



4th Annual
**Student
Research and
Creative Activity
Fair**

All events will take place on the 2nd
floor of the Milo Bail Student Center.



FRIDAY, FEBRUARY 10, 2012

This event was made possible with support from the Office of Research and Creative Activity and the Office of Academic and Student Affairs.

WELCOME

As a student-centered university, the University of Nebraska at Omaha provides diverse opportunities for students to become engaged scholars through research and creative activity. The 4th annual Student Research and Creative Activity Fair will introduce you to our dynamic undergraduate and graduate students. We hope you will enjoy the day-long showcase of their research and creative activity as oral presentations, performances, poster presentations, and exhibits.

Thank you to the faculty advisors for encouraging their students and sharing their time and expertise. They are numerous and represent all six of UNO's colleges, as well as UNL's College of Engineering.

We appreciate the willingness and time of those serving as judges for this event, our community colleagues and friends: Rhonda Ahrens, Physicians Mutual; John Buckley, Omaha Public Power District; John Falconer, University of Nebraska at Kearney; Marian Fey, Omaha Public Schools Board of Education; Julie Griffin, ConAgra Foods; Matt Hammons, University of Nebraska; Brian Henkel, Papio-Missouri River Natural Resources District; Barbara Jessing, Heartland Family Service; Jim Kueffner; Todd Morris, PayPal; Tom Nimps; Danny Pate, CenturyLink; Wendy Patterson, The Salvation Army; John Prouty; John Rogers; Marty Skomal, Nebraska Arts Council; Bill Snyder, Peru State College; and Lisa St. Clair, University of Nebraska Medical Center.

Enjoy your time on campus today. Thank you for your support of student research and creative activity at UNO.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Snyder", followed by a long horizontal line extending to the right.

Scott D. Snyder, Ph.D.

Associate Vice Chancellor for Research and Creative Activity

SCHEDULE

TIME	ACTIVITY	LOCATION
8:00 AM - 9:00 AM	Check in for Fair Participants; Continental Breakfast	Ballroom
9:00 AM - 11:30 AM	Poster Presentations/Exhibits	Ballroom
	Undergraduate Oral Presentations/Performances	Chancellor's Room
	Graduate Oral Presentations/Performances	Nebraska Room, Aksarben Room
11:30 AM - 12:45 PM	Lunch Provided for All Student Participants, Faculty Advisors, and Judges	Ballroom
1:00 PM - 4:30 PM	Poster Presentations/Exhibits	Ballroom
	Undergraduate Oral Presentations/Performances	Chancellor's Room, Aksarben Room
	Graduate Oral Presentations/Performances	Nebraska Room
4:30 PM - 5:00 PM	Reception and Viewing of Posters	Ballroom
4:30 PM - 5:30 PM	Judges' Forum	Chancellor's Room
4:45 PM	Presentation by Adam Smith, UNO Alum	Nebraska Room
5:45 PM	Awards Ceremony and Closing Reception	Nebraska Room, Ballroom



CHANCELLOR'S ROOM

9:00 AM **JACOB ANDERSON**
Undergraduate
Terrestrial Vertebrate Trackways of the Early Jurassic
Nugget Formation at Dinosaur National Monument
Major: Geology
Faculty advisor: George Engelmann
Co-Author(s): Keegan M. Melstrom
and Joanna M. Panosky

9:10 AM **LAURA ESPEJEL**
Undergraduate
Generating Stably Overexpressing Cells to Evaluate
Gene Product Involvement During *Toxoplasma gondii*
Infection and Growth
Major: Biology-Unclassified
Faculty advisor: Paul Davis

9:20 AM **BRENT KELDERMAN**
Undergraduate
Investigation of capstone course curriculum for
secondary mathematics education majors
Major: Teacher Education
Faculty advisor: Michael Matthews

9:30 AM **KIMBERLY MORSS**
Undergraduate
The Lead Around our Homes: Distinguishing
between sources of anomalous lead concentrations in
an urban setting (Omaha, NE) via distribution of lead
and lead isotopes
Major: Environmental Sciences
Faculty advisor: Dana Richter-Egger

9:40 AM **DEIBI SIBRIAN**
Undergraduate
Aspiring to Higher Omaha, NE High School
Graduation Rates
Major: Sociology-Unclassified
Faculty advisor: Thomas Sanchez

BREAK

CHANCELLOR'S ROOM

10:00 AM

ERIKA CRAWFORD

Undergraduate
Purification of Plasmid DNA Containing the
Coxsackievirus Genomic 5' Non Translated Region
Major: Biotechnology
Faculty advisor: William Tappich

10:10 AM

BENJAMIN FLOYD

Undergraduate
Ground and First Excited States of a Cross
Intersection Quantum Dot: Variational Method
Major: Physics
Faculty advisor: Wai-Ning Mei

10:20 AM

LINDSEY KNIGHT

Undergraduate
Is direct ingestion of contaminated sediment an
important route by which fish are exposed to
steroidogenic compounds?
Major: Biotechnology
Faculty advisor: Alan Kolok

10:30 AM

DAVID VANOSDALL

Undergraduate
Design and Develop a GIS database to
consolidate field observations of the Lower
Jurassic Nugget sandstone
Major: Geology
Faculty advisor: George Engelmann

BREAK

10:50 AM

ABBY GARDNER

Undergraduate
The Impact of Internal vs. External Locus of
Control on Occupational Safety
Major: Industrial-Organizational Psyc
Faculty advisor: Lisa Scherer

CHANCELLOR'S ROOM

11:00 AM

JULIA WARNKE

Undergraduate

Customized Assembly of Short Read Sequences:
Using Dataset Characteristics, Graph Theoretic
Properties, and Domain Specific Information to
Improve the Assembly Process

