THE COLLEGE OF ARTS AND SCIENCES 15TH ANNUAL SUMMIT FOR

UNDERGRADUATE RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITY

URSCA.UA.EDU

APRIL 13, 2018
MOODY MUSIC HALL
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MESSAGE FROM THE DEAN

Dear Participants:

Welcome to the College's 15th annual 2018 Summit for Undergraduate Research, Scholarship, and Creative Activity (URSCA). Undergraduates representing all divisions of the College—the humanities and fine arts, the natural sciences and mathematics, and the social sciences—will present their research and creative works today.

The College of Arts and Sciences is proud of the many high-quality research and creative activities it offers to our undergraduates. Our faculty knows that hands-on learning experiences in the laboratory, the studio, or in the archives fuel the spirit of curiosity and discovery and open the mind to new vistas in learning. This is the process for intellectual discovery and for developing highly productive individuals who will serve their communities and their professions with great expertise and understanding. My sincerest thanks to each faculty mentor for your dedication.

We are equally proud of the many undergraduates who have chosen to present their investigations here today. These men and women represent the best of our College, and it will be a wonderful experience, indeed, to visit with them today and hear about their discoveries. I congratulate each participant for their excellent work and look forward to seeing their intellectual journey continue to unfold during their undergraduate years in the College.

I would like to extend special thanks to Dr. Roger Sidje and the faculty judges for the important roles they play and their valuable feedback to the students.

Thank you for joining us today.

Sincerely,

Robert F. Olin, Ph.D.
Professor and Dean
SCHEDULE OF EVENTS

Attendance is open to all UA students and the general public, but presenters are UA students (from any program) that have A&S faculty mentors. Below is an outline of the schedule of events. Attendees and the public are welcome to watch the presentations and the creative interlude.

8:00–8:45 a.m. Oral Presentation Registration and Set-Up Lobby

9:00 am–1:00 p.m. Oral Presentations Classroom Wing

9:00 am–1:00 p.m. Poster Presentations Registration and Set-Up Lobby

1:00–2:00 p.m. Creative Interlude: Watch the creative interlude while waiting on results from oral presentations. The interlude features a selection of performances by students in the fine and performing arts. Concert Hall

2:00–6:00 p.m. Poster Presentations Million Dollar Band Wing
FINE ARTS AND HUMANITIES
ORAL PRESENTATIONS

Group 1 – Room 180

9:00 a.m.  
CAITLYN BELL  
Department: Religious Studies  
Faculty Mentor: Steven Ramey  
(Religious Studies)  
Exhibiting Asia: When Asia Meets America in Contemporary Museums

10:20 a.m.  
ANNIE YONGE  
Department: Theatre and Dance  
Faculty Mentor: Donna Meester  
(Theatre and Dance)  
The 25th Annual Putnam County Spelling Bee: How Costume Research Influences Design

9:20 a.m.  
MOLLY BUFFINGTON  
Department: History  
Faculty Mentor: George McClure (History)  
A Faith That Sings: Lutheran Liturgy as a Theological Tool in the Reformation

10:40 a.m.  
TALLY ROBISHAW  
Department: New College  
Faculty Mentor: Jane Cassidy  
(Art and Art History)  
Community Without (Verbal) Communication

9:40 a.m.  
RHIANNON HEIN  
Department: History  
Faculty Mentor: Daniel Riches (History)  
Nationalist Sentiment in the Era of German Unification

11:00 a.m.  
JARED TUBBS  
Department: Music  
Faculty Mentors: Andrew Dewar (New College)  
Holland Hopson (New College)  
Internal: Sonifying the Human Body

10:00 a.m.  
KYLE VAN FRANK  
Department: Theatre and Dance  
Faculty Mentor: Stacy Alley (Theatre and Dance)  
Kidnapped Culture: The Story of Tap Dancing America

11:20 a.m.  
RYAN TUMBLESON  
Department: Modern Languages and Classics  
Faculty Mentor: Alecia Chatham  
(Modern Languages and Classics)  
A Timeless Fight
Group 2 – Room 181

9:00 a.m.
BRITTANY GRADY
Department: New College
Faculty Mentor: Julia Cherry (New College)
*The Impact of Service Learning Courses on First Generation and Pell Grant Eligible Students*

