

# TEXAS A&M UNIVERSITY Commencement



## TEXAS A&M UNIVERSITY COMMENCEMENT

## Program

Doctoral Commencement and Hooding Ceremony

Saturday, August 7, 2021, 10 a.m. Reed Arena

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. Blanca Lupiani, Dean of Faculties and Associate Provost Stage Party Dr. George B. Cunningham, Senior Associate Dean Announcers Ms. Nora Cargo, Director, Scholarships & Financial Aid 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. Jay C. Graham . . . . . . Houston Mr. Michael A. "Mike" Hernandez III . . . . . . Fort Worth Mr. Michael J. Plank..... Houston Mr. Cliff Thomas . . . . . . Victoria Ms. Matilin "Mati" Rigsby (Student Regent)............ Gainesville Chancellor Texas A&M University Administrative Officers President . . . . . . Dr. M. Katherine Banks Provost and Executive Vice President (interim) . . . . Dr. Mark H. Weichold Vice Provost for Faculty Affairs and Interdisciplinary Initiatives (interim) . . . . . . Dr. Patrick Louchouarn Dean, College of Agriculture and Life Sciences . . . . Dr. Patrick J. Stover Dean, College of Architecture . . . . . . . . . . . . . Dr. Jorge A. Vanegas Dean, Mays Business School (interim) . . . . . . . . . Dr. R. Duane Ireland Dean, College of Dentistry (interim)...... Dr. Lynne A. Opperman Dean, College of Education and

Dean, Bush School of Government and

Dean, College of Medicine
Texas A&M University at Qatar
Associate Provost
Chief Operating Officer, Texas A&M Health and
Vice President
Vice President
Chief Marketing and Communications Officer and
Vice President
Information Technology (interim) Dr. Edwin L. Pierson
Vice President and
Associate Provost for Diversity (interim)Dr. Annie S. McGowan
Vice President for Brand Development Mr. Shane Hinckley
Vice President for Development
Vice President for Economic Development and
Dean, School of Innovation Dr. Andrew P. Morriss
Vice President for Enrollment and
Academic Services
Vice President of Facilities, Safety,
and Security Mr. Stephen B. Franklin
Vice President for Government Relations Mr. Norman R. Garza, Jr.
Vice President for Human Resources and
Organizational Effectiveness
Vice President for Research (interim) Dr. Jack G. Baldauf
Vice President for
Student Affairs (interim) Brigadier General Joe E. Ramirez, Jr. (Ret.)
Vice President and Chief Operating Officer, Texas A&M University at Galveston Colonel Michael E. Fossum (Ret.)
Associate Provost for Undergraduate Studies Dr. Ann L. Kenimer
Associate Provost for Academic Affairs and
Student Success
Chief Compliance Officer
Commandant of the
Corps of Cadets (interim) Colonel Byron F. Stebbins (Ret.)

## 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

Chair:	Julie F. Harlin		
Kellie Jean Seals Record of Study:	"The Effects of Authentic Experiential Learning and Student-Teacher Relationships on Situational Career Interest of Rural Youth: A Mixed Methods Intervention Approach"		
Chair: Co-Chair:	Amy Boren-Alpizar Gary E. Briers		
Miraj Rhiannon Rose Wallace			
Chair: Co-Chair:	Educator Job Satisfaction in Arizona" John Elliot Courtney A. Meyers		
Doctor of Philosophy			
Jason Kenneth Allen . Dissertation:	"Understanding How Endosomal Membrane Permeabilizing Agents Can Be Improved for Efficient Intracellular Delivery"		
Chair:	Hays S. Rye		
Gessica Araujo Franco Dissertation:	Physiology of Reproduction "Investigating the Sire Contribution to Embryonic Mortality in Cattle"		
Chair:	Ky G. Pohler		
Nasta Babirye Dissertation:			
Chair: Co-Chair:	Paul S. Schwab Julie A. Howe		
Karen Mynhier BeathardNutrition			
Dissertation:	"Nutrition, Vision, and Cognition in Health: Egg (Ionhealth-Egg) Study"		
Chair:	Steven Riechman		

Calcium Solubility on Broiler Performance, Nutrient Absorption, Intestinal PH, and Bone Development" Chair: Audrey P. McElroy Michael Alexander Black . . . . . . . . . . . . . . . . . . Agricultural Economics Dissertation: "Essays on the Benefits of Soil and Water Conservation" Richard Woodward Chair: Karely Cantu ..... Dissertation: "The Enumeration and Mitigation of Microbial Loads on Hatchling Eggs, Embryos and Newly Hatched Chicks" Chair: Craig D. Coufal Erika Leonor Garcia Villatoro .......Nutrition "Role of the Aryl Hydrocarbon Receptor Activity in Dissertation: Intestinal Epithelial Cells in the Formation of Colonic Tertiary Lymphoid Tissue and Colorectal Cancer Development" Chair: Clinton Allred "Engineering Protein-Based Materials for Neovascular-Dissertation: ization" Chair: Sarah Bondos Dissertation: "Applying the Theories of Identity in the Human Dimensions of Wildlife Conservation" Chair: Gerard Kyle "Improving Irrigation Efficiency in Sand-Capped Dissertation: Turfgrass Systems and Urban Lawns" Benjamin G. Wherley Chair. Rachel Anne Innocenti ...... Ecosystem Science and Management "Ecosystem-Based Solutions to Dune and Beach Erosion" Dissertation: Chair. Russell A. Feagin A S M Faridul Islam... Dissertation: "Genome-Wide Association Mapping for Rice Grain Quality and Nutrition" Chair: Michael J. Thomson Demetrios Harry Kostomiris . . . . . . . . . . . . . . . . . Biochemistry Dissertation: "Application of Mechanistic Enzymology in Identifying Inhibitors of Critical Enzymes from Human Pathogens' Chair. Jorge Cruz-Reves Taniya Jayani Koswatta . . . . . . . . . . Agricultural Leadership, Education, and

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Gary Wingenbach

Dissertation:

Chair:

"Public Perception of Science Communication: Factual

vs. Nonfactual Information About Organic Foods"

Communications

Pierre Wai Kit Lau . . . . . Entomology "Honey Bee Foraging Preferences and Nutritional Dissertation: Ecology" Chair: Juliana Rangel Posada Keehvun Lee . . . . . . ..... Agricultural Economics Dissertation: "Studies Concerning Spending Behavior of Households by Store Type and Income Level and Effects of Changes in Immigration Policy on State-Level WIC Participation Rates" Chair: Oral Capps Maria Danielle Leon . . Dissertation: Development in Juvenile Justice Settings Using a Mestiza Methodology" Chair: Corliss W. Outley Lin Liu . . . . . . . . . . . . . . . .....Nutrition "Role of Macrophage Osr1 in Liver Inflammation and Dissertation: Nonalcoholic Steatohepatitis (NASH)" Chair: Linglin Xie Pulkit Marwah . . . . . ..... Agribusiness and Managerial Economics "Three Essays on Consumer Research and Market Dissertation: Analysis for Agricultural Products: An Intersection of Agriculture, Business, and Economics" Chair: Yu Zhang Drake Michael Mellott...... Biochemistry "Drug Discovery and Kinetics in Mycobacterium Dissertation: tuberculosis, Trypanosoma cruzi, and SARS-CoV-2" Chair: Frank Raushel Jales Mendes Oliveira Fonseca......Plant Breeding Dissertation: "Assessing the Genetic Variation, Performance, and Genomic Prediction of Grain Sorghum Hybrids Developed from U.S. Public Breeding Programs" Chair: William L. Rooney . . . . . Biochemistry Ran Meng . . . . . . . . . Dissertation: "Structural Basis for Adsorption of Single-Stranded RNA Bacteriophages" Chair: Ryland Young Shakirah Nakasagga . "Estimating Hydrogen Cyanide Potential, Biomass Yield Dissertation: and UAS-Based Regrowth Assessment in Perennial Sorghum and Zea Derived Lines" Chair: Seth Murray Co-Chair: William L. Rooney Joel Andrew Oliver . . ..... Biochemistry Dissertation: "On the Importance of Watching Grass Grow: Plant Design and Internode Growth and Development in Sorghum Bicolor" Chair: John Mullet

