

CLEMSON UNIVERSITY

Doctoral Hooding Ceremony

MAY 9, 2019



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DOCTORAL HOODING CEREMONY

THURSDAY, MAY 9, 2019

7:00 P.M.

BROOKS CENTER FOR THE PERFORMING ARTS

ORDER OF CEREMONIES

PROCESSIONAL

(Please stand for the processional and the National Anthem)

NATIONAL ANTHEM

OPENING OF CEREMONY

University Marshal Benjamin R. Stephens

REFLECTION

Leslie A. Lewis
Doctoral Candidate
Educational Leadership

WELCOME AND INTRODUCTIONS

Associate Provost and Dean of the Graduate School
Jason W. Osborne
and
Executive Vice President for Academic Affairs and Provost
Robert H. Jones

CONFERRING OF DEGREES, DELIVERY OF DIPLOMAS, AND HOODING

President James P. Clements

ALMA MATER

RECESSIONAL

Music by the Clemson University Brass Quintet
Selections and credits on page 18

*Today's ceremony is being streamed live with captioning at tv.clemson.edu/live.
The recording will be posted at tv.clemson.edu/live/archive when available.
Sign language interpreting available in the front right corner of theater.*

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DEANS

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Dean of Undergraduate Studies

Jason W. Osborne
Associate Provost and
Dean of the Graduate School

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and Life Sciences

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Health Sciences

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George J. Petersen
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Anand K. Gramopadhye
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and Applied Sciences

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Dean of the College of Science

Christopher Cox
Dean of University Libraries

ADMINISTRATIVE OFFICERS

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Special Assistant to the President for Inclusive Excellence
W.C. Hood, Jr.
General Counsel
Emily Watrous
Chief Human Resources Officer
Dan Radakovich, Jr.
Director of Athletics

THE GRADUATE SCHOOL

Jason W. Osborne
Associate Provost and Dean of the Graduate School
William G. Ferrell
Associate Dean
David S. Fleming
Associate Dean
Brian N. Dominy
Associate Dean
Tia N. Dumas
Assistant Dean for Professional Development and
Inclusive Excellence

GRADUATE STUDENT GOVERNMENT

Bryce Conti, President
Cody Woods, Vice President
Senthil Raj Ramesh, VP for Greenville Council

ASSOCIATE DEANS AND DEPARTMENT CHAIRS

COLLEGE OF AGRICULTURE, FORESTRY & LIFE SCIENCES

Paula Agudelo, interim
Associate Dean for Research & Graduate Studies
Jean Bertrand
Associate Dean for Undergraduate Studies
Thomas Dobbins
Associate Dean for Outreach & Engagement

Charles V. Privette, IIIAgricultural Sciences
Kristine L. VernonAnimal & Veterinary Sciences
E. Jeffery Rhodehamel Food, Nutrition, & Packaging Sciences
Greg K. YarrowForestry & Environmental Conservation
Carlyle BrewsterPlant & Environmental Sciences

COLLEGE OF ARCHITECTURE, ARTS & HUMANITIES

James H. Spencer
Associate Dean for Research & Graduate Studies
Lee J. Morrissey
Interim Associate Dean for Academic Affairs
& Undergraduate Studies

Katherine L. Schwensen School of Architecture
Valerie A. Zimany Art
John A. GaberCity Planning & Real Estate Development
N. Mike Jackson Construction Science & Management
Susanna M. AshtonEnglish
James M. BurnsHistory
Salvador A. Oropesa Languages
Becky K. BeckerPerforming Arts
Richard A. AmesburyPhilosophy & Religion

COLLEGE OF BEHAVIORAL, SOCIAL & HEALTH SCIENCES

Eric R. Muth
Associate Dean for Research & Graduate Studies
Denise M. Anderson
Associate Dean for Undergraduate Studies & Faculty Affairs
Kathy N. Headley
Senior Associate Dean of the Division of Collaborative
Academic Services

Kathleen L. Valentine School of Nursing
Joseph P. Mazer Jr. Communication
Wayne A. Freimund Parks, Recreation & Tourism Management
Jeffrey S. PeakePolitical Science
Patrick H. Raymark Psychology
Ronald W. Gimbel Public Health Sciences
Katherine E. Weisensee Sociology, Anthropology & Criminal Justice
Mark A. Small Youth, Family & Community Studies

