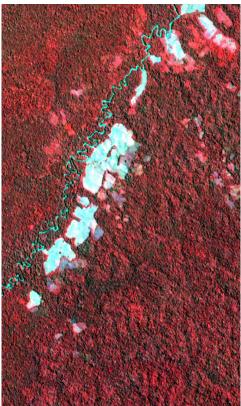


# A&S Student Symposium 37th Annual

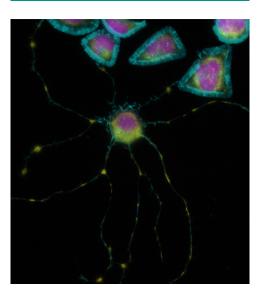
**FRIDAY, APRIL 22, 2022** 1:00–5:00 P.M.

MODLIN CENTER FOR THE ARTS GOTTWALD CENTER FOR THE SCIENCES





### as.richmond.edu/symposium









# A TRADITION OF CELEBRATING OUR COMMUNITY OF LEARNERS







# Welcome

Dear Friends and Colleagues,

The School of Arts & Sciences at the University of Richmond is a community of faculty, staff, and students who explore, discover, and learn together. Today we gather to celebrate the creation of knowledge and to share in that new knowledge. Throughout the school year and summer, the School of Arts & Sciences supported hundreds of students in faculty-mentored research and scholarship that culminates in today's 37th A&S Student Symposium.

Despite the challenges presented by COVID-19 over the past two-plus years, our resilient students and faculty have continued to look inward and outward to learn more about themselves and all of us, from the Race and Racism Project to the examination of the effects of COVID-19 on campus and abroad. As the coordinator for this year's A&S Student Symposium, I invite you to converse with presenters and learn about artifacts dug up on campus, the battle against invasive species here in Virginia, and the impressive work of so many students and their faculty mentors. I invite you to touch a costume designed by a student for a student-directed play or be touched by an exhibit on the struggles of women in war-torn Syria. I invite you to open your eyes, your ears, and your mind.

This gathering could not have happened without the tireless work of many individuals that I hope you will see during the Symposium. Thanks to Interim Dean Dan Palazzolo, Associate Dean Kelling Donald, and the Undergraduate Research Committee for providing funds throughout the year to students and faculty to produce the work you see today. The staff of the Dean's Office, in particular Jennifer Lo Prete, Carolyn Smart, Robert Plymale, and Liza Williams, and the staff of the Technology Learning Center are providing major logistical support for the Symposium. I wish to also thank the academic administrative support team of several departments and programs who helped in securing spaces for the event, as well as the staff of the Modlin Center for the Arts for hosting the event.

I'm particularly proud to bring the Symposium back together in person this spring, in a time of renewal and optimism. Thank you for helping us celebrate the remarkable scholarship of our undergraduate students.

Sincerely,

Euzew Wa

**Eugene Wu**, Ph. D. Associate Professor of Biology and Biochemistry Biochemistry and Molecular Biology Program Coordinator Arts & Sciences Student Symposium Coordinator

**COVID-19 Mitigation:** All participants and visitors to the A&S Student Symposium are encouraged to wear a high quality mask where it's practical to limit the possibility of transmitting COVID-19. If you are not feeling well or exhibit COVID-19 symptoms, please stay home.



# On the cover

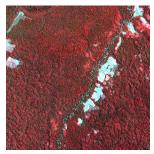
#### STUDENT-LED, FACULTY-MENTORED WORK

The School of Arts & Sciences remains committed to supporting undergraduate research through A&S Summer Fellowships, part of the Richmond Guarantee program. Whether it's in the lab, the art studio, or the archives, student-led, faculty-mentored is a hallmark of the School of Arts & Sciences experience. We are proud to share and celebrate this work at the A&S Student Symposium.



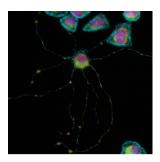
#### DEPARTMENT OF CLASSICAL STUDIES

Fragmentary Dish. Linoleum block print by Danny Saravia Romero showing the relief design on a Warwick China ceramic dish c. 1905. The dish is one of many finds excavated near Maryland Hall in 2019 and mended and studied by Danny and research teammates Emily Dixon and Lindsey Stevens in summer 2021. This linoleum block print was created with the help of Jen Thomas in the University's Book Arts Studio.



#### **DEPARTMENT OF GEOGRAPHY & ENVIRONMENT**

Image created by Eli Beech-Brown through research conducted under a NASA SERVIR grant that focuses on combining the results of a machine learning algorithm with object-based image analyses to map informal road networks from high resolution of satellite images in the Peruvian-Brazilian Amazon borderlands. This image shows deforestation in the Southwestern Amazon.



#### DEPARTMENT OF BIOLOGY

Fluorescence microscopy image of cultured cells that behave like neurons (CAD cells) taken from student research conducted in the Omar Quintero-Carmona Lab. This student research group uses these cells (CAD) as a model system to understand how cells organize and transport their mitochondria. There are a number of human diseases that result when mitochondrial transport is impaired, and this group is working to understand what genes are involved in normal mitochondrial transport.

# Symposium Locations & Times

#### MODLIN CENTER FOR THE ARTS | 1:00-5:00 P.M.

BOOTH LOBBY Symposium Check-In | Poster Presentations

COURTYARD 3:00-5:00 P.M. King of Pops Refreshment Cart

M104 | Artist Presentations

#### GOTTWALD CENTER FOR THE SCIENCES | 1:00-5:00 P.M.

Room A100 | Room A201 | Room C200

#### KELLER HALL | 1:00-5:00 P.M.

Room V206 | Keller Hall Art Gallery

#### BOOKER HALL OF MUSIC | 1:00-5:00 P.M.

Room B102 | Room 207 | Room 226

University themed yard signs will mark each location.

To support all students who are presenting in the session, please stay for the duration of each panel.

#### PHOTOGRAPHY

Video and photographs taken during the Symposium will be used in University publications and on the website. If you do not wish to be included in videos or photographs, please alert the photographer and/or videographer.