Chair: Masami Fujiwara

Megan Rose Pineda . . . . . Poultry Science

Dissertation: "Characterization of Avian Immunity and Salmonella

Intervention Strategies"
Chair: Morgan B. Farnell

Dissertation: "Effects of Glycine Supplementation on Creatine

Synthesis and Growth of Intrauterine Growth Restricted

Pigs (Sus scrofa domesticus) Post-Weaning"

Chair: Guoyao Wu Co-Chair: Fuller Bazer

Ze Shen ...... Agribusiness and Managerial Economics

Dissertation: "Price Analysis and Risk Management in Cryptocurrency

Market"

Chair: David Leatham

Phillip Thomas Shults . . . . . . Entomology

Dissertation: "A Study of *Culicoides* Biting Midges in the Subgenus

Monoculicoides: Population Genetics, Taxonomy, Systematics, and Control"

Systematics, and Cont.

Chair: Edward L. Vargo

Phillip Steven Steigerwald ...... Ecosystem Science and Management

Dissertation: "Management of Woody Plant Encroachment: Decision

Theory, Ecological Theory, & Evaluation"

Chair: Merwyn Kothmann

Dissertation: "Mediating the Relationship Between Motivational

Climate and Intrinsic Motivation in Collegiate Physical

Activity Courses"

Chair: Corliss W. Outley Co-Chair: Andrea Ettekal

Manish Thakran . . . . . . . . . . . . . Molecular and Environmental Plant Sciences

Dissertation: "Sorghum bicolor Genes Involved in Raffinose Oligosac-

charide Metabolism"

Chair: John Mullet

Jeffrey Frederick Wahl......Recreation, Park and Tourism Sciences

Dissertation: "The Ongoing Battles of the Little Bighorn: An Explora-

tion of Conflict in Battlefield Heritage Tourism"

Chair: Tazim B. Jamal

David R. Walther . . . . . . . . . . Agricultural Leadership, Education, and

Communications

Dissertation: "A Qualitative Study of Mass Media Reports about Honey

Bee Decline and Beekeeper Practices"

Chair: Tracy A. Rutherford

I-Fan Wu . . . . . . . . . . . Biochemistry

Dissertation: "Insights from Systematically Analyzing Microbial Phenotypic Profiles"

Chair: Margaret Glasner

Platforms for Lipid and Polyhydroxyalkanoate (PHA)

Production"

Chair: Yuan Dai

Lizhihan Yu...... Agricultural Economics

Dissertation: "Case Studies on Medical Laboratory Decision

Optimization and Grass-Fed Beef Market Penetration"

Chair: Bruce McCarl

Ping Yu .......Horticulture

Dissertation: "Biochar as a Way to Increase Environmental

Friendliness for Potted Plants Production and Disease

Suppression"

Chair: Mengmeng Gu

## College of Architecture

#### Doctor of Philosophy

Mohammadmehdi Danesh.......Architecture

Dissertation: "The Optimization of Energy Performance of Double-Skin Facade in High Rise Building: Using Building

Information Modeling by a Parametric BIM-Base Plugin"

Chair: Stephen Caffey
Co-Chair: Edelmiro Escamilla

Dissertation: "Pedestrian Activity, Outdoor Thermal Comfort and Urban Street Design: Case Studies for the Seoul-lo 7017 in

Seoul and the High Line in New York City"

Chair: Robert D. Brown

Kanghyun Lee...... Urban and Regional Science

Dissertation: "Urban Landscape Design for Improving Thermal

Environments and Protecting Human Health"

Chair: Robert D. Brown

Dissertation: "Much Ado About Affordability: Examining the

Intersection Between Purchase Affordability and

Neighborhood Opportunity"

Chair: Shannon S. Van Zandt

on Elementary School Children's Independent Mobility" Chair: Xuemei Zhu Anusree Saseendran . . . . ......Architecture Dissertation: "Community Engagement and Outreach in the Construction Industry" Stephen Caffey Chair: Co-Chair: Edelmiro Escamilla ...... Urban and Regional Science Ki Jin Seong..... Dissertation: "Living with Floods: Longitudinal Impact of Floodplain Buyouts on Neighborhood Change" Chair: Shannon S. Van Zandt Fatemeh Shahsavari......Architecture "Integrating Probabilistic Methods into BIM and Dissertation: Parametric Modeling for Performance-Driven Building Design and Risk Assessment" Wei Yan Chair: Co-Chair: Charles Culp Huaqing Wang . . . . . . ...... Urban and Regional Science "Effects of Greenspace Morphology on Population Health" Dissertation: Chair: Louis Tassinary Co-Chair: Galen D. Newman Mays Business School Doctor of Philosophy ..... Business Administration Yuna Choe..... Dissertation: "Essays on Mental Budgeting and Consumer Spending Behavior" Christina S. Kan Chair: Co-Chair: Haipeng Chen . . . . . . . . . . Business Administration Yiwen Li . . . . . . . . . . . . "Light the Dark: Voluntary Disclosure and Equity Dissertation: Trading Venue Choice" Chair. Korok Ray Anwer Ahmed Co-Chair: "Does Something Seem Wrong? Misfit During the Job Dissertation: Search" Chair: Murray Barrick Elizabeth June Tori..... ...... Business Administration "Rival Firms' Voluntary Disclosure Response to a Dissertation: Competitor's Financial Distress" Chair: Senvo Tse

Junhyok Yim . . . . . . . ..... Management "What Are You Talking About? Follower Construal Level Dissertation:

and Cognitive Appraisals of Visionary Leadership"

Chair: Stephen H. Courtright

Co-Chair: Anthony Klotz

## College of Dentistry

#### Doctor of Philosophy

Rajay Agnel Daniel Kamath . . . . . . . . . . Oral Biology

"Ephrin-B Signaling in Calvarial Bone Formation" Dissertation:

Chair: M. Douglas Benson

Yongxi Liang..... .....Oral Biology

"Sharpey's Fibers and Periodontal Ligament Dissertation:

Regeneration"

Xiaohua Liu Chair:

Chair:

## College of Education and Human Development

#### Doctor of Education

Michael Anthony Cardona . . . . . . . . . . Educational Administration

Record of Study: "A Case Study of Intra-District School Choice Policy in a

Large Urban District" Mario Torres

..... Curriculum and Instruction Penelope Wyma Flores . . . . . . . .

