



GRADUATE AND PROFESSIONAL STUDENT ASSOCIATION

MASON GRADUATE

INTERDISCIPLINARY

CONFERENCE

FRIDAY, MARCH 31, 2023

MERTEN HALL

GEORGE MASON UNIVERSITY

GAPSA.GMU.EDU



GRADUATE & PROFESSIONAL
STUDENT ASSOCIATION AT
GEORGE MASON UNIVERSITY



Graduate Division



Graduate Student Life



WELCOME

Graduate and Professional Student Association (GAPSA)

Graduate and Professional Student Association (GAPSA) was founded at George Mason University in 2009 to give graduate students representation and ensure their voices are heard. GAPSA recognizes that enriching graduate student life at George Mason University can improve the prestige of the university, as well as the school/life balance for all graduate and professional students. Our goal is to enrich the academic and social life of all graduate and professional students, thereby enriching Mason as a whole.

Mason Graduate Interdisciplinary Conference

The Mason Graduate Interdisciplinary Conference is a one-day event that showcases graduate students' scholarly research and creative work through oral and poster presentations. The goal of this conference is to create large-group discussions across disciplines and provide insight into scholarly research. As an interdisciplinary conference, we seek students from all disciplines at George Mason University to apply and participate. As an outcome of the conference, we hope to provide students a space to develop and enhance skills in research presentation and communication, engage in interdisciplinary learning, and build connections with fellow Mason students.

Conference Schedule

8:45 AM

Registration and Breakfast

Merten Hall Lobby and Room 1201

9:00 AM – 10:05 AM

Opening Remarks and Panel

Merten Hall, Room 1201

10:15 AM – 11:30 AM

Oral Presentations: Session I

Merten Hall, Rooms 2500 and 3300

11:30 AM – 12:50 PM

Lunch

Merten Hall, Room 1201

12:00 PM – 12:50 PM

Poster Session

Merten Hall, Rooms 1202, 1203 and 1204

1:00 PM – 2:15 PM

Oral Presentations: Session II

Merten Hall, Rooms 2500 and 3300

2:30 PM – 3:45 PM

Oral Presentations: Session III

Merten Hall, Rooms 1202, 1203, 2500 and 3300

4:00 PM – 5:00 PM

Three-Minute Thesis® (3MT) Competition

Merten Hall, Room 1201

5:00 PM – 6:00 PM

Reception and 3MT Awards

Merten Hall, Room 1204

Visit <https://gapsa.gmu.edu/conference/abstract-directory/>
Or scan the QR code



Panel Discussion

GLOBALIZED SOCIETY, COMPLEX ISSUES: THE ROLE OF INTERDISCIPLINARY RESEARCH

9:00 AM - 10:05 AM | Merten Hall, Room 1201

A globalized society works collaboratively and intuitively with an ever-shrinking world. But as the world becomes smaller, our ideas have the potential to grow bigger. Interdisciplinary research thoughtfully brings together disciplines that have historically been kept apart. Research in this way calls on the imagination to address complex issues in fresh, creative ways. The university's slogan, coined by President Washington, is "All together, different." The annual Mason Graduate Interdisciplinary Conference wants to make a point to celebrate the synergistic efforts on behalf of our Mason graduate students who share that same vision. The conference's theme this year is "Globalized Society, Complex Issues: The Role of Interdisciplinary Research." The panel will discuss the critical role of interdisciplinary research in a globalized society and how to better engage interdisciplinary research in the world around us.

Moderator

Hatim El-Hibri, Ph.D.

Hatim El-Hibri is Assistant Professor of Film and Media Studies at George Mason University, where he is also affiliated with the programs in Cultural Studies and Middle East and Islamic Studies. He earned his Ph.D. in Media, Culture, and Communication from New York University and previously was a faculty member at the Media Studies Program at the American University of Beirut. His first book, *Visions of Beirut: The Urban Life of Media Infrastructure*, was published by Duke University Press.

Panelists

Supriya Baily, Ph.D.