Major: Bioinformatics

Faculty advisor: Hesham Ali

LUNCH

PROVIDED IN BALLROOM

1:00 PM

MICHELLE BECKER

Undergraduate

Role of Chaperones in Type Three Secretion System
in *Pseudomonas aeruginosa*

Major: Biology-Unclassified

Faculty advisor: Donald Rowen

1:10 PM

KEVIN KAWA

Undergraduate

Measuring the Methanol Concentration in Biodiesel
Using Near-Infrared Spectroscopy

Major: Chemistry-Unclassified

Faculty advisor: Alan Gift

1:20 PM

BENJAMIN KNUTSON

Undergraduate

Relation of Shape Equations (ROSE) Analysis

Major: Physics

Faculty advisor: Renat Sabirianov

1:30 PM

MOR SHEINBEIN

Undergraduate

Identifying and Analyzing Lesbian and Female
Stereotypes in Terry Moore's Graphic Novel
Strangers in Paradise

Major: English-Unclassified

Faculty advisor: Frank Bramlett

CHANCELLOR'S ROOM

1:40 PM

HOLLY WILSON

Undergraduate
The Linkage Of Black Feminine Agency Through
Musical Expression
Major: English/Creative Non-Fiction
Faculty advisor: Peggy Jones

BREAK

2:00 PM

SARA BEHRENS

Undergraduate
Absurdity and Romance
Major: Philosophy
Faculty advisor: Patrice Proulx

2:10 PM

SCARLET HEIM

Undergraduate
In Vitro Analysis of Tooth Erosion Caused by Soft
Drinks and Other Beverages Using Thin Sectioning
Techniques to Examine Internal Tooth Anatomy
Major: Biology-Unclassified
Faculty advisor: Karen Murch-Shafer

2:20 PM

ROBERT KOPP

Undergraduate
The United States' Increasing Vulnerability to
Cyberterrorism and the Necessity of Preparing
Immediate Countermeasures
Major: Political Science
Faculty advisor: Jonathan Benjamin-Alvarado

2:30 PM

ANDREW PRINE

Undergraduate
How Frustration Correlates with Perceived
Reward Value
Major: Psych-Unclassified
Faculty advisor: Jessiline Anderson

BREAK

CHANCELLOR'S ROOM

3:00 PM **MOLLY BYSTREK**
Undergraduate
Here comes trouble -- and he hasn't slept in days
Major: Psych-Unclassified
Faculty advisor: Lisa Scherer
Co-Author(s): Lisa Scherer

3:10 PM **JUSTIN BARNES**
Undergraduate
Effects of Caffeine on Aggression: A Review of the
Research and the Future Directions
Major: Psych-Unclassified
Faculty advisor: Lisa Scherer

3:20 PM **CLAY LANE**
Undergraduate
The How to on Making an Effective Apology
Major: Psych-Unclassified
Faculty advisor: Lisa Scherer
Co-Author(s): Lisa Scherer and Eric Faurote

BREAK

3:40 PM **MATTHEW CHRISTENSON**
Undergraduate
Nebraskan's farmland amphibian springs from
river bank to GenBank
Major: Biotechnology
Faculty advisor: Paul Davis
Co-Author(s): Paul H. Davis, Alan S. Kolok,
Andrew J. Trease, Steven V. Ready,
and Lindsey Knight

3:50 PM **JACOB HETTENBAUGH**
Undergraduate
Transformation of Pharmaceutical Drugs in the
Presence of Water: Effect of Polymer Additives
Major: Chemistry-Unclassified
Faculty advisor: Alan Gift

CHANCELLOR'S ROOM

4:00 PM**ANKIT AGRAWAL**

Undergraduate

Pediatric Visceral Solid Organ Transplant: Is it
Possible to Measure Hemoglobin Levels Without
Drawing Labs?

Major: Biotechnology

Faculty advisor: Myrna C. Newland

4:20 PM**DAVID GROTHEN**

Undergraduate

Bradyzoite Reporter for *Toxoplasma gondii*

Major: Biology-Unclassified

Faculty advisor: Paul Davis

4:30 PM**JUDGES' FORUM**

AKSARBEN ROOM

9:00 AM

MATTHEW BATTEY

Graduate: Masters
Quasi Group Block Ciphers
Major: Computer Science-Unclassified
Faculty advisor: Abhishek Parakh

9:10 AM

VINOD GODAVARTY

Graduate: Masters
Using Quasigroups for Generating
Pseudorandom Numbers
Major: Management Info Systems
Faculty advisor: Abhishek Parakh

9:20 AM

PAMM KILLEEN

Graduate: Masters
I Want to Rock your World: Becoming an Authentic
College Instructor and Mentor by Embracing Student
Diversity in a Global World
Major: Communication-Unclassified
Faculty advisor: Chin Chung Chao

9:30 AM

PRIYANWADA KULKARNI

Graduate: Masters
Gene Knockouts Designed to Disrupt the Bradyzoite
Stage Formation in *Toxoplasma gondii*
Major: Biology-Unclassified
Faculty advisor: Paul Davis

9:40 AM

MELISSA MOUNT

Graduate: Masters
Effects of urbanization on the species richness and
abundance of native grassland birds
Major: Biology-Unclassified
Faculty advisor: LaReesa Wolfenbarger

BREAK

AKSARBEN ROOM

10:00 AM

NARESH KUMAR CHINNI

Graduate: Masters

Analysis of Very Large Networks Using Graphics
Processing Units

Major: Computer Science

Faculty advisor: Sanjukta Bhowmick

10:10 AM

JENNIFER GOODELL

Graduate: Masters

Guarding the Public Interest in the 21st Century:
A Decade of Federal Communications
Commission Forfeitures