COLLEGE OF BUSINESS

Gregory M. Pickett
Senior Associate Dean & Director of MBA Programs
Carl W. Hollingsworth, interim
Associate Dean for Academic Affairs

Sally K. Widener School of Accountancy
Scott L. Baier Economics
Angela G. Morgan Finance
Charles “Chip” Tonkin Graphic Communications
“Sri” V. Sridharan Management
Jesse N. Moore Marketing

COLLEGE OF EDUCATION

Kathy N. Headley
Senior Associate Dean of the Division of Collaborative
Academic Services
Jeff C. Marshall, interim
Associate Dean for Research & Graduate Studies
Michelle P. Cook, interim
Associate Dean for Undergraduate Studies
& Faculty Engagement

Debi M. Switzer Education & Human Development
Jane Clark Lindle, interim Educational & Organizational
Leadership Development
Cynthia Deaton, interim Teaching & Learning

COLLEGE OF ENGINEERING, COMPUTING & APPLIED SCIENCES

Douglas E. Hirt
Associate Dean for Research & Graduate Studies
Bradley J. Putman
Associate Dean for Undergraduate Studies

Zoran S. FilipiAutomotive Engineering
Martine LaBerge Bioengineering
David A. Bruce Chemical & Biomolecular Engineering
Ronald D. Andrus, interim Civil Engineering
Larry F. Hodges, interim School of Computing
Daniel L. Noneaker Electrical & Computer Engineering
Cindy M. Lee Engineering & Science Education
David L. Freedman Environmental Engineering &
Earth Sciences
R. Joe Watkins General Engineering
Scott J. Mason, acting chair Industrial Engineering
Kyle Brinkman Materials Science & Engineering
Atul Kelkar Mechanical Engineering

COLLEGE OF SCIENCE

Julia Frugoli
Associate Dean for Inclusive Excellence & Graduate Education
Calvin Williams
Associate Dean for Undergraduate Excellence
& Community Engagement
Apparao Rao
Associate Dean for Discovery

Saara DeWalt, interim Biological Sciences
William T. Pennington Chemistry
William R. Marcotte, Jr. Genetics & Biochemistry
Kevin James, interim Mathematical & Statistical Sciences
Sean Brittain Physics & Astronomy

Special Thanks to Graduate Program Directors & Staff

Although there are too many to list, the graduate program coordinators, 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.

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.

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 successful research and education journey.

CANDIDATES FOR THE DOCTORAL DEGREE

Jason W. Osborne, Dean, Graduate School

COLLEGE OF AGRICULTURE, FORESTRY AND LIFE SCIENCES

DOCTOR OF PHILOSOPHY

Entomology

Thomas Bilbo.....Ft. Mitchell, KY
B.S., Denison University; M.S., Texas Tech University
Dissertation: Development of *Helicoverpa zea* (Lepidoptera: Noctuidae) in Transgenic Corn
Producing BT Toxins and Implications for Resistance
Advisor: Dr. Francis Reay-Jones

Food Technology

Yaqi Wang.....Shandong, China
B.S., M.A., Clemson University
Dissertation: Fat-Soluble Vitamins in Dietary Supplements: Optimization of Extraction,
Simultaneous Determination by HPLC and Stability Studies
Advisor: Dr. Feng Chen

Plant and Environmental Sciences

Robert Andrew KerrKilbirnie, United Kingdom
B.Sc., University of Central Lancashire; M.S., University of Guelph
Dissertation: Goosegrass Biology, Genetic Diversity and Innovative Control Measures
Advisor: Dr. Lambert McCarty

Qi Zhou..... Wuhan, China
B.S., Hunan Agricultural University; M.S., Huazhong Agriculture University
Dissertation: Optimizing Peach [*Prunus persica* (L.) Batsch] Fertilization by Assessing
Nutrient Partitioning, Resorption and Remobilization, and Estimating
Restitution Needs
Advisor: Dr. Juan Melgar
Qi won first place in Clemson's 3-Minute Thesis competition in 2016 and received five
presentation awards at international conferences from 2016 to 2019.

