

3Minute Research Pitch

Sponsored by The Graduate School

The 3Minute Research Pitch challenges undergraduates to present their research topic in just three minutes and with a single slide.

1st

Claire Green (115), Mentor: Priyadarshini Chakrabarti Basu, Entomology

Creating a phenology wheel for the Southeast Region

2nd

Mary Barnes (209), Mentor: Ayoung Kim, Agricultural Economics

Urban-Rural Disparities in Teen Birth Rates: Examining Contributing Factors and Policy Implications

**PEOPLE'S
CHOICE**

Emily Dew (223), Mentor: Allison Jaeger Berena, Psychology

Visualizing vs. Generating: How Diagram Modality Affects Learning and Metacomprehension

Bagley College of Engineering Undergraduate Research Award

Sponsored by the Bagely College of Engineering

Undergraduate engineering projects are eligible to receive the Visual Display of Information or Cross-Disciplinary Research Award.

VISUAL DISPLAY OF INFORMATION WINNER

Kyler Colip (17), Mentor: Vilas Shinde, Aerospace Engineering

Optimization of Ionization Probability for Electric Space Propulsion

CROSS-DISCIPLINARY RESEARCH WINNER

Madelyn Berry (5), Mentor: Keith Koenig, Aerospace Engineering

Development of a Low-Cost System for the Detection of Wildfires

Psychological Science Award

Sponsored by the Department of Psychology

Selection criteria for this award include significance to the field of psychology, innovation, approach, and presentation.

FIRST PLACE TIE

Rachel Apperson (206), Mentor: Allison Jaeger Berena, Psychology

The Earth is Like a Peach: Understanding the Impact of Analogies on Learning from Geoscience Texts

Emily Dew (223), Mentor: Allison Jaeger Berena, Psychology

Visualizing vs. Generating: How Diagram Modality Affects Learning and Metacomprehension

Biomedical Research Competition

Sponsored by the Department of Agricultural & Biological Engineering and the College of Veterinary Medicine

This competition is for students in the life sciences and/or engineering who have conducted research related to preventing, diagnosing, or treating a human medical condition.

1st

Aidan Gerber (113), Mentor: Barbara Kaplan, Comparative Biomedical Sciences

Potential for a Combination of Antidepressant, Probiotic, and Plant-Derived Compound as a Treatment for Multiple Sclerosis

2nd

Annamarie Thompson (169), Mentor: Trey Howell, Comparative Biomedical Sciences

Roles of the Pregnane X Receptor and Gender in the Immunometabolic Profile of Murine Bone Marrow-Derived Macrophages

3rd

Eromosele Eigbe (19), Mentor: Rahel Miralami, Center for Advanced Vehicular Systems

Optimizing Semi-open Catheter Shunt Designs for Hydrocephalus Treatment

Institute for the Humanities Award

Sponsored by the College of Arts and Sciences

The humanities competition recognizes outstanding student work that highlights the insights and values of humanities scholarship.

1st **Anne Louise Phillips (277), Mentor: Matt Peuple, Shackouls Honors College**

Unrest and Distraction: Fascism in Cabaret and The Great Dictator

HONORABLE MENTIONS

Rowan Feasel (271), Mentor: Tommy Anderson, Shackouls Honors College

Plath's "Mythological Method:" Poetry about Parents

Nathon Shelton (183), Mentor: Jenna Klein, Department of Music

A Sisterly Bond: The Life, Legacy, and Musical Influences of Nadia and Lili Boulanger

US Army Corps of Engineers Engineer Research and Development Center (ERDC) Award

This award recognizes excellence in research relevant to the challenges that face the Corps of Engineers, the Army, and the Nation.

1st **Zeedan Khan (38), Mentor: Chuangchuang Sun, Aerospace Engineering**

Koopman-Inspired Learning-Based Control of Soft Robotic Actuators

2nd **Jayla Travis (58), Mentor: Christopher Hudson, CAVS Research**

Decoding Mobility: CAN Bus Data Interpretation for Vehicle Control

3rd **Martina Hoffman Meyer (31), Mentor: Christopher Hudson, CAVS Research**

Assessment of Autonomous Vehicle Localization

College of Forest Resources and the Forest & Wildlife Research Center Award

Sponsored by the College of Forest Resources

This award recognizes excellence in research performed within the CFR/FWRC.

Parker Hansen (118), Mentor: Courtney Siegert, FWRC - Forestry

1st Exploring how soil microbial amendments alter root structure across six poplar genotypes

Logan Collom (95), Mentor: Andy Kouba, FWRC - Wildlife, Fisheries, & Aquaculture

2nd Ultrasonography as a Biological Sex Identification Method in Captive Hellbenders (*Cryptobranchus alleganiensis*): A Case Study

3rd **Lily Ciel Behnam (86), Mentor: Kristine Evans, FWRC - Wildlife, Fisheries, & Aquaculture**

Assessment of Olfactory Recognition of Mates in Zebra Finches

Humanities in the World Competition

Sponsored by the Department of English

This competition invites undergraduate students to share research that shows how the humanities can help understand important global issues.

Haylee Mormon (276), Mentor: Dhanashree Thorat, English

1st "I'm Only White in America": Performing Ethnicity Post-9/11 and in Mohsin Hamid's *The Reluctant Fundamentalist*

HONORABLE MENTIONS

Connor McOlgan (275), Mentor: Dhanashree Thorat, English

The Spectacle of The War on Terror

Elena Harman (273), Mentor: Eric Vivier, English

Manipulation and Identity in Shakespeare's *The Taming of the Shrew*

MSU Libraries Research Award

Sponsored by MSU Libraries

This award is designed to recognize undergraduate student research that incorporated the use of library resources and/or services.

