



Mississippi State University
Three Minute Thesis Competition
Preliminary Rounds
November 18th, 2025

Afternoon Session
1:00 p.m. to 3:00 p.m.

Join us in-person or virtually via this WebEx Link:
<https://msstate.webex.com/msstate/j.php?MTID=ma915b01b205df3c39e7efabffdd98471>

Welcome

Dr. Angi Bourgeois
Interim Dean of the Graduate School and Interim Vice Provost

Master of Ceremony

Dr. W. Brien Henry
Associate Dean of the Graduate School

SESSION 1

1:00 p.m. to 1:55 p.m.

Grace Olaitan, PhD student

Industrial Technology, Instructional Design, and
Community College leadership, College of
Education
*Revolutionizing Weather and Climate Instruction:
The Impact of VR Immersive Learning Labs*

Alyssa Miller, PhD student

Plant and Soil Sciences, College of Agriculture
and Life Sciences
*Where Weeds Fall, Food Rises: Protecting
Sweetpotatoes for a Hungry World*

Anam Ahsan, PhD student

Wildlife, Fisheries, and Aquaculture, College of
Agriculture and Life Sciences
*Connectivity at a Crossroads: Evaluating Urban
Green Spaces and Linear Infrastructure Effects
on Tiger Conservation in Urban Landscape of
Bhopal, MP, India*

Ana Valencia, PhD student

Chemistry, College of Arts and Sciences
*Giving Plastic Waste a New Life: From PET to
Smart Plastic*

Ashmita Poudel, PhD student

Wildlife, Fisheries and Aquaculture, College of
Forest Resources
Biofingerprints: catching disease with lights

Bryant Applegarth, Master's student

Mechanical Engineering, College of Engineering
*Understanding How Materials Behave Through
3D Metal Printing*

Cierra Clayton, Master's student

Animal and Dairy Sciences, College of
Agriculture and Life Sciences
*Computer Vision for Estrus Detection and
Individual Animal Identification in Freestall-
Housed Dairy Cattle*

Hamza Zeghari, Master's student

Mechanical Engineering, College of Engineering
*Numerical Investigation of Thermal Effects on
Supercavitation Flows*

Muhammad Yusef, PhD student

Physics and Astronomy, and Center for
Computational Sciences, College of Arts and
Sciences
*Taming Quantum Dragons: From Atoms to
iPhones*



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Madeline McKnight, Master's student

Animal and Dairy Science, College of Agriculture and Life Sciences

Stressed systems need strategic supplementation: effects of injectable trace mineral solutions on performance and health in beef cattle during preconditioning and feedlot receiving

BREAK

1:55 p.m. – 2:05 p.m.

SESSION 2

2:05 p.m. – 3:00 p.m.

Manikanta Thati, PhD student

Mechanical Engineering, College of Engineering
Importance of Fluid Structure Interaction Models

Mohammad Abdus Shahid Rafi, PhD student

Electrical and Computer Engineering, College of Engineering
Multimodal Sensors to Harvest: Predicting Crop Yields with ML

Rezwana Rahman Setu, PhD student

Biochemistry, Nutrition, and Health Promotion, College of Agriculture and Life Sciences
When Plants Glow: Illuminating the Secrets of Immunity

Sally Barfield, Master's student

Kinesiology, College of Education
Validation and efficacy of a novel external ankle support device for the prevention of lateral ankle sprain

Sam Theobald, Master's student

Agricultural and Biological Engineering, College of Agriculture and Life Sciences

The Potential for Variable Rate Irrigation in Northeast Mississippi

Samadhi Nawalage, PhD student

Sustainable Bioproducts, College of Forest Resources

Turning Waste into Sustainable Iron Composites for Cleaner Water

Sam Searles, PhD student

Kinesiology, College of Education

Does Greater Hamstrings-to-Quadriceps Ratio Influence Jump Performance?

Oluwabori Adekanye, PhD student

Comparative Biomedical Sciences, College of Veterinary Medicine

Lipids set macrophages on fire, somebody call CES1 (carboxylesterase 1)

Vandana Dharan, PhD student

Wildlife, Fisheries, and Aquaculture, College of Forest Resources

The Immortal Life of Channel Catfish: Establishing a Long-term Fibroblast Cell Line

Yasas Gamagedara, PhD student

Agricultural and Biological Engineering, College of Engineering

Predicting Soil Properties Using Spectroscopy



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