Major: Communication-Unclassified

Faculty advisor: Randall Rose

10:20 AM

JOHN MCWILLIAMS

Graduate: Masters

"She'll Turn into a Maneater": Language and Power in
Axe Shower Gel Packaging

Major: English-Unclassified

Faculty advisor: Frank Bramlett

10:30 AM

MICHAEL MEDUNA

Graduate: Masters

Teacher Salary and Student Achievement: A Study of
Nebraska's Metropolitan Areas

Major: Econ-Unclassified

Faculty advisor: Catherine Co

BREAK

10:50 AM

SAFIATOU DIALLO

Graduate: Masters

Food Security in Developing Countries

Major: Economics

Faculty advisor: Catherine Co

AKSARBEN ROOM

11:00 AM

DANIEL HARRIS

Graduate: Masters

The Relationship between Emotional Intelligence and Malevolent Creativity in Response to Different Tasks

Major: Industrial-Organizational Psyc

Faculty advisor: Roni Reiter-Palmon

Co-Author(s): Roni Reiter-Palmon

11:10 AM

ALICIA PHILLIPS BUTTNER

Graduate: Masters

The effect of stress on social cognitive performance in shelter dogs

Major: Psych-Unclassified

Faculty advisor: Rosemary Strasser

Co-Author(s): Rosemary Strasser

LUNCH

PROVIDED IN BALLROOM

1:00 PM

ERIC CLARK

Undergraduate

Monte Carlo modeling of nanomaterials for magnetic refrigeration

Major: Physics-Unclassified

Faculty advisor: Renat Sabirianov

1:10 PM

LAURA HUGHES

Undergraduate

The Success of Native American College Students at the University of Nebraska at Omaha

Major: Anthropology

Faculty advisor: Timi Barone

1:20 PM

JOSHUA LARSON

Undergraduate

A Novel Compound is Efficient in Killing Toxoplasma gondii in vitro

Major: Biotechnology

Faculty advisor: Paul Davis

AKSARBEN ROOM

1:30 PM

SARA SHINN

Undergraduate

Optimal Values for Disrupting x86-64

Reverse Assemblers

Major: Computer Engineering

Faculty advisor: William Mahoney

1:40 PM

PHILLIP SMITH

Undergraduate

it may not always be so: A Presentation of New Music

Major: Music

Faculty advisor: Kenton Bales

BREAK

2:00 PM

ALYSHA COLLINS

Undergraduate

Displaced Aggression: Victim Characteristics of

Dysfunctional Work-Family Spillover

Major: Psych-Unclassified

Faculty advisor: Lisa Scherer

Co-Author(s): Lisa Scherer

2:10 PM

ANDREW JEZEWSKI

Undergraduate

Discovering the Mechanism of Action for the Novel

Drug Compound, KG2, Against the Parasite

Toxoplasma gondii

Major: Biotechnology

Faculty advisor: Paul Davis

2:20 PM

AMANDA LUDES

Undergraduate

Design of insulating nanocrystalline materials with
enhanced electrostatic affinity to proteins

Major: Physics

Faculty advisor: Renat Sabirianov

AKSARBEN ROOM

2:30 PM

STEPHANIE WEDDINGTON

Undergraduate
Self-Control Training and Other Antecedents of
Impulsive Aggression
Major: Psych-Unclassified
Faculty advisor: Lisa Scherer
Co-Author(s): Lisa L. Scherer

BREAK

3:00 PM

SUSHRUT KAMERKAR

Undergraduate
Investigation of the putative DNA motif involved in
bradyzoite transition initiation in *Toxoplasma gondii*
Major: Biology-Unclassified
Faculty advisor: Paul Davis

3:10 PM

NATALIE MCCLELLAN

Undergraduate
Cultural Adaptation through Foodways: South
Sudanese in the Omaha Area
Major: Sociology-Unclassified
Faculty advisor: Timi Barone

3:20 PM

JEROME PRUSA

Undergraduate
Structural Comparison of the Coxsackie Virus B3
Virulence Determining 5' Non-Translated Region
Major: Biotechnology
Faculty advisor: William Tapprich
Co-Author(s): William E. Tapprich

3:40 PM

CHIA MOUA

Undergraduate
Elastic Properties of Rare Earth
Hexaboride Nanostructures
Major: Physics
Faculty advisor: Wai-Ning Mei

5:45 PM

AWARDS CEREMONY AND CLOSING RECEPTION

NEBRASKA ROOM

-
- 9:00 AM** **NICHOLAS ARREOLA**
Graduate: Doctoral
The Effect of Emergent Leader Extraversion and
Problem Construction on Creative Problem Solving
Major: Industrial-Organizational Psyc
Faculty advisor: Roni Reiter-Palmon
-
- 9:10 AM** **CAN CHEN**
Graduate: Doctoral
Educating Citizens about Budgeting: A Qualitative
Content Analysis of Web-based Citizens' Guides to the
Budget in local Governments in the U.S.
Major: Public Management
Faculty advisor: John Bartle
-
- 9:20 AM** **ERIC FAUROTE**
Graduate: Doctoral
I would be healthy...but who has time?
Major: Industrial-Organizational Psyc
Faculty advisor: Lisa Scherer
Co-Author(s): Lisa Scherer
-
- 9:30 AM** **MARIAM RAHMANI**
Graduate: Doctoral
SRN-based Performance Analysis of a
Banking Web Service
Major: Information Technology
Faculty advisor: Azad Azadmanesh
Co-Author(s): Azad Azadmanesh and Harvey Siy
-
- 9:40 AM** **ABHISHEK TRIPATHI**
Graduate: Doctoral
Factors affecting the adoption of technology to lead to
participation in Crowdsourcing
Major: Information Technology
Faculty advisor: Lotfollah Najjar
-