9:20 a.m.
YASMINE NANA-YEBOAH
Department: American Studies
Faculty Mentor: Stacy Morgan (American Studies)
*An Observation of Jazz Music to Hip-Hop: Black Music and the Impact on American Pop Culture*

9:40 a.m.
ANNEMARIE Lisko
Department: Modern Languages and Classics
Faculty Mentor: Alessandra Montalbano (Modern Languages and Classics)
"[A]s the assassination of President John F. Kennedy Shocked Americans": American Media Representations of the Aldo Moro Kidnapping

10:00 a.m.
GABRIEL ROssER
Department: New College
Faculty Mentors: Andrew Dewar (New College)
       Holland Hopson (New College)
*Building a Modular Synthesizer*

10:20 a.m.
ALEXIA ACEBO
ALEXANDRA MANNINGS
Department: Theatre and Dance
Faculty Mentor: Rebecca Salzer (Theatre and Dance)
*Mixed Reality*

10:40 a.m.
ALEXANDER TAMEZ
Department: Religious Studies
Faculty Mentor: Theodore Trost (Religious Studies)
*The Death of Film*

11:00 a.m.
BRADLEY JOHANSEN
Department: Philosophy
Faculty Mentor: Rekha Nath (Philosophy)
*The Noncombatant Naked Soldier*
FINE ARTS AND HUMANITIES
POSTER PRESENTATIONS

Group 1-Band Room

101
RACHEL CANO
Department: New College
Faculty Mentor: Marysia Galbraith
(Anthropology)
Where’s Your Dirty Laundry: An Ethnography of a Modern Day Watering Hole

102
ANNIE ROBERSON
Department: Music
Faculty Mentor: Elllary Draper (Music)
A Survey of the Thoughts and Attitudes of Music Faculty and Staff Towards Music Therapy

104
GRACE ALBRIGHT
Department: Psychology
Faculty Mentor: Patricia Parmelee (Psychology)
Moderating Effects of Coping on Objective and Subjective Health in Older Adults

105
ABIGAEL FURMAN
Department: English
Faculty Mentor: Dilin Liu (English)
Great, Awesome, Terrific, and Fantastic: Analyzing the Lexical Semantic Change of a Set of Near Synonyms using Corpora

107
KATHERINE METCALF
Department: English
Faculty Mentor: Marni Presnall (English)
Montaigne and Woolf: Humility, Experimentation, and Power in the Personal Essay

108
ALEXANDRA VANCE
Department: Modern Languages and Classics
Faculty Mentor: Bryan Koronkiewicz (Modern Languages and Classics)
Pronouns in Code-Switching: Comparing Spanish-English and French-English

109
MEGAN GOLDMAN
Department: Art and Art History
Faculty Mentor: Pete Shulte (Art and Art History)
Shadow Series
NATURAL SCIENCES AND MATHEMATICS
ORAL PRESENTATIONS

Group 1 – Room 258

9:00 a.m.
COURTNEY THOMPSON
Department: Chemistry
Faculty Mentor: Elizabeth Papish (Chemistry)
Synthesis and Characterization of Transition Metal Complexes as Redox Mediators for Dye-Sensitized Solar Cells

9:20 am
PEDRAM MALEKNIA
Department: Biological Sciences
Faculty Mentors: Cheng-Yu Li (Biological Sciences)
Ryan Earley (Biological Sciences)
Can Rivulus Fish See Through the Müllner-Lyer Visual Illusion?

9:40 am
NATHAN MONIZ
Department: Biological Sciences
Faculty Mentors: Kim Caldwell (Biological Sciences)
Guy Caldwell (Biological Sciences)
Identifying Intrinsic Modulators of Neuronal Resilience in a C. elegans PD Model
NATURAL SCIENCES AND MATHEMATICS
POSTER PRESENTATIONS

Group 1-Band Room

301
JALEN CATES
ANDREW STEWART
Department: Physics and Astronomy and Chemistry
Faculty Mentor: Adam Hauser
(Physics and Astronomy)
The superconducting properties of YBa2Cu3O7
samples minutely-doped with dysprosium

302
CLARE OLS
VANESSA MARSHALL
CHARLES PITSEMBERGER
Department: Biological Sciences
Faculty Mentor: Jeffrey Lozier
(Biological Sciences)
DNA Barcoding as a Tool to Assess Pollinator
Diversity in a Fragmented Landscape

