi
Dissertation: Numerical and Experimental Study of Machining Process of High Strength
Lightweight Materials

COLLEGE OF SCIENCE

DOCTOR OF PHILOSOPHY

Biochemistry and Molecular Biology

Jessica Ann Jones..... Medina, OH
B.A., Malone University
Adviser: Dr. James Morris
Dissertation: Exploring the Role of AMPK in Nutrient Sensing and Signaling in the
Human Parasite *Trypanosoma brucei*
Dr. Jones has accepted a full-time position working for the U.S. Department of Defense. She will
continue studying human parasites with the Army Public Health Center.

Chemistry

Amina Khatun..... Sirajganj, Bangladesh
B.S., M.S., University of Dhaka
Adviser: Dr. Sourav Saha
Dissertation: Stimuli-Responsive and Electrically Conductive Metal-Organic Frameworks

Environmental Toxicology

Stephanie Barbara LaPlaca Fairfax, VA

B.S., M.S., University of South Carolina

Adviser: Dr. Peter van den Hurk

Dissertation: Toxicity and Effects of Tire Crumb Rubber in the Aquatic Environment

Genetics

Allison Hickman..... Cincinnati, OH

B.S., University of South Carolina

Adviser: Dr. Alex Feltus

Dissertation: Identification of Biomarker Systems of Autism Spectrum Disorder and Uterine Cancer

Dr. Hickman has four peer-reviewed publications and one currently in review. She earned the department's Outstanding Graduate in Learning Award in February 2020 and plans to work in the bioinformatics industry.

Sneha Shreekant Mokashi Greenwood, SC

B.S., Vellore Institute of Technology

Adviser: Dr. Robert Anholt

Dissertation: Of Single Nucleotides and Single Cells: Charting the Genotype-Phenotype Map at High Resolution Using *Drosophila melanogaster*

Dr. Mokashi has three peer-reviewed publications and is currently a postdoctoral associate at the Greenwood Genetic Center.

Mathematical Sciences

Pubudu Lakmal Wijesiri Jayasekara Merenchige..... Clemson, SC

B.S., University of Peradeniya; M.S., Clemson University

Adviser: Dr. Margaret Wiecek

Dissertation: An Algorithm for Biobjective Mixed Integer Quadratic Programs

Dr. Merenchige proposed the first ever algorithm to solve biobjective mixed integer quadratic programs.

CLEMSON ALMA MATER

Farmer and McGarity/arr. Freeman

Where the Blue Ridge yawns its greatness,
Where the Tigers play;

Here the sons of dear Old Clemson
Reign supreme always.

Chorus

Dear Old Clemson, we will triumph
And with all our might,

That the Tiger's roar may echo
O'er the mountain height.

We will dream of greater conquests,
For our past is grand,

And her sons have fought and conquered
Every foreign land.

Where the mountains smile in grandeur
O'er the hill and dale,

Here the Tiger lair is nestling
Swept by storm and gale.

We are brothers strong in manhood,
For we work and strive;

And our alma mater reigneth
Ever in our lives.