"Teachers' Perspectives of the Impact of Social Emotional Record of Study:

Learning on Student Behavior"

James D. Laub Chair: Michelle M. Kwok Co-Chair:

Outreach and Engagement to Empower Parents of Gifted

Black Students"

Chair: Trina J. Davis Co-Chair: Monica V. Neshyba

..... Curriculum and Instruction Kasey Leah Lowry . . . .

Record of Study: "A Case Study of the Leadership Styles a Highly Effective

Principal Employed to Cultivate Teacher Collective

Efficacy"

Chair: Iames D. Laub Co-Chair: Michelle M. Kwok

Andrew Jace Mcmullin . . . . . . . . . . . . . . . . Curriculum and Instruction

Record of Study: "Induction, Mentoring, and Coaching of Novice

Performance Arts Educators"

Sharon D. Matthews Chair. Co-Chair: Radhika Viruru

High School X? Special Education Teachers Speak!"

Chair: Trina J. Davis Co-Chair: Monica V. Neshyba

Doctor of Philosophy

Lobat Asadi...... Curriculum and Instruction

Dissertation: "Art, Learning and Literacy: Parallel Monsters from

Borderland Spaces"

Chair: Cheryl J. Craig Co-Chair: Yolanda Padron

Dissertation: "Teacher Professional Development for the Digital Age:

Making Technology Integration Possible"

Chair: Hersholt Waxman

Aaron Rachelle Campbell . . . . . . . . . . . . . . . . . Educational Psychology

Dissertation: "Culturally Responsive Positive Behavioral Support for

African American Learners at Risk for Emotional and

Behavioral Disorder"

Chair: Julie Thompson

Dissertation: "How Mother's Attitudes and Communication Affect

Body Image Satisfaction Status of Daughters"

Chair: Cynthia Riccio

Dissertation: "Promoting Equity and Access for English Language

Learners and Home-Bound Students: From Bilingual

Education to Robot Assisted Learning"

Chair: Cheryl J. Craig
Co-Chair: Rafael Lara-Alecio

Dissertation: "Alpha and Beta Factors of Resilience and the Mediating"

Effects of Coping and Problem-Solving Styles on Family

Caregiver Adjustment"

Chair: Timothy Elliott

Dissertation: "OpenBrick: Encouraging Equity in STEM Education

Through Open Source Educational Robotics"

Chair: Robert Capraro Co-Chair: Mary Capraro

Derek Charles Ford . . . . . . Educational Human Resource Development

Dissertation: "The Graying of the Oil and Gas Industry in the United

States: Knowledge Transfer Perceptions and Experiences

in a Multigenerational Workforce"

Chair: Larry M. Dooley

Deyanira Garcia Zea ...... Educational Human Resource Development Dissertation: "Barriers and Facilitators to Venezuelan Refugee

Professionals' Career Development in South Florida: A

Case Study"

Chair: Larry M. Dooley

Zihan Geng . . . . . . . . . . ..... Curriculum and Instruction

Dissertation: "Exploring the Effects of Task Complexity on Interaction

and L2 Performance with Math Word Problems in FTF

and SCMC Environments"

Chair: Zohreh Eslami

Risk Population Over Time"

Chair: Cynthia Riccio

Eliel Hinojosa, Jr. . . . .

Dissertation: Facilitator Style Variation in Three Elementary Schools

Lynn Burlbaw Chair.

Meghan Ann Hokom... ..... Educational Administration

"English Learners and Students with Disabilities: A Texas Dissertation:

School District Perspective"

Chair: Mario Torres Co-Chair: Beverly Irby

Ehikowoicho Elizabeth Idoko ...... Health Education

Dissertation: "Exploring Mental Health Literacy Among Black and

African American Adults in Predominantly White Higher

Education Institutions"

Chair: Idethia S. Harvey

Nuzulul Isna..... . . . . . . . Educational Human Resource Development

Dissertation: "A Study of Teacher Development Program on Transfer

of Learning in Indonesia"

Fredrick Nafukho Chair. Co-Chair: Khalil M. Dirani

...... Health Education 

Dissertation: "Expressive Writing as a Strategy to Reduce Academic

Stress and Enhance Writing Productivity Among a

Sample of Graduate Students"

Chair: Patricia Goodson

......Educational Psychology Mirim Kim......

"Testing Measurement Invariance on Zero-Inflated

Measures with Two-Part Factor Model and MGCFA"

Chair: Myeongsun Yoon

Dissertation:

Hyunkyung Kwon.. ..... Curriculum and Instruction

Dissertation: "Striking While the Iron is Hot: Reform-Based Instruction

and Problem Solving"

Robert Capraro Chair Co-Chair: Mary Capraro

. . . . . . . . . Educational Psychology

"Universal Design for Learning in Postsecondary Dissertation:

Education: Measure and Explore Perspectives of Students

with Disabilities"

Chair: Dan Zhang

Jiacheng Lu ..... Educational Human Resource Development

Dissertation: "Factors Leading to Engineering Student Team

Performance During Intense International Design

Competition"

Chair: Michael M. Beyerlein

Austin Taylor McCulloch . . . . . . . . . . . . . Kinesiology

"The Influence of Neural Stimulation on the Acquisition" Dissertation:

and Consolidation of Bimanual Coordination Tasks"

Chair: John Buchanan

Samantha Marie Meek..... ..... School Psychology

"Effects of Maternal Mental Illness on Behavioral Dissertation:

Difficulty in Preschool Children: Do Parental Perceptions of Parenting Ability and the Parent-Child Relationship

Play a Role?"

Chair. Sara M. Castro Olivo Krystal T. Simmons Co-Chair:

Jihye Oh . . . . . . . . . . . . . . . . . . Educational Human Resource Development

"The Impact of Social Capital in the Workplace: A Dissertation:

Systematic Review and Quantitative Study"

Chair: Iia Wang

. . . . . . . Educational Human Resource Development Trupti Jayant Palkar....

"Leaving For-Profit Careers to Become Spiritual Leaders Dissertation:

Serving in the Context of HRD: Using Case Studies to Inquire into the Transformative Experiences of Professionals"

Larry M. Dooley Chair:

Dorothy Yee Lok Pang... ..... School Psychology

Dissertation: "Chinese American Emerging Adults' Telling of Their

Life Stories: A Mixed-Methods Study of the Acculturation

Process as Immigrant Children"

Chair: **Jeffrey Liew** 

Co-Chair: Sara M. Castro Olivo

...... Curriculum and Instruction Eunhee Park . . . . . . . .

Dissertation:

"Unearthing Embodied Truths in Curriculum and Instruction: Narrative Plotlines Through a Musical Lens"

Chair: Cheryl J. Craig

.....Educational Psychology Roya Pashmforoosh..