BREAK

NEBRASKA ROOM

10:00 AM

OLIVER BONHAM-CARTER

Graduate: Doctoral

An analysis of palindromic content in the intergenic and non-intergenic regions of selected bacteria

Major: Bioinformatics

Faculty advisor: Dhundy Bastola

Co-Author(s): Dhundy Bastola, Lotfollah Najjar, and Ishwor Thapa

10:10 AM

KATHRYN DEMPSEY

Graduate: Doctoral

Discovering Mechanisms of Aging and Disease using Heterogeneous Integrated Network Models

Major: Bioinformatics

Faculty advisor: Hesham Ali

Co-Author(s): Hesham Ali

10:30 AM

ERICA PLACHTER

Graduate: Masters

Effects of Testosterone on Social Learning in Zebra Finch, *Taeniopygia guttata*

Major: Psych-Unclassified

Faculty advisor: Rosemary Strasser

BREAK

10:50 AM

ANDREA DRYDEN

Graduate: Masters

The Effect of Teacher Wait-time on Student Responses in the Second Language Classroom

Major: Teaching Languages

Faculty advisor: Frank Bramlett

NEBRASKA ROOM

11:00 AM

KATHERINE HECKENBACH

Graduate: Masters

The Effects of Breathing Control on Cardiopulmonary and Subjective Measures on Collegiate Intermediate to Advanced Female Modern Dancers

Major: Athletic Training

Faculty advisor: Melanie McGrath

Co-Author(s): Kris Berg, Neal Grandgenett, and Josie Metal-Corbin

11:10 AM

RHONDA (RJ) REDDEN

Graduate: Masters

Agile Training: An Innovative Educational Process for Information Technology Educators

Major: Management Info Systems

Faculty advisor: Peter Wolcott

LUNCH

PROVIDED IN BALLROOM

1:00 PM

ZACH JACOBS

Graduate: Masters

Gulliver and the Giant King: Swift's 'History of England' and Anglo-Saxon Nostalgia in Brobdingnag

Major: English

Faculty advisor: Kristin Girten

1:10 PM

SRIRAM SRINIVASAN

Graduate: Masters

An Efficient Algorithm To Trace Change in Communities in Evolving Networks

Major: Computer Science-Unclassified

Faculty advisor: Sanjukta Bhowmick

Co-Author(s): Sanjukta Bhowmick

1:20 PM

SCOTT WIKE

Graduate: Masters

Invoking the Past to Justify the Future: The Tea Party Movement and the American Jeremiad

Major: Communication-Unclassified

Faculty advisor: Barbara Pickering



NEBRASKA ROOM

4:45 PM

PRESENTATION BY ADAM SMITH, UNO ALUM

Adam Smith is currently a doctoral student in the Department of Psychology and Program in Neuroscience at Florida State University (FSU), with an anticipated graduation date of May 2013. Adam holds a Master of Arts from the University of Nebraska at Omaha (UNO) in Psychobiology, which he received in 2009. He also graduated Magna Cum Laude with a Bachelor of Science from UNO with a major in Psychology and a minor in Chemistry in 2007.

His interest in research began during his undergraduate studies at UNO when he met Dr. Jeffrey French, Professor of Psychology and Biology. His work involved evaluating different features of adult social bonds in humans and a monogamous primate, the marmoset monkey, including behavioral and physiological mechanisms associated with the maintenance of these relationships. Dr. French provided opportunities for his undergraduate students to work directly with the marmosets, an experience that Adam had not anticipated when he began at UNO as a Goodrich Scholar. Adam received training in behavioral observations and immunoassays while assisting graduate students in the conduct of their experiments.

Eventually, Dr. French gave him the opportunity to conduct his own research projects and offered him a part-time laboratory technician position. He decided to continue working with Dr. French during his master's training, focusing on the neuroendocrine effects of oxytocin, a prosocial hormone, and stress on adult social bonds in marmoset monkeys. Currently, as a doctoral student at FSU, Adam studies the beneficial effects of support from a social partner following stressful events in a monogamous rodent species, the prairie vole. His research goal is to better understand the neuroendocrine mechanisms that regulate the social buffering of the stress response.

NEBRASKA ROOM

4:45 PM

(ADAM SMITH, CONTINUED)

Adam has received extensive external funding in his academic career, including the prestigious NIH Predoctoral Ruth L. Kirschstein National Research Service Award (Principal Investigator, 2011-2013), as well as the National Science Foundation's Graduate Research Fellowship (2008-2011). Adam's other funding includes grants from the American Psychological Foundation/Council of Graduate Departments of Psychology and American Society of Primatologists, as well as institutional grants from the Congress of Graduate Students at FSU and the University Committee on Research and Creative Activity (UCRCA) at UNO. In addition, he has presented at ten scientific conferences and three university research fairs, including the inaugural Student Research and Creative Activity Fair at UNO in 2009, and published nine research articles, with five additional either in review or in preparation.

In addition to his research, Adam, a husband and father of three, engages in activities to promote science education and neuroscience research throughout his local community and beyond. Adam is a member and the coordinator of the FSU Brain Awareness Program, which promotes education of the brain and neuroscience through outreach events and classroom presentations for K-12 students in Tallahassee, FL (educating 1,500 K-12 students in the 2010-2011 academic year). He is also serving as a member of the American Society of Primatologists Education Committee, which promotes education of the sciences and knowledge of primatology through hosting outreach events for K-12 students throughout the United States.

