THE UNIVERSITY OF VERMONT WELCOMES YOU to the 2023 STUDENT RESEARCH CONFERENCE Event Program

APRIL 19, 2023 9:00AM - 4:30PM
DAVIS CENTER

AFTERNOON II SESSION
Afternoon II Session  3:00 - 4:30PM

SOCIAL SCIENCES

Jess Fish
Beyla Munach
Ashleigh Angle
Seanna McGraw
Remy Normand

VERMONT STUDIES

Vitoria Cardoso
Sarah Plaut
Lilah Krugman
Fosca Bechtholdn
Protiva Sen
Molly Myers
Magali Stowell Alemán

CLINICAL

Jenn Choate
Ashley Pelkey
Courtney Amell
Olivia Budington

LIFE SCIENCES

Amanda Sidwell
Amoni Kalagbor
Angelica Golbin
Anwen Roberts
Ashley Lantigua
Bianca Labuschagne
Cecilia Kelly
Dahlia Rosen
Davi Pressman
Emmaleigh Hancock
Eve Phillips
Hallie Shi
Kari Flora
Logan Sands
Mark Mullinger
Massi Khodaverdi
Matt Heilbronn
Rachel Wilson
Sarah Baumann
Sarah Morris
Valorie Vanarsdall

ENGINEERING, MATHEMATICS, & PHYSICAL SCIENCES

Haorui Sun
Kyrill Serdyuk
Rebecca Holt
Samuel Rosenblatt
Yasaman Pedari
Alican Mertan
Austin Flueckiger
Erik Weis
Ethan Rubin
Hani Mavali Zadeh

Haorui Sun
Kyrill Serdyuk
Rebecca Holt
Samuel Rosenblatt
Yasaman Pedari
Alican Mertan
Austin Flueckiger
Erik Weis
Ethan Rubin
Hani Mavali Zadeh
Does Home Food Production Correlate with Improved Food and Nutrition security?

Ashleigh Angle
Faculty Mentor: Dr. Meredith Niles
Nutrition and Dietetics, CALS & HCOL

Blacklegged Tick Infection Dynamics in Northern Vermont Forests

Sam Cranston
Faculty Mentor: Dr. Ellen Martinsent
Biology, CAS

Forest Stand Characteristics on the Abundance of Eastern Red-Backed Salamanders

Jess Fish
Faculty Mentor: Dr. Brittany Mosher
Environmental Science, RSENR

Seeding a Movement: A Film-based Case Study of Improving Food Sovereignty in Vermont

Seanna McGraw
Faculty Mentor: Dr. Teresa Mares
Food Systems, CALS

Relationships between Spongy Moth egg mass abundance and urbanization in Vermont

Beyla Munach
Faculty Mentor: Dr. Noelia Barrios-Garcia
Environmental Science, RSENR

Evaluation of a novel employee wellness program targeting frontline workers during Covid-19

Remy Normand
Faculty Mentor: Dr. Karen Westervelt
Health Sciences, CNHS & HCOL
Modular Controllers Facilitate the Co-Optimization of Morphology and Control in Soft Robots

Alican Mertan

Faculty Mentor: Dr. Nick Cheney
Computer Science, CEMS & GC

Methodological advances to improve repeatability of SOA generation in environmental chambers

Austin Flueckiger

Faculty Mentor: Dr. Giuseppe Petruccii
Chemistry, CAS & GC

Optimal interventions for diverse goals within network epidemiology

Erik Weis

Faculty Mentor: Dr. Jean-Gabriel Youngt
Complex Systems and Data Science, CEMS & GC

Mathematically Proven Code

Kyrill Serdyuk

Faculty Mentor: Dr. Francois Dorais
Computer Science & Data Science, CEMS & GC

Effect of Build Parameters on Tensile Properties of FDM 3D Printed PLA Specimens

Ethan Rubin

Faculty Mentor: Dr. Linda Schadler
Mechanical Engineering, CEMS

P300 Fixation-Related Potential affected by Facial Emotion in Virtual Reality

Haorui Sun

Faculty Mentor: Dr. David Jangraw
Biomedical Engineering, CEMS

Increasing PV Hosting Capacity with Fairness-based, Online Curtailment Schemes

Rebecca Holt

Faculty Mentor: Dr. Mads Almassalkhi
Electrical Engineering, CEMS

Mixed bubbles: Maximizing epidemics with geographic and categorical assortativities in modular geometric graphs