1st

Julia Null (152), Mentor: Manuel Ruiz Aravena, FWRC - Wildlife, Fisheries, & Aquaculture

Analysis of Seasonal and Sex-Based Variations in Endoparasitic Communities of Southeastern Rodent Populations

Public Health Research Competition

Sponsored by the Social Science Research Center

This award is designed to highlight the important work that undergraduate students at MSU are doing in public health.

1st

Avery Tate (257), Mentor: Holli Seitz, Communication

From Image to Influence: Examining the Impact of Image Type, Source, and Disease on Social Media Vaccine Messages

2nd

Siddhi Pathak (245), Mentor: Cliff McKinney, Psychology

Negative Life Events and Depression: How Maternal Authoritarian Parenting Styles Influence Anxious/Depressive Problems

2nd

Arisa Washington (262), Mentor: Brittany Lancaster, Psychology

Does parental education affect BMI change in a pediatric obesity treatment?

3rd

Katie Roman (250), Mentor: Kathleen Ragsdale, Social Science Research Center

Evaluating Acceptability of Four Flavors of Dried Fish Powder-Fortified ComFA+Fish Instant Porridge to Address Stunting Among At-Risk Children in Rural Zambia

Data Science Research Award

Sponsored by MSU Data Science Academic Institute

This award recognizes excellence in undergraduate research relevant to data science.

BASIC DATA SCIENCE RESEARCH PROJECT - HONORABLE MENTION

Emma Claire Spradling (255), Mentor: Jonathan Barlow, Data Science

Measuring Personality Coherence in LLMs: Stability of Directed Personification Across Standardized Assessments

OUTSTANDING USE-INSPIRED DATA SCIENCE RESEARCH PROJECTS

Zachary Barbre (4), Mentor: Gang Li, Mechanical Engineering

Enhanced Wind Energy Forecasting using an Extended Long Short-Term Memory Model

Reid Sewell (50), Mentor: Andy Perkins, Computer Science and Engineering

GNNs for Network Classification in Single Cell RNA Sequencing Data

OUTSTANDING APPLIED DATA SCIENCE RESEARCH PROJECTS

Mason Cole Beard (85), Mentor: Galen Collins, Biochemistry Nutrition Health Promo

Do Ubiquitin Conjugates Activate Ddi2?

Samantha Blocker (90), Mentor: Will Davis, Agricultural Economics

Investigating Health Events in Dairy Cattle

Joshua King (192), Mentor: Catherine Shi, Mathematics & Statistics

The Money Behind March: Linking Financial Metrics to NCAA Basketball Success

DATA SCIENCE INNOVATION AWARD

Joshua King (192), Mentor: Catherine Shi, Mathematics & Statistics

The Money Behind March: Linking Financial Metrics to NCAA Basketball Success

CALS/MAFES Undergraduate Research Scholars Program (URSP)

Sponsored by CALS/MAFES

This award recognizes excellence in research from students in the 2024-2025 CALS/MAFES URSP.

1st **Spencer Sanderson (195), Mentor: Will Maples, Agricultural Economics**

An Examination of the Profitability of Various Soybean Marketing Strategies for Mississippi Delta Producers

2nd **Krystell Cecilia Charles Fajardo (94), Mentor: Shecoya White, Biochemistry Nutrition Health Promo**

Development of Blueberry-Based Dairy and Non-Dairy Ice Cream

3rd **Harper Evers (226), Mentor: Tommy Phillips, School of Human Sciences**

Adolescent Identity Development and Consumer Behavior: A Study on Female College Students' Fashion Purchasing Behavior

HONORABLE MENTIONS

Savana Ashley (80), Mentor: Maryam Mohammadi-Aragh, Ag & Bio Engineering

The impact of spatiotemporal environment in a poultry incubator on eggshell surface E. coli and aerobic bacteria populations

Kelsey Mazeris (140), Mentor: Leyla Rios de Alvarez, Animal & Dairy Science

Second Kiko Buck Performance Test in Mississippi

Piper Bratton (91), Mentor: Guihong Bi, Plant and Soil Sciences

Plant Biostimulants for Sustainable Production of Specialty Crops

Grace Gough (234), Mentor: Jessica Benson, School of Human Sciences

The M.E.N.T.O.R. Project: Understanding Student Needs for Mentorship and Networking

Brandon Bernard (87), Mentor: Peixin Fan, Animal & Dairy Science

In Vitro Assessment of the Neuroactive Potential of the Rumen Microbiome

Climate Change and Society Research Award

Sponsored by the Department of Geosciences

This award recognizes research that addresses climate change and its societal impacts.

1st

Caleb Bowman (62), Mentor: Boniface Fosu, Geosciences

Validating Gridded Hydroclimate Datasets Against Station Observations for Agricultural Applications in the Mississippi Delta

Tomorrow Builder Award

Sponsored by Theta Tau Professional Engineering Fraternity

This award recognizes one engineering undergraduate who uses their research to help solve problems of critical importance to society.

1st

Swarup Bhattarai (9), Mentor: Gray Turnage, Geosystems Research Institute

Towards Cost Effective Autonomous Mapping of Invasive Aquatic Plants Using Deep Learning and a GPU Enabled Microcomputer

Gulf Coast Research Award

Sponsored by the Gulf Scholars Program

The Gulf Coast Research award highlights projects that address issues facing the Gulf Coast.

WINNERS

Victoria Greene (116), Mentor: Michael Sandal, FWRC

Microplastic and Mesoplastic Quantification in Cartilaginous Fishes in the Northern Gulf of Mexico

Aven Brasher (179), Mentor: SaMin Han, Landscape Architecture

Backyard Bayou: Enhancing Coastal Mississippi for Nature, People, and Play