Wildlife and Fisheries Biology

Miriam Meryl Jenkins.....Tampa, FL
B.A., University of Pittsburgh; M.S., University of Akron
Dissertation: Enhancing Native Pollinators of Watermelon Agroecosystems in
South Carolina
Advisor: Dr. Robert Baldwin

Abigail J. LawsonJuneau, AK
B.S., University of California; M.S., University of Nevada
Dissertation: Reducing Uncertainties in Conservation Decision-Making for
American Alligators
Advisor: Dr. Patrick Jodice

COLLEGE OF ARCHITECTURE, ARTS AND HUMANITIES

DOCTOR OF PHILOSOPHY

Planning, Design, and the Built Environment

Laurel Lynne Bartlett..... Columbia, SC

B.A., State University of New York; M.S., Clemson University

Dissertation: Visitor Impact at Historic Sites: An Assessment of the Influence of Usage,
Interpretation, and Management on Material Degradation

Advisor: Dr. Carter Hudgins

Jermaine M. Durham..... Hartwell, GA

B.S., Georgia Southern University; M.S., Savannah State University

Dissertation: The U.S. Foreclosure Crisis and Racial Change in the American South

Advisor: Dr. Mickey Lauria

Pai Liu Dalian, China

B.S., Beijing Forestry University; M.L.A., Clemson University

Dissertation: Culturally Sensitive Care Environment and Chinese Wellbeing: Investigating
Senior Centers Designed for Chinese Elders in the United States

Advisor: Dr. Matthew Powers

Nyoman Dewi Pebryani..... Bali, Indonesia

B.Arch., Brawijaya University; M.A., Huddersfield University

Dissertation: Culturally Specific Shape Grammar: Formalism of Geringsing Textiles
Patterns Through Ethnography and Simulation

Advisor: Dr. Michael Kleiss

Dewi completed her doctoral degree under a Fulbright scholarship and has accepted a
faculty position at the Indonesia Institute of the Arts (ISI) in Denpasar, Bali.

Rhetorics, Communication, and Information Design

Brian Gaines Anderson, SC

B.A., Anderson College; M.A., Clemson University

Dissertation: Machinic Eyes: New and Post-Digital Aesthetics, Surveillance, and Resistance

Advisor: Dr. Victor Vitanza

Brian has four peer-reviewed publications and 12 creative scholarly projects. He is also the
2018 recipient of the Thomas E. Douglass Award for Excellence in Teaching.

Firasat Jabeen Lahore, Pakistan

B.S., Lahore College for Women; M.S., University of the Punjab

Dissertation: The Rhetoric of Neo-Orientalism: The Perpetuation of Ideological
Entanglements for Pakistan

Advisor: Dr. Cynthia Haynes

Firasat is a Fulbright scholar and has three peer-reviewed publications. She plans to work as
an assistant professor at a private university in Lahore.

April Lynn O'Brien..... Pendleton, SC
B.A., Grove City College; M.A., SUNY Buffalo State
Dissertation: Composing Counter-Memories: Using MEMorial and Community
Engagement to Disrupt Dominant Narratives
Advisor: Dr. Jan Holmevik
April won the Graduate Student Government Outstanding Dissertation Award, has two
peer-reviewed publications, and has accepted a tenure-track assistant professorship at Sam
Houston State University.

COLLEGE OF BEHAVIORAL, SOCIAL AND HEALTH SCIENCES
DOCTOR OF PHILOSOPHY

Industrial/Organizational Psychology

Benjamin Philip Hardy..... Windermere, FL
B.S., Brigham Young University; M.S., Clemson University
Dissertation: Transformational Leadership and Perceived Role Breadth: Multi-Level
Mediation of Trust in Leader and Affective Organizational Commitment
Advisor: Dr. Robert Sinclair

Stephen Anders Robertson Lawrenceville, GA
B.S., University of Georgia; M.S., Clemson University
Dissertation: Bifactor Models and Factor Collapse: A Monte Carlo Study
Advisor: Dr. Patrick Rosopa

Anton Sytine..... Plymouth, MN
B.S., Iowa State University; M.S., Clemson University
Dissertation: The Role of Savoring Positive Experiences When Faced with Challenge and
Hindrances Demands: A Longitudinal Study
Advisor: Dr. Thomas Britt
Anton has four peer-reviewed publications and two first-place Clemson Graduate Research
Discovery Symposium posters. He plans to work in military research.