Samuel F. Rosenblatt

Faculty Mentor: Dr. Laurent Hébert-Dufresne
Computer Science, CEMS & GC

Robust Estimation for Satellite Swarms in Presence of Outliers

Yasaman Pedari

Faculty Mentor: Dr. Hamid R. Ossareh
Electrical Engineering, CEMS & GC
Spatial and Working Memory in Mice post Traumatic Brain Injury  
Sarah Baumann  
Faculty Mentor: Dr. Kalev Freeman  
Biology, CAS & HCOL

Introduction of RNAi to deplete CEP41 in Paramecium tetraurelia  
Kari Flora  
Faculty Mentor: Dr. Megan Valentine  
Biomedical Sciences, SUNY Plattsburgh

The effect of introgressive hybridization on stress responses in Poplars  
Angelica Golbin  
Faculty Mentor: Dr. Stephen Keller  
Environmental Sciences, CALS & HCOL

Microtubule destabilization improves Relaxation in Working Myocardial Slices  
Emmaleigh Hancock  
Faculty Mentor: Dr. Matthew A. Caporizzo  
Biochemistry & Economics, CAS

Cytotoxic and defensive properties of various genes in bacteriophage Archie  
Amoni Kalagbor  
Faculty Mentor: Dr. Megan Valentine  
Biomedical Sciences, SUNY Plattsburgh

Elucidating the Function of IFT144 using RNAi in Paramecium  
Cecilia Kelly  
Faculty Mentor: Dr. Megan Valentine  
Biomedical Sciences, SUNY Plattsburgh

Genetic Analysis of Vernalization Sensitivity in Melica L.  
Masoumeh Khodaverdi  
Faculty Mentor: Dr. Jill Preston  
Plant Biology, CALS & GC

Effects of inflammation on the gene expression of Parkinson’s Disease linked LRRK2  
Bianca Labuschagne  
Faculty Mentor: Dr. John Salogiannis  
Molecular Genetics, CALS

Cold and Drought Response Pathways of Brachypodium distachyon Through Analysis of Differentially Expressed Genes  
Ashley Lantigua  
Faculty Mentor: Dr. Jill Preston  
Plant Biology, CALS & GC
## Ferns of Colombia

**Sarah K. Morris**

Faculty Mentor: Dr. Michael Sundue

*Plant Biology, CALS & GC*

## A molecular phylogeny of the genus Melica (Poaceae: Pooidae)

**Mark Mullinger**

Faculty Mentor: Dr. Jill Preston

*Plant Biology, CALS & GC*

## 3D Scanning and Modeling of Small Mammal Skulls for Natural History Teaching Collections

**Eve Phillips**

Faculty Mentor: Dr. Sara Helms Cahan

*Biology, CAS*

## Double KO of PTEN/Raptor genes in dentate gyrus granule cells rescues PTEN KO associated dendritic overgrowth

**Davi Pressman**

Faculty Mentor: Dr. Jeremy Barry

*Neuroscience, CAS & HCOL*

## CCDC22 and CCDC93 play a role in root meristem cell size in Arabidopsis thaliana

**Anwen Roberts**

Faculty Mentor: Dr. Mary L. Tierney

*Molecular Genetics, CALS*

## Investigating Loss of STK11 Function in Breast Cancer

**Logan Sands**

Faculty Mentor: Dr. Paula Deming

*Biological Science, CAS*

## The impact of polymerized whey protein on sensory, microstructure and probiotic survivability of goat milk yogurt infused with hemp extract

