

3rd Annual

MSU DENVER RESEARCH SYMPOSIUM

20
24



OCTOBER 18, 2024

8:00AM-2:30PM

ST. CAJETAN'S

SCHEDULE

8:00-8:30

CHECK-IN &
LIGHT BREAKFAST

8:30-9:00

KEYNOTE BY MARIA
CATTELL

9:10-10:10

SESSION I

10:20-11:20

SESSION II

11:20-11:50

POSTER SESSION &
CHURROS

11:50-12:50

SESSION III

12:50-2:30

LUNCH FOR REGISTERED
ATTENDEES

KEYNOTE

DR. MARIA CATTELL,
BIOLOGY DEPT.

In her keynote, Dr. Maria Cattell will discuss the impact undergraduate research can have on students through detailing its influence on her personal and professional life. She will also talk about the coral conservation research that is currently underway in her lab in the Biology Department including their molecular genetic approach to studying coral symbiosis and bleaching, their coral field studies and their new anemone coral model animals being housed in the biology department. She'll also share some success stories of biology undergraduate research students whose life and professional goals were shaped by their undergraduate research.

SESSION I | 9:10-10:10

DR. BRANDON OLSON | HISTORY

JUSTIN STEVENS | HISTORY

The Pyla-Koutsopetria Archaeological Project

This presentation will focus on the research agenda of the Pyla-Koutsopetria Archaeological Project and will highlight the MSU Denver sponsored study abroad program. The tight chronology of the site, along with the large number of weapons (e.g. arrowheads, spear points, daggers, sling bullets) and evidence of weapons manufacturing found to date, suggest that this site may be directly related to the conflicts among the diadochi for control of Cyprus after Alexander's death.

DR. VIDA MELVIN | BIOLOGY

Investigating the function of genes during embryonic zebrafish development

I take a student-centered approach to study the genetics of zebrafish development. The zebrafish (*Danio rerio*) is one of the more significant experimental systems to study the environmental and genetic factors influencing craniofacial development. In particular, my lab is focused on the relationship of two genes to zebrafish development - the stem-promoting factor, *macc1*, and the signal regulator, *ndnf*.

DR. DENNIS L. RUDNICK | ELEMENTARY EDUCATION AND LITERACY

DR. BRIDGET AREND | CTLD

MEHPARA QADIR | EDUCATION

Faculty Perceptions on Grading and Assessment

Our research examines faculty perspectives on changing grading and assessment practices. This study explores institutional and cultural factors that influence faculty members in modifying their grading and assessment approaches, and how faculty members' sociological understandings and personal beliefs contribute to their considerations of equity in grading and assessment practices.

CALINA HILYARD | HEALTH ADMINISTRATION

Local barriers to prenatal care in Colorado maternal desert counties

Improving maternal healthcare in rural populations is especially complex due to the non-monolithic nature of barriers to access in rural communities. The presentation will display the importance of qualitative research on the issue of prenatal care access in rural CO communities.

SESSION I | 9:10-10:10

REBECCA JACKSON | COMMUNICATION STUDIES

AI Generated Black Voices Reading White Authors: The Compossibility of American Whiteness on Speechify

This talk explores the legacy of American white supremacy by analyzing concepts like Vocal Blackface and the Confederate gaze through Speechify. This work demonstrates how white bodies assume and consume Black voices on Speechify, reconstituting the Black body (and its voice) as a souvenir of white power.

DR. VINCENT PITURRO | ENGLISH

Seven Winters in Tehran

Using the film "Seven Winters in Tehran", I will discuss what I call the "Faculty Circle," which is how our scholarship, teaching, and service can work together as a circle rather than just disconnected, non-linear activities.

DR. INGRID CARTER | ELEMENTARY EDUCATION AND LITERACY

DR. LETITIA PLEIS | ACCOUNTING

DR. TINA HERRING | SPECIAL EDUCATION, EARLY CHILDHOOD, AND CULTURALLY AND LINGUISTICALLY DIVERSE EDUCATION

DR. MICHELE TRUJILLO | SPECIAL EDUCATION, EARLY CHILDHOOD AND CULTURALLY AND LINGUISTICALLY DIVERSE EDUCATION

A Collaborative Self-Study to Explore Assessment and Feedback in Online/Hybrid Courses

This collaborative self-study examined the experiences of five faculty members at MSU Denver. We explored assessment and feedback mechanisms to center students' learning, de-emphasize grading, and focus on equitable practices within our courses, and we found that small changes can be effective despite a possible need for a larger paradigm shift.