Crystal Susan Wiedemann Powdersville, SC
B.S., U.S. Air Force Academy; M.B.A., Wright State University; M.S., Clemson University
Dissertation: Purpose-Driven: Employee Engagement from a Human Flourishing
Perspective
Advisor: Dr. Fred Switzer

International Family and Community Studies

Hadoto Ida Josephine Mikisa Busolwe, Uganda
M.Sc., Aberdeen University
Dissertation: Retention of Girls at Primary School in the Busolwe Sub-County Butaleja
District, Eastern Uganda
Advisors: Dr. Natallia Sianko and Dr. Bonnie Holaday
Ida credits her assistantship and a dissertation completion grant with helping her attain her
Ph.D. She plans to work to improve the lives of disadvantaged families.

International Family and Community Studies *continued*

Ana Uka..... Tirana, Albania
B.A., Istanbul University; M.Sc., Leiden University
Dissertation: Youth Civic Engagement in Albania
Advisors: Dr. Mark Small and Dr. Martha Thompson

Parks, Recreation and Tourism Management

Haley Kathleen Griffiths Oak Ridge, TN
B.S., M.S., University of Tennessee
Dissertation: Resilience: Understanding the Influence of a Military Youth Camp
Advisor: Dr. Jasmine Townsend

Kathleen Krafte.....Carrboro, NC
B.A., University of North Carolina; M.A., Miami University
Dissertation: Investigating the Cultural Context for Big Cat Conservation Around
the World
Advisors: Dr. Robert Powell and Dr. Lincoln Larson
Kathleen was a Hartzog Fellow, received her department’s Graduate Student Award of
Excellence in 2018, and is currently a faculty member at the University of North Carolina
Wilmington.

Carmen Stephi NibigiraBujumbura, Burundi
B.A., Brighton University; M.A., University College of Birmingham
Dissertation: Tourism Development in the East Africa Community Region: Why Is
Tourism Development a Shared Agenda Among Only Some EAC Countries?
Advisor: Dr. Sheila Backman
Carmen is working in East Africa as a tourism policy analyst and has won two awards there
for her outstanding work in her pursuit of sound development policies.

Lauren Elizabeth StephensAiken, SC
B.S., University of South Carolina; M.P.W., University of Oklahoma
Dissertation: “There’s Stuff Beyond Sport”: A Study of the Realities and Perceptions of
Student-Athlete Body Image Concerns, Drive for Muscularity, and Eating Behaviors
Advisor: Dr. Edmond Bowers
Lauren was named her college’s Outstanding Doctoral Teaching Assistant in spring 2019
and has accepted a faculty position at Clemson University.

COLLEGE OF BUSINESS

DOCTOR OF PHILOSOPHY

Business Administration

Marie EspositoAugusta, GA
B.S.A., University of Georgia; M.S., University of Georgia; M.B.A., Augusta University
Dissertation: Signaling Your Beliefs: The Role of Signal Strength on Identity Perceptions
in a Social Media Environment
Advisor: Dr. Jason Thatcher

Dan JiangHanshou, China
B.A., M.A., University of International Business and Economics
Dissertation: Why Do People Chase Fashionable Technologies? Toward a Systematic
Understanding of IT Fashion Diffusion and Adoption of Fashionable IT
Advisors: Dr. Varun Grover and Dr. Janis Miller

Economics

Smriti Bhargava..... Delhi, India
B.A., Delhi University; M.A., Gokhale Institute of Politics and Economics
Dissertation: Essays on Earnings and Labor Supply of Married Women in India
Advisor: Dr. Curtis Simon

Wing Yin Bobby Chung..... Hong Kong, Hong Kong
B.S., Open University of Hong Kong; M.S., Hong Kong Baptist University
Dissertation: Investigating Inequality: Peer Effects and Occupational Licensing
Advisor: Dr. Howard Bodenhorn

Roksana Ghanbariamin..... Tehran, Iran
B.A., Allameh Tabataba'i University; M.S., Eastern Mediterranean University
Dissertation: The Economic Analysis of Kidney-Exchange Networks
Advisor: Dr. Patrick Warren

Benjamin Timothy Harbolt Tigard, OR
B.A., Whitworth University; M.A., Clemson University
Dissertation: Essays on Taxes, Guns, and Education
Advisor: Dr. William Dougan

Liuna Issagholian Tehran, Iran
B.S., University of Tehran; M.S., San Jose State University
Dissertation: Essays on Price Discrimination and Information Disclosure
Advisor: Dr. Matthew Lewis

Steven JohnsonPonchatoula, LA
B.A., Louisiana State University
Dissertation: Welfare Reform, Disability, and Federalism: The Economics of Government
Assistance Programs in the United States
Advisor: Dr. Robert Fleck

