



TEXAS A&M UNIVERSITY
Commencement

May 7, 2022, 10 a.m.

The audience is asked to stand for the procession. As a courtesy to the graduating class, guests are requested to refrain from leaving until after the recessional.

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TEXAS A&M UNIVERSITY COMMENCEMENT

Program

Doctoral Commencement and Hooding Ceremony

Saturday, May 7, 2022, 10 a.m.
Rudder Auditorium

Processional

The National Anthem

Invocation

Student Expression of Appreciation

Greetings and Authorization to Confer Degrees

Presentation of Degree Candidates and Conferring of Degrees

Roll Call of Graduates

Induction into The Association of Former Students

Recessional

Faculty Marshals

Mace Bearer

Dr. Heather C. Lench, Senior Associate Vice President for
Faculty Affairs

Stage Party

Dr. George B. Cunningham, Senior Associate Dean

Announcer

Judge Rick Hill, Brazos County Justice of the Peace Precinct 3

*The Texas A&M University System
Board of Regents*

- Mr. Tim Leach, Chairman Midland
- Mr. Bill Mahomes, Jr., Vice Chairman Dallas
- Mr. Robert L. Albritton Fort Worth
- Mr. James R. "Randy" Brooks San Angelo
- Mr. Jay C. Graham Houston
- Mr. Michael A. "Mike" Hernandez III Fort Worth
- Ms. Elaine Mendoza San Antonio
- Mr. Michael J. Plank Houston
- Mr. Cliff Thomas Victoria
- Ms. Matilin "Mati" Rigsby (Student Regent) Gainesville

Chancellor

Mr. John Sharp Placedo

Texas A&M University Administrative Officers

- President Dr. M. Katherine Banks
- Provost and Executive Vice President (interim) Dr. Timothy P. Scott
- Dean, College of Agriculture and
Life Sciences (interim) Dr. Mark A. Hussey
- Dean, College of Architecture (acting) Dr. Patrick C. Suermann
- Dean, Mays Business School (interim) Dr. R. Duane Ireland
- Dean, College of Dentistry (acting) Dr. José Luis Bermúdez
- Dean, College of Education and
Human Development (interim) Dr. Michael A. de Miranda
- Dean, College of Engineering (interim) Dr. John E. Hurtado
- Dean, College of Geosciences Dr. Debbie Thomas
- Dean, Bush School of Government and
Public Service General Mark A. Welsh III (Ret.)
- Dean, School of Law and Vice President for
Professional Schools and Programs Mr. Robert B. Ahdieh
- Dean, College of Liberal Arts (interim) Dr. Steven M. Oberhelman

Dean, College of Medicine Dr. Amy L. Waer
Dean, College of Nursing Dr. Nancy L. Fahrenwald
Dean, Irma Lerma Rangel College of Pharmacy Dr. Indra K. Reddy
Dean, School of Public Health Dr. Shawn G. Gibbs
Dean, College of Science Dr. Valen E. Johnson
Dean, College of Veterinary Medicine and
Biomedical Sciences Dr. John R. August
Dean, Texas A&M University
Libraries (interim) Dr. Julie A. Mosbo Ballestro
Dean and Chief Operating Officer,
Texas A&M University at Qatar Dr. César O. Malavé
Dean, Graduate and Professional School and
Associate Provost Dr. Karen L. Butler-Purry
Chief Operating Officer and
Senior Vice President Mr. Gregory W. Hartman
Chief Operating Officer and Senior Vice President,
Texas A&M Health Dr. Jon E. Mogford
Chief Operating Officer and Vice President,
Texas A&M University at Galveston Colonel Michael E. Fossum (Ret.)
Chief Financial Officer and Vice President Mr. John W. Crawford
Chief Marketing and Communications Officer and
Vice President Ms. Marilyn M. Martell
Chief Information Officer and Vice President for
Information Technology Mr. Edwin L. Pierson
Chief Compliance Officer and Vice President . . . Mr. Kevin P. McGinnis
Vice President for Academic
and Strategic Collaborations Dr. Susan G. Ballabina
Vice President and
Associate Provost for Diversity (interim) Dr. Annie S. McGowan
Vice President for Brand Development Mr. Shane Hinckley
Vice President for Development Mr. Andy Acker
Vice President for Enrollment and
Academic Services Mr. Joseph P. Pettibon II
Vice President for Facilities, Safety,
and Security Mr. Stephen B. Franklin
Vice President for Faculty Affairs Dr. Nagamangala K. Anand
Vice President for Government Relations Mr. Norman R. Garza, Jr.
Vice President for Human Resources and
Organizational Effectiveness Mr. Damon Slaydon
Vice President for Operational Innovation Dr. Alan Sams
Vice President for Research (interim) Dr. Jack G. Baldauf
Vice President for
Student Affairs Brigadier General Joe E. Ramirez, Jr. (Ret.)
Vice Provost for Faculty Affairs and
Interdisciplinary Initiatives (interim) Dr. Patrick Louchouart
Vice Provost for Undergraduate Studies (interim) . . . Dr. Ann L. Kenimer
Associate Vice President for Academic Affairs, Texas A&M University at
Galveston, and Associate Provost (interim) Dr. Antonietta S. Quigg
Commandant of the
Corps of Cadets (interim) Colonel Byron F. Stebbins (Ret.)

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Candidates for Doctoral Degrees

Presented by Dr. Karen L. Butler-Purry
Dean and Associate Provost

Graduate and Professional School

College of Agriculture and Life Sciences

Doctor of Education

Jenny Rebecca Nuccio Agricultural Education
Record of Study: "Understanding the Resource Gaps For Social Entrepreneurs and the Challenges Implementing Change in a Social Enterprise"
Chair: Kim W. Dooley

Doctor of Philosophy

Alper Adak Plant Breeding
Dissertation: "Phenomic and Genomic Approaches to Understand Photoperiod Associated Flowering, Plant Height And Yield In Southern Maize (Zea Mays L.)"
Chair: Seth Murray

Taylor L. Barnes Animal Science
Dissertation: "Better Preparing Undergraduate Animal Science Students for Careers in Education by Providing Undergraduate Teaching Assistant Opportunities and Support"
Chair: Kathrin A. Dunlap

Ilse Estefania Barrios Perez Molecular and Environmental Plant Sciences
Dissertation: "Assessing the Potential of Ground Penetrating Radar for Root Biomass Phenotyping in Cereal Crops"
Chair: Dirk B. Hays

Jessica Christine Benson Agricultural Leadership, Education, and Communications
Dissertation: "Followership and Exemplary Follower Characteristics: A Middle-Level Management Perspective"
Chair: Jennifer Strong

Sudip Biswas Plant Breeding
Dissertation: "Gene Editing in Rice and Peanut: Multiplex Editing, Protoplast Validation, and Prime Editing"
Chair: Endang M. Septiningsih

Justin Xavier Boeckman Animal Science
Dissertation: "The Role of the Gut Microbiome in Chronic Inflammatory Diseases and Evaluation of Phage for Targeted Microbiome Engineering"
Chair: Jason J. Gill

- Leah Witte Buchman Entomology
 Dissertation: "Variable Effects of Plant-Associated Fungi in Herbivore-Crop Systems"
 Chair: Gregory Sword
- Janaina Camara Siqueira da Cunha Entomology
 Dissertation: "Plant-Associated Fungi Effects on Insect Herbivores and on a Predator"
 Chair: Gregory Sword
- Rui Afonso D'Orey Branco Physiology of Reproduction
 Dissertation: "Follicular Dynamics in Early Maturing, Late Maturing and Prenatal Stressed Brahman Cows"
 Chair: Ronald Randel
 Co-Chair: Thomas Welsh
- Yabin Da Agricultural Economics
 Dissertation: "Three Essays on Ozone Pollution, Biofuel Production, and Climate Change"
 Chair: Bruce McCarl
- Roy Ladell Davis II Plant Pathology
 Dissertation: "Characterizing Inoculum Density and Plant Phenotypic Variation at High Spatial Resolution"
 Chair: Thomas M. Chappell
- Xiaoyang Deng Agricultural Economics
 Dissertation: "The Economic Impact of Hurricanes and Hurricane Forecast Accuracy on the U.S. Gulf Coast Oil and Gas Industry"
 Chair: Bruce McCarl
- Casey Ann Flint Entomology
 Dissertation: "The Impact of Microbes Associated with Vertebrate Carrion on Attraction and Colonization by *Cochliomyia macellaria* (Fabricius) (Diptera: Calliphoridae)"
 Chair: Jeffery Tomberlin
- Katherine Marie Halloran Physiology of Reproduction
 Dissertation: "The Importance of Amino Acids, Polyamines, and Hexose Sugars for Conceptus Development During the Peri-Implantation Period of Pregnancy in Sheep"
 Chair: Fuller Bazer
- Laith Abdelqader Harb Biochemistry
 Dissertation: "Mechanisms of Cell Penetration by SSRNA Bacteriophages"
 Chair: Jean-Philippe Pellois
- Helen Hashemi Food Science and Technology
 Dissertation: "Polyphenol Loaded Nanoparticles: A Colon-Targeted Delivery System to Enhance Stability and Antimicrobial Properties of Barberry (*Berberis vulgaris*) Fruit Extract"
 Chair: Stephen T. Talcott
- Mehdi Hashemi Food Science and Technology
 Dissertation: "Stability of Sumac (*Rhus coriaria*) Polyphenolic Extract During Simulated Gastrointestinal Digestion and Colonic Fermentation"
 Chair: Stephen T. Talcott

