

Poster Presentations: NSF REU Advancing Human Health

Modulating Signaling Pathways to Promote Acinar Cell Secretory Function In Vitro

Luis Riera

Mentor: Professor Danielle Benoit

Poster Presentations: NSF REU Computational Methods for Understanding Music, Media, and Minds

Deep Learning for Music Language Modeling

Adrian Eldridge and Harleigh Awner

Mentor: Professor Daniel Gildea

Reading Ancient Manuscripts (RAM)

Sarah Field and Lauren Fowler

Mentor: Professor Henry Kautz

Re/producing Jazz: Exploring the Changes in Audio Qualities of Iconic Jazz Recordings, 1956-2013

Graham Palmer and Jake Altabef

Mentor: Professor Stephan Roessner

Interactive Music Transcription

Arlen Fan and Andrew Smith

Mentor: Professor Zhiyao Duan

Analyzing the Impact of Gender on the Automation of Feedback for Job Interview Performance

Ethan Cole and Astha Singhal

Mentor: Professor M. Ehsan Hoque

Human Pose Annotation for Cross-Modal Video Generation

Moses Bug and Wesley Smith

Mentor: Professor Chenliang Xu

The David T. Kearns Center would like to thank the deans, directors and faculty of the various departments that mentored and supported students throughout the summer.



UNIVERSITY of ROCHESTER

THE DAVID T. KEARNS CENTER
RESEARCH SYMPOSIUM



Friday, July 28, 2017

Feldman Ballroom, Douglass Commons

Oral Presentations

8:30am-12:30pm

Poster Presentations

1pm-3pm

THE DAVID T. KEARNS CENTER
FOR LEADERSHIP AND DIVERSITY IN ARTS, SCIENCES AND ENGINEERING

The David T. Kearns Center for Leadership and Diversity at the University of Rochester strives to expand the educational pipeline through the doctoral degree for low-income, first-generation college, and underrepresented minority students.

transforming lives through educational opportunity

Schedule of Presentations

- 8:30am Welcome from Beth Olivares, Dean for Diversity and Executive Director of David T. Kearns Center
- 8:35am **Are There Gender Differences in Response to Intervention Among Older Adults with Vision Loss?**
Tatyana Smith
Mentor: Professor Silvia Sorensen
- 8:55am **Do Younger Women of Color Have Higher Rates of Violations of Parole Compared to Older Caucasian Women?**
Taryn Watkins
Mentor: Professor Diane S. Morse
- 9:15am **Is Race or Ethnicity a Predictor of Suboptimal Feeding Practices of Infants During First 6 Months in Monroe County, Rochester, NY?**
Joy Nicholas
Mentor: Professor Ann M. Dozier
- 9:35am **Lexical Frequency Effects Depend on Task Constraints**
Magdalena Granados
Mentor: Professor Bradford Mahon
- 10am **Expanding Temperamental Dimensions: A Deeper Look into the Transparent Box Task**
Imani Glanton
Mentor: Professor Patrick Davies
- 10:25am **Transition to Medication Self-Management and Health Literacy for Youth with ASD**
Claudia Perez
Mentor: Professor Laura B. Silverman
- 10:45am **The Effects of a Psychological Need-Based State on Religiosity**
Laura Duntley
Mentor: Professor Miron Zuckerman
- 11:05am **Preservation in Two Ways: The Soldier, The Letters**
Antonia Garcia
Mentor: Professor Maya Ravindranath Abtahian

Poster Presentations: Advancing Human Health REU

- Characterization of Collagen Hydrogels Using High Frequency Quantitative Ultrasound Imaging and the Integrated Backscatter Coefficient**
Haley Bertrand
Mentor: Professor Diane Dalecki
- Assistive Mobile Manipulators**
Steven Broida
Mentor: Professor Thomas Howard
- The Effects of Chain Extenders on Thio-ene Networks**
Ricardo Cardoza
Mentor: Professor Mitchell Anthamatten
- Development of Scanning System for Breast Cancer Imaging Using Diffuse Optics**
Katelyn Curtis and Amanda Forti
Mentor: Professor Regine Choe
- Testing the Effects of ML-7 for Treatment of Lens Mechanics Using Novel Testing Approach**
Kyla Driver
Mentor: Professor Mark Buckley
- Peptide-Functionalized Poly(ethylene glycol) (PEG) Hydrogels to Investigate Retinal Pigment Epithelial Barrier Function**
Corrine Kennedy
Mentor: Professor Danielle Benoit
- Thermoplastic Triblock Copolymer with Shape Memory Capabilities**
William Krizak
Mentor: Professor Mitchell Anthamatten
- Measuring the Glycosaminoglycan Content in the Cornea & Corneal Cross-Linking**
Eunice Noel
Mentor: Professor Mark Buckley
- Analyzing the Relationship Between Viscoelastic Properties and Impact Absorption Capacity of Biological Soft Tissue**
Michael Reid
Mentor: Professor Mark Buckley

Terahertz Photonics and Nanodevice Characterization

Fiyinfoluwa Oluyinka

Mentor: Professor Roman Sobolewski

Characterization of 3D Fluid Flow Patterns in Liquid Metal Batteries Using Multiple Ultrasonic Transducers