SESSION 2 | 10:20-11:20

DR. CINDY HEISS | NUTRITION

Effect of Added Peanut Butter on the Glycemic and Satiety Responses to a High Glycemic Load Meal

Blunting the blood glucose response to a carbohydrate load is important for those with and without diabetes to avoid adverse consequences. Adding nut butter to a high carbohydrate meal/snack appears to lower the blood glucose, and the added calories may be offset by the increased satiety nut butters provide.

DR. ANDREW K. GILLESPIE | PHYSICS

Collaborative Research in Nuclear Science: Novel Fission and Fusion Pathways for Energy Generation

Our research in nuclear science fosters collaboration across universities and national laboratories to explore new power cycle designs. Through simulations, irradiation experiments, and advanced characterization methods, we are identifying novel nuclear processes with significant impacts on cleaner energy production. X-ray diffraction and ion chromatography applications are also discussed.

AMY KERN | INDUSTRIAL DESIGN

Designing for Cognitive Wellbeing: Integrating Environmental Psychology, Cognitive Ergonomics and Cultural Responsiveness in Industrial Design Education

This presentation explores the integration of environmental psychology, cognitive ergonomics, and culturally responsive design in Industrial Design education. It highlights how these interdisciplinary approaches can enhance empathy, cultural sustainability, and well-being in design practice, preparing students to create inclusive, user-centered solutions for diverse global populations.

DAVID KLEIN | INDUSTRIAL DESIGN

Where Has Color Gone?

Design trends usually have some underlying cultural, technological, economic, or other reason for their existence. Designs are becoming more standardized and monochromatic. This research examines the importance and function of color in design, architecture, food and other applications and begins a search for an answer to the question; where has color gone?

SESSION 2 | 10:20-11:20

SUREE TOWFIGHNIA | JOURNALISM AND MEDIA PRODUCTION
RUBEN CRUZ | STUDENT SCHOLAR

Documentary Film as a Tool to Represent Indigenous Perspectives in American History

This talk examines the role documentary film can play in correcting inaccurate histories. The presentation will share strategies and lessons learned while working with Lakota collaborators and the Smithsonian Museum on an interview and archive-based project that features descendants of Lakota performers in Buffalo Bill Cody Wild West shows.

K SCHERRER | SOCIAL WORK
EZRA TOLEDO | STUDENT SCHOLAR
DR. EMILY KAZYAK | SOCIOLOGY | UNIVERSITY OF NEBRASKA
M GILLIS | GRADUATE STUDENT SCHOLAR
ALEJANDRA VASQUEZ | PHD STUDENT | UNIVERSITY OF NEBRASKA

Promising Practices in Social Science Research Methods: Lessons Learned by Students on a Research Team Studying GLBQ+ Intergenerational Family Relationships

This presentation showcases effective social science methods from student researchers studying GLBQ+ intergenerational family relationships. Toledo discusses online recruitment strategies; Gillis emphasizes trans-inclusive interview techniques; and Vasquez highlights the importance of native language interviews. Together, these insights enhance methodologies for engaging diverse participants and capturing authentic experiences.

DR. ELIZABETH KLEINFELD | ENGLISH

Crippling Sex & Pleasure: Memoirs of Aging, Disability, and Sex

Drawing on crip theory, this presentation examines how memoirs written by older disabled people or their caregiving partners challenge the hegemonic view that older and disabled people are asexual. Rather than comparing disabled sex and sensuality to nondisabled sex and sensuality, disabled sex should be appreciated on its own terms.

DR. JADE LUIZ | SOCIOLOGY AND ANTHROPOLOGY

Another Racket on Pine Street: Archaeology of the nineteenth-century sex district of Central City, Colorado

In 2023, the nineteenth-century Central City, Colorado sex district became the location of a MSU Denver archaeological field school. While also engaging community members and doing deep documentary research into the area, researchers are attempting to use archaeological investigation and artifacts to determine the real lived experiences of the people living in the Pine Street sex district.

POSTER SESSION | 11:20-11:50

DR. GRANT DENN | PHYSICS

VLASS reveals high incidence of radio detections and some extreme morphologies in a sample of low-z LoBAL quasars

The VLASS is a radio survey made with the Karl Jansky Very Large Array. LoBALs are a subpopulation of QSOs (quasars). We are looking for radio brightnesses, variability, and morphology for an optically chosen sample within the survey.

