



UNIVERSITY OF ROCHESTER

ARTS, SCIENCES, &  
ENGINEERING

# GRADUATE RESEARCH SYMPOSIUM

MARCH • 27 • 2024

3:00-4:30PM • POSTER SESSION

4:30-5:30PM • AWARDS & NETWORKING

FELDMAN BALLROOM





# EVENT PROGRAM

MARCH • 27 • 2024

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POSTER SESSION

3:00 PM - 4:30 PM

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NETWORKING RECEPTION &  
AWARDS PRESENTED BY AS&E  
DEAN OF GRADUATE  
EDUCATION & POSTDOCTORAL  
AFFAIRS NICK VAMIVAKAS

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4:30 PM - 5:30 PM

# Symposium Participants

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## Engineering & Math

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- **Chang, Jiwon.** Computer Science. Approximate Top- $k$  Sampling Under Budget Constraint
- **Cwitkowitz, Frank.** Electrical and Computer Engineering. Toward Fully Self-Supervised Multi-Pitch Estimation
- **Dinesh, Karthik.** Data Science. Deep Learning for Brain Tumor Segmentation
- **Lavell, Michael.** Mechanical Engineering. Development of a collision model for simulating fusion plasmas
- **Li, Zihao.** Biomedical Engineering. In vivo Localization of a Breast Cancer Targeting Molecular Probe for Fluorescence Imaging and Photodynamic Therapy
- **Jeske, Madelyn.** Chemical Engineering. Photobase Initiated Networks for Two-Photon Polymerization: Improving and Expanding Applications for Micro Polymers
- **Mason, Tyler.** Chemical Engineering. Minimizing Outgassing from High-Power Vacuum Transmission Lines
- **Shah, Jaimin.** Data Science. Granger Causality Analysis of US Housing Market Influence on Substance Abuse Trends (2004-2011)
- **Shahnazari, Ayoub.** Mechanical Engineering. Generating Synthetic 2D XRD Patterns for Advanced Deep Learning Analyses

- **Wang, Yuxiang Wang.** Electrical and Computer Engineering. Predicting Global HRTF from Head Geometry using Deep Learning and Compact Representations
- **Zhang, Chloe.** Biomedical Engineering. Towards quantifying cerebral blood flow of patients undergoing extracorporeal membrane oxygenation (ECMO) with diffuse correlation spectroscopy (DCS) and speckle contrast optical spectroscopy (SCOS)
- **Zhang, You (Neil).** Electrical and Computer Engineering. SingFake: Singing Voice Deepfake Detection
- **Zhao, Yineng.** Materials Science. Artificial SEIs by Ultrathin, Conformal Fluoropolymers for High Coulombic Efficiency Lithium Metal Anodes in Dilute Electrolytes

## Humanities

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- **Gausselin, Kevin.** Philosophy. A Novel Account of Rich Representation in Conscious Experience
- **Lachenmaier, Kathrin.** English. On the Grid, Off the Grid: Negotiating Landownership and Alterity at the Frontier in James Fenimore Cooper's Novels 'The Pioneers' and 'The Chainbearer'
- **Satake, Yusuke.** Philosophy. Absence as Indeterminacy
- **Steiner, Samantha.** English. Hands as Symbols of Black Motherhood in Daughters of the Dust
- **Tanzil, Vincent.** Philosophy. Antirealism about Social Properties
- **Warrick-Schkolnik Caroline.** English. Antisemitic Conspiratorial Fantasies in Western Culture