# Artist Presentations

### MODLIN CENTER FOR THE ARTS, ROOM M104

#### 1:30-2:45 P.M.

#### SANA MOUAYD AZEM

The Story She Holds FACULTY MENTOR: Sonja Bertucci

#### 3:15-4:45 P.M.

#### SHERLEY ARIAS-PIMENTEL

"I wish I lived in a world where education is ..." FACULTY MENTOR: Patricia Herrera, Sylvia Gale

#### MACLAINE BAMBERGER

Pandemic Art FACULTY MENTOR: Megan Driscoll

# KELLER HALL ART GALLERY

#### 3:15-4:45 P.M. MEGAN SALTERS A Sense of Place FACULTY MENTOR: Sonia Bertucci

### CAROLE WEINSTEIN INTERNATIONAL CENTER

#### JULIA BRITTAIN At the Intersection of Contagion and Connection: HIV/AIDS and Richmond's LGBTQ+ Community FACULTY MENTOR: Laura Browder Note: Work presented on April 21, 2022.

# BOOKER HALL OF MUSIC, ROOM B102

1:00-1:25 P.M. Richard Waller, session moderator

#### MAKY ESPINOZA

*Pygmies and Nilotic Scenes in Roman Visual Culture: An Analysis of Proto-Racism in Colonial Othering* **FACULTY MENTOR:** Megan Driscoll, Agnieszka Szymanska

1:25-1:50 P.M. Richard Waller, session moderator

#### HADLEY BECKSTRAND

Michaelina Wautier: Overcoming Institutional Barriers for Women Artists in Early Modern Europe FACULTY MENTORS: Megan Driscoll, Elena Calvillo

1:50-2:10 P.M. Richard Waller, session moderator

### HADLEY BECKSTRAND

Harnett Fellow FACULTY MENTOR: Richard Waller

# BOOKER HALL OF MUSIC, ROOM B207

1:00-1:15 P.M. Ernest McGowan, session moderator

#### JILLIAN YATES

Racism, Pandemics, and the GRTC FACULTY MENTOR: Laura Browder

1:15-1:45 P.M. Ernest McGowan, session moderator

MARIA PERRY, GRACE CHAHAL, MAIA DEMITRACK, WILL KARMEN, NIKKI MAY

Race and Racism Project FACULTY MENTOR: Ernest McGowen, Melissa Ooten

#### 1:45-2:15 P.M. Ernest McGowan, session moderator

#### RAZAN KHALIL, CHRIS MITCHELL, KAITLYN O'LEARY, NY'ASIA FLOWERS, LAUREN OLIGINO

Race and Racism Project FACULTY MENTOR: Ernest McGowen

#### 2:30-2:45 P.M. Monika Siebert, session moderator

#### SHIRA GREER

*"Freer and More Human:" Latin American Liberation Theology, Violence, and Fugitivity* **FACULTY MENTORS:** Armond Towns, Abigail Cheever

2:50-3:05 P.M. Monika Siebert, session moderator

#### MOLLY KATE KREIDER

"He Seemed to Watch the Slow Flowing of Time Beneath Him:" Temporality, Narrative Time, and the Southern Gaze in Light in August FACULTY MENTOR: Peter Lurie

3:05-3:30 P.M. Monika Siebert, session moderator

#### REDA ANSAR

Postcolonial Pakistan: Mohsin Hamid FACULTY MENTOR: Monika Siebert

4:00-4:15 P.M. Elizabeth Outka, session moderator

#### MAYA LIEBERMAN

Blurred Realities: "AIDS Plays" in American Theatre FACULTY MENTOR: Elizabeth Outka

4:20-4:40 P.M. Elizabeth Outka, session moderator

#### JOSIE HOLLAND

World-Making, Queer Temporality, and Alternative Futurism in Speculative Fiction FACULTY MENTOR: Nathan Snaza

#### 4:40-5:05 P.M. Elizabeth Outka, session moderator

#### SEJONG TAKENAKA

How Writing in Young Adult Fiction is Used for Family, Academia, and Social Identities FACULTY MENTOR: Elisabeth Gruner

# BOOKER HALL OF MUSIC, ROOM B226

#### 2:30-2:45 P.M. David Brandenberger, session moderator

#### HANNAH LEVINE

The Ford Foundation and Central America FACULTY MENTORS: Nicole Sackley, Timothy Barney

#### 2:45-3:00 P.M. David Brandenberger, session moderator

#### JOHN LIANG

An Investigation on Andrei Vlasov and the Russian Liberation Movement FACULTY MENTOR: David Brandenberger

3:00-3:15 P.M. David Brandenberger, session moderator

#### JANIS PARKER

Framing Capital Punishment in Virginia History FACULTY MENTOR: Pippa Holloway

3:15-3:40 P.M. David Brandenberger, session moderator

#### JOHN JONES SPENCER

Noble Pagans and Satanic Saracens: Literary Portrayals of Islam in Medieval Italy and Iberia FACULTY MENTORS: Joanna Drell, Sydney Watts

#### 4:00-4:25 P.M. Michelle Kahn, session moderator

#### **CAMERON DONEZ**

The Limits of Absolutism; The Second World War in Yugoslavia and German Ideological Insufficiency FACULTY MENTORS: Michelle Kahn, David Brandenberger

#### 4:25-4:50 P.M. Michelle Kahn, session moderator

#### **CHARLES TABOR**

Moctezuma and the Emergence of a Historical Dialogue in Sixteenth-Century New Spain FACULTY MENTOR: Manuella Meyer

#### 4:50-5:15 P.M. Michelle Kahn, session moderator

#### CARLY KESSLER

Building Back Greener FACULTY MENTORS: Eric Yellin, Abigail Cheever

# KELLER HALL, ROOM V206

#### 1:00-1:20 P.M. Yvonne Howell, session moderator

#### ALEX PISTOLESI

Paralleli tra la retorica del fascismo di Mussolini e il populismo di Salvini (Parallels between Mussolini's fascism and the populism of Salvini) FACULTY MENTOR: Lidia Radi

#### 1:20-1:40 P.M. Yvonne Howell, session moderator

#### **TEJA KINNEY**

The Geographer Drank His Globe Away: A New Translation From Russian FACULTY MENTOR: Yvonne Howell

2:30-2:50 P.M. Tom Mullen, session moderator

#### LOGAN JONES-WILKINS

*Ecuador's Bumpy Road to Modernity* **FACULTY MENTOR:** Tom Mullen

#### 2:50-3:15 P.M. Tom Mullen, session moderator

#### CALVIN HOGG

*Reigen: Disorienting Sex and Disease* **FACULTY MENTOR:** Caroline Weist

3:20-3:45 P.M. Tom Mullen, session moderator

#### **REIDE PETTY**

The Vivifying Gifts: Sincerity and the Semiotic Construction of Cholera in Pushkin's Boldino Works FACULTY MENTOR: Yvonne Howell