- Jocelyn Rosanna Holt Entomology
 Dissertation: "Assessing Mutualisms and Population Genetics in an Invasive Ant and Aphid"
 Chair: Raul Medina
- Jennifer Young Kee Agricultural Economics
 Dissertation: "Economic Decisions in the Presence of Others: Evaluating the Effects of Observability and Generosity on Economic Decisions"
 Chair: Marco Palma
- Meng Liu Ecology and Conservation Biology
 Dissertation: "Feasibility of Burned Forest Classification and Biomass Burning Emission Estimation Using ICESat-2 Data"
 Chair: Sorin Popescu
- Bin Long Plant Pathology
 Dissertation: "Computational Modeling, Systems and Synthetic Biology to Address Challenges in Algae Biofuels and Microplastic Upcycling"
 Chair: Shuhua Yuan
 Co-Chair: Yuan Dai
- Lungelo Mandiyoli Biochemistry
 Dissertation: "Annotating Mycobacterial Aminotransferases Through Function and Structural Studies and RV3208A Is a Small Mycobacterial Protein with a Novel Fold and Quarternary Structure"
 Chair: Tatyana Igumenova
- Sixto Alberto Marquez Lopez Horticulture
 Dissertation: "Analysis of Resistance to Vine Decline Disease Caused by *Monosporascus cannonballus* in Melons (*Cucumis melo* L.)"
 Chair: Kevin M. Crosby
 Co-Chair: Bhimanagouda S. Patil
- Lia Dibiase Murty Plant Pathology
 Dissertation: "The Role of Rhizosphere Bacteria VOCs on *Fusarium oxysporum* f.sp. *vasinfectum*"
 Chair: Won-Bo Shim
- Benjamin Roy Osborn Biochemistry
 Dissertation: "Characterization of the Sec14 Domain Membrane Binding Interface"
 Chair: Michael Polymenis
- Aditi Pandey Soil Science
 Dissertation: "Nanoscale Analysis of X-Ray Amorphous Phases in Palagonitic Martian Analogs, and *In Situ* Resource Utilization of Soil for Extraterrestrial Construction"
 Chair: Jeffrey W. Bullard
 Co-Chair: Youjun Deng
- Alexandria Nicole Payne Entomology
 Dissertation: "Honey Bee (*Apis mellifera*) Disease Ecology: In-Hive Pests and Nutrition Affect Host-Pathogen Interactions"
 Chair: Juliana Rangel Posada

- Jonathan Allen Picker Biochemistry
 Dissertation: "Prokaryotic Collagen-Like Proteins and Uses Thereof"
 Chair: Jennifer K. Herman
- Pei Qiao Biochemistry
 Dissertation: "Insight into the Interactions Between Kir Channels and Lipids"
 Chair: Thomas D. Meek
 Co-Chair: Pingwei Li
- Michael Lee Salinas Nutrition
 Dissertation: "High-Fat Diet-Induced Obesity Alters the Biophysical Properties of the Plasma Membrane Modifying Colonic Stem Cell Homeostasis"
 Chair: Robert Chapkin
- Bishwa Bandhu Sapkota Agronomy
 Dissertation: "Using Geospatial and Computer Vision Techniques for Weed Detection and Mapping in Agricultural Systems"
 Chair: Muthukumar V. Bagavathiannan
- Brenda Adelle Schumann Agricultural Leadership, Education, and Communications
 Dissertation: "Impact of Leader Style on Followers and Organizations During the Unplanned Change of COVID-19: A Case Study of Higher Education"
 Chair: Jennifer Strong
- Clifford Dale Shelton, Jr. Agricultural Economics
 Dissertation: "Essays on Environmental and Agricultural Economics"
 Chair: Richard Woodward
- Rajan Shrestha Agronomy
 Dissertation: "Studies on Agro-Ecological Performance and Crop Physiology of Guar"
 Chair: Curtis Adams
 Co-Chair: Nithya Rajan
- Binita Thapa Soil Science
 Dissertation: "Effect of Carbon Amendments, Tillage and Cover Cropping in Soil Health Indicators"
 Chair: Jason Mowrer
 Co-Chair: Ashly Peyton Smith
- Dustin Aaron Therrien Animal Science
 Dissertation: "Application of Molecular Genomic Analysis Tools to Assess Bacterial Genomes and Bovine Regulatory Elements for Food Safety and Meat Quality"
 Chair: Penny K. Riggs
- Chrystal Arlene Jannelle Thomas-Winston Agricultural Economics
 Dissertation: "Smoothing Income or Not? Households' Payment Choice Between Credit and Debit at Point-of-Sale"
 Chair: Ximing Wu
- Guosong Wang Animal Science
 Dissertation: "Genetic Basis for the Development of Scurs in Bos Indicus-Influenced Crossbred Cattle"
 Chair: Clare Gill

College of Architecture

Doctor of Philosophy

- Alexander Abuabara Urban and Regional Science
 Dissertation: "Applications Of Causal Bayesian Networks On Urban Planning"
 Chair: Walter Peacock
 Co-Chair: Zenon Medina Cetina
- Haleh Moghaddasi Architecture
 Dissertation: "An Adaptable Net Zero Model to Accelerate Achieving Global Climate Targets: A Monitored Case Study"
 Chair: Jorge Vanegas
 Co-Chair: Charles Culp
- Hannah Park Construction Science
 Dissertation: "Towards Personally Relevant Navigation: Interaction Effects of Cognitive Style and Map Orientation on Spatial Knowledge Development"
 Chair: Manish K. Dixit
 Co-Chair: Stephen Caffey
- Tho Ngo Duc Tran Urban and Regional Science
 Dissertation: "Assessing the Housing Plan Quality and Locational Outcomes in the United States"
 Chair: Shannon S. Van Zandt
- Varusha Venkatraj Construction Science
 Dissertation: "Towards the Application of a Machine Learning Framework for Building Life Cycle Energy Assessment"
 Chair: Manish K. Dixit
 Co-Chair: Wei Yan

Mays Business School

Doctor of Philosophy

- Huseyn Abdulla Business Administration
 Dissertation: "Essays on Consumer Return Policy Design"
 Chair: Michael Ketzenberg
 Co-Chair: James D. Abbey
- Inn Hee Gee Management
 Dissertation: "CEO's Formal Association with Nonprofit Organizations"
 Chair: Albert Cannella
- Fangfei Guo Business Administration
 Dissertation: "Essays on the Effectiveness of Conditional Free Shipping Policies on Customers' Purchase Behaviors and Retailers' Profitability"
 Chair: Yan Liu
- Seulchan Lee Business Administration
 Dissertation: "Essays on Energy Operations"
 Chair: Chelliah Skriskandarajah
 Co-Chair: Alexandar Angelus

- Young Eun Lee Management
 Dissertation: "Employee See, Employee Do. Or Employee Don't? Unpacking When and Why Employees Mimic (or Don't) Coworkers' Helping Behavior."
 Chair: Joel E. Koopman
- Mayukh Majumdar Business Administration
 Dissertation: "Essays on Resource Planning and Utilization to Achieving Operational Efficiency in Service Organizations"
 Chair: Chelliah Skriskandarajah
 Co-Chair: Anupam Agrawal
- Han Kyul Oh Business Administration
 Dissertation: "Essays on Behavioral Operations: Managers, Algorithms, and Operational Decisions"
 Chair: Rogelio Oliva
- Melanie K. Prengler Management
 Dissertation: "'Do Better, Try Harder': A Grounded Exploration of How Employees Evaluate, Experience, and Respond to Allyship Failure"
 Chair: Anthony Klotz
- Valerie Sy Management
 Dissertation: "Strategic Renewal: Learning, Unlearning, and Organizational Wisdom"
 Chair: Michael D. Howard
- Yuan Xue Business Administration
 Dissertation: "Can Social Media Facilitate Informed Trading?"
 Chair: Hwagyun Kim

College of Education and Human Development

Doctor of Education

- Suzanna Ammenheuser Curriculum and Instruction
 Record of Study: "Project-Based Learning and the Acquisition of 21st Century Skills in the Elementary Classroom"
 Chair: Mary Capraro
 Co-Chair: Karen Elizabeth Rambo
- Jessica Nikola Lee Curriculum and Instruction
 Record of Study: "Fostering the Support and Development of Resilience in Children of Alcoholics in the School Setting"
 Chair: Mary Capraro
 Co-Chair: Bugrahan Yalvac
- Ashley Brooke Marquez Educational Administration
 Record of Study: "Sensemaking and the Selection of Principals to Open Campuses in Fast-Growth Districts in Suburban Austin"
 Chair: Daniel H. Bowen

