

# KALMAN RESEARCH SYMPOSIUM

\*Digital posters with and without pre-recorded presentations available for viewing at [kalmanvirtual2021.scholar.bucknell.edu](http://kalmanvirtual2021.scholar.bucknell.edu)

\*Synchronistic ("live") presentations will follow the schedule below

## SCHEDULE

SATURDAY, APRIL 17, 2021 | 12:45-3:30 P.M.

**1 p.m.** Opening Remarks & Welcome by Provost Elisabeth Mermann-Jozwiak

### POSTER PRESENTATIONS

All poster presentations will occur simultaneously for one hour. Attendees may freely switch between presentation rooms and ask questions of presenters at any time.

#### 1:15 - 2:15 p.m.

Effect of Self-Oxidation on Deposited Cigarette Smoke Composition and Third-Hand Smoke (April Hurlock, PHYSICAL SCIENCES OTHER THAN ENGINEERING)

Mechanical Testing of Wax-based Polymer Gels (Anthony Orlando, ENGINEERING)

The Implications of Socioeconomic Status on Maternal Language Input and Child Language Outcomes (Klaudia Kulawska, SOCIAL SCIENCES & MGMT)

Effect of white matter stimulation on clinical outcomes in thalamic deep brain stimulation for essential tremor (Wutt Hmone Thin Kyi, ENGINEERING)

### ORAL PRESENTATIONS

Oral presentations are 10 minutes followed by a 5 minute Q&A. Breakout rooms will appear when Q&A begins in each session.

#### 1:15 - 1:30 p.m.

ORAL PRESENTATION, GROUP A  
Establishing the Independent Tunability of the Mechanical and Transport Properties of Polymer Gels (Lucas Rankin, ENGINEERING)

#### ORAL PRESENTATION, GROUP B

The Choppy Purple Surf: Understanding the 2020 Election in Rural Pennsylvania (Jacob Feuerstein, SOCIAL SCIENCES & MGMT)

#### 1:30 - 1:45 p.m.

ORAL PRESENTATION, GROUP A  
Synthesis (Gari Eberly, ARTS & MUSIC)

#### ORAL PRESENTATION, GROUP B

Housing Illness in a PA Mushroom Town (John Mirsky, SOCIAL SCIENCES & MGMT)

#### 1:45 - 2 p.m.

ORAL PRESENTATION, GROUP A  
Determining the Metamorphic Conditions of ca 1.4 Ga Rocks from the Sierra Estrella Mountains, Arizona USA: An Application of Raman Thermobarometry (Julian Cohen, PHYSICAL SCIENCES OTHER THAN ENGINEERING)

#### ORAL PRESENTATION, GROUP B

Assessing the generalizability of temporally coherent echocardiography video segmentation (Edward Chen, ENGINEERING)

#### 2 - 2:15 p.m. BREAK

#### 2:15 - 2:30 p.m.

ORAL PRESENTATION, GROUP A  
Computer Simulations of Granular Media \*20 MINUTE PARTNER PRESENTATION\* (Ella Carlander & Michael Bolish, PHYSICAL SCIENCES OTHER THAN ENGINEERING)

#### ORAL PRESENTATION, GROUP B

Assessing Solvent Viscosity Impact on the Physical Characteristics of Polymeric Organogels (Cameron Hong, ENGINEERING)

#### 2:30 - 2:45 p.m.

ORAL PRESENTATION, GROUP A  
The Show Must Go On! (Catherine MacKay and Brooke Echnat, ARTS & MUSIC)

#### ORAL PRESENTATION, GROUP B

Reducing Food Waste In The Restaurant Industry (Camillo Lazarczyk and Simon Behr, SOCIAL SCIENCES & MGMT)

#### 2:45 - 3 p.m.

ORAL PRESENTATION, GROUP A  
Catch The Pig! Understanding the Interaction Between People and AI (Akil Atkins, SOCIAL SCIENCES & MGMT)

#### ORAL PRESENTATION, GROUP B

Location Dependent Mechanical Behavior of Aponeurosis Tissue Under Uniaxial Tensile Stretch (Emily Tully, ENGINEERING)

#### 3 - 3:15 p.m.

ORAL PRESENTATION, GROUP A  
U-Pb Isotope Dating of Monazite in the Sierra Estrella Mountains of Arizona: Evidence for ca. 1.4 Ga Metamorphism and Deformation (Valerie Justice, PHYSICAL SCIENCES OTHER THAN ENGINEERING)

#### ORAL PRESENTATION, GROUP B

Gas-Phase Chemical Ionization Orbitrap Mass Spectrometry (Michael Duncan, ENGINEERING)

#### 3:15- 3:30 p.m.

ORAL PRESENTATION, GROUP A  
To Believe or Not to Believe: A Closer Look at the Impact of Sexual Assault in Politics (Emily Brandes, SOCIAL SCIENCES & MGMT)

Pre-recorded presentations and digital posters can be viewed at [kalmanvirtual2021.scholar.bucknell.edu](http://kalmanvirtual2021.scholar.bucknell.edu)