DR. ANDONG MA | DEPARTMENT OF EARTH AND ATMOSPHERIC SCIENCES

Detecting Large Wood in a Coastal River Floodplain using Very High-Resolution Aerial Photography and a Deep-Learning-Extraction Framework

This research study involves the utilization of advanced deep learning techniques to identify fallen trees in a coastal river floodplain.

DR. ROBERTO FORNS-BROGGI | WORLD LANGUAGES

Creating a Mini-Eco-Archive of Video-Essays: A New Approach to Ecological Regeneration Stories in Latin America

Discover how video essays can transform storytelling with "Creating a Mini-Eco-Archive: Ecological Regeneration in Latin America." Explore new methods for documenting survival and adaptation in challenging environments, using multimedia to educate and inspire. Engage with this project to see how it enhances MSU Denver's curriculum and promotes environmental awareness.

DR. KATHRYN YOUNG & DR. NELS GREVSTAD | SECONDARY EDUCATION

Trauma-Informed Supports for new teachers Year 3 findings in a longitudinal study

This proposal highlights the quantitative third year findings of a longitudinal study about secondary traumatic stress experienced by new teachers and what trauma-informed interventions might mitigate some secondary traumatic stress. The project also looks into what might have changed for new teachers from year 1 to year 3.

DEANNA HIRSCH & JESSICA QUINTANA | JOURNALISM AND MEDIA PRODUCTION

Empowering Student Success: Experiential Service-Learning in Public Relations and Beyond

Early-stage research on the transformative impact of experiential service learning. Discover how real-world projects enhance skills, foster ethical excellence, and prepare future communicators. Don't miss Jessica's poster showcasing her service learning project!

DR. CYNTHIA ERICKSON, DR. SHALINI SRINIVASAN, & DR. ARIJANA BARUN | PSYCHOLOGICAL SCIENCES, BIOCHEMISTRY & CHEMISTRY, & BIOLOGY

Sense of Belonging in Active Learning STEM courses at a HSI (Hispanic Serving Institution)

The results of this multi-departmental study provide a preliminary snapshot into the potential impact of transformative teaching in STEM courses. They are part of an ongoing exploration into the effects of transformative teaching use on other factors such as self-efficacy, math anxiety, mindset and sense of belonging.

ALEX MCDANIEL, MARIT SMITH, WILL AUSTIN, & JENNIFER WHITTON-TRUJILLO | CENTER FOR TEACHING, LEARNING, AND DESIGN

Is it AI or is it human? A blinded simulation of submitting and grading assignments

This poster shares results from a simulation experiment by the Instructional Design team at the CTLD. Three groups (AI, human-assisted AI, and human) submitted assignments and were given feedback to explore the emerging realities of our new Generative AI landscape. Recommendations for course design and instructional practices will be shared.

DR. LOGAN SCHUETZ, DR. JAY MARTIN, & ALEXIS BOEHM | EXERCISE AND SPORT SCIENCES

Breaking through the glass ceiling: Job engagement and perceived career barriers among women sport employees

This presentation explores job engagement and the glass ceiling for women in collegiate and professional sport. The researchers examine how perceived career barriers impact job engagement and provide insights into fostering inclusive environments that support women's upward mobility and organizational success in the sport industry.

DR. MARIA MAGALLANES, DR. JEANNE CONNELLY, DR. LINA MARTIN CORREDOR, & DR. ANDREW WALTON | ELEMENTARY EDUCATION & SPECIAL EDUCATION

Normalizing the Changemaker Identity for Future Teachers: Lesson Study for Social Justice in Higher Education

Infusing social justice into teacher preparation at an HSI, this research explores how Lesson Study fosters collaboration and innovation. By integrating Social Justice Standards across literacy, cultural linguistic diversity, and special education courses, teacher educators modeled changemaking, empowering future teachers to address systemic inequities and embrace their roles as transformative leaders.

DR. SARAH SCHLIEMANN, MICHAEL PRADO, & ERIC LINKHEART | EARTH AND ATMOSPHERIC SCIENCES

Soil Infiltration in Highway Bioswales

Students from MSU Denver conducted infiltration tests before and after the subsoiling process to determine whether subsoiling increased infiltration. Results of the study were inconclusive and additional testing may be warranted.

ALYSSA RIDDER | THEATRE

Immersive Apparel: A Historical Fashion Show in Digital Space

3D garment simulation technology has taken center stage recently due to its ability to facilitate reproduction of fragile extant textiles in digital space. My current research proposes a virtual fashion show created by students at MSU Denver that showcases garments preserved in the clothing and textile collections at History Colorado.