"Virtual Mentoring and Coaching Through Virtual Dissertation:

Professional Learning Communities and Reflection: Building Instructional Capacity of School Leaders to

Impact Bilingual and English Learners"

Chair. Rafael Lara-Alecio

Christopher Slaughter Prickett............................... School Psychology Dissertation: "Bodily Emotion Recognition Differences Between Autism Spectrum Disorder and Typical Development" Chair. Steven Woltering Co-Chair: Cynthia Riccio Elisabeth Kathryn Pugliese..... Educational Administration Dissertation: "An Analysis of Policy and Practices in Preparing Culturally Responsive Leaders" Chair. Beverly Irby Shakiba Razmeh... ..... Curriculum and Instruction Dissertation: "ESL Beyond the Classroom: Life Stories, Virtual Knowledge Communities, and Identity Reconstruction of Three Immigrants in the USA" Chair: Cheryl J. Craig Coaching on Teachers of English Learners' Professional Growth' Chair: Rafael Lara-Alecio Co-Chair: Fuhui Tong ......Educational Psychology Special Education" Kimberly Vannest Chair: Co-Chair: Iennifer Ganz Mandy Nicole Spadine . . . . . . . . . . . . . . . . . Health Education "Investigating Social Influence on Fad Diet Behavior Dissertation: Using Social Network Analysis" Chair: Megan S. Patterson Dissertation: "Student Development Implications of Loose Coupling Between University Sport Club Subsystems" Marlene A. Dixon Chair: Kaitlyn Elizabeth Stein . . . . . . . . . . . . . . . . . Counseling Psychology "The Use of Clinical Outcomes to Measure Within-Group Dissertation: Differences in Counselors in Training" Chair: Dan F. Brossart ..... School Psychology Carlene Ann Swift . . . . "Examining Psychotherapy Dropout Among Racially and Dissertation: Ethnically Diverse Youth' Chair: Iamilia Blake Vy Tuong Tran . . . ..... Counseling Psychology "Clinical Supervisors' Conceptualization and Evaluation Dissertation: of Supervisee's Multicultural Counseling Competence: An Exploratory Study"

Charles Ridley

Chair.

Perspective, and Subjective Well-Being Among Chinese

International Students: A Moderation Model"

Chair: Charles Ridley

Behavioral Challenges for Individuals with ASD and ID"

Chair. **Iennifer Ganz** Co-Chair: Lisa Perrott

Asian American College Students: The Role of Self-

Objectification"

Chair: Jeffrey Liew

Sara M. Castro Olivo Co-Chair:

## College of Engineering

#### Doctor of Philosophy

Dissertation: "Evaluation and Detection of Leaks in a Laboratory-Scale

Water Distribution System with Acoustic, Acceleration, and Dynamic Pressure Sensors"

Katherine Banks Chair: Co-Chair: **James Brumbelow** 

Ahmad F. Al Douri . . ..... Chemical Engineering

"Systematic Frameworks for Reliability, Availability, Dissertation:

and Maintainability (RAM) Considerations in Chemical

Process Design"

Chair: Mahmoud El-Halwagi

Mina Aliakbari . . . . . 

"Optimization Models for Train Routing in Railyard Dissertation:

Networks"

Chair: Joseph P. Geunes

"Coding and Compressed Sensing for Massive Random Dissertation:

Access'

Chair: Krishna Narayanan

Co-Chair: Jean-Francois Chamberland-Tremblay

Muhammad Anas...... Chemical Engineering

Dissertation: "Radio Frequency Heating of Carbon-Based Nanomaterial

Films"

Chair: Micah Green

Jyot Antani ...... Chemicai Engine Dissertation: "Sensory Functions of the Bacterial Flagellar Motor" ..... Chemical Engineering

Chair: Pushkar P. Lele

Joshiba Ariamuthu Venkidasalapathy ...... Chemical Engineering "Safety-Centered Quantitative Approach for Alarm Dissertation: System Design and Process Control Design" Chair: Costas Kravaris Akhil Arora..... . . . . . . . . . . . . . . . . Chemical Engineering "Process Design, Optimization and Material Screening Dissertation: Methods for Small-Scale Chemical Manufacturing with Application to Unconventional Natural Gas" Chair. M M Faruque Hasan Chair: Akhilesh K. Gaharwar Amrita Bal......Electrical Engineering Dissertation: "Additive Manufacturing and Electroless Metallization of a 4X4 V-Band Contorted Waveguide Butler Matrix" Chair: Gregory Huff Co-Chair: Robert Nevels Pedro Batista Camara Leal . . . . . . . . . . . . . . . . Aerospace Engineering Dissertation: "Reduced-Order Modeling and Parameterized Optimization of Bio-Inspired Adaptive Structures" Chair · Darren J. Hartl Shahin Boluki . . . . . . "Knowledge-Based Bayesian Learning" Dissertation: Chair: Edward Dougherty Co-Chair: Xiaoning Oian in Early Design Through AI-Augmented Mind-Mapping" Chair: Vinayak R. Krishnamurthy Yan Chen . . . . . . . . Dissertation: "In Situ Tribochemical Characterization of Nanolubricants" Chair: Hong Liang Ting-Yen Chi . . . . . . Dissertation: "Molecularly Imprinted Polymers for Chemical Detection on a Paper Substrate" Chair: Jun Kameoka Seunghwan Chun. . . . . "Experimental Study of Proppant Transport for S $\bar{l}$ ickwater Dissertation: Fracturing in Unconventional Reservoirs" Kan Wu Chair: Chair: Raymundo Arroyave Co-Chair Ibrahim Karaman Jyotikrishna Dass . . . . ......Computer Engineering "Efficient and Scalable Machine Learning for Distributed

Edge Intelligence"

Rabinarayan Mahapatra

Dissertation:

Chair:

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Studies on Biologically Important Molecules and

Crystals"

Chair: Peter M. Rentzepis

Dissertation: "High-Pressure Exponent Break of AP/HTPB-Composite"

Propellants" Eric Petersen

Dissertation: "Low-Cost Passive Wireless Sensors for Agriculture and

Environment Monitoring"

Chair: Jun Kameoka Co-Chair: Laszlo Kish

Chair.

Roshan Thomas Eapen . . . . . . . . . . . . . . . . Aerospace Engineering

Dissertation: "Semi-Analytic Methods for Averaging and Rectification

of Complex Dynamical Systems"

Chair: Manoranjan Majji Co-Chair: Kyle Alfriend

Dissertation: "Multiscale Energy Network Tomography and

SmartNIC-Accelerated In-Band Network Telemetry for

Network Internal State Monitoring"

Chair: Nicholas G. Duffield

Hongxiang Fu......Mechanical Engineering

Dissertation: "An Expanded and Updated Framework for Whole-

Facility Energy Consumption Statistical Models of

Commercial Buildings"

Chair: David Claridge Co-Chair: Juan-Carlos Baltazar

Dissertation: "Sediment Movement Due to Non-Linear Forcing

Generated by Irregular Waves, Pressure Gradients, and

Ships"

Chair: John A. Sweetman

Dissertation: "Effect of Inorganic Particles in the Protection Behavior of

Epoxy-Based Composite Coatings"

Chair: Homero Castaneda-Lopez

Co-Chair: Raymundo P. Case

Anna Paula Galvão Scheidegger . . . . . . . . . . . . Industrial Engineering

Dissertation: "The Implications of Uncertainty in the Results of Simulation Models and Applications of Entropy

Measures as a Method for Uncertainty Quantification in

Simulation Models"

Chair: Amarnath P. Banerjee

Pau Garcia Buzzi ...... Aerospace Engineering

Dissertation: "AI Tools for Design and Operation of Distributed

Spacecraft Missions"

Chair: Daniel Selva Valero

Reactors" Iean C. Ragusa Chair.

Co-Chair: Mauricio E. Tano Retamales

Dissertation: "Large Scale Data Analytics for Fault Detection and

Diagnosis of Residential HVAC Systems"

Chair. Bryan Rasmussen

...... Materials Science and Engineering Raman Hlushko . . . .