BALLROOM

9–11:30 AM KAYLETA ADAMS

Graduate: Masters
Helping Early Literacy Practice Strategies (HELPS):
Primary vs. Intermediate Grade Level Implementation
Major: School Psychology-Unclassified
Faculty advisor: Lisa Kelly-Vance

9–11:30 AM ANKIT AGRAWAL

Undergraduate
Nasotracheal intubation in a Difficult Airway using the
Storz C-MAC laryngoscope, Boedeker Bougie
Endotracheal Introducer, and Boedeker curved forceps
Major: Biotechnology
Faculty advisor: Myrna C. Newland

9–11:30 AM ALYCIA AHRENS

Graduate: Masters
I Don't Want to Play: A Longitudinal Examination of
Asocial Withdrawal
Major: Psych-Unclassified
Faculty advisor: Jonathan Santo

9–11:30 AM JASJIT BANWAIT

Graduate: Doctoral
Effect of co-localization of miRNAs and target genes
on miRNA-mediated post-transcriptional regulation
Major: Information Technology
Faculty advisor: Dhundy Bastola
Co-Author(s): Dhundy Bastola

9–11:30 AM BENJAMIN BOWDER

Undergraduate
Perceived exertion (RPE) and oxygen consumption
(VO₂) during inclined treadmill walking in healthy
young adults
Major: Bioinformatics
Faculty advisor: Sara Myers
Co-Author(s): Ka-Chun Siu

BALLROOM

9–11:30 AM

JULIE CONNER

Graduate: Masters
A Fifth Grade Reading Fluency Intervention
Major: Psych-Unclassified
Faculty advisor: Lisa Kelly-Vance
Co-Author(s): Mark Shriver

9–11:30 AM

ERIC CUTLER

Graduate: Doctoral
Differences in Gait Improvements Following Surgery in
Slow and Fast PAD Patients
Major: Exercise Science
Faculty advisor: Nick Stergiou
Co-Author(s): Neil B. Huben, Austin C. Korgan,
Sara A. Myers, Jason M. Johanning, Iraklis I. Pipinos,
and Nick Stergiou

9–11:30 AM

LORA FRECKS

Graduate: Doctoral
Microenterprise Collaboration Communities
Major: Public Admin-Unclassified
Faculty advisor: Jay White
Co-Author(s): RJ Redden and Andrew Lescelius

9–11:30 AM

EMILIANO GRASSI

Undergraduate
Predictors of Emergent Leadership and Leader Effects
on the Team Performance
Major: Psych-Unclassified
Faculty advisor: Roni Reiter-Palmon
Co-Author(s): Victoria Kennel and Roni Reiter-Palmon

9–11:30 AM

RYAN HASENKAMP

Undergraduate
Mechanical Efficiency During Gait is Altered by
Multiple Sclerosis
Major: Exercise Science
Faculty advisor: Sara Myers
Co-Author(s): Jenna Yentes and Shane Wurdeman

BALLROOM

9–11:30 AM

JOSHUA HAWORTH

Graduate: Doctoral

Evaluating concurrent development of cognitive and motor behavior in typical and delayed infants

Major: Exercise Science

Faculty advisor: Nick Stergiou

Co-Author(s): Elena Kokkoni, Regina Harbourne, and Nick Stergiou

9–11:30 AM

MATTHEW HEESCH

Graduate: Masters

Small Differences in Exercise Intensity May Impact Muscle Glycogen Without Concurrent Changes in Metabolic Gene Expression

Major: Exercise Science

Faculty advisor: Dustin Slivka

Co-Author(s): Dustin Slivka, Charles Dumke, John Cuddy, Walter Hailes, and Brent Ruby

9–11:30 AM

BRAD HULLSIEK

Graduate: Doctoral

Career Velocity and Challenging Work Experiences

Major: Psych-Unclassified

Faculty advisor: Roni Reiter-Palmon

Co-Author(s): Jeff Weekley and Roni Reiter-Palmon

9–11:30 AM

ERIKA JACOBSON

Graduate: Masters

A Policy of Vengeance: California's Three Strikes Law

Major: Social Work

Faculty advisor: Kerry Beldin

9–11:30 AM

VICTORIA KENNEL

Graduate: Masters

Teams and Creativity: Accuracy in Idea Evaluation and Selection

Major: Industrial-Organizational Psyc

Faculty advisor: Roni Reiter-Palmon

Co-Author(s): Roni Reiter-Palmon

BALLROOM

9–11:30 AM SARAH LEHN

Undergraduate
Effects of *Toxoplasma gondii* growth in host cells
over-expressing CYP17
Major: Biotechnology
Faculty advisor: Paul Davis

9–11:30 AM DENISE MCGRATH

Post Doctoral Fellow
The Effects of Auditory Stimulation on Gait Variability
in Healthy Elderly
Major: Exercise Science
Faculty advisor: Nick Stergiou
Co-Author(s): Nick Stergiou

9–11:30 AM KRISTIN MICEK

Graduate: Masters
Chicken or the Egg, Academics or Behavior? What
Comes First?
Major: School Psychology-Unclassified
Faculty advisor: Lisa Kelly-Vance
Co-Author(s): Allison Nields and Lisa Kelly-Vance

9–11:30 AM ANNESHA MITRA

Undergraduate
Using Self-Continuity and Self-Discontinuity as
predictors of General Self-Worth among Early
Adolescents: A comparison of samples from Montreal,
Canada and Curitiba Brazil
Major: Neuroscience
Faculty advisor: Jonathan Santo
Co-Author(s): Jonathan Bruce Santo,
Josafa M. Cunha, and William M. Bukowski