4:00-4:20 P.M. Mary Finley-Brook, session moderator

#### ROBERTO CHIA-BALMACEDA

The Costs to our Communities: An Environmental Justice Analysis on the Development of the Mountain Valley Pipeline FACULTY MENTOR: Mary Finley-Brook

#### 4:20-4:40 P.M. Mary Finley-Brook, session moderator

#### FRANK HANSON

Energy Insecurity in Sub-Saharan Africa FACULTY MENTOR: Mary Finley-Brook, Guoping Huang

4:40-4:55 P.M. Mary Finley-Brook, session moderator

#### JASSIEM KONRAD

The Belt and Road Initiative: Railway Projects in Nigeria FACULTY MENTOR: Mary Finley-Brook

### GOTTWALD SCIENCE CENTER, ROOM A100

1:30-1:50 P.M. Jonathan Richardson, session moderator

#### RYAN SZYKOWNY

The Effects of Demolition Projects on Rat Activity in Urban Areas FACULTY MENTOR: Jonathan Richardson

1:50-2:15 P.M. Jonathan Richardson, session moderator

#### **KATHRYN GRAGE**

Iterative Forecasting Models Create Accurate Predictions for the Near-Future Spread of an Invasive Insect Pest FACULTY MENTORS: Jonathan Walter, Kristine Grayson

2:30-2:55 P.M. Linda Boland, session moderator

#### LEAH GHAZALI, ARIANA SOSA

Deletion of Alternative Ribosomal Proteins in Mycobacterium smegmatis FACULTY MENTOR: Sladjana Prisic

2:55-3:20 P.M. Linda Boland, session moderator

#### JULIETTE COPELAND

Phytochemicals and Neurodegeneration FACULTY MENTORS: Melinda Yang, Kristine Nolin

#### 3:20-3:45 P.M. Linda Boland, session moderator

#### JEAN GONZALES

Reactive Oxygen Species and Cysteine Modulation of Inwardly-Rectifying Potassium Channels FACULTY MENTOR: Linda Boland

4:00-4:25 P.M. Omar Quintero-Carmona, session moderator

#### **KATHRYN REDA**

The Cytoskeleton, Mitochondria, and Charcot Marie Tooth Syndrome FACULTY MENTOR: Omar Quintero-Carmona

4:25-4:50 P.M. Omar Quintero-Carmona, session moderator

#### JOSEPH RHODENHISER

*Myosin-XIX Patterning on Mitochondria: A Super-resolution Microscopy Approach* **FACULTY MENTOR:** Omar Quintero-Carmona

# GOTTWALD SCIENCE CENTER, ROOM A201

1:30-1:45 P.M. Mike Norris, session moderator

#### **GWYNETH WELSH**

The Topology of Exceptional Points FACULTY MENTOR: Lipan Ovidiu

1:45-2:00 P.M. Mike Norris, session moderator

#### JACK RECKNER

A Chemical and Electrochemical Approach to CO2 Reduction FACULTY MENTOR: Michael Norris

2:00-2:20 P.M. Mike Norris, session moderator

#### JULIA VIDLAK

Synthetic and Computational Study of Bis(phosphino)pyrrole Ligands and Their Transition Metal Complexes FACULTY MENTOR: Miles Johnson

#### 2:30-2:55 P.M. Prateek Bhakta, session moderator

#### KAYLA LAMBERT, NATE LEVY

Modeling Kidney Function FACULTY MENTOR: Lester Caudill

#### 2:55-3:20 P.M. Prateek Bhakta, session moderator

#### LANDIN BARNEY

Dependence of Index of Refraction of Rare-Earth Metal Oxides with Temperature FACULTY MENTOR: Mariama Dias

#### 3:20-3:45 p.m. Prateek Bhakta, session moderator

#### IOANA-ANDREEA CRISTESCU, YING ZHU Generating Optimal Liver Allocation System FACULTY MENTOR: Prateek Bhakta

# GOTTWALD, ROOM C200

1:00-1:20 P.M. Nicole Maurantonio, session moderator

#### **KAMENE MANG'OKA**

Poverty Porn in the Rhetoric of Ford's Foundation Philanthropy FACULTY MENTORS: Timothy Barney, Nicole Sackley

1:20-1:40 P.M. Nicole Maurantonio, session moderator

#### JORDYN LOFTON

Aesthetics of the Old South: Why Contemporary Plantation Weddings Still Exist FACULTY MENTOR: Nicole Maurantonio

1:45-2:00 P.M. Nicole Maurantonio, session moderator

#### HAYLEY SIMMS

James River Plantations Research Project FACULTY MENTOR: Nicole Maurantonio

#### 2:30-2:50 P.M. Stephen Long, session moderator

#### **GEORGE ESTRADA**

Aquinas and Suarez on Law FACULTY MENTOR: Kevin Cherry

2:50-3:15 P.M. Stephen Long, session moderator

#### **KEVIN GOU**

Predicting Migration in the Sahel FACULTY MENTOR: Stephen Long

3:15-3:30 P.M. Stephen Long, session moderator

#### HANNAH GRACE HOWELL

Rhetorical Invention and Iconographies of Protest in La Casa de Papel FACULTY MENTOR: Paul Achter

4:00-4:15 P.M. Jennifer Erkulwater, session moderator

#### HANTANG QIN

Examining the Initial Government COVID Response Between the US and Australia FACULTY MENTOR: Maia Linask

4:15-4:40 P.M. Jennifer Erkulwater, session moderator

#### SANDEEP KUMAR

*Exploring Heterogenieties in COVID-19 Spread and Management* **FACULTY MENTOR:** Jennifer Erkulwater

# **Poster Presentations**

All poster presentations will be held in the Modlin Center for the Arts Booth Lobby. To locate specific posters please consult poster layout map in this program.