Supriya Baily is an activist, a scholar, and an educator. Her work began while she was a teenager in India as a community organizer and leader. Currently, she is Professor of Education at George Mason University, focusing on social justice issues in education, the marginalization of girls and women in educational policy and practice, and the role of teacher education to address educational inequity.

Aayushi Hingle Collier

Aayushi Hingle Collier (MA., 2017, Cal State LA) is a Doctoral Candidate in the Communication Department at George Mason University. She is an intercultural, health, and instructional communication scholar. Aayushi is passionate about communication, mental health, and how culture impacts how we speak about mental health and seek help. Her focus is on how support systems within higher education can be more effective for student populations that are marginalized and underrepresented. Aayushi is currently working on research with international students, but hopes to expand this research and experience to other student populations.

Megumi Inoue, Ph.D.

Dr. Megumi Inoue's research focuses on health and aging, and she is particularly interested in promoting older adults' autonomy and dignity in health care settings. She brings her extensive clinical experience as a social worker and a registered nurse to her understanding of the research area. Dr. Inoue received her Ph.D. from Boston College (Graduate School of Social Work), MSW from Washington University in St. Louis (Brown School of Social Work), BSW from Kawasaki University of Medical Welfare in Japan (Department of Medical Social Welfare), and ADN from Kyushu University in Japan (College of Medical Technology Department of Nursing).

Naoru Koizumi, Ph.D.

Naoru Koizumi is a professor of public policy and associate dean of research and grants in the Schar School of Policy and Government at George Mason University. She specializes in medical policies, particularly in the fields of organ transplantation and end-stage kidney and liver diseases. Her research focuses on the applications of various quantitative methods such as biostatistics, geographic information systems (GIS), simulation and mathematical optimization to analyze various clinical and policy questions related to organ transplantation and other chronic disease treatments. Her grant from the Bill and Melinda Gates Foundation investigated the effectiveness of ICT-based interventions designed to enhance medication adherence among tuberculosis patients in India.

Dylan Scarton

Dylan Scarton is a third-year PhD student in the Interdisciplinary Program in Neuroscience at George Mason University. From genitourinary medical oncology at MD Anderson Cancer Center to warfighter rehabilitation at Walter Reed National Military Medical Center, Dylan has extensive experience with conducting interdisciplinary research alongside a number of extraordinary international colleagues. Dylan received his bachelor of science in interdisciplinary studies with a concentration in neuroscience from the College of William and Mary and completed his master of science in molecular biotechnology from the University of Houston-Clear Lake.

Oral Presentations

SESSION I

10:15 AM - 11:30 AM | Merten Hall, Rooms 2500 & 3300

Presenters have 15 minutes each to present their work. After everyone has taken turns presenting, the discussant will use 5 minutes to give general feedback to the presenters. Then the last 10 minutes will be used for Q&A with the audience led by either the moderator or the discussant.

Technology and Infrastructure Development

Merten Hall, Room 2500

Discussant: Jeff Offutt, Ph.D.

Intent-to-Treat in the "Cheating" Paradigm: A Meta-Analysis

Mary Catlin, Allison D. Redlich, Ph.D., & Talley Bettens, M.S., College of Humanities and Social Sciences

Why is there a contrast between officially successful public infrastructure and negative community outcomes?

Judith Efouefack Lewetchou, College of Humanities and Social Sciences

Distributed multi-robot target tracking via virtual pheromones using LTA Agents

Joseph Prince Mathew, College of Engineering and Computing

A Framework of Vehicle-Human Communication Features at Traffic Intersections to Enhance Trust and Situation Awareness

Liam Kettle, Kayla M. G. Herrera, Pawinee Pithayarungsarit, Cassidy L. Simpson, & Yi-Ching Lee, College of Humanities and Social Sciences

Society and Globalization

Merten Hall, Room 3300

Discussant: Stephanie Bluth, Ph.D.