Alexander Daniel Ray..... McLean, VA
B.A., University of Rochester; M.A., Clemson University
Dissertation: Applications of the Club Model to the Economics of Terrorism
Advisor: Dr. Michael Makowsky

Kyle Lance Rechar.....Albuquerque, NM
B.S., Texas A&M University; M.S., University of New Mexico; M.A., Clemson University
Dissertation: Essays on Monetary Policy and Bitcoin Financial Economics
Advisor: Dr. Gerald Dwyer

Economics *continued*

- Narendra Raj Regmi Pokhara, Nepal
B.A., Cornell College
Dissertation: Essays in Economic Growth and International Trade
Advisors: Dr. Robert Tamura and Dr. Scott Baier
Narendra has accepted a position as an assistant professor of economics at the University of Wisconsin-Whitewater.
- Kelsey Victoria Roberts.....Swansea, MA
B.S., B.A., Stonehill College; M.A., Clemson University
Dissertation: Foster Care and Child Welfare
Advisor: Dr. Patrick Warren
- Jacob Walloga..... Brandon, FL
B.S., Florida State University; M.A., Clemson University
Dissertation: Essays on Policy Issues in the Financial Services Industry
Advisors: Dr. Matthew Lewis and Dr. Paul Wilson
- Chen Wang.....Tianjin, China
B.S., Southwestern University of Finance and Economics; M.A., North Carolina State University
Dissertation: Three Essays on the U.S. Film Industry
Advisor: Dr. Frederick Hanssen
- Xiaosong Wu..... Wuhan, China
B.S., Shanghai University of Finance and Economics
Dissertation: Essays on Consumer Search and A+B Auctions
Advisor: Dr. Matthew Lewis

COLLEGE OF EDUCATION

DOCTOR OF PHILOSOPHY

Curriculum and Instruction

- Heidi Dolly CianAndrews, SC
B.S., M.Ed., Clemson University
Dissertation: Influence of Student Values, Knowledge, and Experience and Socioscientific Topic on Measures of High-School Student Socioscientific Reasoning
Advisors: Dr. Michelle Cook and Dr. Cassie Quigley

Educational Leadership

- Courtney Allen Manhattan, NY
B.A., Susquehanna University; M.A., Rowan University
Dissertation: Calling All the Sisters: The Impact of Sister Circles on the Retention and Experiences of Black Womyn Collegians at Predominately White Institutions
Advisor: Dr. Robin Phelps-Ward
Courtney has one peer-reviewed publication and book chapter. She won her college's Excellence in Research award in 2018 and was president of Clemson's Graduate Student Government in 2017-2018.

Rebecca Claire Atkinson Easley, SC
B.S., James Madison University; M.Ed., Clemson University
Dissertation: Women Student Veterans' Experiences in a College Setting:
A Phenomenological Case Study
Advisor: Dr. Pamela Havice

Deborah Bishop Laurens, SC
B.S., Lander University; M.S., Winthrop University; Ed.S., Clemson University
Dissertation: Principals' Influences on Culturally Responsive Teaching Self-Efficacy:
A Multiple Case Study
Advisor: Dr. Hans Klar

Leslie A. Lewis Anderson, SC
B.S., United States Military Academy; B.A., University of Oxford; M.L.I.S., University
of Pittsburgh
Dissertation: West Point Women: An Oral History of the West Point Experience and
Leader Identity Development
Advisor: Dr. Jane Clark Lindle

Jessica Gale Owens Summerville, SC
B.S., Clemson University; M.S., Florida State University
Dissertation: Doctoral Student Experiences of Engagement in Social Media:
An Exploration of #SADOC
Advisor: Dr. Pamela Havice
Jessica serves as an assistant director in the Academic Success Center.

Beth Diane Solomon Lexington, MA
B.A., Union College; M.Ed., Salem State University
Dissertation: Leadership Development Within NCAA Division I Women's Soccer
Advisors: Dr. Pamela Havice and Dr. William Havice
Beth earned a graduate certificate in Athletic Leadership in May 2019.

Emily E. Virtue Cullowhee, NC
B.A., University of Mount Union; M.A., University of North Carolina Wilmington
Dissertation: Un-Conditional: Reflections on Teaching Conditionally-Enrolled Students
Advisor: Dr. Robin Phelps-Ward
Emily has one book chapter and four peer-reviewed publications. She was recently
nominated as faculty member of the year by the Student Government Association at
Western Carolina University.