9–11:30 AM ASHLEY MOELLER KLUG

Graduate: Masters
Improving Preschoolers' Social Play Skills Through a
Peer-Mediated Intervention
Major: School Psychology-Unclassified
Faculty advisor: Lisa Kelly-Vance
Co-Author(s): Lisa Kelly-Vance, Brigitte Ryalls,
and M. Susan McWilliams

BALLROOM

9–11:30 AM JAY NEWSTROM

Undergraduate
Improving the Accuracy of Measuring Microscopic
Organisms Using Information Technology
Major: Innovatn&Entrepreneurship
Faculty advisor: Ann Fruhling
Co-Author(s): Greg Hoff and Ann Fruhling

9–11:30 AM CUONG NGUYEN

Graduate: Doctoral
An Ontology for ActionCenter-oriented
Collaboration Platforms
Major: Information Technology
Faculty advisor: GJ de Vreede
Co-Author(s): Azamat Mametjanov,
Douglas Kjeldgaard, and Robert Briggs

9–11:30 AM ALLISON NIELDS

Graduate: Masters
Behavior Management: Helping Teachers Beyond
Pre-Service Training
Major: School Psychology-Unclassified
Faculty advisor: Brian McKevitt
Co-Author(s): Kristin Micek

9–11:30 AM KATIE NOVICKI

Graduate: Masters
Systematic Observation of Physical Activity in
Afterschool Programs: Preliminary Findings from
Movin' Afterschool Intervention
Major: Hlth Phys Ed & Rec-Unclassified
Faculty advisor: Jennifer Huberty
Co-Author(s): Michael Beets, Jennifer Huberty,
and Aaron Beighle

9–11:30 AM TAYLOR PIZINGER

Undergraduate
Idea Generation: Does generating multiple ideas lead
to increased creativity?
Major: Psych-Unclassified
Faculty advisor: Roni Reiter-Palmon
Co-Author(s): Roni Reiter-Palmon and Nick Arreola

BALLROOM

9–11:30 AM CHRISTINE QUICK

Undergraduate
Affect and Experience of Work-Life Unfairness on
Decision Making
Major: Industrial-Organizational Psyc
Faculty advisor: Lisa Scherer
Co-Author(s): Stephanie Weddington and Lisa Scherer

9–11:30 AM TROY RAND

Graduate: Masters
Frontal Joint Dynamics When Initiating Stair Ascent
with and without Gait Speed
Major: Exercise Science
Faculty advisor: Sara Myers

9–11:30 AM ALI REZAEIAN

Graduate: Masters
Analysis and Experimentation of Mission Space
Coverage in Wireless Sensor Networks
Major: Computer Science-Unclassified
Faculty advisor: Azad Azadmanesh
Co-Author(s): Azad Azadmanesh

9–11:30 AM CHRISTOPHER SAUTTER

Undergraduate
Fracture Orientation Analysis: The Central US
Major: Geology
Faculty advisor: Harmon Maher

9–11:30 AM ELIZABETH SILKNITTER

Undergraduate
Depression Rates Among Native American Youth at
Walthill Public School
Major: Psych-Unclassified
Faculty advisor: Jessiline Anderson
Co-Author(s): Jessica Ishmael, Janelle Butler,
and Juan Quevedo

BALLROOM

9–11:30 AM **DANIELLE SUPONCHICK**
Undergraduate
The Effects of Treadmill and Overground Running on
Attentional Focus and Performance
Major: Physical Ed-Exercise Science
Faculty advisor: John Noble

LUNCH PROVIDED IN BALLROOM

1–4:30 PM **BRYAN ARNOLD**
Undergraduate
Non-linear measures are sensitive to the severity of
Cerebral Palsy for sitting postural control
Major: Neuroscience
Faculty advisor: Srikant Vallabhajosula

1–4:30 PM **ISMAEL BARAJAS**
Undergraduate
Plasticity in the Developing Taste System (GOLGI)
Major: Neuroscience
Faculty advisor: Suzanne Sollars

1–4:30 PM **ADENA BARELA**
Undergraduate
Changes in Fish Community of Agate Fossil Beds from
Introduced Species
Major: Biology-Unclassified
Faculty advisor: Richard Stasiak
Co-Author(s): Richard Stasiak, George Cunningham,
Scott Flash, and Andrea Wagner

1–4:30 PM **BEN BATES**
Undergraduate
Shrinkage Cracks and Subsequent Geometries
Major: Geology
Faculty advisor: Harmon Maher

BALLROOM

1–4:30 PM

SAMANTHA BAYER

Graduate: Masters

The Impact of Reading Interventions with
Sudanese Children

Major: School Psychology-Unclassified

Faculty advisor: Lisa Kelly-Vance

Co-Author(s): Madeleine Moody and Kristin Moody

1–4:30 PM

PETER BOKELMAN

Undergraduate

Application of X-Band Radar at General
Aviation Airports

Major: Aviation

Faculty advisor: David Byers

Co-Author(s): Matthew Pastor and Nghia Cao

1–4:30 PM

JOSEPH BORO

Undergraduate

Mineralogical Analysis of pottery shards from the
Tall al-Umayri Region, Jordan

Major: Geology

Faculty advisor: Robert Shuster

1–4:30 PM

MADELINE BROCKETTE

Undergraduate

Suicide and Depression in Native American Culture

Major: Psych-Unclassified

Faculty advisor: Jessiline Anderson

Co-Author(s): Lindsey Wittry, Evie Abts,
and Annesha Mitra

1–4:30 PM

EMILY CALLISON

Graduate: Masters

Grunting in Tennis: The Effects on Energy Expenditure
and Ball Velocity

Major: Exercise Science

Faculty advisor: Kris Berg

BALLROOM

1–4:30 PM

JON CAREY

Graduate: Masters

Effectiveness of an Elastic Load-Based Exercise Program in Improving Balance in Healthy Individuals