Negotiating Identities and Mental Health for Non-native English Speaking Graduate Student Instructors

Munira Mutmainna, College of Humanities and Social Sciences

Storying Global Foodways in Crying in H Mart

Tyler Martinez, College of Humanities and Social Sciences

The impact of parental involvement on children's integration into the US school system: A proposal to study families who settled in Connecticut from Ecuador between 2015-2019

Gabriela Larkin, College of Humanities and Social Sciences

Poster Session

12:00 PM - 12:50 PM | Merten Hall, Rooms 1202, 1203 & 1204

Presenters will describe their research briefly multiple times to participants who stop at their posters. After describing, participants can ask follow-up questions for a deeper understanding of the research topic. When done conversing with the researcher, participants may move to the next poster so that other audience members can engage with the presenter.

Merten Hall, Room 1202

A learning design analysis of an online course

Cynthia Cuellar & Jehad Halawani, College of Education and Human Development

A reversed form of public goods game: equivalence and difference

Chaoqian Wan & Attila Szolnoki, College of Science

An agent-based model of the spatial mismatch hypothesis: Exploring the mechanisms of poor labor market outcomes of urban Black workers in the US

Unchitta Kan, College of Science

Application of Metabolomic Analysis towards the Discovery of Biomarkers of Immunogenicity and Efficacy of Parasitic Vaccines

Nazli Azodi, Hannah Markle, Timur Oljuskin, Parna Bhattacharya, Nevien Ismail, Greta Volpedo, Abhay Satoskar, Sreenivas Gannavaram, & Hira Nakhasi, College of Science

Applying Dynamical Adjustment Techniques to Quantify Contributions of Variability to North Atlantic Sea Surface Temperature

Douglas Nedza & Dr. Timothy DeSole, College of Science

Beyond a binary: Investigating criteria of insidership in peacebuilding

Hannah Adamson, Carter School for Peace and Conflict Resolution

Bird Feathers As a Method of Reconstructing Historical Exposure to Per- and Polyfluoroalkyl Substances (PFAS)

Matthew Badia, College of Science

Brick by Digital Brick: Memory and 3D Modeling of Historic Space

Hayley Madl, College of Humanities and Social Sciences

Cervical cancer screening with HPV test among U.S. women: At the intersection of disability and high-risk for HIV infection

Amarachukwu Faith Orji & Michelle Sharonda Williams, College of Public Health

Comparing climate model variability with observations using an improved statistical methodology

Nikki Lydeen & Timothy DelSole, College of Science

Comparison of GEDI and ICESat 2 Terrain and Canopy Height Estimates in African Savanna Vegetation

Xiaoxuan Li, Konrad Wessels, Ph.D., John Armston, Ph.D., Laura Duncanson, Ph.D., Mikhail Urbazaev, Ph.D., Steven Hancock, Ph.D., Renaud Mathieu, Ph.D., India Russell Main, Ph.D., Laven Naidoo, Ph.D., Barend Erasmus, Ph.D., College of Science

Did Pandemic Unemployment Insurance Prolong Unemployment But Reduce Covid Deaths?

Sungbin Park, Dr. Kyung Min Lee, & Dr. John S. Earle, Schar School of Policy and Government

Merten Hall, Room 1203

Do symptoms of depression mediate the association between immigration-related stress and positive parenting among undocumented Central American immigrant mothers?

Rafael Hernandez, Bethany Letiecq, Tara M. Chaplin, Colleen Vesely, Rachael Goodman, & Marlene Marquez, College of Humanities and Social Sciences

Does the 52-hour workweek policy reduce the firm's occupational accidents and illnesses?

Hyeseon Na, Schar School of Policy and Government

Evaluation of Fragmentation Techniques for Intact Peptides

Amy Carfagno, Dr. Paul Russo, Dr. Liana Chafran, & Dr. Barney Bishop, College of Science

Examining the Mental Toll of Racism: Associations of Race-Based Stress and Psychological Inflexibility among Black Americans

Shane A. Stori, M.A., College of Humanities and Social Sciences

Examining the Relationship between Adverse Childhood Experiences and Having a Rheumatic Disease or Condition Among United States Adults

Carolyn Hoffman, MPH, College of Public Health

Exploration of Low-level Physiological Properties in Simulations of Rodent Spatial Navigation

Nate Sutton, Dr. Holger Dannenberg, & Dr. Giorgio Ascoli, College of Engineering and Computing

Health at the Margins: Health Narratives of Multilingual Immigrant Communities in the U.S.