Doctor of Philosophy

- Xinyi Bian Educational Human Resource Development
 Dissertation: "Chinese Women's Career Interruptions: A Constructivist Grounded Theory Study"
 Chair: Jia Wang

- Mahjabin Chowdhury Curriculum and Instruction
 Dissertation: "Digital Game-Based Language Learning: Vocabulary Development Among Young English Language Learners"
 Chair: Li-Jen Kuo
- Carmen Miliagros Figueroa Educational Psychology
 Dissertation: "Examining Pre-Referral Intervention and Assessment Procedures for Elementary English Learners in Texas"
 Chair: Rafael Lara-Alecio
- Sayvon Jonte' Lewis Foster Kinesiology
 Dissertation: "Time to Talk About Sport: Creating a Space for Sport Within #LiftingAndShiftingHBCUs"
 Chair: John Singer
- Patrice French Educational Human Resource Development
 Dissertation: "Black Women Faculty, Digital Social Networks, and Mobilizing Social Capital"
 Chair: Mary Alfred
 Co-Chair: Megan S. Patterson
- Taylor Paige Graves Boswell Health Education
 Dissertation: "Investigating Factors Related to Autoimmune Thyroid Disease (AITD) Management Using Social Network Analysis"
 Chair: Nicolaas Deutz
- Caitlin Taylor Holden Health Education
 Dissertation: "Exploring Identity Formation and Identity Salience Among Sexuality Educators"
 Chair: Patricia Goodson
- Miranda Livingston Educational Human Resource Development
 Dissertation: "The Impact of Digital Readiness, Teaching Methods, and Instructor Feelings and Experiences on Student Self-Directed Learning in Virtual Course Modalities During the Covid-19 Pandemic: A Qualitative Investigation of Community College Faculty Perceptions"
 Chair: Elizabeth Roumell
 Co-Chair: Mary Alfred
- Colleen Louise O'Reilly Kinesiology
 Dissertation: "Culprit or Consequence: Determining the Role of Ghrelin in Skeletal Muscle Dysregulation"
 Chair: James Fluckey
- Samantha Michele Shields Curriculum and Instruction
 Dissertation: "Shifting Pedagogical Paradigms: The Active Learning in Engineering Program"
 Chair: Michael A. De Miranda
 Co-Chair: Debra A. Fowler
- Ajai Cribbs Simmons Curriculum and Instruction
 Dissertation: "College Readiness for Students Starts with Professor Readiness"
 Chair: Mary Capraro
 Co-Chair: Robert Capraro

- Megan Elizabeth Svajda-Hardy Curriculum and Instruction
 Dissertation: "Contextualized Understanding: Teachers' Classroom Management Needs and Supports"
 Chair: Andrew H. Kwok
- Wenting Weng Educational Psychology
 Dissertation: "Applying Statistical Methods in Clustered Educational Data"
 Chair: Wen Luo
- Ashley Marrie Williams Curriculum and Instruction
 Dissertation: "Developing Spatial Abilities Thru Computer-Aided Design Software Experiences: Enhancing STEM Education"
 Chair: Mary Capraro
 Co-Chair: Jamaal R. Young

College of Engineering

Doctor of Engineering

- Andrew James Schaper Engineering
 Record of Study: "The Energy Transition: Decarbonization in Practice"
 Chair: Charles M. Wolf

Doctor of Philosophy

- Mohammed Saleh M Abusalem Nuclear Engineering
 Dissertation: "Development of PSMA-Targeted Radiopharmaceuticals for Routine Clinical Applications"
 Chair: John Ford
- Mohammad Aghababaei Civil Engineering
 Dissertation: "Quantitative Models and Framework for Evaluating Community Resilience Accounting for Its Interdependent Systems"
 Chair: Maria Koliou
- Hananeh Alambeigi Industrial Engineering
 Dissertation: "Modeling Driver Behavior During Automated Vehicle Takeovers"
 Chair: Tony D. McDonald
- Wei Eng Ang Nuclear Engineering
 Dissertation: "Coherent Elastic Neutrino Nucleus Scatter Response of Semiconductor Detectors to Nuclear Reactor Antineutrinos and Safeguards Applications"
 Chair: Shikha Prasad
- Hossein Asadi Mechanical Engineering
 Dissertation: "Vortex Dynamics in Cardiovascular Flows"
 Chair: Iman Borazjani
- Alaba Olumide Bamido Mechanical Engineering
 Dissertation: "Design, Analysis, Fabrication and Testing of Thermally Actuated Microvalves"
 Chair: Debjyoti Banerjee

- Anthony Petru Barbu Nuclear Engineering
 Dissertation: "Iterative Methods for Neutron and Thermal Radiation
 Transport Problems"
 Chair: Marvin Adams
- Abinash Barooah Petroleum Engineering
 Dissertation: "Investigation of Multiphase Cutting Transport in Nearly
 Horizontal Well Using Pressure Drop, Visualization and
 Electrical Resistance Tomography Techniques."
 Chair: Berna Hascakir
 Co-Chair: Mohammad A. Rahman
- Nripojyoti Biswas Civil Engineering
 Dissertation: "Role of Silica-Based Co-Additives for Effective Treatment
 of Expansive Soils"
 Chair: Anand J. Puppala
- Perawat Boonpuek Mechanical Engineering
 Dissertation: "Investigation of The Effects of Electrowetting and
 Temperature on Interfacial Mechanics between Human
 Finger Skin Corneocyte and Nanoasperities"
 Chair: Jonathan R. Felts
- Anna Marie Brokesh Biomedical Engineering
 Dissertation: "Inorganic Biomaterials Shape the Transcriptome Profile
 to Induce Endochondral Differentiation"
 Chair: Akhilesh K. Gaharwar
- Travis James Carrell Biomedical Engineering
 Dissertation: "Hardware and Software Approaches to Increasing
 Accessibility of Nuclear Magnetic Resonance Imaging
 and Spectroscopy"
 Chair: Mary P. McDougall
- Avijit Chakraborty Computer Engineering
 Dissertation: "Heuristics Based Test Overhead Reduction Techniques
 in VLSI Circuits"
 Chair: Duncan Walker
- Christiana Sökeland Freitas Chamon Electrical Engineering
 Dissertation: "Random Number Generator, Zero-Crossing, and Non-
 linearity Attacks Against the Kirchhoff-Law-Johnson-
 Noise (KLJN) Secure Key Exchange Protocol"
 Chair: Laszlo Kish
- Clint Cheng Chemical Engineering
 Dissertation: "Effects of Microbially Derived Tryptophan Metabolites
 on Immune Cells"
 Chair: Arul Jayaraman
- Xiangyi Cheng Mechanical Engineering
 Dissertation: "Interactive e-Cube Games for Cognitive Assessment"
 Chair: Kiju Lee
- Ivan Cortes Mechanical Engineering
 Dissertation: "Design, Analysis, and Control of a Cable-Suspended
 Robot for Large-Scale Additive Manufacturing"
 Chair: Won-Jong Kim

- Jennifer Sara Dargin Civil Engineering
 Dissertation: "Addressing Inequities in Service Disruptions with Human-Centric Infrastructure Resilience: An Empirical Assessment of Household-Infrastructure Interactions During Disasters"
 Chair: Ali Mostafavi
- Sourav Das Civil Engineering
 Dissertation: "Tracing and Quantifying Contributions of Proximal, Regional, and Global Sources to Primary Particulate Matter in an Urban Atmosphere Using Radiogenic Isotopes, Platinum Group Metals, and Other Trace and Major Elements"
 Chair: Shankararaman Chellam
- Alexandra Danielle Easley Materials Science and Engineering
 Dissertation: "Solution Behavior and Charge Transfer Kinetics of Macromolecular Radicals for Energy Storage"
 Chair: Jodie L. Lutkenhaus
- Amir Esmalian Civil Engineering
 Dissertation: "Understanding Social Equity in Infrastructure Systems Resilience"
 Chair: Ali Mostafavi
- Gan Feng Industrial Engineering
 Dissertation: "On the Cutting of Metals at the Small Scale: Size Effect, Friction and Plastic Instabilities"
 Chair: Dinakar Sagapuram
- Xuhui Feng Mechanical Engineering
 Dissertation: "Surface Engineered Catalysts for Effective Photo-Conversion and Utilization of Greenhouse Gases"
 Chair: Ying Li
- Shawna Lee Fletcher Interdisciplinary Engineering
 Dissertation: "A Framework to Understand Engineering Identity Development and the Success of Women's Participation on Competitive Project Teams"
 Chair: Kristi J. Shryock
- Anne-Marie Ginn-Hedman Biomedical Engineering
 Dissertation: "Investigation of Ventricular Assist Device Inflow Cannula Configurations within Single Ventricle Hearts"
 Chair: Fred Clubb
- Jiangyue Gong Industrial Engineering
 Dissertation: "Stochastic Programming Models: Community Health Pathways Scheduling and Optimal Vaccine Allocation"
 Chair: Lewis Ntaimo
- Xiangyu Guo Mechanical Engineering
 Dissertation: "Advanced Stereoscopy Towards On-Machine Surface Metrology and Inspection"
 Chair: ChaBum Lee