Learning Sciences

Jonathan William Lashley Sandpoint, ID
B.A., Western Washington University; M.A.P.C., Clemson University
Dissertation: Our Educative Reticence: A Grounded Theory of Instructors' Not Adopting
Open Textbooks
Advisor: Dr. Matthew Boyer
Jonathan is a leader of statewide open education initiatives in Idaho and regularly advises
other university leaders across the U.S. on behalf of the Open Textbook Network.

Learning Sciences *continued*

Juan Li..... Han Zhong, China
B.A., Tianjin Foreign Studies University; M.A., Nankai University
Dissertation: The Role of Massively Multiplayer Role-Playing Games in Facilitating
Vocabulary Acquisition for English Language Learners: A Mixed-Methods Study
Advisor: Dr. Danielle Herro

COLLEGE OF ENGINEERING, COMPUTING AND APPLIED SCIENCES

DOCTOR OF PHILOSOPHY

Automotive Engineering

Shiferaw Damtie Beyene..... Addis Ababa, Ethiopia
B.Sc., Addis Ababa University; M.Tech., Indian Institute of Technology Madras; M.S.,
Addis Ababa University
Dissertation: Optimal Control of UV-Induced Curing Processes for Layer-by-Layer
Manufacturing of Composites
Advisors: Dr. Beshah Ayalew and Dr. Srikanth Pilla
Shiferaw has five peer-reviewed publications and was inducted into the Phi Kappa Phi
honor society in 2016.

Dhruvang B. Rathod Mumbai, India
B.E., Mumbai University; M.E., Rochester Institute of Technology
Dissertation: Evaporator Modeling and an Optimal Control Strategy Development of
an Organic Rankine Cycle Waste Heat Recovery System for a Heavy Duty Diesel
Engine Application
Advisor: Dr. Zoran Filipi
Dhruvang has seven publications and will be joining Fiat Chrysler Automobiles as a senior
calibration engineer.

Bioengineering

Megan Alexis Casco..... Summerville, SC
B.S., Clemson University
Dissertation: Tissue Engineered Aortic Heart Valve Roots: *In Vitro* Characterization
and Revitalization
Advisor: Dr. Dan Simionescu

Hannah Lynn Cash Spartanburg, SC
B.S., M.S., Clemson University
Dissertation: The Mechanical and Functional Effects of Ionizing Radiation on Articular
Cartilage
Advisor: Dr. Delphine Dean
Hannah has two peer-reviewed publications and was named her college's Outstanding
Graduate Teaching Assistant in 2019.

Yunkai Dai Shanghai, China
B.S., M.S., Shanghai Jiao Tong University
Dissertation: The Role of Tbx5 in Sinoatrial Node Differentiation in Mouse Embryonic
Stem Cell Derived Cardiomyocytes
Advisor: Dr. Ann Foley

Jhilmil Dhulekar Greenville, SC
B.S., M.S., Clemson University
Dissertation: Development of Tissue Engineered Vascular Grafts Resistant to Diabetes Mellitus
Advisor: Dr. Agneta Simionescu

Xin She Shenmu, China
B.S., Northwestern Polytechnical University; M.S., Clemson University
Dissertation: Sexual Dimorphisms in Human Temporomandibular Joint Morphology and Function
Advisor: Dr. Hai Yao

Chemical Engineering

Victor Bermudez Salazar Cali, Colombia
B.S., M.Sc., Universidad del Valle
Dissertation: Anomalous Effect of Spinning Conditions on the Mechanical and Transport Properties of Mesophase Pitch-Based Carbon Fibers
Advisor: Dr. Amod Ogale

Cameron J. Bodenschatz North Canton, OH
B.S., Ohio State University
Dissertation: A Combined Molecular Dynamics and Density Functional Theory Approach for Generating Liquid Water Configurations for Aqueous-Phase Heterogeneous Catalysis Studies
Advisor: Dr. Rachel Getman

Kai Shen Changzhi, China
B.S., Beijing Institute of Petrochemical Technology; M.S., University of Southern California
Dissertation: Advances in Reachability Analysis for Nonlinear Dynamic Systems
Advisor: Dr. Joseph Scott