Munira Mutmainna, College of Humanities and Social Sciences

Identification of Urinary Peptide Indicators of Chagas Disease in Congenitally Infected Infants

Kathryn Cassels, Alessandra Luchini, & Amanda Haymond, College of Science

Is it Funnier to Be Rude? Grammatical Politeness in Japanese Comedy

Arlee Jade Pearlswig, College of Humanities and Social Sciences

Perceived Cultural Competencies of Music Teachers

Scot R. Ward, MeHaley Babich, & Dr. Charles R. Ciorba, College of Visual and Performing Arts

Preliminary Investigation of Captive Red Pandas' (Ailurus fulgens ssp.) Activity Patterns

Sarah M. Huskisson, M. S., Kristina M. Delaski, DVM, DACZM, Nucharin Songsasen, DVM, PhD, & Elizabeth W. Freeman, College of Science

The Use of an Educational Aid and Workplace Toolkits to Increase Colorectal Cancer Screening at a Primary Care Clinic

Deborah Sackey, College of Public Health

Merten Hall, Room 1204

Reduced-Order Computational Modeling of Catheter Insertion in Elastic Blood Vessels of the Cerebral Vasculature

Aseem Milind Pradhan, College of Engineering and Computing

Social Change and Reconstructionist Philosophy

MeHaley Babich, College of Visual and Performing Arts

Sorption of Per-polyfluoroalkyl Substances on Clay Minerals

Aamir Ahmad, & Dr. Kuo Tian, College of Engineering and Computing

Structural Analysis of Amylin and Amyloid β Peptide Signal-ing in Alzheimer's Disease

Longsheng Xie, College of Science

Targeting mechanisms of resistance to endocrine therapy in combination with Cdk4/6 inhibitors in ER+ metastatic breast cancer

Emna El Gazzah, College of Science

The Effectiveness of School Resource Officers Based on Situational Awareness and Task Load: A Phenomenological Study

Beth Hosek, M.S., Dr. Stephanie Dailey, & Dr. Heather Walter, College of Education and Human Development

Training Strategies of CNN for Land Cover Mapping with High Resolution Multi-spectral Imagery in Senegal

Minh Tri Le, Konrad Wessels, Jordan Caraballo-Vega, Margaret Wooten, Nathan Thomas, Mark Carroll, & Christopher Neigh, College of Science

Understanding the Social Emotive Potential of Music and Its Relationship to Conflict Transformation: The Benefits of a Craft Analysis

Audrey Williams, Carter School for Peace and Conflict Resolution

Variety in Economic Clusters: The Case of Europe

Caroline Wesson, Schar School of Policy and Government

What the White Savior Forgets to Save

Briana Davis, College of Humanities and Social Sciences

λ MDS: Scaling Distributed File System Metadata Service using Serverless Functions

Benjamin Carver & Runshou Han, College of Engineering and Computing

Oral Presentations

SESSION II

1:00 PM - 2:15 PM | Merten Hall, Rooms 2500 & 3300

Presenters have 15 minutes each to present their work. After everyone has taken turns presenting, the discussant will use 5 minutes to give general feedback to the presenters. Then the last 10 minutes will be used for Q&A with the audience led by either the moderator or the discussant.

Social Identities and Idioms

Merten Hall, Room 2500

Discussant: Gregory Robinson, Ph.D

Gender and Foodways on Eating Disorder Twitter

Kathryn Casey, College of Humanities and Social Sciences

"Emotion and Narrative in Sport Games?" An analysis of Kris Bowers score for Madden 21

Calvin Evans, Jr., College of Visual and Performing Arts

Shadows & Solid Things: The History of Religion and Archaeology

Kristofer Stinson, College of Humanities and Social Sciences

The common semantic characteristics of English bare infinitival constructions

Amy Lam, College of Humanities and Social Sciences

The Intersection of Land, Sea, and Life

Merten Hall, Room 3300

Discussant: Cody Edwards, Ph.D.