- Kie Scott Hankins II Chemical Engineering
 Dissertation: "Reactivity, Morphology, and Solvation Phenomena Over Electrode Interfaces in Battery Systems"
 Chair: Perla Balbuena
 Co-Chair: Jorge Seminario
- Joshua Thomas Hanophy Nuclear Engineering
 Dissertation: "Non-linear S_2 Acceleration for Multidimensional Problems with Unstructured Meshes"
 Chair: Jim Morel
- Zachary Kenneth Hardy Nuclear Engineering
 Dissertation: "A Non-Intrusive Reduced Order Model for Parametric Reactor Kinetics Simulations"
 Chair: Jim Morel
- Ahmed Harhara Chemical Engineering
 Dissertation: "Incorporating Process Safety Into Heat Exchanger Network Synthesis"
 Chair: M M Faruque Hasan
- Alison Reba Hoe Materials Science and Engineering
 Dissertation: "Characterization and Modification of Thermal Response Through Intentional Design of Phase Change Material Composites"
 Chair: Patrick J. Shamberger
- Samantha Elizabeth Holt Biomedical Engineering
 Dissertation: "The Use of Tetrazine-Norbornene Click Products in Supramolecular Hydrogel Crosslinking and the Design of Dynamic Hydrogels"
 Chair: Daniel L. Alge
- Woolim Hong Mechanical Engineering
 Dissertation: "User- and Speed-Adaptability Enhancement of User Gait Phase Estimation for Robotic Transfemoral Prosthesis Control"
 Chair: Pilwon Hur
 Co-Chair: Gholamreza Langari
- Rui Hua Mechanical Engineering
 Dissertation: "Foot Motion-Based Falling Risk Evaluation for Patients with Parkinson's Disease"
 Chair: Ya Wang
- Nathan Clinton Hurley Computer Science
 Dissertation: "Deep Semi-Supervised and Multi-Stage Learning for Medical Applications"
 Chair: Bobak Mortazavi
- Jaylen R. James Materials Science and Engineering
 Dissertation: "Enhancing Performance Prediction Accuracy of High Strength Alloys via Uncertainty Quantification"
 Chair: Raymundo Arroyave
 Co-Chair: Douglas L. Allaire
- Jungyeon Jang Civil Engineering
 Dissertation: "Geopolymer Treatment for Stabilization of Problematic Geomaterials"
 Chair: Anand J. Puppala

- Yu JiangPetroleum Engineering
 Dissertation: "Simulation of Unconventional Reservoirs with Complex Fracture Conditions"
 Chair: John E. Killough
- Takanori KajiharaNuclear Engineering
 Dissertation: "Parametric Optimization of TRU Destruction Rates in HTR Cores Using Hybrid Metaheuristic Algorithm and Regression Methods"
 Chair: Pavel V. Tsvetkov
- Esmail KarimiElectrical Engineering
 Dissertation: "Algorithmic and Coding-Theoretic Methods for Group Testing and Private Information Retrieval"
 Chair: Alexander Sprintson
- Rohith KarthikeyanMechanical Engineering
 Dissertation: "Closed-Loop Non-Invasive Brain Stimulation as a Fatigue Countermeasure"
 Chair: Ranjana Mehta
- Elif KayaElectrical Engineering
 Dissertation: "Novel Approaches in Non-Destructive UWB RF/Microwave CMOS Integrated Time Domain Spectroscopy Systems and Circuits"
 Chair: Kamran Entesari
- Fatemeh KazemikordasiabiElectrical Engineering
 Dissertation: "Providing Private and Fast Data Access for Cloud Systems"
 Chair: Alexander Sprintson
- Inchul KimCivil Engineering
 Dissertation: "A Consistent Nonlinear Frequency Domain Model for Finite Depth Ocean Wave Propagation"
 Chair: James M. Kaihatu
- Yang Woo KimCivil Engineering
 Dissertation: "A Novel Approach for Object Detection, Path Planning, and Control of Autonomous Vehicles on Rural Roads"
 Chair: Ivan Damnjanovic
- Jeremy William KingNuclear Engineering
 Dissertation: "An External Remote Monitoring System for Safeguarding Spent Nuclear Fuel in Interim Dry Cask Storage"
 Chair: Craig Marianno
- Jobin Kolliyil JoyAerospace Engineering
 Dissertation: "Micromechanical Modeling of Precipitated NiTiHf Shape Memory Alloys"
 Chair: Dimitris Lagoudas
- Heather Emily Kostak-TeplicekAerospace Engineering
 Dissertation: "Stability and Breakdown Measurements on the AFRL/AFOSR Boundary Layer Turbulence (BOLT II) Flight Geometry"
 Chair: Rodney Bowersox

- Pallavi Kumari Chemical Engineering
 Dissertation: "Consequence Estimation and Root Cause Diagnosis of Rare Events in Chemical Process Industry"
 Chair: Joseph S. Kwon
 Co-Chair: Qingsheng Wang
- Aditya Lahiri Electrical Engineering
 Dissertation: "Applications of Probabilistic Graphical Models in Genomic Networks for Agriculture"
 Chair: Aniruddha Datta
- Raghuvveer Lalitha Sridhar Mechanical Engineering
 Dissertation: "Development of Tools for Mechanical Characterization and Mechanical Stimulation of Tissue Engineered Constructs"
 Chair: Michael R. Moreno
- John Delaney Lassalle, Jr. Mechanical Engineering
 Dissertation: "Environmental Applications of Electron Beam Irradiation and Energy-Intensive Remediation Technologies"
 Chair: David Staack
- Jieun Lee Nuclear Engineering
 Dissertation: "Validation of Pronghorn Pressure Drop Correlations Against Pebble Bed Experiments"
 Chair: Yassin Hassan
- Junho Lee Civil Engineering
 Dissertation: "Performance of Multiline Ring Anchor in a Soft Clay Seabed"
 Chair: Charles Aubeny
- Smith Edward Leggett Petroleum Engineering
 Dissertation: "Investigations of the Low-Frequency Distributed Acoustic Sensing Response to a Propagating Fracture"
 Chair: Ding Zhu
 Co-Chair: Alfred Hill
- Qinbo Li Computer Science
 Dissertation: "Exploiting Multimodal Information in Deep Learning"
 Chair: Yoonsuck Choe
- Peiming Liu Computer Science
 Dissertation: "Faster and More Precise Pointer Analysis Algorithms for Automatic Bug Detection"
 Chair: Shaoming Huang
- Richard John Livingston Nuclear Engineering
 Dissertation: "Synthesis and Leachate Analysis of Dry Synthesized Substituted Fluorapatite Nuclear Surrogate Waste Forms for Molten Salt Reactors"
 Chair: Sean McDeavitt
- Xing Lu Mechanical Engineering
 Dissertation: "Development and Evaluation of High-Performance Rule-Based Sequences of Operation for Variable Air Volume Systems"
 Chair: Zheng O'Neill

- Pritam Majumder Computer Engineering
 Dissertation: "Communication and Computation Optimizations in Modular Systems-On-Chip"
 Chair: Eun Kim
- Diego Serafin Martinez Garcia Computer Science
 Dissertation: "Automated Machine Learning Systems: Evaluation, Ease of Use, Data Transformation"
 Chair: Xia Hu
- Levi Daniel McClenny Electrical Engineering
 Dissertation: "Convergence, Adaptivity, and Applications of Physics-Informed Machine Learning"
 Chair: Ulisses Braga Neto
 Co-Chair: Narasimha Annapareddy
- Andres Guillermo Morell-Pacheco Nuclear Engineering
 Dissertation: "Radiation Response, Mechanical Property Changes, and Corrosion Behavior of Molten Salt Reactor Materials"
 Chair: Lin Shao
- Sakina Mohammed Mota Biomedical Engineering
 Dissertation: "Quantitative Image-Based Analysis of Multidimensional Mesenchymal Stromal Cell Cultures via Computer Vision and Machine Learning"
 Chair: Kristen Maitland
- Andrew Schmidt Nemece Computer Engineering
 Dissertation: "Hybrid and Nonadditive Quantum Codes"
 Chair: Andreas Klappenecker
- Christine Ikram Noshi Petroleum Engineering
 Dissertation: "Data Driven Casing Failure Mitigation during Drilling and Completion, Operations Using a New Machine Learning Workflow on Data Set from the Granite Wash Formation"
 Chair: Mahmood Amani
- Hyoungmook Pak Biological and Agricultural Engineering
 Dissertation: "Investigating the Effects of Environmental Factors on the Spread of Antibiotic Resistant Bacteria in a Dairy Facility"
 Chair: Maria King
- Cynthuja Partheeban Biological and Agricultural Engineering
 Dissertation: "Improving Native Prairie Restoration Modeling for Flood Reduction Using Pedotransfer Functions"
 Chair: Fouad H. Jaber
 Co-Chair: Patricia Smith
- Pengcheng Pi Electrical Engineering
 Dissertation: "Computational Efficiency Studies in Computer Vision Tasks"
 Chair: Zixiang Xiong
 Co-Chair: Zhangyang Wang