Dissertation: "Synthetic Antioxidant Polymers: Synthesis, Adsorption,"

and Layer-By-Layer Assembly"

Chair: Svetlana Sukhishvili

Tong Huang ..... ......Electrical Engineering

"Physical and Cyber Anomaly Management in  $\bar{\text{M}}$  assively Dissertation:

Digitized Power Systems" Chair. Le Xie

Wenkai Jia . . . . . . . . . . . .

......Biomedical Engineering "Cell-Derived Extracellular Matrix in Lymphangiogenesis Dissertation:

and Cardiac Patch Engineering" Feng Zhao Chair.

Zeren Jiao ...... 

"Development of Machine Learning Based Prediction Dissertation:

Models for Safety Related Properties and Consequences" Chair:

Qingsheng Wang

Hunter Reed Johnston... ..... Aerospace Engineering

"The Theory of Functional Connections: A Journey from Dissertation:

Theory to Application"

Chair. Daniele Mortari

Wonbae Jung..... ......Mechanical Engineering

Dissertation: "A Nonlinear Rotordynamics Model for Automotive

Turbochargers Coupled to a Physical Model for (Semi)

Floating Ring Bearing System" Luis A. Sanandres

Chair:

......Biological and Agricultural Engineering Dhruva Kathuria . . . .

"Multiscale Spatio-Temporal Big Data Fusion of Dissertation:

Hydrological Variables from Point to Satellite Footprint

Scales"

Chair: Binayak Mohanty

Efficiency in Deviated and Extended Reach Wells"

Chair: Abu Rashid Hasan Co-Chair: Mohammad A Rahman

Sangjin Ko . . . . . . . . 

Dissertation: "Reinforcement Learning Based Decision Making for Self

Driving and Shared Control Between Human Driver and

Machine"

Chair: Gholamreza Langari

"A Calibrated Computational Fluid Dynamics Model for Dissertation: Simulating the Rotating Disk Apparatus" Chair: Hadi Nasrabadi Alaa Mohamed H. Elwany Co-Chair: Dissertation: "An Integrated Approach to Exoskeleton Device Evaluation and Design" Roland Kaunas Chair. Co-Chair: Donald R. Peterson Synthesis and 3D Network Morphologies" Chair: Yossef A. Elabd Chau Hai Le . . . . . . . ..... Interdisciplinary Engineering "Novel Data-Driven Approaches for Enhanced Project Dissertation: Duration and Cost-Related Decision Making" Ivan Damnjanovic Chair: Co-Chair: Hyungseok D. Jeong Carl Dakota Leake . . . . . . . . . . . . . . . . . . . Aerospace Engineering "The Multivariate Theory of Functional Connections: Dissertation: An n-Dimensional Constraint Embedding Technique Applied to Partial Differential Equations Chair. Daniele Mortari Bochan Lee ..... ..... Aerospace Engineering "On the Complete Automation of Vertical Flight Aircraft Dissertation: Ship Landing" Benedict Moble Chair: "Multi-Agent Mechanisms and Learning in Energy Dissertation: Applications" Chair: Srinivas Shakkottai Hanyue Li ..... . . . . . . . . . . . . . . . . . Electrical Engineering Dissertation: "Towards the Automation of Data-Driven Remedial Action Scheme Design" Chair: Thomas Overbye Qingchun Li ...... ...... Civil Engineering "Unraveling the Dynamics of Coupled Human-Dissertation: Infrastructure Networks for Urban Resilience" Chair: Ali Mostafavi

Yongzan Liu ..... ......Petroleum Engineering "Hydraulic Fracture Geometry Characterization" Dissertation:

Using Low-Frequency Distributed Acoustic Sensing Data: Forward Modeling, Inverse Modeling, and Field

Applications" Kan Wu

Co-Chair: George J. Moridis

Chair ·

Dissertation: "Investigating Precise Control in Spatial Interactions:

Proxemics, Kinesthetics, and Analytics"

Chair: Vinayak R. Krishnamurthy

Dany Mulyana ...... ......Nuclear Engineering

Dissertation: "Proliferation Risk Assessment of a Pebble-Bed Reactor"

Chair. Sunil S. Chirayath

Praneeth Nampally ... ......Mechanical Engineering

"Nonlinear Micropolar Beam and Plate Theories with Dissertation:

Applications to Lattice Core Sandwich Structures and Dual Mesh Control Domain Method for Structural

Elements"

Chair: Junuthula Reddy

"Human-Centered Computing and Visual Analytics for Dissertation:

Future of Work in Construction"

Chair Stephanie Paal Amir Behzadan Co-Chair:

Asuka Autumn Orr . . . . ...... Chemical Engineering

"Engineering Computational Tools to Study and Design Dissertation:

Molecular Recognition Systems"

Chair · Phanourios Tamamis

Sandipan Paul..... 

"Studying Problems in Elasticity and Plasticity Using a Dissertation:

QR Decomposition of the Deformation Gradient"

Alan D. Freed Chair:

"Modeling and Prediction of Personalized Thermal Dissertation: Comfort and Control of HVAC System for Indoor

Climate"

Chair. Sheng-Jen Hsieh

Saul Perez Beltran .... ..... Chemical Engineering

Dissertation: "New Insights on Lithum/Sulfur Battery Materials: A

Theoretical Approach From Atomistic Modeling"

Chair: Perla Balbuena

......Mechanical Engineering 

Dissertation: "Deformation Mechanisms in Single Crystalline and

Ultrafine Polycrystalline Medium and High Entropy

Alloys"

Chair: Ibrahim Karaman

Dissertation: "Accelerating Storage Applications with Emerging Key

Value Storage Devices"

Chair . Narasimha Annapareddy

Co-Chair: Paul Gratz

Dissertation: "Studying the Dynamics of Fc-Engineered Antibodies

Using Advanced Imaging Methods"

Chair: Raimund I. Ober

Co-Chair: Alvin Yeh

Using Bayesian Hierarchical Models" William Lee Chair.

"Implementing Shape Memory Polymers in Interactive Dissertation:

4D Kirigami Structures"

Arun R. Srinivasa Chair.

Iinsil Seo Co-Chair:

Carolina Rodriguez Paras . . . . . . . . . . . . . . . . . Industrial Engineering

Dissertation: "Physiological Indicators of Cognitive Workload as

Detectors of Performance Redlines'

Thomas K. Ferris Chair: Co-Chair: Farzan Sasangohar

......Mechanical Engineering "Convergence Effect on Heat Transfer in Gas Turbine Izzet Sahin . . . . . . . .

Dissertation:

Blade Midchord and Trailing Edge Internal Cooling

Channels"

Chair: Ie Han

Co-Chair: Lesley M. Wright

Samalis Santini De Leon . . . . . . . . . . . . . . . . . Aerospace Engineering

Dissertation: "Intelligent Data Understanding for Entry, Descent, and

Landing, Architecture Analysis"

Chair: Daniel Selva Valero

......Biomedical Engineering

"Computational Analysis of Thermodynamic Factors for Dissertation:

Intrinsically Disordered Ligand Recognition"

Chair: Wonmuk Hwang

Farhan Shakil Ahmed Siddiqui . . . . . . . . . . . . Aerospace Engineering

"Boundary-Layer Instabilities on a Cooled Flared Cone at Dissertation:

Mach 6"

Chair. William Saric Co-Chair: Rodney Bowersox

Dissertation: "Wettability Assessment in an Asphaltic-Shaly Sandstone

Reservoir Using Relative Permeability, Capillary

Pressure, and Resistivity"

Chair: David Schechter

..... Civil Engineering Sirajum Munira.....