Civil Engineering

Luay Abdulhusein Abbood Abo Alarab Karbala, Iraq
B.Sc., M.Sc., University of Babylon
Dissertation: The Effect of Crack Opening Size and Repair Methods on Corrosion of Steel Reinforcement in Concrete
Advisors: Dr. Brandon Ross and Dr. Amir Poursaee

Ling Ding Rugao, China
M.S., Purdue University
Dissertation: Corrosion Behavior of H-Pile Steel in Different Soils
Advisor: Dr. Amir Poursaee

Fanfu Fan Xi'an, China
B.S., Tianjin University; M.S., Clemson University
Dissertation: Tornado Hazard Analysis for the United States Using a Stochastic Track Simulation Model
Advisor: Dr. Weichiang Pang

Civil Engineering *continued*

Goutam Konapala..... Visakhapatnam, India

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

Dissertation: Quantification of Hydro-Climatic Processes Using Non-Parametric and Complex Networks Methods

Advisor: Dr. Ashok Mishra

Goutam has eight peer-reviewed publications and works as a postdoctoral associate at Oak Ridge National Laboratory.

Katerina Valentine Moreland.....Greer, SC

B.S., M.S., Clemson University

Dissertation: Validation of a Form Based Mutual Aid Agreement Tool for Use by Bus-Centric Transportation Agencies

Advisor: Dr. Jennifer Ogle

Shweta Shrestha.....Trishuli Bazar, Nepal

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

Dissertation: Design and Optimization of Hybrid Foundation for Tall Wind Turbines and Development of New Foundation Through Biomimicry

Advisor: Dr. Nadarajah Ravichandran

Shweta has seven peer-reviewed publications and four conference papers, was named the University's Outstanding Graduate Teaching Assistant in 2019, and is the founding president of the ASCE Geo-Institute Graduate Student Organization (GI-GSO).

Ahmad Nawaf Tarawneh.....Al-Karak, Jordan

B.Sc., M.Sc., University of Jordan

Dissertation: Behavior and Design of Post-Installed Anchors in Thin Concrete Members

Advisor: Dr. Brandon Ross

Tarawneh has published three papers and will join the civil engineering faculty at the Hashemite University in Jordan.

Computer Science

Yuheng Du..... Wuhan, China

B.S., Huazhong University; M.S., University of Florida

Dissertation: Streaming Infrastructure and Natural Language Modeling with Application to Streaming Big Data

Advisors: Dr. Amy Apon and Dr. Alexander Herzog

Electrical Engineering

Daniel Blaine Cutshall II.....Johnson City, TN

B.S., Clemson University

Dissertation: Silicon Based Schottky Diodes and MOS Capacitors for Sensing Singly and Multiply Charged Ions with Low Kinetic Energy

Advisors: Dr. William Harrell and Dr. Chad Sosolik

Daniel has accepted a faculty position at Milligan College in Tennessee.

Engineering and Science Education

Catherine Dessie McGough Charleston, WV
B.S., Clemson University
Dissertation: A Mixed Methods Study on Mid-Year Engineering Students' Perceptions
of Their Future Possible Careers
Advisor: Dr. Lisa Benson
Catherine was awarded a National Science Foundation graduate research fellowship and
plans to teach electrical engineering at Iron Range Engineering in Minnesota.

Human Centered Computing

Lorraine Lin Vicksburg, MS
B.S., Mississippi State University
Dissertation: Evaluating Effects of Character Appearance on Ownership and Learning
in Virtual Applications
Advisor: Dr. Sophie Joerg
Lorraine has seven peer-reviewed publications, was named Outstanding Ph.D. Student in
Human Centered Computing in 2017, and plans to work in the virtual reality industry.

Industrial Engineering

Amir Ali Nasrollahzadeh Clemson, SC
B.Sc., Sharif University of Technology
Dissertation: Approximate Dynamic Programming: Health Care Applications
Advisor: Dr. Amin Khademi

Mechanical Engineering

Abduljaleel Hussain Abd Altememe Clemson, SC
B.Sc., M.Sc., University of Baghdad
Dissertation: CM Scale Flapping Wing of Unmanned Aerial Vehicle at Very Low Reynolds
Numbers Regime
Advisor: Dr. Oliver Myers
Altememe has four peer-reviewed publications and plans to work in the aeronautics
industry.