303
JOSHUA GOBLE
Department: Biological Sciences
Faculty Mentor: Dr. Kevin Kocot
(Biological Sciences)
The Biodiversity of Deep-Sea Icelandic
Aplacophoran Molluscs

304
LAKBIRA SHEFFIELD
Department: Biological Sciences
Faculty Mentor: Stanislava Chtarbanova
(Biological Sciences)
Identification of Novel Factors in Age-Dependent
Anti-Viral Innate Immunity

305
CARIS SMITH
Department: Chemistry
Faculty Mentors: David Dixon (Chemistry)
Monica Vasiliu (Chemistry)
Computational Chemistry Studies of Modular
Approaches to Contemporary Complexants for
Separations

306
TYLER MORGAN
Department: Chemistry
Faculty Mentor: Silas Blackstock (Chemistry)
Redox Switching of a Bis(Azobenzene)Amine

307
CONNOR KIRKLAND
Department: Geological Sciences
Faculty Mentor: Joe Lambert (Geological Sciences)
Seasonal Growth of Speleothems in Northern
Alabama Cave Systems: A Watch Plate Study

308
CHARLES WATTS-KERR
Department: Biological Sciences
Faculty Mentor: Stephen Secor (Biological Sciences)
Postfeeding Energetics of Centipedes
309
AUSTIN WHITE
Department: Biological Sciences
Faculty Mentor: Katrina Ramonell (Biological Sciences)
The Characterization of Arabidopsis thaliana Fungal Pathogen Receptor-Like Kinase, PMRK1

310
ALYSSA KANDOW
Department: Biological Sciences
Faculty Mentor: Jennifer Howeth (Biological Sciences)
Effects of Zebra Mussel Invasion on Water Quality in Texas Reservoirs

311
CATHERINE OWENS
Department: Chemistry
Faculty Mentors: Silas Blackstock (Chemistry)
Ariel Kelley (Chemistry)
Magnetic Anisotropy of Nitrosoarenes

312
LUCAS GLISSON
Department: Biological Sciences
Faculty Mentor: Carla Atkinson (Biological Sciences)
Impact of Temperature Gradients on Phosphorus Content of Mayflies in the Alaskan Tundra

Group 2-Band Room

313
TAYLOR PERKINS
Department: Chemistry
Faculty Mentor: Carolyn Cassady (Chemistry)
Influencing Charge State Distribution of Biological Peptides in Electrospray Ionization Mass Spectrometry Using Chromium (III) Nitrate

315
ALLISON CUMMINS
Department: Biological Sciences
Faculty Mentor: Stanisla Chtarbanova (Biological Sciences)
Involvement of the Receptor Croquemort in Bacterial Phagocytosis by Glial Cells in the Brain of Drosophila melanogaster

314
BLAIR MORRISON
Department: Biological Sciences
Faculty Mentor: Ryan Earley (Biological Sciences)
Green Invaders: Life Stages of the European Green Crab (Carcinus maenas) in Southern Maine

316
CHRISTOPHER MCCULLERS
Department: Engineering—Chemical and Biological
Faculty Mentor: John Yoder (Biological Sciences)
Expression Level Regulation of Transcription Factor Dsx and Hox Protein Abd-B in Drosophila melanogaster Embryo
317
ALAA ABUSAAD
Department: Geological Sciences
Faculty Mentor: Marcello Minzoni
(geological Sciences)
Constructing Synthetic Seismic Images of Cambrian Microbialite Exposures in Mason, Texas to Aid Exploration of the Jurassic Smackover in the Gulf of Mexico

318
LANEY BRAGER
Department: Geography
Faculty Mentor: Justin Hart (Geography)
Drought-Induced Growth Response of Longleaf Pine in the Alabama Line Hills

319
ALEXANDER SHAVER
Department: Chemistry
Faculty Mentor: Stephen Woski (Chemistry)
Cyanocarbazole Derivatives as Universal Bases

320
RACHEL RIDGWAY
Department: Chemistry
Faculty Mentor: Silas Blackstock (Chemistry)
Redox-Auxiliary Catalysis of bicyclo[3.2.0]heptene ring-openings

321
HOPE BURNHAM
Department: Chemistry
Faculty Mentor: Shane Street (Chemistry)
Matthew Confer (Chemistry)
A Raman Investigation of Ammonia Borane Thermal Decomposition