### **DIGITAL POSTER ONLY**

Domain Adaptation in Machine Learning for Medical Imaging (Nicholas Passantino, ENGINEERING)

Evaluating the Impact of Stream Restoration Techniques on Bank Erosion, Stream Morphology, and Soil Carbon at an Unnamed Tributary of Pine Creek near Woodward, central Pennsylvania (Emily Haas, PHYSICAL SCIENCES OTHER THAN ENGINEERING)

Chinese International Students in the US: The Influence of Discrimination, Acculturation and Coping on Psychological Wellbeing (Ruoying Zhang, SOCIAL SCIENCES AND MANAGEMENT)

Investigations of Kelvin-Helmholtz Instability (KHI) and Associated Magnetosonic Wave Emission in the Solar Corona: New Impacts on Coronal Heating (Weiru Chen, PHYSICAL SCIENCES OTHER THAN ENGINEERING)

Visual and Mechanical Characterization of the Muscle to Aponeurosis Junction (Olivia Dyer, ENGINEERING)

### **PRE-RECORDED 2-MINUTE POSTER PRESENTATION AND DIGITAL POSTER**

Ray/cycle Initiative: Characterizing and Productizing Community-Sourced Plastic Waste (Phillip Onffroy, ENGINEERING)

Fluoroquinolone-based therapy and onset of functional gastrointestinal disorders in human subjects (Maya Freeman, LIFE SCIENCES)

Little Arnot Run: An Evaluation of Groundwater-Surface Water Interactions with Regard to Hyporheic Exchange and Temperature (Mackenzie Flynn and Bree McCullough, Physical sciences other than engineering)

Bayesian Optimization for 2D Echocardiography Segmentation (Tung Tran, ENGINEERING)

A population genomics approach to understanding the role of Indigenous foragers in the distribution and genetic diversity of an Australian wild bush tomato (*Solanum diversiflorum*) (Jeffrey Heim, LIFE SCIENCES)

*Solanum* 'Deaf Adder,' a New Bush Tomato Species from the Australian Monsoon Tropics (Claire Marino, LIFE SCIENCES)

Impact of Screw Type on Torque During SCFE Screw Removal (Keith Grega, ENGINEERING)

Measuring Lower Limb Muscle Activity and Kinematics in Variable Foot Strike Gaits (Thomas Matsumura, ENGINEERING)

Using finite element modeling to investigate the effect of mechanical loading on muscle extracellular matrix microstructure (Jaden Lee, ENGINEERING)

Does Global Trade Help or Hinder Economic Inequality? (Ariel Kelly, SOCIAL SCIENCES AND MANAGEMENT)

A Study of Teacherpreneurs Who Create Elementary Mathematics Curricular Resources (Lainey Lavelle, SOCIAL SCIENCES AND MANAGEMENT)

My Experiences Re-immersing into Introduction to Mathematical Thought (Kaelyn Long, SOCIAL SCIENCES AND MANAGEMENT)

Measuring Concordance of Subtype Sulcogyrals in Monozygotic and Dizygotic Twin Pairs (Shane Kozick, LIFE SCIENCES)

What happens when you cross plant species with two distinct sexual systems?: An *ex situ* hybridization approach (Diamanda Zizis, LIFE SCIENCES)

### **PRE-RECORDED 10-MINUTE ORAL PRESENTATION WITH SLIDES**

Perceptually Improved Medical Image Translations Using Conditional Generative Adversarial Networks (Anurag Vaidya, ENGINEERING)

The Mechanical Properties of Ramming Animal Horn Shapes (Jake Schaefer, ENGINEERING)

Noise-driven aggregation of swimmers in the Kolmogorov flow (Kyle Ferguson, PHYSICAL SCIENCES OTHER THAN ENGINEERING)

Assessing the Impact of Block-Selective Homopolymers on the Diffusion of Payload Through Polymeric Organogels (Ian Coates, ENGINEERING)

**BRAXHAGE'S ADJACENTS** (Ryan Bremer, ARTS AND MUSIC)

Native Danish mother's intersection between parenting approach and religion (Caroline Eckert, Amber Coleman, Alexis Faria, Clara Han, Makenna Luzenski, Lauren Shearer, Grace Wilder, & Prof. Chris Boyatzis, Dept. of Psychology, LIFE SCIENCES)

The Psychological Impact of COVID-19 and Social Distancing (Coco Sachs, Chris Boyatzis, Lily Shorney, SOCIAL SCIENCES AND MANAGEMENT)

Uncovering South Asian-American Playwrights (Julia Tokish, HUMANITIES)

What's Out There? Investigating Online Teacher Created Activities (Margaret Anne MacNeille, SOCIAL SCIENCES AND MANAGEMENT)

Relationships between Food Availability, Aggression, and Growth in Black-legged Kittiwake Chicks (Taiba Khan, PHYSICAL SCIENCES OTHER THAN ENGINEERING)

A comparison of estimated and quantitative blood loss in childbirth, and investigation of risk factors for postpartum hemorrhages (Ben Travis, LIFE SCIENCES)