#### MODLIN CENTER FOR THE ARTS

# 1:15-2:15 P.M.

#### CAMERON KEELEY-PARKER

Investigations of the Role Cerium Plays in Catalysis and Antimicrobial Activity FACULTY MENTOR: Dominique Williams POSTER #1

#### ANDREW COOK, CAROLYN FALCO

Detecting the Influence of Arginine Methylation on Ded1 in vivo and in vitro FACULTY MENTOR: Angie Hilliker POSTER #2

#### RACHEL PAK

Development of a Next Generation Matrix Model for Rickettsia parkeri in Amblyomma maculatum (Gulf Coast tick) FACULTY MENTOR: Jory Brinkerhoff POSTER #3

#### MIKAYLA QUINN

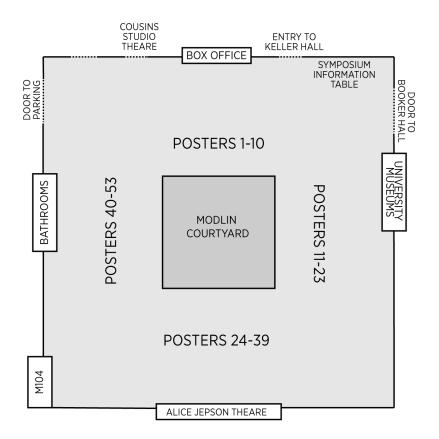
Bryophytes of Goochland County FACULTY MENTOR: John Hayden POSTER #4

#### PARKER ERNST

Assessing Human Influence on Ranavirus Infections in Vulnerable Turtle Populations FACULTY MENTORS: Jennifer Sevin, Jory Brinkerhoff POSTER #5

#### POSTER PRESENTATION FLOORPLAN

ALL POSTER PRESENTATIONS WILL BE HELD IN THE MODLIN CENTER FOR THE ARTS BOOTH LOBBY



#### ALEX ROBERTSON

Assessing Movement of Freshwater Snails Between Rock Pools with Spray Paint Mark-Recapture FACULTY MENTOR: Kristine Grayson POSTER #6

#### WESLEY TSAI

Analyzing Reference Panel Size in Searching for Human Genetic Continuity FACULTY MENTOR: Melinda Yang POSTER #7

#### ANNA LIU

The Effect of EGCG on RAW 264.7 Macrophages' Immune Response When Challenged with Woodsmoke FACULTY MENTOR: Shannon Jones POSTER \*8

#### ALBERT WU

Beta-Adrenergic Receptor Signaling Reduces Pro-Inflammatory Signaling and Promotes the M2 Phenotype in the RAW264.7 Macrophage Cell Line FACULTY MENTOR: Krista Stenger POSTER \*9

#### TONY IANNIELLO

Genetic Continuity of Human Populations in South Asia FACULTY MENTOR: Melinda Yang POSTER #10

#### EMILY BREW

Examining The Inflammatory Effects of Woodsmoke on Murine Macrophages FACULTY MENTOR: Shannon Jones POSTER #11

#### DOMINIQUE PHAM

Seed Bank Dynamics of the Emerging Invasive Species: Wavyleaf Basketgrass (Oplismenus undulatifolius) FACULTY MENTOR: Carrie Wu POSTER #12

#### **BETTY DUAN**

The Evolutionary History of the Derived ADH1B Alleles FACULTY MENTOR: Melinda Yang POSTER #13

#### DAISY BROOKS, ASHLEY FALLAS

Characterizing the Agrobacterium/Plant Interface FACULTY MENTOR: B. Daniel Pierce POSTER #14

#### JANHAVI BHALERAO

The Effects of Effort-Based Reward Training and Chemogenetic Activation of the Lateral Habenula on Behavioral and Neuroendocrine Responses in Stressful Contexts FACULTY MENTORS: Kelly Lambert, Jacy Jacob POSTER #15

#### NHYIRA ASAMOAH

Toxicity of E-Cigarettes FACULTY MENTOR: Shannon Jones POSTER #16

#### MICHAEL BAMBHA

Analysis of Phosphinopyrrole Isomers and Their Complexes FACULTY MENTOR: Miles Johnson POSTER #17

#### RAMSEY GOODNER

Synthesis of 2,3-dihydroisoxazoles from ketones and N-benzyl nitrones FACULTY MENTOR: Wade Downey POSTER #18

#### TRAVIS GREENE

Using Halogen Bonding to Detect Opioids FACULTY MENTOR: Carol Parish POSTER #19

#### HELEN XIA

Addition of indoles to nitrones via Friedel–Crafts silyloxyaminoalkylation FACULTY MENTOR: Wade Downey POSTER #20

#### **BENJAMIN SOLOMON, MASON ORTIZ**

Exploration of Structural and Chemical Properties of New Transition Metal Complexes of 2-PyridyInaphthyridine Ligands FACULTY MENTORS: Emma Goldman, Raymond Dominey POSTER #21

#### NAM PHAM

Can Inductive Effects be Quantified through Halogen Bonding: A Computational Assessment for Aromatic Systems FACULTY MENTOR: Kelling Donald POSTER #22

#### KARTHIK LALWANI

Sintering-Based In-Situ Synthesis and Characterization by TEM of Noble Metal Nanoparticles for Ceramic Glaze Color Control FACULTY MENTORS: Leo Leopold, Ryan Coppage POSTER #23

#### CAITLIN SALES

Determining the Medial Axis Structure for V-wall and Parabolic Model Under Multiple Controls FACULTY MENTOR: Jeremy LeCrone POSTER #24

#### KARTIKEY SHARMA

Markov Chains and the Degree Sequence Problem FACULTY MENTOR: Prateek Bhakta POSTER #25

#### ANDRÉ SHANNON, NIKITA MOROZOV, ANGELA STEFANOVSKA, CHRIST ATHIOGBEY, VI PHAM, GRANT SZAJDA, OHENEBA BERKO

Explaining Automated Voice Processing Systems FACULTY MENTOR: Douglas Szajda POSTER #26

#### LOGAN WEST, HECTOR GOMEZ, RILEY PLACE, ANNA FRISBIE

Dead Wolf to Red Wolf: Virginia Reintroduction FACULTY MENTORS: Peter Smallwood, Todd Lookingbill POSTER #27

#### CLAIRE KING, NINA VANATTA, CHARLES MILLER, MORGAN MALSTEAD

Breathe Easier: A Multi-Pronged Approach to Evaluating and Addressing Disparities in Air Quality, Urban Heat, and Accessibility in Richmond FACULTY MENTOR: Todd Lookingbill POSTER #28