Major: Exercise Science

Faculty advisor: Sara Myers

Co-Author(s): Sara A. Myers

1–4:30 PM

JUNG CHIEN

Graduate: Doctoral

Sensory interaction under perturbations during locomotion in health individuals

Major: Exercise Science

Faculty advisor: Nick Stergiou

Co-Author(s): Chun-Kai Huang, Mukul Mukherjee, Ka-Chun Siu, and Nick Stergiou

1–4:30 PM

AUSTIN DAVIDSON

Undergraduate

External Work is Increased Using Rocker Bottom Shoes

Major: Biology-Unclassified

Faculty advisor: Nick Stergiou

Co-Author(s): Heather L. Henning, Shane R. Wurdeman, Neil B. Huben, and Nick Stergiou

1–4:30 PM

KATHRYN DEMPSEY

Graduate: Doctoral

Maintenance and discovery of genetic cohorts via chordal graph filtering in large-scale correlation networks

Major: Bioinformatics

Faculty advisor: Hesham Ali

Co-Author(s): Kanimathi Duraisamy, Sanjukta Bhowmick, and Hesham Ali

1–4:30 PM

BRANDON DENNEY

Undergraduate

Alternative Wind Energy

Major: Aviation

Faculty advisor: David Byers

BALLROOM

1–4:30 PM

KARI ECHTENKAMP

Undergraduate

Parental Care in Juvenile Gerbils: The Role of Central Stress Systems and Previous Experience

Major: Biology-Unclassified

Faculty advisor: Jeffrey French

Co-Author(s): Caitlynn Gillaspie, Matthew Kirby, and Andrew Castaneda

1–4:30 PM

LORA FRECKS

Graduate: Doctoral

Comparison of Communication Strategies Utilized by Public, Nonprofit and Corporate Entities

Major: Public Administration

Faculty advisor: Jay White

1–4:30 PM

AMANDA HAARBERG

Graduate: Masters

Association of staff behaviors and afterschool program features to physical activity: Findings from Movin' Afterschool

Major: Hlth Phys Ed & Rec-Unclassified

Faculty advisor: Jennifer Huberty

Co-Author(s): Scott Wissing, Jennifer Huberty, Michael Beets, and Aaron Beighle

1–4:30 PM

THERESA HALLIGAN

Undergraduate

The Relationship of Clastic Dikes in Northwestern Nebraska to those in Badlands National Park

Major: Geology

Faculty advisor: Robert Shuster

Co-Author(s): Ryan Korth, Harmon Maher, and Robert Shuster

1–4:30 PM

AMY HESTER

Undergraduate

Time-titration Experiments to Determine Incubation Time for the Production of Full-length RNA

Major: Biotechnology

Faculty advisor: William Tapprich

BALLROOM

1–4:30 PM

CHUN-KAI HUANG

Graduate: Doctoral
Reduced Visual Input Affects Gait Characteristics during Treadmill Walking
Major: Hlth Phys Ed & Rec-Unclassified
Faculty advisor: Ka-Chun Siu
Co-Author(s): Jung Hung Chien, Srikant Vallabhajosula, and Ka-Chun Siu

1–4:30 PM

NATE HUNT

Graduate: Masters
Evidence of Different Control Processes in the Maintenance of Standing and Sitting Posture
Major: Exercise Science
Faculty advisor: Nick Stergiou
Co-Author(s): Fabien Cignetti and Nick Stergiou

1–4:30 PM

ALEXANDRA KALE

Graduate: Masters
Understanding Early Adolescent General Self-Worth: Sex Differences in the Association of Gender Roles and Body Image
Major: Psych-Unclassified
Faculty advisor: Jonathan Santo
Co-Author(s): Alicia Bower, Heather Giles, Terry Stone, Jonathan Santo, and William Bukowski

1–4:30 PM

WHITNEY KORGAN

Undergraduate
Reduced Vertical Displacement of Body's Center of Mass Coincides with Increased Metabolic Energy Expenditure
Major: Neuroscience
Faculty advisor: Nick Stergiou
Co-Author(s): Shane Wurdeman

BALLROOM

1–4:30 PM

BETTINA LECHNER

Graduate: Masters

Using IT to Enable Large-Scale Elkhorn Watershed
Herbicide Testing

Major: Management Info Systems

Faculty advisor: Ann Fruhling

Co-Author(s): G. Hoff, A. Fruhling, G. Ryskamp,
and A. Kolok

1–4:30 PM

BRITTNEY MEAYS

Undergraduate

Tobacco Use in Methamphetamine
Dependent Patients

Major: Neuroscience

Faculty advisor: Jamie Simpson

Co-Author(s): Jamie L. Simpson, Stephanie Sinclair
Kelley, James R. Meyer, Sangeeta Agrawal,
Debra J. Romberger, and Kathleen M. Grant

1–4:30 PM

MOLLY MIERAS

Graduate: Masters

The Effects of a Reading Distraction on VO₂
While Participating in a Self-Directed Bout of
Submaximal Cycling

Major: Exercise Science

Faculty advisor: Kris Berg

1–4:30 PM

CHRISTINE MORRISON

Undergraduate

Dog therapy as a stress buffer in an induced
stress event

Major: Psych-Unclassified

Faculty advisor: Rosemary Strasser

Co-Author(s): Natasha Fields

BALLROOM

1–4:30 PM

ELIZABETH MULKERRIN

Graduate: Doctoral

The Effect of a Zoo-Based Experiential Academic Science Program on High School Students' Math and Science Achievement and Perceptions of School Climate