Dissertation: "Fusing Nonmotorized Traffic Data: A Decision Fusion

Framework"

Chair: Yunlong Zhang

Abhinav Srivastava . . 

"Tube Equal Channel Angular Extrusion as a Novel Dissertation:

Severe Plastic Deformation Technique for MG-3AL-1ZN

Alloy and Pure Niobium"

Chair: Karl Hartwig

Co-Chair: Ibrahim Karaman

Jin Tang ......Petroleum Engineering

"Pattern Generation of Strain Rate Simulation for Cross-Dissertation: Well Hydraulic Fracture Monitoring in Unconventional

Reservoirs"

Chair: Ding Zhu

Yuhe Tian ..... . . . . . . . . . . . . . . . Chemical Engineering

Dissertation: "Synthesis and Operability Strategies for Computer-

Aided Process Intensification"

Chair. Efstratios Pistikopoulos

...... Chemical Engineering Spyridon Tsolas . . . . .

"Design and Analysis of Water-Energy Nexus as Dissertation:

Interconnected Networks for Sustainability, Survivability

and Resilience"

Chair: M M Faruque Hasan Efstratios Pistikopoulos Co-Chair:

Modeling Asphalt Binders and Mixtures"

Chair: Kumbakonam Rajagopal

Co-Chair: Eyad Masad

Dissertation: "Optimal Design and Diagnosis of Conventional and

Unconventional Reactors"

Chair: Costas Kravaris Co-Chair: Benjamin A. Wilhite

Chair: Paul Gratz

Dissertation: "Multi-Objective Efficient Parametric Optimization"

Chair · Richard J. Malak

Zhenyu Wu..... 

"Video Understanding: Data Privacy, Pipeline Simplicity, Dissertation:

and Implementation Efficiency"

Chair: Zhangyang Wang

Zhipei Yan . . . . . . . . . . 

Dissertation: "Control of Curvature Extrema in Curve Modeling"

Chair: Scott Schaefer

......Petroleum Engineering Sangcheol Yoon . . . . .

"Modeling of Coupled Flow and Geomechanics for Fault Dissertation:

Slip, Wellbore Stability, Fracture Propagation and its

Field Application" Jihoon Kim Chair: Co-Chair: John E. Killough

..... Chemical Engineering Mengxi Yu.....

Dissertation: "Data-Driven Approach to Prevent Process Incidents in

Complex Systems – Identify Function Interactions and

Weak Signals Leading to Hazards"

Chair: Costas Kravaris

"Towards Explainable Deep Models for Images, Texts, Dissertation: and Graphs" Chair: Shuiwang Ji Dissertation: "A Framework for Modeling Large Deformations and Stress Wave Mechanics in Soft Biological Tissue" Alan D. Freed Chair: Co-Chair: Junuthula Reddy ...... Industrial Engineering Bing Zhang . . . . . . . . Dissertation: "Accelerating the Printability of New Metal Additive Manufacturing Alloys: A Robust Calibration Approach" Chair: Alaa Mohamed H. Elwany "Development of a Parallel Geomechanics Code Based Dissertation: on the Message-Passing-Interface (MPI) Approach and Iterative Coupling with a Parallelized Flow and Thermal Simulator for the Analysis of System Behavior in Hydrate-Bearing Geologic Media" Chair · George J. Moridis Co-Chair: Thomas A. Blasingame Rixing Zhang ...... .....Petroleum Engineering "Integrated Multiscale, Numerical, Experimental, and Dissertation: Field Investigation of a Less Damaging Friction Reducer to Mitigate Formation Damage in Unconventional Shale Reservoirs" Nobuo Morita Chair: Guofei Gu Chair: Yulin Zhang ..... . . . . . . . . . . . . . . . . Computer Science Dissertation: "Robot Design from the Perspective of Planning and Estimation" Chair: Dylan A. Shell Guang Zhao ...... ......Electrical Engineering "Bayesian Experimental Design Based on Mean Objective Dissertation: Cost of Uncertainty" Chair: Xiaoning Qian Xing Zhao . . . . . . . . . . . . "Revealing and Addressing Bias in Recommender Dissertation: Systems" James Caverlee Chair: Xinzhu Zheng...... "Microstructural Influence on Deformation, Degradation Dissertation: and Fracture of Ductile Materials" Chair: Ankit Srivastava

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## College of Geosciences

## Doctor of Philosophy

Dissertation:	"From Fresh- to Sea-Water and From Shallow to Deep - A			
Chair: Co-Chair:	Turbulence Perspective" Ayal Anis Rainer Amon			
Sharon				
Dissertation:	"Reconstructing Dysoxia in the Gulf of Alaska and the Eastern North Pacific: Severity, Duration, and Drivers"			
Chair:	Christina Belanger			
Anne Elizabeth Tamala	ıvageOceanography			
Dissertation:	"Developing Geochemical Evidence for Holocene Hydroclimate Variability in the Subtropical Western North Atlantic"			
Chair: Co-Chair:	Peter Van Hengstum Patrick Louchouarn			
Chia Pei Teoh	"Dolomite and High-Magnesium Calcite: Case Studies from Laboratory, Field, and Computer Simulation Studies"			
Chair:	Juan Carlos Laya Pereira			
	Geography			
Dissertation: Chair:	"The Impact of Frozen Ground Degradation on Surface- Atmosphere Interactions" Oliver W. Frauenfeld			
Tatiana Williford	Oceanography			
Dissertation:	"The Role of Dissolved Organic Matter for Water Mass Characterization and Trace Metal Transport in the Arctic Ocean"			
Chair:	Rainer Amon			
Tyler Scott Winkler Dissertation:	"Near-Annual History of Subtropical North Atlantic			
Chair:	Hurricane Activity Recorded in Blue Hole Successions" Peter Van Hengstum			
School of Law				
Juris Doctor				
Mario Guerra III	Law			
Zachary Reed Kosut	Law			
Hugh Mealer	Law			

## College of Liberal Arts

#### Doctor of Philosophy

Rocio Mercedes Alvarez .....

Dissertation:

Chair: Gregory Pappas

Dissertation: "Representations of Black Athletic Bodies in New Media"

Chair: Kristan A. Poirot

.....Communication Adam Russell Bajan....

"The Technique of Religious Persuasion: Digital Media, Dissertation:

Evangelicals, and Liturgical Design"

Nathan A. Crick Chair:

..... Anthropology

"Mediterraneum Mare: Shipbuilding in the Late Medieval Dissertation:

and Early Modern Period (AD 1000-1700)"

Chair: Luis F. Vieira De Castro

Kevin Crisman Co-Chair:

Jonathan Thomas Bibeau ......Philosophy

Dissertation: "Murder, Responsibility, and Mourning in the Writings

of Emmanuel Levinas and Literature"

Chair: Claire Katz

Christopher David Black......Philosophy

"Beyond Mediation: Thinking About Technology Dissertation:

Existentially, or, the Algorithm that I Also Am'

Chair: Theodore George

Kirstie Marie Boyett..

Dissertation: "The Rape Paradox: The Effect of Anti-Sexual Assault

> Policies on Gender and Sexual Assault Attitudes, Donations to Sexual Assault Campaigns, and Policy

Compliance" Chair: Jane Sell

Seokyeong Choi . . . . . .