#### **ELI BEECH-BROWN**

Using Planet Data and Google Earth Engine to Automate Mapping of Informal Roads in the Amazon Borderlands. FACULTY MENTORS: Stephanie Spera, David Salisbury POSTER #29

#### DELANEY DEMARET

Tracking and Analysis of Socio-Environmental Impacts of Informal Road Building in the Amazon Borderlands FACULTY MENTORS: Stephanie Spera, David Salisbury POSTER #30

#### ALLISON WALTERS

Longitudinal Trends in Mental Health Among University of Richmond Students FACULTY MENTORS: Rick Mayes, Peter LeViness POSTER #31

#### ISRAA DRAZ, ANDREW BRADY, HENLEY SMITH, MILES GOLDMAN, VY BUI

Difference Sets with Symmetric Difference Properties FACULTY MENTOR: James Davis POSTER #32

#### LILY DICKSON, THOMAS SPIKER

Discontinuous Medial Axis Structures: Dubins Car FACULTY MENTOR: Jeremy LeCrone POSTER #33

#### SOPHIA HARDTEN, CHLOE SECKART

An Evaluation of the Other-Race Effect Through the Attentional Blink FACULTY MENTOR: Cindy Bukach POSTER #34

#### ANNA MARSTON

Demographic Disparities in College Students' Psychological Adjustment During COVID-19 FACULTY MENTOR: Karen Kochel POSTER #35

#### CAM SMITH, BRIANNA CHARLETON, JASMIN RUBIERA

Do Autistic Traits in Typically Developing Individuals Impact the Structural Encoding of Faces as Measured by the N170 Component FACULTY MENTOR: Cindy Bukach POSTER #36

#### ALEXIA REHLING

Coping Strategies of Grieving and Bereaved Students FACULTY MENTOR: Kristjen Lundberg POSTER #37

#### JARED BRASSIL

Awareness of Partisan Bias in Political Decision-Making FACULTY MENTOR: Kristjen Lundberg POSTER #38

#### LINDSAY EVERHART

Do Diversity, Equity, and Inclusion (DEI) Initiatives Cause More Harm Than Good for LGBTQ+ Employees? FACULTY MENTOR: Kristjen Lundberg POSTER #39

#### CLAIRE MCLAM, SAMPSON VALDEZ

Error Monitoring and Clinical Perfectionism: Relation of Neural Processing to Two Proposed Dimensions of a Standardized Assessment FACULTY MENTOR: Cindy Bukach POSTER #40

#### ISABELLA HOLMGREN

Falling for Moses: The Role of Stroop Inhibition and Language Expertise FACULTY MENTOR: Matthew Lowder POSTER #41

#### MAMIE ZIEGLER

What Does "Avoidance Mode" Feel Like? The Effect of Avoidance Awareness on Negative Affect FACULTY MENTOR: Laura Knouse POSTER #42

#### LIV CLAYTON, LUCY PATTERSON

Circumstances Influencing Likelihood to Become and Organ Donor FACULTY MENTOR: Camilla Nonterah POSTER #43

#### AMARA NWANGWU

Barriers in Access to Care and Depressive Symptoms – The Role of Race/Ethnicity and Gender FACULTY MENTOR: Camilla Nonterah POSTER #44

#### LEON ZHENG

Virginian News Coverage on Undocumented Immigrant Health FACULTY MENTOR: Miguel Diaz-Barriga POSTER #45

#### PAIGE WILLIS

Lighting the Lavender Scare FACULTY MENTORS: Maja White, Johann Stegmeir POSTER #46

#### TED CORL

Investigating the Redox Activity of Cu2+ Present in MEMO1 FACULTY MENTORS: Julie Pollock, Leo Leopold POSTER #1

#### SYDNEY ROBINSON

Ruthenium Based Complexes in Photo-Activated Chemotherapy FACULTY MENTOR: Julie Pollock, Michael Norris POSTER \*2

#### **EMILY WARD**

Characterization of Hypothetical Proteins in Proteus Mirabilis FACULTY MENTOR: Jonathan Dattelbaum POSTER #3

#### SAI POLURI

Analogs of 8-oxo-2'-deoxyguanosine FACULTY MENTOR: Michelle Hamm POSTER #4

#### HANNAH PARKER

Metabolic Map and Genetic Disorders FACULTY MENTOR: Julie Pollock POSTER #5

#### **BRITTANY JOHNSON**

Genetic Continuity in the Yellow River Basin FACULTY MENTOR: Melinda Yang POSTER #6

#### JESSICA GAROFALO

Investigation of the VirA Linker Domain to Characterize its Phenol Interactions FACULTY MENTOR: B. Daniel Pierce POSTER \*7

#### **KRISTEN STARKS**

Investigation of the Effects of N-Acetylcysteine on Neurodegeneration in Drosophila Models of Spinocerebellar Ataxia 3 FACULTY MENTOR: John Warrick POSTER #8

#### SARENNA ENRIGHT

Epithelial Cell Inflammation Induced by Woodsmoke FACULTY MENTOR: Shannon Jones POSTER #9

#### MORGAN ABDO

MLST of B. burgdorferi FACULTY MENTOR: Jory Brinkerhoff POSTER #10

#### AMARA TAYLOR, IVY DE SOUZA

Air Pollution and it's Affects on the Immune System FACULTY MENTOR: Shannon Jones POSTER #11

#### AIYAH ADAM

Mechanisms Underlying Dravet Syndrome FACULTY MENTOR: Colleen Carpenter POSTER #12

#### NESSA OKOROANYANWU, LESLEY BOADU

Carcinogen Effects on Epithelial Cells FACULTY MENTOR: Shannon Jones POSTER #13

#### JEAN AZAR-TANGUAY

Spin-Flip CCSD Characterizations of Heteroaromatic Pyrrole Diradicals FACULTY MENTOR: Carol Parish POSTER #14

#### **CATHERINE BAYAS**

Investigating Molecular Interactions of MEMO1 with SRC and Estrogen Receptor Alpha FACULTY MENTOR: Julie Pollock POSTER #15

#### MIMI VISESTAMKUL, ALEXSAS MWANGO MISOKA

Incorporation of dCTP and dATP opposite OdG and analogues with KT R677A FACULTY MENTORS: Michelle Hamm POSTER #16

#### KINGSLEY DWOMOH, ZACH ROME, FELIX MINAMI

Continuous Flow Synthesis of Polyfunctionalized Pyrroles FACULTY MENTOR: Emma Goldman, Raymond Dominey POSTER #17