The Undersea Balance in the Pacific: Understanding the Current State of Play and the Role of Geography

Michael Sweeney, Schar School of Policy and Government

Subsurface Migration and Transport of Per-polyfluoroalkyl Substances (PFAS)

Aamir Ahmad & Dr. Kuo Tian, College of Science

Where Was That Whale? Paleobiogeography of the Early Baleen Whales

Nickolas A. Brand, Jess Miller-Camp, & Mark D. Uhen, College of Science

Analyzing the phase-change of water molecules at the nanoscale using molecular dynamics

Sajad Kargar & Jeffrey Lawrence Moran, College of Engineering and Computing

Oral Presentations

SESSION III

2:30 PM - 3:45 PM | Merten Hall, Rooms 1202, 1203, 2500 & 3300

Presenters have 15 minutes each to present their work. After everyone has taken turns presenting, the discussant will use 5 minutes to give general feedback to the presenters. Then the last 10 minutes will be used for Q&A with the audience led by either the moderator or the discussant.

Culture and Society

Merten Hall, Room 1202

Discussant: Cynthia Fuchs, Ph.D.

A New Noble: Creating Stories for Men to Live By

William Applegate, College of Humanities and Social Sciences

Hidden Figures in Film Music Examining the Lives and Work of William Grant Still and William Vodery.

Calvin Evans, Jr., College of Visual and Performing Arts

La Ausencia

May Santiago, College of Humanities and Social Sciences

Environmental Policy and Climate Activism

Merten Hall, Room 1203

Discussant: Byunghwan Ben Son, Ph.D.

Evaluating effects of meteorology and recent policy implementations on major pollutant concentrations over Beijing, China

Shreya Guha & Dr. Lucas Henneman, College of Engineering and Computing

The Different Faces of Climate Change Movement Leaders in Indonesia

Hilyatuz Zakiyyah, College of Humanities and Social Sciences

Hyperspectral Signature-Based Differentiation of Altitude of Aircraft-Induced Clouds

Amy Tal Rose, College of Science

Assessing Thermodynamic Changes of Extratropical Cyclones and their Resulting Extreme Winter Precipitation in the Mid-Atlantic United States

Austin T. Reed & James L. Kinter III, College of Science

Economics of Social Constructs

Merten Hall, Room 2500

Discussant: Nora McDonald, Ph.D.

The Right Way to Use the Wisdom of Crowds: Analyzing Solvers' Responses to the Introduction of Marketplace in a Crowdsourcing Platform

Fanshu Li, Dr. Shun Ye, & Dr. Pallab Sanyal, School of Business

Monumental Effects: The Lost Cause & Confederate Symbols in the Post-Reconstruction South

Alexander Taylor, College of Humanities and Social Sciences

You Can't Develop What You Don't Know: How Hayek Predicted Limitations on the Mission Economy

Kathryn Waldron & Dr. Christopher Coyne, College of Humanities and Social Sciences

Expanding Marx Ecologically: Nature, the Grundrisse, and the Social Metabolic Order

Blake Vullo, College of Humanities and Social Sciences

Conversations in Public Health and Healthcare

Merten Hall, Room 3300

Discussant: Alma Detten, MPH

Do chatbots improve health applications patient engagement and treatment adherence?