Dissertation: "Impossible Narration: The Unknowable Other and the

Ethical Imagination in Modernism"

Chair: Marian Eide

Mary Kathryn Constantin.....

Dissertation: "Who Gets to Free Ride? Status & Punishment in a Public

Goods Game"

Iane Sell Chair.

Dissertation: "The Role of Categorical and Numerical Reinforcers in

Category Learning"

Chair: Darrell Worthy

"The Constitution of Reproductive Health(care): Under-Dissertation: standing the Communicative Tensions of Organization, Identity, and Geography" Anna W. Wolfe Chair: Dissertation: "Numerical Thinking and Reasoning in Bilinguals: Does" Language of Problem Presentation Matter?" Chair. Iyotsna Vaid ......Psychology Michael Imburgio. . . . Dissertation: "Cognitive Processes in Voluntary Task Switching" Chair: Joseph M. Orr Chair: Nehemia Geva Ieesu Kim..... ..... Neuroscience Dissertation: "Identifying Neural Mechanisms and Behavioral Effects of Anxiety on Attentional Capture" Chair: Brian A. Ánderson ..... English Literature of Care and Social Control" Chair: Marian Eide Lauren Elizabeth Liebe ..... English "Inheriting the Stage: Pre-Interregnum Drama in the Dissertation: Restoration" Chair: Margaret Ezell Ted Maldonado ..... ......Psychology "Cerebellar Contributions to Cognition in Young Adults: Dissertation: A tDCS and Brain Imaging Study" Chair: Jessica Bernard Katelyn Needham Mcdonough . . . . . . . . . . . . . Anthropology Dissertation: "Human Paleoecology in the High Desert: 12,600 Years of Human-Plant Dynamics in the Northern Great Basin, Oregon, USA" Chair: Frank Goebel ......Political Science Aleiandro Medina . . . . "Purchasing Certainty: Concerning Intra-Legislature and Dissertation: Interest Group Bargaining" William Clark Chair: "Newcomers as Bystanders of Workplace Bullying" Dissertation: Chair: James Barge Michael James Perez . . . .....Psychology Dissertation: "The Influence of Historical Knowledge and Historical Context on Perceptions of Protest" Chair: Brandon Schmeichel

Benjamin Alexander Peterson . . . . . . . . . . . . . . . . . Political Science

"Islamic Reform and the Challenge of Nomocracy: The Dissertation: Constitutional Theories of Fazlur Rahman and Javed

Ahmad Ghamidi"

Chair: Cary Nederman

Frances May Thielman ..... English Dissertation: "The Logic of Trash in Victorian Literature"

Chair: Mary A. O'Farrell

"The Effects of Observability and Evaluativeness on Dissertation:

Metacognitive Self- and Other-Judgments"

Chair: Heather Lench

United States Congress"

Linda Radzik Chair:

"Improving College Students' Mental Help-Seeking: Dissertation:

From Cross-Sectional Evidence to a Longitudinal

Intervention"

Chair. Richard Street

Samantha Rae Zuhlke . . 

"A Political Theory of Nonprofits: Partisanship, Policy, Dissertation:

and the Rise of the Nonprofit Sector"

Chair: Manuel P. Teodoro Co-Chair: Guy Whitten

#### College of Medicine

#### Doctor of Philosophy

Eunyoung Bang . . . .

Dissertation:

Cognitive Mechanisms in the Basal Forebrain Using an

Optogenetic Mouse Model"

Chair: William Griffith

Victoria Marie Dunlap Golub..... ..... Medical Sciences

"Translational Studies of Epigenetic Interventions for Dissertation:

Post-Traumatic Epilepsy"

Chair: Doodipala Samba Reddy

Jordyn Aleah Michalik . ..... Medical Sciences

Dissertation: "Bacteriophage Therapy for Treatment of Multiple Drug

Resistant Klebsiella pneumoniae Derived Hospital Acquired

Bacteremia"

Chair: Jason J. Gill **James Samuel** Co-Chair:

Yue Yin ...... Medical Sciences

"Comprehensive Data Analysis Toolkit Development for Dissertation: Low Input Bisulfite Sequencing" Yun Huang Chair: Co-Chair: Roderick Dashwood Mutian Zhange . . . . . . ...... Medical Sciences Dissertation: "Prostate Cancer Epigenetic Mechanism Study and Biomarker Discovery Using Bioinformatics Approaches" Chair: Yun Huang ..... Medical Sciences Yuanning Zheng. . . . Dissertation: "Early High-Fat Dietary Exposures Epigenetically Program Mammary Cancer Susceptibility" Chair: Robin F. Young School of Public Health Doctor of Philosophy ..... Health Services Research Nima Khodakarami... Dissertation: "Three Essays in Health Services Research: Impact of the Affodable Care Act on Access to Care and Hospitalization in Texas" Chair: Tiffany A. Radcliff Co-Chair: Benjamin Ukert

Services and Pharmacy Closures"
Chair: Robert L. Ohsfeldt

Department Users" Tiffany A. Radcliff

Doctor of Public Health

"Measuring Public Health Practitioner's Information and Communication Technology Competence and

"Analysis of Factors Associated with Access to Pharmacy

..... Health Services Research

Preparation: A Mixed Methods Approach"

Chair: Ellisa Jones-Mckyer Co-Chair: Lesley E. Tomaszewski

College of Science

Doctor of Philosophy

Dissertation: "Bergman Kernels, Hartogs Domains, and the Wiegerinck

Problem"
Chair: Harold Boas
Co-Chair: Emil Straube

Eniola Afeez Olatunii.....

Dissertation:

Chair:

Hay	ley Nicole Brawley Dissertation:	"Bioanalytical Methods Development for Detection and Characterization of Labile Metal Pools in Escherichia coli"
	Chair:	Paul Lindahl
Sara	h Anne Cantu	Astronomy
	Dissertation:	"Understanding the Nature of Ultra-faint Dwarf Galaxies Through Characterization and Statistical Inference"
	Chair:	Louis E. Strigari
Crist	ian Cernov	Physics
0115	Dissertation:	"Topological and Electrochemical Properties of Organometallic Tin Polymers and Tin-Substitution Diamonds"
	Chair:	Artem G. Abanov
Oian	ıfan Chen	Physics
Qiui	Dissertation:	"Optics of Dirac Materials and Light-Matter Interaction in the Nanophotonic Systems"
	Chair:	Alexey Belyanin
Rvar	n Patrick Coll	
rtyui	Dissertation:	"Exploration of Redox Active Dirhodium Compounds for Electrocatalysis and Photodynamic Therapy by Tuning
	Chair:	the Ligand Field and Donor/Acceptor Properties" Kim R. Dunbar
Vice	nte Estrada-Carper	nter IV Astronomy
	Dissertation:	"Stellar Populations and Formation Histories of Massive Galaxies Derived from Deep Hubble Space Telescope Grism Data"
	Chair:	Casey Papovich
Dakas	Ctanton Formuson	Askranamy
rete	r Stanton Ferguson Dissertation:	"Satellites, Streams, and Surveys, Oh My!"
	Chair:	Jennifer L. Marshall
	Co-Chair:	Louis E. Strigari
Sum	it Ghosh	Physics
	Dissertation:	"Exploring the Invisible Universe by Model Building: Neutrinos and Other Dark Matters"
	Chair:	Bhaskar Dutta
Iane	lle Allvn Goeke	Ecology and Evolutionary Biology
juric	Dissertation:	"Bottom-Up Effects of Mangrove Encroachment on Basal Consumers in the Gulf of Mexico"
	Chair:	Anna Armitage
Iohn	Anthony Criffin II	II
JOILL	Dissertation:	"Free Decompositions of R-Diagonal Random Variables"
	Chair:	Kenneth Dykema
Birai	Subhra Guha	
Diraj	Dissertation:	"Theoretical Guarantees for Bayesian Generalized Linear Regression and Variational Boosting"
	Chair:	Debdeep Pati
	Co-Chair:	Anirban Bhattacharva