322
LAUREN COOK
Department: Biological Sciences
Faculty Mentors: Kim Caldwell (Biological Sciences)
Guy Caldwell (Biological Sciences)
Gene-by-Environmental activation of DAF-7/TGF-β signaling in response to exposure to a noxious stimulus in a C. elegans model of Parkinson’s Disease

323
CONNOR MEYERS
Department: Chemistry
Faculty Mentor: Silas Blackstock (Chemistry)
Redox auxiliary mediated Z->E switching of a stable cis azobenzene
SOCIAL SCIENCES
ORAL PRESENTATIONS

Group 1 – Room 257

9:00 a.m.
MARUKA WALKER
Department: History
Faculty Mentor: John Giggie (History)
*Hidden Figures: The Women Behind the Montgomery Bus Boycott (The Case of Jo Ann Robinson)*

9:20 a.m.
JOHN DENTON
Department: Modern Languages and Classics
Faculty Mentor: Bronwen Lichtenstein (Criminology and Criminal Justice)
*Accept or Decline?: Deciding Factors in a Voluntary HIV Testing Program for Probationers and Parolees*

9:40 a.m.
KYLIE HOPKINS
Department: Biological Sciences
Faculty Mentor: Bronwen Lichtenstein (Criminology and Criminal Justice)
*Is Divorce Fair?: The Gendered Dynamics of Property Disposition*

10:00 a.m.
KATY ANN THAXTON
Department: History
Faculty Mentor: Lesley Gordon (History)
*The Conflicting Views on Andrew Jackson*
SOCIAL SCIENCES
POSTER PRESENTATIONS

Group 1-Band Room

201
CLAIRE MANDERFIELD
Department: Psychology
Faculty Mentor: Joan Barth (ISSR)
*Gender Role Norms in High School Girls’ Social Groups and STEM Interest*

202
GRACIE SMITH
Department: Political Science
Faculty Mentor: Allen Linken (Political Science)
*The Modern Major General*

203
CHARLOTTE MCRAE
ALEXANDRA THOMASSON
Departments: New College and Psychology
Faculty Mentor: Beverly Roskos (Psychology)
*Drawings of Hope*

204
JULIA SPONHOLTZ
Department: Anthropology
Faculty Mentor: Chris Lynn (Anthropology)
*Keeping the Home Fires Burning: The Impact of Sociability on Fireside Relaxation*

205
HANNA BENKHRABA
ERIN MCNEIL
Department: Criminology and Criminal Justice
Faculty Mentor: Diana Dolliver (Criminology and Criminal Justice)
*Anonymity and TOR: Weapons Trade on the Darknet*

206
ABIGAIL KAPPELMAN
Department: Political Science
Faculty Mentor: Jacqueline Morgan (Political Science)
*Cuba’s Response to Zika: How a Socialist Island Nation Avoided The Biggest Disease Outbreak of 2015*

207
ROXANNA HARE
COURTNEY DIEBOLD
JACK SCHWARZ
JULIANNA BOSKUS
Department: Psychology
Faculty Mentor: Jessica Mendoza (Psychology)
Beverly Roskos (Psychology)
*Perceiving Nuances and Punctuation from Online Textual Communications*
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<td>TONI REBALDO</td>
<td>Psychology</td>
<td>Beverly Roskos (Psychology)</td>
<td>Wayfinding: Navigation in an Outdoor Environment</td>
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<td>JORDAN BOLLING</td>
<td>Biological Sciences</td>
<td>Ian McDonough (Psychology)</td>
<td>Transcranial Direct Current Stimulation with Language and Memory</td>
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<td>MADYSON POTTER</td>
<td>Psychology and Biological Sciences</td>
<td>Beverly Roskos (Psychology)</td>
<td>Relations Among Video Game Training, Gender, and Spatial Skills</td>
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<td>AISLINN TANSEY</td>
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<td>Lauren Kois (Psychology)</td>
<td>The Impact of a Psychopathy Diagnosis and Affect of a Defendant on Juror Perceptions</td>
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<td>ALEXIS CORZINE</td>
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<td>James Hamilton (Psychology)</td>
<td>Learning about Factitious Disorder Through Published Legal Cases: The Use of Experts and Terminology Issues</td>
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<td>WHITNEY HOVATER</td>
<td>Psychology</td>
<td>Lauren Kois (Psychology)</td>
<td>Effective Measures for Detecting Malingering and Deception in Adolescents</td>
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<td>KIRSTEN WILLIAMS</td>
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<td>Joan Barth (Psychology)</td>
<td>The Effect of Self-Efficacy on the Career Goals of College and Elementary-Age Students</td>
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<td>JENNIFER FOURROUX</td>
<td>Psychology</td>
<td>Christopher Lynn (Anthropology)</td>
<td>Caregivers’ Perspectives on their Human-Nonhuman Primate Relationships</td>
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<td>MILLIE SARTAIN</td>
<td>Communicative Disorders</td>
<td>Angela Barber (Communicative Disorders)</td>
<td>What Parents Want: Examining Parental Preference of Intervention for Children with Autism</td>
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Group 2-Band Room