**Hallie Shi**

Faculty Mentor: Dr. Mingruo Guo

*Nutrition and Food Science, CALS & GC*

## Repeated variate stress increased voiding frequency and altered TrpV1 and TrpV4 transcript expression

**Amanda Sidwell**

Faculty Mentor: Dr. Margaret Vizzard

*Neuroscience, CAS, LCOM & GC*

## Heat Tolerance of Roast Pork Outbreak-Associated Strains of Salmonella enterica

**Valorie Vanarsdall**

Faculty Mentor: Dr. Andrea J. Etter

*Microbiology, CALS*

## Investigation of proteins associated with a VTI13 endosomal trafficking pathway to the lytic vacuole

**Rachel Wilson**

Faculty Mentor: Dr. Mary Tierney

*Plant Biology, CALS & GC*

## Recipe Development of a Cricket-Corn Chip

**Dahlia Rosen**

Faculty Mentor: Dr. Todd Pritchard

*Nutrition and Food Science, CALS*
### Afternoon II 3:00 - 4:30PM

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<td>Fosca Bechthold</td>
<td>Dr. Cheryl Morse, Geography, CAS &amp; HCOL</td>
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<td><strong>More Than Just Medicine: Implications of the Addison County Farmacy Program</strong></td>
<td>Lilah Krugman</td>
<td>Dr. Victor Izzo, Food Systems, CALS</td>
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<td><strong>Social Relations, Second Homes, and the Space Between “Insider” and “Outsider” in a Rural, Amenity Rich Community</strong></td>
<td>Molly Myers</td>
<td>Dr. Cheryl Morse, Geography, CAS &amp; HCOL</td>
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<td><strong>Analysis of Home Repair Programs for Mobile Home Residents</strong></td>
<td>Magali Stowell Alemán</td>
<td>Dr. Kelly Hamshaw, Community and International Development, CALS &amp; GC</td>
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<td><strong>Hacker Detection: Story of Catching Beginner Hackers with Honey Documents.</strong></td>
<td>Protiva Sen</td>
<td>Dr. Jeremiah Onaolapo, Computer Science, CEMS &amp; GC</td>
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<tr>
<td><strong>Social Identities, Risky Behavior, &amp; the Rural Youth Experience: Geographies of Northern Vermont Teens</strong></td>
<td>Sarah Plaut</td>
<td>Dr. Cheryl Morse, Geography, CAS &amp; HCOL</td>
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<td><strong>Do meso-institutions translate farmers’ values? Embedding relational and instrumental values in the implementation of rules and rights</strong></td>
<td>Vitoria Cardoso</td>
<td>Dr. Dan Tobin, Sustainable Development Policy, Economics and Governance, CALS &amp; GC</td>
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<td><strong>Dance Performance</strong></td>
<td>Lucie Novelline, Erin Sullivan, Ella Myregaard, &amp; Isabelle Sellers</td>
<td>Paula Higa, Dance, CAS</td>
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Afternoon II 3:00-4:30pm

The Effects of Aerobic Training on Patients with Breast Cancer Experiencing Chemotherapy-Induced Cardiotoxicity

**Courtney Amell**
Faculty Mentor: Dr. Rebecca Ouellette-Morton

*Physical Therapy, CNHS & GC*

The Effects of Mutations in a Highly Conserved Site on the Alpha-4 Helix of KIF18A

**Olivia Budington**
Faculty Mentor: Dr. Jason Stumpff

*Biology, CAS & HCOL*

Impact of Visual Perception in Persistent Postural-Perceptual Dizziness

**Jenn Choate**
Faculty Mentor: Dr. Sambit Mohapatra

*Physical Therapy, CNHS & GC*

A Model Health and Wellness Coaching Program to Support Employee Health and Student Experience

**Ashley Pelkey**
Faculty Mentor: Dr. Karen Westervelt

*Physical Therapy, CNHS & GC*

Synergistic effects of ATAD2 inhibitor with tamoxifen on ER-positive breast cancer cells

**Cole Royer**
Faculty Mentor: Dr. Melissa Scheiber

*Medical Laboratory Science, CNHS*