- Qasim Khan Electrical Engineering
 Dissertation: "Condition Monitoring of Power Equipment: Partial Discharge Analysis"
 Chair: Haitham Abu-Rub
 Co-Chair: Hamid Toliyat
- Gabriel Caio Queiroz Tomaz Mechanical Engineering
 Dissertation: "Development of Data Driven Models to Predict Pressure Drop in Wire-Wrapped Rod Bundles"
 Chair: Yassin Hassan
- Ayten Khaled Mohamed Abdelhalim Rady Petroleum Engineering
 Dissertation: "A Comparative Study on The Effect of Different Water-Based Weighting Agents on Formation Damage"
 Chair: Hadi Nasrabadi
- Meelad Ranaiefar Materials Science and Engineering
 Dissertation: "An Integrated Computational Framework for the Accelerated Development of Tailored Additively Manufactured Metals"
 Chair: Raymundo Arroyave
- Kathy Yeonjoo Rhee Chemical Engineering
 Dissertation: "Quantitative Probes of Bacterial Physiology"
 Chair: Pushkar P. Lele
- Laura Katherine Rivera Tarazona Biomedical Engineering
 Dissertation: "Designing Stimuli-Responsive Engineered Living Materials for Biomedical Applications"
 Chair: Taylor Ware
- Arash Rocky Civil Engineering
 Dissertation: "Metallic Coatings as Peripheral Barriers to Diminish the Adverse Effects of Cathodic Protection on Prestressing Members"
 Chair: Stefan Hurlebaus
- Carl Christopher Runco Aerospace Engineering
 Dissertation: "Aeromechanics, Dynamics, and Control of Cycloidal Rotor Based Micro Air Vehicles"
 Chair: Benedict Moble
- Nalin Udayanga Samarasinghe Biological and Agricultural Engineering
 Dissertation: "Development of a Methane-Based Biological Fuel Cell"
 Chair: Sandun Fernando
- I Wayan Rakananda Saputra Petroleum Engineering
 Dissertation: "Interfacial Phenomena of Crude Oil/Brine/Rock/Surfactant Systems in Lower 48 Shale Reservoirs and Their Optimum Surfactant Structures for Enhanced Oil Recovery Process"
 Chair: David Schechter
- Pravin Saraswatula Civil Engineering
 Dissertation: "Durability Based Performance Evaluation of Bridge Deck High-Performance Concrete (HPC) Mixes through Innovation in Pore Solution and Transport Properties"
 Chair: Anal Mukhopadhyay
 Co-Chair: Dan Zollinger

- Cesario Sarmiento Goncalves Martins E. Tavares Civil Engineering
 Dissertation: "Multi-Objective Density Diagrams Developed With Machine Learning Models to Optimize Sustainability and Cost-Efficiency of UHPC Mix Design"
 Chair: Zachary Grasley
- Raiyan Ali Seede Materials Science and Engineering
 Dissertation: "Optimization of Process Parameters, Post Processing Treatments, and Phase Diagram Features for Controlling the Microstructure and Performance of Additively Manufactured Metals"
 Chair: Ibrahim Karaman
- Deepthi Sen Petroleum Engineering
 Dissertation: "Applications of Machine-Learning in Reservoir Connectivity Detection and Optimization"
 Chair: Akhil Dattagupta
- Farinoush Sharifi Civil Engineering
 Dissertation: "Designing a Heavy-Duty Fleet Electrification Framework for Port Drayage Operations"
 Chair: Mark Burris
 Co-Chair: Luca Quadrifoglio
- Ruiqing Shen Chemical Engineering
 Dissertation: "Development and Application of Metal-Based Flame Retardants to Improve the Fire Safety of Materials"
 Chair: Qingsheng Wang
- Sandeep Kumar Singh Aerospace Engineering
 Dissertation: "Leveraging Manifold Theory for Trajectory Design - A Focus on Futuristic Cislunar Missions"
 Chair: John Junkins
 Co-Chair: Manoranjan Majji
- Milad Soleimani Electrical Engineering
 Dissertation: "Risk Analysis of The Electric Grid Interfacing With Consumer-Owned Energy Resources"
 Chair: Mladen Kezunovic
- Jiaao Song Electrical Engineering
 Dissertation: "Cold Resistors: Theory, Design and a Related Security Application"
 Chair: Laszlo Kish
- Eric Alan Stoddard Civil Engineering
 Dissertation: "Behavior of Hot Rolled Asymmetric Steel I-Beams: Concept to Construction"
 Chair: Matthew T. Yarnold
- Chenhao Sun Electrical Engineering
 Dissertation: "Three Studies in High-Field MR Engineering: SAR Reduction Through Sequential RF Pulses, A System for B1+ Steering, and A Low-Complexity Multi-Nuclei Array Coil"
 Chair: Steven M. Wright

- Jian TanMechanical Engineering
 Dissertation: "Li-S Batteries Cathode and Anode with Functionalized Carbon Nanotube Sponges"
 Chair: Choongho Yu
- Zeyi TanMaterials Science and Engineering
 Dissertation: "Processing and Characterization of New $(M_xNb_{1-x})_2AlC$, $(M_xV_{1-x})_2AlC$, and $(M_xV_{1-x})_3AlC_2$ Max Phase Solid Solutions with $M = Ti, Fe, Co, Ni$ "
 Chair: Miladin Radovic
- Songyuan TangElectrical Engineering
 Dissertation: "Assessment of Orthopedic Trauma Using Multimodal Ultrasound Imaging Techniques"
 Chair: Raffaella Righetti
- Priyanka VasanthakumariBiomedical Engineering
 Dissertation: "Machine-Learning Algorithms for Multispectral Autofluorescence Lifetime Imaging (maFLIM) Based Detection of Oral and Skin Cancer Lesions"
 Chair: Javier Jo
 Co-Chair: Vladislav V. Yakovlev
- Jan Izak VermaakNuclear Engineering
 Dissertation: "A New Residual Monte Carlo Method for Estimating Errors in Deterministic Transport Solutions"
 Chair: Jim Morel
 Co-Chair: Jean C. Ragusa
- Vishala Aerospace Engineering
 Dissertation: "Novel Tools for Practical Co-Optimization and Guidance of Space Missions"
 Chair: John Junkins
- Narendra Vishnumolakala Interdisciplinary Engineering
 Dissertation: "Downhole Intelligence for Drilling Systems Using Supervised and Deep Reinforcement Learning Techniques"
 Chair: Eduardo Gildin
- Qing Wan Computer Science
 Dissertation: "Reconstructing and Analyzing Effective Hypersurfaces From Convolutional Neural Network Layers Using AdjointBackMap"
 Chair: Yoonsuck Choe
- Jianling Wang Computer Science
 Dissertation: "Toward Sustainable Recommendation Systems"
 Chair: James Caverlee
- Ruisong WangMechanical Engineering
 Dissertation: "Enhancing Phase Change Heat Transfer via Interfacial Engineering"
 Chair: Dion S. Antao
- Xiaoxuan Wang Civil Engineering
 Dissertation: "Plant Uptake and Impact of Engineered Metallic Nanoparticles in Soil Plant Systems"
 Chair: Xingmao Ma
 Co-Chair: Fugen Dou

- Yu Wang Ocean Engineering
 Dissertation: "Verification and Validation Study of CFD Simulations of Semi-Submersible Platform for Floating Offshore Wind Turbine"
 Chair: Hamn Chen
- Xingjian Wei Industrial Engineering
 Dissertation: "Experimental Investigation and Modeling of PolyJet and Binder Jetting Additive Manufacturing Processes"
 Chair: Zhijian Pei
 Co-Chair: Li Zeng
- Nicholas James Weidner Computer Science
 Dissertation: "Novel Degrees of Freedom, Constraints, and Stiffness Formulation for Physically Based Animation"
 Chair: Shinjiro Sueda
- Yalun Wen Mechanical Engineering
 Dissertation: "An Efficient Control Framework for Robot Manipulators Performing Tasks Requiring Simultaneous Control of Tool Path and Orientation"
 Chair: Prabhakar Pagilla
- Yinghao Wen Civil Engineering
 Dissertation: "Advanced Oxidation and Reduction Processes for the Removal of Recalcitrant Pollutants in Water"
 Chair: Xingmao Ma
- Bryan Thomas Wilson Civil Engineering
 Dissertation: "Ground Penetrating Radar for Asphalt Concrete Density Profiling"
 Chair: Robert Lytton
- Peng Wu Materials Science and Engineering
 Dissertation: "Low-Cost and High Energy Density Lithium-Sulfur Batteries Enabled by Modification of Cell Design and Operating Conditions"
 Chair: Choongho Yu
- Jinghao Yang Electrical Engineering
 Dissertation: "Mid-Infrared Real-Time and Non-Destructive Material Detection and Intelligent Analysis"
 Chair: Pao Tai Lin
- Yifei Yang Chemical Engineering
 Dissertation: "Fuel Cells and Reverse Fuel Cells: Nanostructured Patterned Electrodes and Membranes"
 Chair: Yossef A. Elabd
- Benjamin En-Min Young Materials Science and Engineering
 Dissertation: "Actuation Fatigue and Fracture in High Temperature Shape Memory Alloys"
 Chair: Ibrahim Karaman
- Umme Zakira Civil Engineering
 Dissertation: "Development of Low Carbon Footprint Building Materials"
 Chair: Bjorn Birgisson