DR. CHRISTINA FOUST | COMMUNICATION STUDIES

Community Engaged Learning at MSU Denver

Join the Community Engaged Learning Faculty Co-Fellows and MSU Denver faculty to learn more about ongoing research projects involving community partners. Projects include environmental education in K-12 public schools, as well as waste diversion infographics with the ASCP.

SESSION 3 | 11:50-12:50

DR. MARK KOESTER | MATHEMATICS
HANNAH GASPARD | STUDENT SCHOLAR
LILLY KOFOED | STUDENT SCHOLAR

The ‘One-Handed Tribe’ and its Lessons for Teaching about Number, Place Value and Operations

The researchers implemented an innovative set of lessons in a mathematics class for preservice elementary teachers to teach ideas about place value and operations that puts students in the position of a learner of a new number system.

DR. KWABENA PEPRAH | BUSINESS
DR. SMITA SINGH | HOSPITALITY

“Gen-AI in the Classroom: Revolutionizing Student Learning Experiences”

The purpose of this study is to explore the impact of Generative AI (Gen-AI) on students learning in an undergraduate classroom. Specifically, this research aims to investigate students' perceptions of Gen-AI as a tool for enhancing their learning, examine any changes in these perceptions after engaging with Gen-AI-based assignments, and assess whether the use of Gen-AI is correlated with an increase in student learning outcomes.

DEEPIKANJALI JUREEDI | CYBERSECURITY

Digital Evidence in White Collar/Cyber Crime Investigation: A Content Analysis

This presentation explores the critical role of digital evidence in investigating PPP Loan fraud, analyzing 110 Supreme Court cases from 2020. The findings highlight investigative methodologies and offer valuable insights for legal practitioners and policymakers to combat the complexities of white-collar and cybercrime.

DR. CAITLIN FINE | ELEMENTARY EDUCATION
DR. INGRID CARTER | ELEMENTARY EDUCATION
DR. PARIS PRESTRIDGE | HEALTH PROFESSIONS
SARA SCARGALL | STUDENT SCHOLAR
JAIDYN SEAL | STUDENT SCHOLAR

“Co-Designing Multimodal / Bilingual Digital Science Notebooks for Elementary Students”

This talk will share emerging themes from a researcher-teacher co-design project with an elementary educator. The project focused on developing digital science notebook slides that incorporated multimodal and bilingual elements. We share critical design components that emerged as important and preliminary themes from debrief conversations with the teacher participant.

SESSION 3 | 11:50-12:50

NONA SHIPMAN | ONE WORLD ONE WATER CENTER

ERIN SEEDORF | PUBLIC HEALTH

So We Went To Mongolia. Now What?

Two colleagues will discuss the educational and cultural experience of traveling throughout Mongolia this past summer to study the intersection of climate change and public health, what they're doing with everything they learned, and how it is enhancing their work at MSU Denver.

DR. JESSICA WEISS | ART

A Tale of Two Queens: The Annunciation Image in Isabel of Castile's Breviary

This paper will argue that the depiction of the Annunciation in the Breviary of Isabel the Catholic (British Library ADD MS 18851) communicates a three-part analogy including, Old Testament: New Testament: Fifteenth-Century Castile, that integrates contemporary politics into divine systems of promise and fulfillment.

DR. DANIEL PITTMAN | COMPUTER SCIENCES

CECE HOUSH | STUDENT SCHOLAR

KADE SHOCKEY | STUDENT SCHOLAR

Roadrunner Connect: Enhancing Campus Engagement Through an Interactive Mobile Application

Roadrunner Connect enhances campus engagement through a map-based mobile application that allows users to discover and participate in events while earning rewards for their involvement. This presentation outlines the technical and user-centered design approaches used in developing the app, which integrates event data from multiple sources, promotes campus interaction, and strengthens MSU Denver's position as an anchor institution. The project is currently in progress, with a planned launch later this year. We will discuss the work accomplished so far and our vision for the platform's future impact.

This event was organized by: the Undergraduate Research and Creative Scholarship Program, the Honors Program, the Center for Teaching, Learning and Design, and the Center for Individualized Learning.

It is our hope that this event will become an annual tradition that showcases the breadth and depth of research activities happening on our campus and connects aspiring undergraduate and graduate researchers with MSU Denver faculty researchers.

We would like to thank the following sponsors:

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