Philippe Giguère Simpsonville, SC
B.Eng., McGill University; M.Sc., Université Laval
Dissertation: Determining Wind Turbine Drivetrain Test Bench Capability to Replicate
Dynamic Loads: Evaluation Methods and Their Validation
Advisor: Dr. John Wagner
Philippe currently works as a technical leader at GE Renewable Energy with a focus on
wind turbine modeling and testing.

James Allen Righter Elizabethton, TN
B.S., United States Naval Academy; M.S., Marine Corps University
Dissertation: Engineering Design Team Leadership in Undergraduate Design Teams
Advisor: Dr. Joshua Summers

Marcus John Hubis Yoder Jackson, MS
B.S., Mississippi State University
Dissertation: Size Effects in Periodic Lattice Structured Cellular Materials
Advisors: Dr. Lonny Thompson and Dr. Joshua Summers

COLLEGE OF SCIENCE

DOCTOR OF PHILOSOPHY

Biochemistry and Molecular Biology

Logan Phillip Crowe Charlotte, NC
B.S., University of North Carolina
Dissertation: Glucose Adaptation and Glycosome Import Machinery of *Trypanosoma brucei*
Advisor: Dr. Meredith Morris

Biological Sciences

Brett M. Frye Saltville, VA
B.S., Emory and Henry College; M.S., Winthrop University
Dissertation: Exploring the Causes and Consequences of Intrafamilial Interactions in
Captive and Free-Ranging Callitrichine Monkeys
Advisor: Dr. Michael Sears

Chemistry

Steven Paul Belina Newington, CT
B.S., University of Connecticut
Dissertation: The Synthesis and Characterization of Novel Pentafluorosulfonyl-Containing
Heterocycles and Pentafluorosulfonyldifluoromethane
Advisor: Dr. Joseph Thrasher

Saheed A. Bukola Erin-Osun, Nigeria
B.Tech., Federal University of Technology; M.S., King Fahd University of Petroleum
and Minerals
Dissertation: Electrically-Driven Ion Transmission Through Two-Dimensional
Nanomaterials
Advisor: Dr. Stephen Creager
Bukola has twelve publications and two patents. He was named his college's Outstanding
Graduate in Discovery this year.

Steve Craig Goodman, Jr. Beech Island, SC
B.S., Clemson University
Dissertation: Mechanisms of Metal-Binding Antioxidants: Interactions with NADH, Iron,
and DNA in Cellular Systems
Advisor: Dr. Julia Brumaghim

Christian Uwe Rausch Coburg, Germany
B.S., M.S., University of Erlangen
Dissertation: The Influence of Substituted Aryl Isocyanides on Molybdenum(0) Complexes
Advisor: Dr. Andrew Tennyson

Lakshman K. Ventrpragada Puttaparthi, India
B.S., M.S., Sri Sathya Sai Institute
Dissertation: Nanomaterials-Based Electrodes for Lithium-Ion Batteries and Fuel Cells
Advisors: Dr. Apparao Rao and Dr. Stephen Creager

Yunzhi ZhangZhengzhou, China
B.S., China University of Geosciences
Dissertation: Nuclear Magnetic Resonance (NMR) Applications in Nanoparticles:
Dynamic Nuclear Polarization and Nanoparticle Surface Interaction
Advisor: Dr. Leah Casabianca
Yunzhi has four first-author publications and five peer-reviewed publications.

Environmental Toxicology

Lauren Marie Garcia Chance Amarillo, TX
B.L.A., B.S., M.S., Texas A&M University
Dissertation: Remediation of Nursery and Greenhouse Runoff Using Floating
Treatment Wetlands
Advisor: Dr. Sarah White
Lauren has five publications and two grants, was named her college's 2018 Outstanding Graduate in Outreach, and earned a certificate in Engineering and Science Education.

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.

CEREMONIAL MUSIC

Clemson University Brass Quintet

Prelude

Various marches and processions

Processional

Pomp and Circumstance – Sir Edward Elgar

National Anthem

Words by Francis Scott Key
Music attributed to John Stafford Smith

Closing

Clemson University Alma Mater
Words by A. C. Corcoran, Class of '19
Music by Hugh H. McGarity and R. Hawkins
Arranged by J. Butler

Recessional

Rondeau from "*Sinfonies de Fanfares*"
Jean-Joseph Mouret

Candidates appearing in this program may not be certified graduates. Likewise, academic honors designations are based upon performance prior to final grades. Both certification of graduation and honors designations must come from the Registrar of the University.

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UNIVERSITY