#### LEON ZHENG, JULIETTE COPELAND

Antimicrobial Natural Products FACULTY MENTOR: Kristine Nolin POSTER #18

#### ZENA ABRO, VICKY OSENGA

Synthesis of Biaryl Phosphatrane Ligands for Transition Metal-Catalyzed Cross-Coupling Reactions FACULTY MENTOR: Miles Johnson POSTER #19

#### SEBASTIAN MENDOZA-GOMEZ

Spin Flip TDDFT/CCSD Characterization of FURAN FACULTY MENTOR: Carol Parish POSTER #20

#### CAMRYN CARTER

Interference of the hACE2 and SARS-CoV2 RBD interaction with Repurposed Molecules FACULTY MENTOR: Carol Parish POSTER #21

#### HELENE LEICHTER

The Sculpting of 'The Veiled Lady' FACULTY MENTOR: Alicia Díaz POSTER #22

#### **KATHRYN GRAGE**

Iterative Forecasting Models Create Accurate Predictions for the Near-Future Spread of an Invasive Insect Pest FACULTY MENTORS: Jonathan Walter, Kristine Grayson POSTER #23

#### VIOLET JETTON, DOMINIQUE PHAM

Mapping and Analyzing the Distribution of Wavy Leaf Basket Grass FACULTY MENTORS: Carrie Wu, Beth Zizzamia POSTER #24

#### ANNA FRISBIE

The Potential Effects of Transboundary Road-Building in the Southwestern Amazon Shared by Peru and Brazil FACULTY MENTORS: Stephanie Spera, David Salisbury POSTER #25

#### WILLIAM HEINLE

Deforestation in Multiuse Protected Areas in Madagascar FACULTY MENTORS: Sandra Joireman, John Scrivani POSTER #26

#### **CHARLES MULLIS**

Connectivity in the Urban Landscape (2015–2020): Who? Where? What? When? Why? and How? FACULTY MENTOR: Todd Lookingbill POSTER #27

#### WILLIAM DAVIS

Transmediality of S.T.A.L.K.E.R. FACULTY MENTOR: Yvonne Howell POSTER #28

#### OLIVIA BARLOW, YUNZE WANG, YIXUAN ZHAO, DITRICK MWALONGO, AAMY BAKRY, HANNAH LI

Towards a Mathematical Model of the Effect of Inhaled Toxicants and Antioxidants on the Inflammatory Response FACULTY MENTORS: Marcella Torres, Kathy Hoke POSTER #29

#### ELEAZER AFOTEY

FINTEC in Ghana FACULTY MENTOR: Douglas Szajda POSTER #30

#### MILES GOLDMAN, ISRAA DRAZ, YUHAN ZHOU, IVANA FILIPOVIC, HENLEY SMITH, ANDREW BRADY, MEREDITH SCHULTEN, VY BUI

Difference Sets, Designs, and Relative Difference Sets FACULTY MENTOR: Jim Davis POSTER #31

#### ANNA FORTUNATO, DYLAN HOOPER

Space Race to the Curved Base: Discontinuous Medial Axis Structures in Various Obstacle Spaces and Control Models FACULTY MENTOR: Jeremy LeCrone POSTER #32

#### ERIN BURNS

Driving is a No (New) Brainer: The Impact of Adult Neurogenesis on Cognitive Learning in Male Long-Evans Rats FACULTY MENTORS: Kelly Lambert, Jacy Jacob POSTER #33

#### **BRIANNA CANTRALL**

Optimal Method for Reconstructing Polychromatic Maps from Broadband Observations with an Aysmmetric Antenna Pattern FACULTY MENTOR: Emory Bunn POSTER #34

#### JOSEPH STERLING

Estimation of pure B power in polarized CMB data via Gibbs sampling FACULTY MENTOR: Emory Bunn POSTER #35

#### HELEN WALLACE, MCKENNAH LAUBER

The Motivated Use of Colorblindness in a University-Wide Movement for Racial Justice FACULTY MENTORS: Kristjen Lundberg, Crystal Hoyt POSTER \*36

#### SADIE WENGER, KELLY SAVERINO

An Exploration of Tool-Use, Flexible Cognition, and Cultural Behaviors in Semi-Natural Java Macaques FACULTY MENTORS: Kelly Lambert, Jacy Jacob POSTER #37

#### **BRIANNA CHARLTON**

Other Race Faces Look the Same: Is Motivation Enough to Diminish this Effect? FACULTY MENTORS: Cindy Bukach POSTER #38

#### EMMA BENDER, MACKENZIE SEWARD, JEN SCHLUR, ANNIE BECKERMAN

Predictors of Attitudes Towards BLM FACULTY MENTOR: Jane Berry POSTER #39

#### KAYLA SCHILTZ, EMILY HUESMAN

Are Racial Microaggressions Related to Colorblind and White Privilege Ideologies? FACULTY MENTOR: Jane Berry POSTER #40

#### LAYLA COBRINIK

The Warmline Study FACULTY MENTOR: Kristjen Lundberg POSTER #41

#### ALLISON WALTERS

Stigma and Anxiety as Barriers to Help-Seeking Among University of Richmond Students FACULTY MENTOR: Kristjen Lundberg POSTER #42

#### **HYEWON HONG**

Friendship in a Pandemic: An Experimental Intervention to Test the Protective Role of Friendship Quality FACULTY MENTORS: Kristjen Lundberg, Karen Kochel POSTER #43

#### ANTONIO CARDOSO

Individual Differences in Processing of Garden-Path Sentences: The Role of Obsessive Compulsive Personality Traits FACULTY MENTOR: Matthew Lowder POSTER #44

#### ADDI MANSINI

Examining Protective Quality of Sense of Belonging and Friendship Quality on Peer Victimization Outcomes FACULTY MENTOR: Karen Kochel POSTER #45

#### **CAMERON MCKENDRICK**

Evaluating Hyperfocus Prevalence through Ecological Momentary Assessment FACULTY MENTOR: Laura Knouse POSTER #46

#### MICHALA DINI

The Emotional Mechanisms of Altruism Born of Suffering FACULTY MENTOR: Kristjen Lundberg POSTER #47