- Enrique Zarate Losoya Interdisciplinary Engineering
 Dissertation: "Data-Driven Numerical Simulation and Optimization Using Machine Learning, and Artificial Neural Networks Methods for Drilling Dysfunction Identification and Automation"
 Chair: Eduardo Gildin
 Co-Chair: Zenon Medina Cetina
- Niloofer Zarei Computer Science
 Dissertation: "Designing Interactive Tools to Support Narrative Authoring for Elementary-School Children through Digital Enactment"
 Chair: Francis K. Quek
- Cheng Zhang Biological and Agricultural Engineering
 Dissertation: "Removal of Nickel, Cyanide, and Ethylene Diamine Tetraacetic Acid from Electroplating Wastewater by Iron Media: Mechanism and Application"
 Chair: Yongheng Huang
- Yin Zhang Computer Engineering
 Dissertation: "Improving Content-Aware Recommendation: Relationship Mining, Integrating, and Disentangling"
 Chair: James Caverlee
- Gang Zhao Computer Science
 Dissertation: "Improving Static Analysis for Software Security at Compile-Time and Runtime"
 Chair: Shaoming Huang
- Junchao Zhou Electrical Engineering
 Dissertation: "Mid-Infrared Multi-Spectrum Sensing and Imaging for Non-Destructive Material Characterization"
 Chair: Pao Tai Lin
- Yuanming Zhu Electrical Engineering
 Dissertation: "Design Techniques for High-Speed Multi-Carrier Wireline"
 Chair: Samuel M. Palermo

College of Geosciences

Doctor of Philosophy

- Montana Etten-Bohm Atmospheric Sciences
 Dissertation: "Lightning and its Relationship with the Large-Scale Environment"
 Chair: Courtney Schumacher
- Hamdi Hassan Hamdi Mahmood Geophysics
 Dissertation: "4c Seismic Shear Wave Source Mechanism Analysis, Modeling and Imaging in the Shallow Marine Environment of the Arabian Gulf"
 Chair: Yuefeng Sun

- Jacob Michael Martin Geophysics
 Dissertation: "The Rapid Acquisition and Application of Geophysical Data to the Sustainable and Proficient Management of Shallow Aquifers and Cemeteries"
 Chair: Mark Everett
- Dawid Szafranski Geophysics
 Dissertation: "Integrating Numerical Simulations, Machine Learning and Bayesian Inversion in Investigations of Hydraulic Fracturing and Wastewater Disposal Operations, and Associated Seismic Activity"
 Chair: Benchun Duan
- Jingxuan Wei Geophysics
 Dissertation: "Multi-Scale Analysis of Thermohaline Structures through Seismic Oceanography, South Atlantic Ocean"
 Chair: David Sparks
 Co-Chair: Robert S. Reece
- Gaopeng Xu Oceanography
 Dissertation: "Investigating Impacts of Model Horizontal Resolution on Sea Surface Temperature Biases and Ocean Heat Uptake Projections"
 Chair: Ping Chang
 Co-Chair: Lixin Wu
- Qiuying Zhang Oceanography
 Dissertation: "A Coupled Initialization Strategy to Represent Historical Atlantic Meridional Overturning Circulation Decadal Variation and Prediction"
 Chair: Ping Chang

College of Liberal Arts

Doctor of Philosophy

- Angela Marie Achorn Anthropology
 Dissertation: "Examining the Function of Meat Sharing in Savanna-Dwelling Chimpanzees at Fongoli, Senegal"
 Chair: Sharon Gursky
- Rachel Leah Allen Hispanic Studies
 Dissertation: "Instructional, Social, and Institutional Factors Affecting Teachers' Application of Technology in L2 Secondary Spanish Classrooms"
 Chair: Gabriela C. Zapata
- Niels Henrik Appeldorn Political Science
 Dissertation: "Competition and the Institutional Choices of Rebel Governance"
 Chair: Hyeran Jo
- Adam Bestenbostel Economics
 Dissertation: "Essays in Applied Microeconomics"
 Chair: Mark L. Hoekstra

- Lauren Aubrey Bondarenko Political Science
 Dissertation: "Tactical Decision Making in Terrorist Organizations"
 Chair: Guy Whitten
 Co-Chair: Manuel P. Teodoro
- Stephanie Erin Vis Brown Industrial/Organizational Psychology
 Dissertation: "Beyond 'Hey Hun!' and #BossBabe: Motivations for
 Military Spouse Involvement in Multi-Level Marketing"
 Chair: Mindy Bergman
- Jacob Arthur Davis Psychology
 Dissertation: "The Impact of Anesthesia on Pain-Induced Deficits
 Following Spinal Cord Injury in Rats"
 Chair: James Grau
- Kostanca Dhima Political Science
 Dissertation: "Gender and Political Representation"
 Chair: Michelle Taylor
- Marijo Gauthier-Berube Anthropology
 Dissertation: "Building Ships in the Late 17th-Century France: Agency,
 Traditional Knowledge, and Technology in Shipyards"
 Chair: Luis F. Vieira De Castro
 Co-Chair: Kevin Crisman
- Hoyeol Kim English
 Dissertation: "Computational Approaches in the Humanities: From
 Sentiment Analysis to Deep Learning Colorization"
 Chair: Maura Ives
- Hyunjung Kim English
 Dissertation: "Felt Sound: Poethics of Listening and Queer Relations in
 Modern and Contemporary Poetry and Multimedia Art
 in North America"
 Chair: Mikko Tuhkanen
- Julia Christina Lake History
 Dissertation: "The Southwest's Heart Is No Longer for the Pioneer
 Alone: Creating and Remembering Fred Harvey's
 Invention of an Authentic Native American Experience in
 the Southwest"
 Chair: Angela Hudson
- Janica De Chaves Magat Political Science
 Dissertation: "Constructing Alliances: The Politics of Informality in
 Weak States"
 Chair: Michelle Taylor
 Co-Chair: Florian M. Hollenbach
- Byeung-Kuk Oh Economics
 Dissertation: "Essays on Applied Microeconomics"
 Chair: Jonathan Meer
- Michael Edward Ohsfeldt Sociology
 Dissertation: "Emblematic Legitimacy: Sports, Organizations, and
 Symbols"
 Chair: Stjepan Mestrovic

- Mayra Belinda Pineda Torres Economics
 Dissertation: "Essays on the Economics of Reproductive Health Care"
 Chair: Jason M. Lindo
- Adam Russell Roberts Economics
 Dissertation: "Essays on the Determinants of Health and Labor Market
 Outcomes"
 Chair: Andrew C. Barr
- Damian Robles Garcia Hispanic Studies
 Dissertation: "«¡Hideputa que os Parió!»: Idios Pragmaticus, Vestigios
 de Afrentas e Injurias en el Quijote Traducido (1607-
 1620)"
 Chair: Hilaire A. Kallendorf
 Co-Chair: Britt Mize
- Rubria Rocha De Luna Hispanic Studies
 Dissertation: "Rompiendo con la Retórica del Poder a Través del
 Activismo en los Medios Digitales. El Caso de los
 Migrantes de Regreso a México"
 Chair: Hilaire A. Kallendorf
 Co-Chair: Laura C. Mandell
- Paloma Serrano Vinuelas Hispanic Studies
 Dissertation: "Enjoyment, Boredom, and Anxiety in the Spanish Lan-
 guage Classroom in the Time of COVID-19"
 Chair: Richard K. Curry
- Flavio Douglas da Silva Souza Political Science
 Dissertation: "The Mass Politics of Financial Markets"
 Chair: Guy Whitten
- Reed Hunter Stevens Political Science
 Dissertation: "Care Ethics and Political Institutions: Democracy, Con-
 stitutionalism, and Federalism"
 Chair: Cary Nederman
- Chelsea Evan Temple Economics
 Dissertation: "Essays on the Economics of Crime"
 Chair: Jennifer L. Doleac

School of Public Health

Doctor of Philosophy

- Nikita Sandeep Wagle Health Services Research
 Dissertation: "Disparities in Treatment Utilization, Delay and Out-
 comes among Patients with Hepatocellular Carcinoma in
 the United States"
 Chair: Hye-Chung Kum

Doctor of Public Health

- Linda Arnett Bridges Epidemiology and Environmental Health
 Dissertation: "Predictors of Musculoskeletal Symptoms and Improve-
 ment of Health Outcomes via Computer Software"
 Chair: Mark E. Benden

Metari S. Garza Public Health Sciences
 Dissertation: "Provider Implicit Bias & African American Female Veterans Within the Veterans Healthcare Administration"
 Chair: Ellisa Jones-Mckyer
 Co-Chair: Radhika Viruru