Dissertation: for Multiscale Problems" Yalchin Efendiev Chair: Dissertation: "On Preservation of Moduli of Continuity by Parabolic Evolution" Edriss S. Titi Chair: Wangming Ji . . . . . . . . . . . Biology Dissertation: "Genomic Approaches to Identifying Acylsugar Metabolism Genes in Solanum pennellii" Chair: Thomas McKnight Connor Quinton Kabes . . . . . . Dissertation: A Bifunctional Approach" Chair: John Gladysz Dissertation: "Gerstenhaber Bracket on Hopf Algebra Cohomology" Chair: Sarah Witherspoon Dissertation: "NiN<sub>2</sub>S<sub>2</sub> Metallodithiolato Ligands in Bioinspired Proton Reduction Catalysts: Synthetic and Kinetic Studies" Chair · Marcetta Darensbourg Kai-Yuan Kuan..... "Mechanisms of Photoinduced Reactions from Kinetic Dissertation: Isotope Effects" Chair: Daniel Singleton "Advances in F-Block Metallocenophane Chemistry: Dissertation: Lanthanide-[1]Ferrocenophane Compounds Functioning as Molecular Nanomagnets" Chair: Michael Nippe Dissertation: "Understanding the Formation and Impacts of Atmospheric Aerosols" Chair: Renyi Zhang Cheng-Wei Lin . . . . . . "Interrogation of the Fe-S Cluster Biosynthetic Mechanism Dissertation: Using Native Mass Spectrometric Techniques" David P. Barondeau Chair: David H. Russell Co-Chair: Xinyu Ma...... ......Chemistry Dissertation: "Structure-Based Drug Discovery Against Human ENL Yeats Domain and SARS-CoV-2 Main Protease" Chair. Wenshe Liu "Interrogating the Interactions of Oncogenic KRAS Dissertation: Mutants with SOS and BRAF" Chair: Arthur Laganowsky

Himangshu Neog. Physics
Dissertation: "The Hybrid Detector: A Phonon-Mediated IZIP Style Detector for Low Mass Dark Matter Search" Chair: Rupak K. Mahapatra Co-Chair: Nader Mirabolfathi Dissertation: "On the Stability and Number of Steady States of Chemical Reaction Networks" Anne J. Shiu Chair. Tolulope Nathaneal Oke..... Dissertation: "On the Lie Algebra Structure on Hochschild Cohomology of Koszul Quiver Algebras" Chair: Sarah Witherspoon "An Exploration of Therapeutic Applications for Dinitrosyl Dissertation: Iron Complexes (DNIC's)" Marcetta Darensbourg Chair: Sean Christopher Plummer ..... ..... Statistics Dissertation: "Statistical and Computational Properties of Variational Inference" Chair. Debdeep Pati Cysteine Based Chemical Biology Methods" Chair: Wenshe Liu Chair: Anirban Bhattacharya ......Mathematics Pablo Sanchez Ocal . . . Dissertation: "The Relative Künneth Theorem"
Chair: Sarah Witherspoon Krzysztof Sebastian Swiecicki . . . . . . . . ......Mathematics Dissertation: "Nonlinear Embeddings into Banach Spaces" Chair: Guoliang Yu Erol Can Vatansever. . . . . "Chemical Biology Approaches to Study Antibody-Drug Conjugate Synthesis, Genetic Code Expansion and Main Dissertation: Protease of SARS-CoV-2" Wenshe Liu Chair: Tong Wang ..... "Novel Computational Techniques for Semiparametric Dissertation: Analysis with Interval-Censored Data" Chair. Samiran Sinha Daniel Samy Zilber . . . "Application, Methodology, and Theory for Gaussian Dissertation: Processes" Matthias S. Katzfuss Chair: Co-Chair: Debdeep Pati

## College of Veterinary Medicine and Biomedical Sciences

Doctor of Philosophy

Ellen Ruth C. Alexander . . . . . . . . . . . . . Biomedical Sciences

Dissertation: "Using Whole Genome Sequencing to Study the

Epidemiology and Comparative Genomics of

Streptococcus equi from the United States"

Chair: Noah Cohen

Alexander Daniel Blanchette . . . . . . . . . . . . . . . . . Toxicology

Dissertation: "A Bayesian New Approach Method for High

Throughput Population-Based Cardiotoxicity Risk Characterization of Environmental and Pharmaceutical

Compounds"

Chair: Weihsueh A. Chiu

Dissertation: "Single-Haplotype Genome Assemblies Reveal

Remarkable Rates of X-Linked Satellite Evolution and a

Role in Reproductive Isolation"

Chair: William Murphy

Dissertation: "Development of Soil Amendments to Reduce Exposures

to Hazardous Environmental Chemicals"

Chair: Timothy Phillips

Alexandra Nichole Myers...... Biomedical Sciences

Dissertation: "Severe Dermatophytosis in Persian Cats: A Multi-omics

Approach to Unraveling Pathogenesis"

Chair: Aline Rodrigues Hoffman

Co-Chair: William Murphy

Julia Lorraine Popp . . . . . . Biomedical Sciences

Dissertation: "Cardiac Phenotypes in the Collaborative Cross:

Derivation and Utility of Cardiac Reference Ranges for

Mus musculus"

Chair: David W. Threadgill

Aileen Long Rowland . . . . . . . . . Biomedical Sciences

Dissertation: "The Immunogenicity of Mesenchymal Stem Cells"

Chair: Ashlee E. Watts

Doctor of Veterinary Medicine

Stephanie Rae Grissom . . . . . . . . . . . . . . . . Veterinary Medicine

Eva Linda Trevino . . . . . . . . . . . . Veterinary Medicine

## 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 Agriculturemaize, 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, Asceplius. 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.

**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.

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 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.

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.

## "The Spirit of Aggieland"

### By Mimms-Dunn

Some may boast of prowess' bold, Of the school they think so grand, But there's a spirit can ne'er be told, It's the spirit of Aggieland.

#### Chorus

We are the Aggies—the Aggies are we, True to each other as Aggies can be. We've got to fight, boys, We've got to fight! We've got to fight for Maroon and White. After they've boosted all the rest, They will come and join the best, For we are the Aggies—the Aggies so true, We're from Texas A M U. 9

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## CONGRATULATIONS NEW GRADUATES! WELCOME TO THE ASSOCIATION OF FORMER STUDENTS!

Today, as a proud graduate of Texas A&M University, graduates will turn their Aggie Rings so that the Class year faces away from the body symoblizing a readiness to face the world.

Being an Aggie lasts a lifetime! It is a life-long 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.



TEXAS A&M UNIVERSITY®

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