#### ISABELLE WARREN, ELIZABETH POPOVICH, CAROLINE GLASER

Support for BLM: The Role of Childhood Factors and Time Since the 2020 Uprisings FACULTY MENTOR: Jane Berry POSTER #48

# JEN SCHLUR, EMMA BENDER, ANNIE BECKERMAN, MACKENZIE SEWARD, OLIVIA HARDING

Bots Invaded Our Study of Black Lives Matter FACULTY MENTOR: Jane Berry POSTER #49

#### **KATHRINA DURANTE**

Committed to the Cause or Performative Posting?: Developing a Measure of Internal and External Motivations for Online Activism FACULTY MENTOR: Kristjen Lundberg POSTER #50

#### ALISON ZHANG

Racial Homogeneity at Home and Race Essentialism: The Role of Interracial Friendship FACULTY MENTORS: Kristjen Lundberg, Karen Kochel POSTER \*51

#### ALISA FOMINYKH

The Economic Blitzkrieging of Russia FACULTY MENTOR: Michael Marsh-Soloway POSTER #52

#### RAY BARR

Individualized History: Tobacco Workers Interred at East End Cemetery FACULTY MENTOR: Elizabeth Baughan POSTER #53

#### DANNY FRASCELLA

Effect of Retinoic Acid Receptors (RAR) on Spinal Cord and Hindbrain Territories in Danio rerio FACULTY MENTOR: Isaac Skromne POSTER #1

#### JOSHUA PANDIAN

The Effect of Microbiome Composition on Rickettsia parkeri Prevalence in Peromyscus leucopus and Sigmodon hispidus FACULTY MENTOR: Jory Brinkerhoff POSTER #2

#### **CORRI COOPER**

Autophagy-Mediated Neurodegeneration in Drosophila with Human Machado-Joseph Disease FACULTY MENTOR: John Warrick POSTER #3

#### GABRIEL OFFENBACK, COLE FISHBERG

Pro-inflammatory Signaling in RAW264.7 macrophages FACULTY MENTOR: Krista Stenger POSTER #4

#### NINA PRICE

Physiological Actions of Hydrocinnamic Acid on Cardiac Ion Channels FACULTY MENTOR: Linda Boland POSTER #5

#### JONATHAN KAN

Tick Behavior in Varying Environments FACULTY MENTOR: Jory Brinkerhoff POSTER #6

#### LONDON NEMMERS, ANNA ALI

The Effects of Desiccation Stress on Desert Soil Nematodes FACULTY MENTOR: Amy Treonis POSTER #7

#### **ALLISON NGUYEN**

Leaf Ecophysiological Responses to Light Availability in Oplismenus undulatifolius, a Shade Tolerant Invasive Plant FACULTY MENTOR: Carrie Wu POSTER #8

#### **GRACE DAVIS**

Examining Critical Thermal Limits of Lymantria dispar Regarding Geographic Differences FACULTY MENTORS: Kristine Grayson, Jonathan Walters POSTER #9

#### **BRENDAN CROCKETT, NICK GONZALES**

Tracking Wild Rat Brains: Emerging Neurobiological Differences Between Urban Wild-Trapped and Laboratory Rats (Rattus norvegicus) FACULTY MENTOR: Kelly Lambert POSTER #10

#### EMILY CASSADY

Testing the Ability of Environmental Growth Chambers to Replicate Outdoor Growth Conditions Using the Invasive Forest Insect Lymantria dispar (L.) FACULTY MENTORS: Kristine Grayson, Hannah Coovert POSTER #11

#### SINEAD DOWLING, KATHLEEN GARCHITORENA, ANNIE KWON

Mutational Analysis of the Agrobacterium VirA Sensor Kinase Reveals AND/OR Gating Control FACULTY MENTOR: B. Daniel Pierce POSTER #12

#### LEEANN DEMPSEY

The Effect of Wood Smoke on Human Lung Epithelial Cells FACULTY MENTOR: Shannon Jones POSTER #13

#### ELENA MECCHI, ANH NGUYEN, LYNDDA CEVALLOS

Does Calcium Binding Affect Miro-binding to MYO19 or TRAK1 or 2 in Mitochondria? FACULTY MENTOR: Omar Quintero-Carmona POSTER #14

#### KHARMA HALL

Stxbp1b Epilepsy Modelling in Zebrafish FACULTY MENTOR: Colleen Carpenter-Swanson POSTER #15

#### ELSA KATARINA ACOSTA

An In-Silico Investigation of G-quadruplex Stabilization by DNA Telomerase Inhibitors for Anti-Cancer Applications FACULTY MENTOR: Carol Parish POSTER #16

#### JACOB AIRAS, TRAVIS GREENE

Using Halogen Bonding to Detect Opioids FACULTY MENTOR: Carol Parish POSTER #17

#### ANDREW FELIX

Green Synthesis of Pyrroles FACULTY MENTOR: William O'Neal POSTER #18

#### **TESSA YARBROUGH**

Electron Delocalization and Aromaticity in Inorganic Analogues of Small Ring Systems FACULTY MENTORS: Kelling Donald POSTER #19

#### LIAM DAY

Cerium(IV) Complexes in Biological Assays and Phosphate Bond Cleavage FACULTY MENTORS: Dominique Williams POSTER #20

#### MAK CALLENDER

Expression, Purification, and Activity Investigation of STK1 FACULTY MENTOR: Julie Pollock POSTER #21

#### MICHAEL RODRIGUEZ, TYLER CHONG

Synthesis of Styrenes from Aldehyde-aldehyde Aldol Coupling Products FACULTY MENTOR: Wade Downey POSTER #22

#### HALEY GLADDEN

Small Molecule Interference with the hACE2 and SARS-CoV RBD Complex Junction FACULTY MENTOR: Carol Parish POSTER #23

#### SADIESHA TAYLOR

Synthesis of Unsymmetrical Bis(phosphine)pyrrole Ligands and Their Nickel Complexes FACULTY MENTOR: Miles Johnson POSTER #24

#### **CHARLI CHEN**

Spin Flip TDDFT/CCSD Characterization of Thiophene Di-radicals FACULTY MENTOR: Carol Parish POSTER #25

#### JOLAN MOTYKA

Mining Nature for New Antibiotics FACULTY MENTOR: Jonathan Dattelbaum POSTER #26

#### MARISSA GOODALL

Alternative Medicine & Black, College-Educated Women FACULTY MENTORS: Rick Mayes POSTER #27