Shubhangi Tarun Vasudeo Epidemiology and Environmental Health
 Dissertation: "Driver Characteristics and Behaviors Associated with Higher Injury Severity Large Logging Truck Crashes on Public Roadways in Louisiana (2010-2018)"
 Chair: Dennis Gorman

College of Science

Doctor of Philosophy

Eric Evan Aboud Physics
 Dissertation: "The Simulation of a Novel Fast Neutron Portal Monitor and the Development of TexCAAM, the Texas CSI Array for Astrophysical Measurements"
 Chair: Grigory V. Rogachev

Brittany Marie Alexander Statistics
 Dissertation: "Bayesian Models for the Aggregation of Public Opinion Survey Data"
 Chair: Jeffrey Hart
 Co-Chair: Suojin Wang

Derek Murphy Anderson Physics
 Dissertation: "Reconstruction of Neutral-Triggered Recoil Jets in $\sqrt{s} = 200$ GeV p+p Collisions at the STAR Experiment"
 Chair: Saskia Mioduszewski

Mohammadreza Armandpour Statistics
 Dissertation: "Deep Generative Models: Pitfalls and Fixes"
 Chair: Jianhua Huang
 Co-Chair: Debdeep Pati

Yirui Cao Chemistry
 Dissertation: "Fused-Ring Heterocyclic Aromatic Compounds"
 Chair: Lei Fang

Lacey D. Douglas Chemistry
 Dissertation: "Deterministic Control of Fluid Flow through Control of Surface Chemistry and Texturation"
 Chair: Sarbajit Banerjee

Priyanga Ganesan Mathematics
 Dissertation: "Quantum Coloring of Quantum Graphs"
 Chair: Eric Rowell

Susan Olivia Gunther Chemistry
 Dissertation: "Highly Lewis Acidic Carbocations for the Generation of Reactive Main-Group and Transition Metal Cations and New Ligand Design"
 Chair: Oleg Ozerov

- Curtis Nathaniel Hunt Physics
 Dissertation: "The Study of Neutron-Rich Nuclei, ${}^9\text{Li}$ And ${}^{13}\text{Be}$, Through Isobaric Analogue States Using Resonant Scattering"
 Chair: Grigory V. Rogachev
- Sheagan Abdallah Karan Arlene John Mathematics
 Dissertation: "Secondary Higher Invariants and Cyclic Cohomology for Groups of Polynomial Growth"
 Chair: Zhizhang Xie
- Young-Ho Jung Biology
 Dissertation: "Analyzing the Effect on *Drosophila* Sex Determination by Transcription Factor Binding Site Mutations in the SXL Enhancer"
 Chair: James Erickson
- Mohammadjavad Karimi Chemistry
 Dissertation: "Group 14 and 15 Derivatives in Energy Conversions and Catalysis"
 Chair: Francois Gabbai
- Rakheon Kim Statistics
 Dissertation: "Sparsity in Varying-Coefficient Regression and Covariance Matrix Estimation"
 Chair: Tanya P. Garcia
 Co-Chair: Mohsen Pourahmadi
- Tarini Konchady Astronomy
 Dissertation: "Mira and Cepheid Variables as Extragalactic Distance Indicators in the Optical and the Near-Infrared"
 Chair: Lucas Macri
- Yen-Nan Lin Chemistry
 Dissertation: "Strategies for Controlling Physicochemical Characteristics of Nanomaterials Toward Personalized Medicine"
 Chair: Karen Wooley
- Yuting Luo Chemistry
 Dissertation: "Cation Insertion in Vanadium Oxide: Insertion Mechanisms, Intercalation-Induced Phase Transformations, and Electrochemistry-Mechanics-Particle-Geometry Coupling"
 Chair: Sarbajit Banerjee
- Zhao Tang Luo Statistics
 Dissertation: "Bayesian Spanning Tree Models for Complex Spatial Data"
 Chair: Huiyan Sang
 Co-Chair: Bani Mallick
- Asim Maity Chemistry
 Dissertation: "Sustainable Oxidation Catalysis via Hypervalent Iodine Intermediates"
 Chair: David C. Powers
- Naveed Nabeel Merchant Statistics
 Dissertation: "Bayesian Tests for Checking the Equality of Distributions, With Application to Screening Variables for Classification"
 Chair: Jeffrey Hart
 Co-Chair: Debdeep Pati

- Saad NaseemChemistry
 Dissertation: "Functional Characterization of Metalloenzymes in Lumichrome Catabolism and Chuangxinmycin Biosynthesis"
 Chair: Tadhg Begley
- Sean Patrick O'ConnorApplied Physics
 Dissertation: "Nonlinear Spectroscopy for Characterizing Cells, Proteins, and the Origins of the Photobiomodulation Effect"
 Chair: Marlan Scully
 Co-Chair: Vladislav V. Yakovlev
- Gyeongjin ParkChemistry
 Dissertation: "Main Group Lewis Acids for Application in Anion Transport and Catalysis"
 Chair: Francois Gabbai
- Shirun Shen Statistics
 Dissertation: "Principal Component Analysis of Two-Dimensional Functional Data with Serial Correlation"
 Chair: Lan Zhou
 Co-Chair: Na Zou
- Ellen SongChemistry
 Dissertation: "Investigation of the Properties of Formamidinate Bridged Photoactive Dirhodium (II, II) Complexes"
 Chair: Kim Dunbar
 Co-Chair: Marcetta Darensbourg
- Krawe Sharini Malsha UdayakanthaChemistry
 Dissertation: "Phonon-Mediated Energy Transfer Processes in Luminescent Displays and Infrastructure Materials: Lanthanide Phosphors and Insulating Coatings as Case Studies"
 Chair: Sarbajit Banerjee
- Elise Anne WalkerMathematics
 Dissertation: "Toric Varieties and Numerical Algorithms for Solving Polynomial Systems"
 Chair: Frank Sottile
- Xiaomeng Yan Statistics
 Dissertation: "Randomized Functional Data Analysis and its Application in Astronomy"
 Chair: Jianhua Huang
 Co-Chair: Lan Zhou
- Huiya Zhou Statistics
 Dissertation: "Functional Data Analysis and Applications on Paired Functional Data and Density Functions"
 Chair: Lan Zhou

College of Veterinary Medicine and Biomedical Sciences

Doctor of Philosophy

- Maliha Batool Biomedical Sciences
Dissertation: "Tackling Lyme Disease by Identifying Potential Subunit Vaccine Candidates and Defining the Microbiota of *Ixodes ricinus* Ticks"
Chair: Artem S. Rogovskyy
- Jonathan Charles Behlen Toxicology
Dissertation: "Understanding the Mechanisms of Gestational Exposure to Ultrafine Particulate Matter on Placental Development and Dysfunction in a Murine Model"
Chair: Natalie M. Johnson
- Amanda Belle Blake Biomedical Sciences
Dissertation: "Amino Acids and Metabolites in Dogs with Gastrointestinal Disease"
Chair: Jan Suchodolski
Co-Chair: Joerg M. Steiner
- Joseph James Dubie Genetics
Dissertation: "Evolutionary Dynamics of Selfish Mitochondrial Mutations in *Caenorhabditis elegans*"
Chair: Vaishali Katju
- Alycia Pauline Fratzke Biomedical Sciences
Dissertation: "Mechanisms of *Coxiella burnetii* Whole Cell Vaccine Reactogenic Responses"
Chair: James Samuel
- Emily Nissa Gould Biomedical Sciences
Dissertation: "The Comparative Effects of Acid Suppressants on Healthy and Neoplastic *In Vitro* Mast Cells"
Chair: Mary K. Tolbert
- Mary Lynn Krath Biomedical Sciences
Dissertation: "Investigation of a Cryptic Aminoglycoside Resistance Gene in *Salmonella enterica* Subspecies *Enterica* Serovar Typhimurium"
Chair: Sara D. Lawhon
- Carmen Lau Biomedical Sciences
Dissertation: "The Role of Ultrafine Particulate Matter and Nrf2 in the Pathogenesis of Neonatal Respiratory Syncytial Virus Disease at Texas A&M University"
Chair: Natalie M. Johnson
Co-Chair: Aline Rodrigues
- Yu-Lieh Lin Biomedical Sciences
Dissertation: "Engineering Articular Cartilage with Bone Morphogenetic Proteins"
Chair: Ken Muneoka
- Anne E. Peters Biomedical Sciences
Dissertation: "Exploring Mesenchymal Stem Cell Function in an *In-vitro* Equine Synovitis Model"
Chair: Michael Criscitiello

- Alina Teresa Roman Hubers Toxicology
Dissertation: "Advancing Regulatory Decision Making of UVCB Sub-
stances Through Novel Analytical Techniques"
Chair: Natalie M. Johnson
- Lauren Wood Stranahan Biomedical Sciences
Dissertation: "*Brucella canis*: Development of a Mouse Model and
Investigation of Correlates of Immune Protection"
Chair: Angela M. Arena Gamboa