# Social Sciences

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- **Aceves Rodríguez, Constanza.** Linguistics. Coordination strategies in Ombeayiüts
- **Amoah, Emefa.** Psychology. The Intersection of Anti-Fat, Anti-Black, and Sexist Attitudes
- **Chee Princeton.** Psychology. Feeling Awe and Pride in Parenthood: The Unique Emotional Rewards of Parenting on Well-Being
- **Everson, Rebecca.** Linguistics. Shekgalagadi of the Tjhauba: Culture, Subsistence, and Language in the Okavango
- **Garg, Tanya.** Psychology. How threat influences selection history: An eye-tracking study of attentional biases
- **Mohan, Oviya.** Brain and Cognitive Sciences. Experimental Emergence of Conventions in Humans
- **Pate, Neeley.** Computer Science. Impact of Educational Attainment on Belief Rigidity and Social Network Construction
- **Patni, Suhasini.** Linguistics. /h/ Deletion in Spoken Hindi and Hinglish
- **Sawler, Sarah.** Political Science. Who Benefits? Experimental Evidence of Gender Differences in Evaluations of the Deserving Poor

# Natural Sciences

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- **Cavanah, Paul.** Brain and Cognitive Science. Visuospatial attention and visual working memory share theta-rhythmic performance fluctuations
- **Claus, Hannah.** Chemistry. Developing Photoresponsive Artificial Chaperones
- **Hu, Gang.** Biology. A partition function model to predict melting curves for RNA structure
- **Huffman, Lucy.** Chemistry. Isolation of Low-coordinate, High Valent Iron Centers within Rigid Cavities

- **Irfan, Hafsa.** Chemistry. Study of structure-function relationship in cobalt-substituted cytochrome c for biocatalytic hydrogen evolution
- **Li, Yuanhao.** Brain and Cognitive Sciences. Ultra-fine knowledge of gaze position in saccade planning
- **Li, Chen.** Brain and Cognitive Science. Goal-directed alpha power actively filters initial afferent activity in early visual cortices
- **Loman, Matthew.** Earth and Environmental Sciences. Development of a high-resolution gridded inventory of anthropogenic methane emissions in New York State
- **Mitiku, Hailemariam.** Chemistry. Synthesis, Reactivity, and Photophysical Properties of Pyridone-supported Bimetallic Ni(I) Complexes
- **Mondal, Mohammad Elious Ali.** Chemistry. Quantum Dynamics Simulations of the 2D Spectroscopy for Exciton Polaritons
- **Patwa, Manasvi.** Data Science. Quantitative Assessment and Prediction of Ocean Plastic Motivating Actions to Mitigation
- **Peter, Chari.** Chemistry. Surface Interactions between CdSe QDs and Polyoxovanadates that influence charge transfer
- **Reger, Noah.** Biology. Histone buffering in zebrafish and fly embryos: mechanisms and function
- **Salamatian, Alison.** Chemistry. Selective CO<sub>2</sub> Reduction by a Synthetic Biocatalyst
- **Sannigrahi, Sanchari.** Chemistry. Ab-initio exploration of photo induced dynamics in the collective coupling regime.
- **Shipley, Alicia.** Biology. The role of Impa2 in histone exchange and organization of actin-rich structures
- **Sleiman, JohnPaul.** Earth and Environmental Sciences. Measuring Lobate features on Mars and determining the scaling relative to terrestrial solifluction patterns
- **Wang, Jialong.** Chemistry. Investigating Cavity Quantum Electrodynamics-Enabled Endo/Exo- Selectivities in a Diels-Alder Reaction

- **Weight, Braden.** Physics and Astronomy. A Diffusion Quantum Monte Carlo Approach to the Polaritonic Ground State
- **Whitehead, Bevan.** Chemistry. Selective Point Source Capture of Perfluorinated Gas Using MOFs with Dynamic Corrugated Ultramicropores
- **Ying, Wenxiang.** Chemistry. Theory of Vibrational Strong Coupling Induced Polariton Chemistry
- **Zhang, Yu.** Mechanical Engineering. Kinetic study of laser-driven quasi-parallel magnetized shocks and particle acceleration

## Special thanks to...

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- The Office of Alumni Relations & Constituent Engagement
- The River Campus Libraries
- Faculty & Staff Judge Volunteers
- The Graduate Student Presenters!



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