#### NOAH ROBINSON, NAM PHAM, WILLIAM RICE, PAIGE DELSA

Strong Halogen Bonding Tendencies Below Period Two FACULTY MENTORS: Donald Kelling POSTER #28

#### EMILY DIXON, DANIEL SARAVIA-ROMERO

Concessions Uncovered: Westhampton Park in Context FACULTY MENTOR: Elizabeth Baughan POSTER #29

#### TAYLOR GRINDLE

Liberosis FACULTY MENTOR: Alicia Díaz POSTER #30

#### KAYLA SCHILTZ

Hush FACULTY MENTOR: Alicia Díaz POSTER #31

#### TAYLOR COLEMAN, INDYA WOODFOLK, KATHRYN GRAGE, VIRGINIA MEAD

Management Strategies for Improving the Quality of Westhampton Lake FACULTY MENTORS: Peter Smallwood, Todd Lookingbill POSTER #32

#### TAYLOR COLEMAN

Remote Sensing of the Florida Gulf Coast: An Investigation of the 2017-2019 Red Tide Event FACULTY MENTOR: Stephanie Spera POSTER #33

#### ELIZA HERRENKOHL, ELSPETH COLLARD

COVID-19 within Indigenous Communities of the Peruvian Amazon: An Ucayali Case Study FACULTY MENTORS: Stephanie Spera, David Salisbury POSTER \*34

#### ELIZA HERRENKOHL, BOB CHIABALMACEDA, ELIZA HERRENKOHL, ANTONIA KEMPE, SURAYA SOUIDI

Conservation Efforts in Richmond, Virginia FACULTY MENTOR: Todd Lookingbill POSTER #35

#### LINDSEY BARNARD

The Geolocation of Facebook and Twitter Posts on the Proposed Highway between Pucallpa, Peru and Cruzeiro do Sul, Brazil FACULTY MENTORS: David Salisbury, Stephanie Spera POSTER #36

#### JULIA STEVERMER

Defining the Holodomor a Title and Accountability to the Ukrainian Terror Famine of 1932-1933 FACULTY MENTOR: David Brandenberger POSTER #37

#### **KELLY SAVERINO, SADIE WENGER**

An Exploration of Tool-Use, Flexible Cognition, and Cultural Behaviors in Semi-Natural Java Macaques FACULTY MENTOR: Kelly Lambert POSTER #38

#### WILSON BERRY

Examining the Relationship Between Interracial Contact and Support for Social Change on the UR Campus FACULTY MENTOR: Kristjen Lundberg POSTER #39

#### **RYAN WIGGINTON**

Do ADHD Symptoms Strengthen the Relationship Between Depression/Anxiety and Avoidance? FACULTY MENTOR: Laura Knouse POSTER #40

#### MAMIE ZIEGLER, ALISON ZHANG, HOOR UL AIN

Personality Matters: Neuroticism and Conscientiousness are Associated with College Students' Avoidance in Daily Life FACULTY MENTOR: Laura Knouse POSTER #41

#### EVE RIDENHOUR, MIRANDA MOE

Popular Children's Perceived Competence in School-Based Peer Interactions FACULTY MENTOR: Karen Kochel POSTER #42

#### ELENA BAGNOLI, ALYSSA HENDRICKS, BAILEY SANTAGUIDA

How Positive Psychology Benefits the Well-Being of Solid Organ Transplant Recipients FACULTY MENTOR: Camilla Nonterah POSTER #43

#### MARY SANCHEZ

Cultural Femininity in Denmark FACULTY MENTOR: Olivier Delers POSTER #44

#### SHAYLEN LAFFERTY

Props & Posters: Perfect Arrangement FACULTY MENTOR: Johann Stegmeir POSTER #45

#### LIAM KEENAN, EMMA SLOANE, SHAYLEN LAFFERTY, PAIGE WILLIS, GABRIEL MATTHEWS, OONA ELOVAARA, OLIVE GALLMEYER

Perfect Arrangement - Sound Design FACULTY MENTOR: Maja White POSTER #46

#### EMMA SLOANE

Perfectly Queer: Directing an LGBTQ+ Production FACULTY MENTORS: Walter Schoen POSTER #47

#### **OLIVE GALLMEYER**

The Lavender Scare on Stage: Perfect Arrangement Dramaturgical Research FACULTY MENTOR: Walter Schoen POSTER #48

#### SHAYLEN LAFFERTY, EMMA SLOANE, PAIGE WILLIS, GABRIEL MATTHEWS, LIAM KEENAN, OLIVE GALLMEYER, OONA ELOVAARA

Perfect Arrangement FACULTY MENTOR: Johann Stegmeir POSTER #49

#### **GABRIEL MATTHEWS**

Scenic Design for Perfect Arrangement FACULTY MENTORS: Vicki Davis POSTER #50

#### **OONA ELOVAARA**

Costume Design for the production of Perfect Arrangement FACULTY MENTOR: Johann Stegmeir POSTER #51



# THE **SCHOOL OF ARTS & SCIENCES** IS THE HEART OF THE UNIVERSITY OF RICHMOND.

Though we have an expansive and diverse list of expertise, experiences, and learning opportunities we pride ourselves on being a tight-knit community of lifelong learners bound together by one common mission. Our A&S community — made up of students, faculty, alumni, and staff — questions the unknown, seeks answers, and thrives by learning how to turn new-found knowledge into action. From art history to physics, Arts & Sciences prepares students to be committed lifelong learners who challenge societal and intellectual barriers, who provide ethical leadership, and who lead sustainable and meaningful lives.

Every Richmond student begins their undergraduate career in Arts & Sciences, placing us at the heart of Richmond's liberal arts experience. We implement a broad-based, integrative educational approach while valuing the power of an inclusive community where faculty, students, alumni, and staff all inquire, discover, and take risks together.

Together, we're fostering intellectually nimble global leaders capable of critical thinking and adaption in a diverse and ever-changing world.

BOATWRIGHT LIBRARY ADMINISTRATION WING 261 Richmond Way University of Richmond, VA 23173 804-289-8416 | as.richmond.edu





# A TRADITION OF CELEBRATING OUR COMMUNITY OF LEARNERS

PAST A&S STUDENT SYMPOSIUM PHOTOGRAPHY BY KIM LEE SCHMIDT



University of Richmond 261 Richmond Way Richmond, VA 23173