Academic Regalia

Academic institutions throughout the world have created a wide variety of customs including distinctive dress, color and ceremony to indicate the accomplishments of scholars. English traditions originating at Oxford and Cambridge led to the development of American academic regalia. By the twentieth century, institutions of higher learning in the United States had adopted a well-defined code of academic costume, which now includes the identification of the different academic degrees by distinctive gowns, hoods and colors. For instance, the baccalaureate gown is worn closed and is identified by long, pleated front panels and long, pointed sleeves. The master's gown has very long sleeves, closed at the bottom, and the arms of the wearer are placed through an opening in the front of the sleeves. Doctoral gowns are distinguished by velvet panels around the neck and down the front of the gown. Three horizontal black velvet bars also mark the doctorate. In America, the hood is the most colorful feature of academic regalia. The bachelor's hood, when worn, is comparatively short; the master's, a bit longer; and the doctor's, at four feet, reaches far down the wearer's back. The outside of the hood is black and is bordered with a two-, three- or five-inch band of velvet in the color representing the degree received, and the hood is lined with the colors of the granting institution. For instance, the Master of Arts hood from Texas A&M has a white border, for the discipline color of Arts, Letters and Humanities, with a maroon and white lining; the Master of Science hood has a golden yellow border, for Science, with a maroon and white lining; and the Doctor of Philosophy hood has a border in the blue of Philosophy with a maroon and white lining. Among the other discipline colors are Agriculture—maize, Architecture—violet, Business—olive green, Education—light blue, Engineering—orange and Veterinary Medicine—gray. These colors represent the degree earned, not the academic major. The Ph.D. in Engineering, for example, would normally wear the dark blue of Philosophy on the hood and gown instead of the orange of Engineering. Official guests of the University and members of the Board of Regents wear the doctor's gown with the blue of Philosophy on the front and hood.

Ceremonial Mace

The University mace, a gift of the Class of 1990, leads the academic procession at commencement and on other special ceremonial occasions. Historically, the use of a mace dates back to the Middle Ages and was carried before or placed near a magistrate or other dignitary as an ensign of authority. This mace is made of sterling silver, walnut and oak and depicts various University symbols. It was designed by Rodney Hill, Texas A&M architecture professor who also carved the staff. Silversmith Lane Coulter '78, of Santa Fe, prepared the silver head of the mace and Lars Stanley '74, of Austin, designed and manufactured the stand.

Gonfalons

The gonfalon, a flag that hangs from a crosspiece or frame, originated in the medieval republics of Italy as an ensign of state or office. Gonfalons have been adopted in many universities around the world as college or institutional insignias. The gonfalons displayed represent the colleges of Texas A&M University. The colors of the University, maroon and white, are joined together in a pattern common to all of the flags. The top portion is the designated color for each unit. The white field serves as a background for the symbol of each.

College of Agriculture and Life Sciences. On a ground of white appears an emerging sun of yellow and russet rays. Yellow, the discipline color of science, russet, the discipline color of natural resources, and the center orange, color of engineering, combine to illustrate the intellectual interest in human and biological systems and structures. The interweaving ring encompasses the dawn making a full circle of life.

College of Architecture. The hexagonal symbol is composed of three colors that represent the solid foundation of the college. Our Aggie core values (maroon) connect limitless possibilities and opportunities in learning, scholarship, and engagement for the college (blue) with the energy of creativity, innovation, and design to address them (yellow). The striped ribbon represents the drivers of the college's vision of quality of life, place, and human endeavors which is intertwined with a solid ribbon that represents where this vision is applied: the natural, built, and virtual environments. The six segments defined by the alternating striped and solid ribbon represent the six disciplinary domains of the college: urban planning, architecture, landscape architecture, land and property development, construction science, and visualization.

Mays Business School. The golden knot symbolizes unity and coordination of the disciplines of business administration. Surrounding the golden knot, a field of purple represents the rank of authority. The foundation of lozenges under the triangle illustrates the flow of order.

College of Dentistry. The color lilac has been associated with dentistry since the 1800s, symbolizing compassion and inspiration. Upon it, rests the Greek Omicron, O, representing the first letter in "odont," meaning tooth, along with an interlaced Delta representing the letter D for Dentistry. The inner-most component of the emblem depicts healing, as signified with a serpent intertwined around the ancient cauterizing rod of the Greek god of healing, Asclepius. Included in the emblem, are 32 leaves and 20 berries representing both the primary and secondary teeth.

College of Education and Human Development. The flourishing flame blazoned with gold, light blue and royal purple signifies the burning zeal of the three missions of education--teaching, research and service. The hands hold the spiritual, social and intellectual flame of education.

College of Engineering. As the triangles collaborate alongside each other, projecting a diamond shape, they depict the strong relationship between the diverse engineering disciplines. The use of mathematics, science and technology provide the foundation of solving today's challenging ideas between and within each engineering department. The center illustrates a circuit board to express the continuing growth in technology and engineering today, resulting in new industries and opportunities. The cohesive elements of this design work together as a whole symbolizing communication, interaction, teamwork, and balance in Engineering as the green, blue and navy color palette represents energy, loyalty, wisdom, professionalism and ambition.

College of Geosciences. The white field reveals a yellow sun representing our surrounding atmosphere. The mountain peaks and the horizontal band of golden land represent the lithosphere. The banded waves of white signify the hydrosphere. The atmosphere, lithosphere and hydrosphere form the total environment for life in our world.

Bush School of Government and Public Service. The star symbolizes pride and heritage in our great state of Texas. The two lines on either side of the star represent our connection with the past, and with the future, in an effort to build on experiences from history, while contributing and presenting new opportunities to future generations.

School of Law. A widely accepted symbol of peace, the olive leaves highlight one of the most critical contributions of law and legal order to human development. Curving inwards, they also bring to mind the Aggie Ring – and the circle of fellowship and community it represents. Lady Justice symbolizes the values our graduates bring to bear in their careers: a spirit of objectivity (blindfold), an unwavering commitment to fairness (scales), and the strength necessary to pursue it (sword). The six stars, finally, represent Texas A&M's Core Values – Leadership, Respect, Loyalty, Excellence, Selfless Service, and Integrity – essential requirements of not only members of the legal profession, but all those who study the law and seek to advance justice, fairness, and the Rule of Law.

College of Liberal Arts. The golden torch symbolizes the various disciplines lighting the path to our goal, "Knowledge for Life." The circle of blue, the traditional color of knowledge, represents the college's unending, unbroken commitment to scholarship, learning, and responsible citizenship.

College of Medicine. The white field provides a background for the Aesculapian staff and serpent, long used as the symbol of the healing arts. The green color is the same displayed on the hoods and robes worn for the degree of Doctor of Medicine.

College of Nursing. The stars on the College of Nursing gonfalon represent caring, innovation and empowerment, while the cross symbolizes the origins of nursing. The candle honors the founder of nursing, Florence Nightingale. Apricot is the color of nursing.

Irma Lerma Rangel College of Pharmacy. The mortar and pestle on the College of Pharmacy gonfalon symbolize the tools of traditional pharmacy. The Rx is from the Latin, "Take thou."

School of Public Health. The anchor and caduceus are adapted from the national Public Health Service, which evolved from the Marine Hospital Service to the Public Health and Marine Hospital Service, and finally became the U.S. Public Health Service. The star represents the linkage of the School of Public Health with the Texas A&M Health Science Center and the State of Texas. The salmon color is the color of the public health hoods.

College of Science. This symbol's segments represent the five departments of the College of Science--Biology, Chemistry, Mathematics, Physics and Astronomy, and Statistics. The interweaving of each depicts their close relationship to each other. The inner quilting represents the intellectual search in science and its continuing growth.

College of Veterinary Medicine and Biomedical Sciences. Resting upon a ground of purity, a white snake stands for the science and the art of prevention, cure or alleviation of disease and injury to animals. It is found entwined around a herald's green staff--the symbol of service. The golden radiant triangle atop the Aesculapius illustrates the breadth of veterinary medical science.

CONGRATULATIONS NEW GRADUATES!

WELCOME TO THE ASSOCIATION OF FORMER STUDENTS!

Today, as a proud graduate of Texas A&M University, you will turn your Aggie Ring so that the Class year faces away from the body symbolizing a readiness to face the world.

Being an Aggie is a lifelong experience that is supported by the Aggie Network. By staying involved with Texas A&M through The Association of Former Students, together, we will continue the work of passing back the core values, traditions and experiences that make Texas A&M unique.

As you begin your new journey, we ask that when you're ready, you consider helping to pass it back to future generations. Join the Century Club at a 50% discount and proudly showcase your very own Century Club member decal.



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The Association of Former Students is **HERE** for Aggies during their days as students and former students, **THERE** for Aggies as they make their way around the world and **EVERYWHERE** that the Aggie Network needs us to be.

This program is accurate with respect to the degree awarded and honors conferred based on available information at the time of print production. Neither a name listed herein nor participation in the ceremony guarantees the awarding of a degree or honors. The Office of the Registrar retains each student's permanent academic record, which indicates these official designations.

This program will be available for download on the graduation website the week after ceremonies have been held at <https://graduation.tamu.edu/Home/Ceremonial-Symbols-History/Program-Archives>.