Meghan Patrick

Mentor: Professor Douglas Kelley

Effects of Pupil Apodization on Visual Acuity Performance

John Pirog

Mentor: Professor Geunyoung Yoon

Effect of Fibronectin III1H on Cell Proliferation

Geoffrey Rouin

Mentor: Professor Diane Dalecki

Cooperative Robot Mapping for Amplifying Human Perception

Seth Schaffer

Mentor: Professor Thomas Howard

Next-Generation Nanoelectronics of 2D Transition Metal Dichalcogenides

Arfan Sewaket

Mentor: Professor Stephen Wu

Deciphering the Functionality of Harris' BeOn PTT App Using Decapsulation

Chinenye Tassie

Mentor: Dean and Professor Wendi Heinzelman and Professor Cristiano Tapparello

Structural Analysis of the Temple of the Seven Dolls in Dzibilchaltun, Mexico

Edna Toro Garza

Mentor: Professor Renato Perucchio

Effect of Peptide Ligand Density of Micelles for CLL1 Targeted Delivery of PTL to Leukemia Stem Cells

Yifei Yan

Mentor: Professor Danielle Benoit

High-Dimensional Quantum Key Distributions with Twisted Light

Weichen Yao

Mentor: Professor Robert Boyd

11:30am

Racial Identity Development: College Students' Perception of How Experiences with Racism Affected Their Academic Achievement

Winston Scott

Mentor: Professor Doug Guiffrida

11:50am

Magnetic Hysteresis of Carbonaceous Chondrite Meteorites

Frank Padgett

Mentor: John Tarduno

12:10pm

Deep Learning for Music Language Modeling

Adrian Eldridge and Harleigh Awner

Mentor: Professor Daniel Gildea

12:13pm

Reading Ancient Manuscripts (RAM)

Sarah Field and Lauren Fowler

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12:16pm

Re/producing Jazz: Exploring the Changes in Audio Qualities of Iconic Jazz Recordings, 1956-2013

Graham Palmer and Jake Altabef

Mentor: Professor Stephan Roessner

12:19pm

Interactive Music Transcription

Arlen Fan and Andrew Smith

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12:22pm

Analyzing the Impact of Gender on the Automation of Feedback for Job Interview Performance

Ethan Cole and Astha Singhal

Mentor: Professor M. Ehsan Hoque

12:25pm

Human Pose Annotation for Cross-Modal Video Generation

Moses Bug and Wesley Smith

Mentor: Professor Chenliang Xu

12:30pm

Lunch

1pm

Opening of Poster Session; Welcome from Gloria Culver, Dean of Arts & Sciences, Professor of Biology

3pm

Close Poster Session

Poster Presentations: McNair Scholars

Analyzing the Stability, Release, and Efficacy of Lyoprotected Parthenolide Loaded Micelle Nanoparticles (NPs)

Kharimat Alatise

Mentor: Professor Danielle Benoit

Language Content, Creativity, & Emotion: The Art of Everyday Speech

Famous Clark

Mentor: Professor M. Ehsan Hoque

Analyses of Ultrasound Absorption Coefficients in Polymerized Agar

Dominique James

Mentor: Professor Diane Dalecki

Improving the Human-Computer Interaction for WISE: Web-Based Interactive Speech Emotion Classification

Kim Sitthisack

Mentor: Professor Zhiyao Duan

Measuring Organelle Size Distributions in Single Cells Using Angular Scattering

Sabrina Villanueva

Mentor: Professor Andrew Berger

Network Resilience Using Multi-Interface WiFi Direct

Javon Walker

Mentor: Dean and Professor Wendi Heinzelman

CO₂ Laser Fusion Splicer Design

Raymond Yu

Mentor: Professor Jamie Cardenas

Poster Presentations: Xerox Fellows

Development of Instrumentation for Ultrasound Measurement in Metal Casting

Andrew Fianu

Mentor: Professor Douglas Kelley

Study of Failure Mechanisms in Single Crystalline Nanoporous Structures

Muhammad Hadi

Mentor: Professor Niaz Abdolrahim

Computer-Mediated Communication Coach

Yutong He

Mentor: Professor M. Ehsan Hoque

Real-Time Distributed Natural Language Understanding in Multi-Robot Human-Robot Teams

Liam Heeger

Mentor: Professor Thomas Howard

Next Generation of Freeform Optics: Automation of Measurement

Xiaojing Huang

Mentor: Professor Jannick Rolland

Model and Analysis of Temporomandibular Joint Reaction Forces

Mohamed Keita

Mentor: Professor Paul Funkenbusch

Application of Convolutional Neural Networks to Binge-Drinking Recognition

Ben King

Mentor: Professor Jiebo Luo

Gas Permeation of Photoswitchable Liquid Crystal-Azobenzene Membranes

Jacob Kuebler

Mentor: Professor Kenneth Marshall

Determining Effects on the Volumetric Properties of Red Blood Cells Corresponding to Varied Levels of Intracellular Oxygen Tension

John Lisi

Mentor: Dean and Professor Richard Waugh

Steel Reinforcement Analysis of the Triumphal Arch of the Church of Andahuaylillas, Peru

Zhongdi Liu

Mentor: Professor Renato Perucchio

High-Reflectivity Polymer Cholesteric Liquid Crystal (PCLC) Flake/Fluid Host Devices for Applications in Optics, Photonics, and Information Displays

Diana Magana

Mentor: Professor Kenneth Marshall

Design and Characterization of Phantom Materials for Ultrasound Elastography Research

Mohamed Salah Mahmoudi and Penelope Subervi

Mentor: Professor Stephen McAleavey