217
STEPHANIE MACKENZIE
Department: Psychology
Faculty Mentor: James Hamilton (Psychology)
Understanding Death Acceptance

218
HAROLD ACOSTA
Department: Psychology
Faculty Mentor: Christopher Lynn (Anthropology)
The Genetics of Attention: Preliminary Results from a Pilot Study of Absorption, Mental Boundaries, and Catechol-o-Methyltransferase

219
ALAYNA WATSON
Department: Psychology
Faculty Mentor: Ansley Gilpin (Psychology)
The developmental relationship of inhibitory control and emotion regulation in preschoolers: A longitudinal study

220
BROOKE BOYLES
MOLLY BAILEE
SOPHIE NORGAAARD
GRACE SHIRAH
JACKSON GIST
Department: Communicative Disorders
Faculty Mentor: Memorie Gosa (Communicative Disorders)
Reliability and Validity of the IDDSI Flow Test as a Measure of Liquid Consistency

221
RACHEL LEE
Department: Psychology
Faculty Mentor: Jessica Mendoza (Psychology)
Sub-Criterion A PTSD

222
TANNER MULLENIX
ANTHONY FANT
Department: Psychology and Biological Sciences
Faculty Mentors: Beverly Roskos (Psychology)
Qichen Zhao (Psychology)
Group Creativity and the Incubation Effect

223
SALENA LEE
Department: C&BA—Management
Faculty Mentor: Rachel Stephens (Art and Art History)
Uncovering Slavery at The University of Alabama

224
KIRA YANCEY
Department: Anthropology
Faculty Mentor: Christopher Lynn (Anthropology)
Stars, Bars, and Skin Marks: A Preliminary Study of Tattoos in the American Military

225
TAYLOR PUCKETT
Department: Anthropology
Faculty Mentor: Christopher Lynn (Anthropology)
Tattoos and Piercings Among Undergraduate Populations
226
TESSA HAWKINS
Department: Psychology
Faculty Mentor: Alexa Tullett (Psychology)
Cognitive Bias and Scientific Self-Correction in Psychologists

227
ALICIA RAMBO
Department: Communicative Disorders
Faculty Mentors: Angela Barber
Candace Cook (Communicative Disorders)
The Effect of Manualized vs. Traditional Therapy Methods on the Preparation of Successful Speech-Language Pathologists Working with Children who are at Risk for an Autism Spectrum Disorder

228
ROLANDA TURNER
Department: Political Science
Faculty Mentor: Nicholas Kerr (Political Science)
Exploring the Electoral Fraud During Kenya’s 2013 Election

229
WADE TIDWELL
Department: Anthropology
Faculty Mentor: Lisa LeCount (Anthropology)
Artifact Ubiquity as Indices of Ancient Maya Socioeconomic Variability at Actuncan, Belize

230
LAUREN MCGUIRE
Department: Psychology
Faculty Mentor: Ian McDonough (Psychology)
Encoding Activity in Sedentary Versus Physically Active Jobs using fMRI

231
PHILIP PITTS ZOE BERNDT PEYTON BADURA
Department: Geography, Biological Sciences, and C&BA—Information Systems, Statistics, and Management Science
Faculty Mentor: David Bolus (Theatre and Dance)
The Beautification and Revitalization of Marion, Alabama

232
VALERIE MOORE
Department: Communicative Disorders
Faculty Mentor: Angela Barber
(Communicative Disorders)
Examining Vocabulary and Social Communication in Young Children with ASD