Kevin E Cevasco, Rachel E Morrison, Rediet Woldeselassie & Dr. Seth Kaplan, College of Public Health

COVID and beyond: COVID-19 interventions and power plant emissions in the United States

Munshi Md Rasel & Lucas Henneman, College of Engineering and Computing

Lighting Up A Lipid: Fluorescence of Cardiolipin in Estrogen Treatment Conditions

Nadege Lebert, College of Science



THREE-MINUTE THESIS® COMPETITION FINALISTS **(in order of appearance)**

4:00 PM - 5:00 PM | Merten Hall, Room 1201

Energy & Aging: The Estrogen Connection

Patricia L. Sinclair, College of Science

Diasporic Hindu Nationalism and Purity Politics in the South Asian American Community

Pavithra Suresh, College of Humanities and Social Sciences

Using Dragonfly Exuviae as a No-Kill Approach to Monitor Mercury along the Freshwater Potomac River

Doreen S. Peters, College of Science

Destigmatization and the Politics of Time

Mozella Brown, Carter School for Peace and Conflict Resolution

Polymer Electrode Materials for Green and Sustainable Batteries

Motahareh Mohammadiroudbari, College of Science

Measuring profiles and patterns of leadership behavior

Steven Zhou, College of Humanities and Social Sciences

Don't you know that you're toxic? Detecting forever chemicals using invasive clams

Lauren Koban, College of Science

Large-scale Screening Under Uncertainty

Marwan Shams Eddin, College of Engineering and Computing

Looking at the Heart of Active Galaxies: A Microscopic View Using High-Resolution Radio Observations

Onic Islam Shuvo, College of Science

The other side of leader humor: An investigation of leader humor from the follower's perspective

Tiancheng Chen, College of Humanities and Social Sciences

Hyperspectral Signature Development for Aircraft-Induced Clouds from Aerial and Ground-Based Sensors

Amy T. Rose, College of Science



3MT COMPETITION FINAL ROUND JUDGES

James Dooley

James Dooley, GMU Department of Religious Studies, is a past District Governor of Toastmasters International, and has taught communication and leadership skills for more than 35 years. He has competed in many speaking contests of his own, winning several at the highest levels of competition and not making it nearly all the way in others — so he understands what some of today’s contestants are feeling! — and he encourages all public speakers and educators to exercise their abilities outside of their comfort levels. Before coming to George Mason, Professor Dooley served with the International Social Services branch of the American Red Cross, specializing in the tracing and reunion of family members separated by wars and disasters, and was a National Instructor of International Humanitarian Law.

Kamaljeet Sanghera, PhD

As Executive Director of the Institute for Digital InnovAtion, Dr. Sanghera and her team support the research community in the pursuit of cutting-edge work to shape the future of our digital society, promoting equality, wellbeing, security, and prosperity. She serves as a point of contact to unite George Mason University (Mason) IDIA researchers with the broader community. Dr. Sanghera is also an active member of the Students and Technology in Academia, Research, and Service (STARS) program and the National Center of Women in Technology (NCWIT).

Megan Bruening, PhD

Megan joined the George Mason community as the Assistant Director of Graduate Fellowships in 2021 and became Director of the Office of Fellowships in 2022. Her role is to recruit and support currently enrolled and alumni students applying for nationally competitive, external awards. Megan brings a holistic, process-focused approach to advising, guiding students to grow as scholars and professionals during an application. With her colleagues she sees fellowship advising as an avenue for social justice and transformation.

Lisa Kahn, Ph.D.

Lisa Kahn, retired Associate Dean, College of Visual and Performing Arts, George Mason University, has conducted archaeological fieldwork in Europe and the Middle East, presently involved in studies at Caesarea Maritima, Israel and Pompeii, Italy. She holds her degrees from Boston University (Ph.D.), and the State Universities of New York at Albany and New Paltz. We are honored to have her back on campus.

MASON GRADUATE INTERDISCIPLINARY CONFERENCE

A Special Thank You

Graduate Division
University Life
Parking and Transportation Services
Graduate Student Life
Conference Volunteers

Conference Planning Team

Bernard Atieme, Conference Chair
Stephanie Bluth, Ph.D.
Emily Crawford
Austin A. Deray
Ashish Hingle
Julie Choe Kim, Ph.D.
Ayondela McDole
Ninon Nelson
Xiaorong (Sherry) Shan
Hsien-tien Shen
Michelle Yang
Cydni Young

Notes



**GRADUATE & PROFESSIONAL STUDENT ASSOCIATION AT
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