Major: Educational Admin

Faculty advisor: John Hill

1–4:30 PM

ANDREA NAUGHTON

Graduate: Masters

How do pregnant women and women up to one year postpartum use the Internet for Health Behavior Information? A Descriptive Study

Major: Public Health

Faculty advisor: Jennifer Huberty

Co-Author(s): Danae Wolcott and Jennifer Huberty

1–4:30 PM

SARAH NIENHUESER

Graduate: Masters

The Influence of Rater Expertise on Creativity Ratings

Major: Psych-Unclassified

Faculty advisor: Roni Reiter-Palmon

Co-Author(s): Roni Reiter-Palmon, James Kaufman, John Baer, and David Cropley

1–4:30 PM

LUKE PFEIFFER

Undergraduate

Survey on Image Fusion Techniques When Applied to Microbiological Pictures

Major: Computer Science-Unclassified

Faculty advisor: Ann Fruhling

Co-Author(s): Greg Hoff, Ann Fruhling, and Jay Newstrom

1–4:30 PM

PRAPUNJA POKHREL

Graduate: Masters

Leveraging IT to deliver telemental health services to rural Nebraskans

Major: Management Info Systems

Faculty advisor: Ann Fruhling

BALLROOM

1–4:30 PM**JESSICA RENZ**

Undergraduate

Adaptations in Joint Kinetics Over Consecutive Steps in Stair Negotiation

Major: Exercise Science

Faculty advisor: Nick Stergiou

1–4:30 PM**NICHOLE RUCKER**

Undergraduate

Purification of Poly(rC)-binding protein 2 for Coxsackievirus B

Major: Biotechnology

Faculty advisor: William Tapprich

1–4:30 PM**BRIAN SCHUELE**

Undergraduate

Evaluation of Biosand Filter Technology in Madagascar

Major: Civil Engineering

Faculty advisor: Shannon Bartelt-Hunt

1–4:30 PM**AMY SCHWEID**

Undergraduate

Split Decision

Major: Theatre-Unclassified

Faculty advisor: Douglas Paterson

Co-Author(s): Colin Ferguson and Aaron Ellis

1–4:30 PM**COLLEEN SNOZA**

Graduate: Masters

Comparison of Peak VO₂ and Achievement of Peak VO₂ Criteria during Three Modes of Exercise in Triathletes

Major: Exercise Science

Faculty advisor: Kris Berg

BALLROOM

1–4:30 PM

BROOKE SULLIVAN

Undergraduate

Structural Transitions Induced By Mutations in the 5'NTR of Coxsackievirus B3 Genomic RNA

Major: Biotechnology

Faculty advisor: William Tapprich

Co-Author(s): William E. Tapprich

1–4:30 PM

ALVIN TARRELL

Graduate: Doctoral

Reducing information overload via spatialization

Major: Management Info Systems

Faculty advisor: Ann Fruhling

1–4:30 PM

BRIAN TIPTON

Undergraduate

Subterranean vs Subaerial Formation of Flared Slopes on Granite Terrain Vedauwoo State Park, WY

Major: Geology

Faculty advisor: John F. Shroder, Jr.

1–4:30 PM

LEVI TODD

Undergraduate

Malleability of the Chorda Tympani Nerve Terminal Field in the Nucleus of the Solitary Tract Following Neonatal Nerve Transection

Major: Neuroscience

Faculty advisor: Suzanne Sollars

1–4:30 PM

ALEXANDRIA TORRES

Graduate: Masters

Effects of a Policy-Level Intervention on Children's Pedometer-Determined Physical Activity

Major: Hlth Phys Ed & Rec-Unclassified

Faculty advisor: Jennifer Huberty

Co-Author(s): Jennifer Huberty, Michael W. Beets, and Aaron Beighle

BALLROOM

1–4:30 PM

SRIKANT VALLABHAJOSULA

Post Doctoral Fellow

Impact of starting position on variability of neuromuscular control during stair negotiation

Major: Physical Ed-Exercise Science

Faculty advisor: Nick Stergiou

Co-Author(s): Jennifer Yentes, Chi Wei Tan,

Ka-Chun Siu, and Nick Stergiou

1–4:30 PM

ABBEY WEDDLE

Graduate: Masters

Translating research to the community: A pilot study to determine if a community-based book club can increase physical activity among women

Major: Hlth Phys Ed & Rec-Unclassified

Faculty advisor: Jennifer Huberty

Co-Author(s): Kate Rolfsmeyer, Diane Ehlers, and Jennifer Huberty

1–4:30 PM

BEN WIGERT

Graduate: Doctoral

You're not as creative as you think you are, but I admire your passion: The Influence of Creative Self-Perception, Self-Efficacy, and Task Realism on Creative Performance

Major: Industrial-Organizational Psyc

Faculty advisor: Roni Reiter-Palmon

Co-Author(s): Diana Dobey, Victoria Kennel, and Roni Reiter-Palmon

1–4:30 PM

SAMUEL WILKINS

Graduate: Masters

The Relationship Between Sport Specialization in Baseball and Glenohumeral Internal and External Rotation Range of Motion and Functional Movement Screen Scores

Major: Physical Ed-Exercise Science

Faculty advisor: Melanie McGrath

Co-Author(s): Melanie McGrath, Kris Berg, Jeffrey French, and Kody Moffatt

BALLROOM

1–4:30 PM

SCOTT WISSING

Graduate: Masters

Association of staff behaviors and afterschool program features to physical activity: Findings from Movin' Afterschool

Major: Hlth Phys Ed & Rec-Unclassified

Faculty advisor: Jennifer Huberty

1–4:30 PM

SHANE WURDEMAN

Graduate: Doctoral

Direction of Gait Affects Attractor Divergence

Major: Exercise Science

Faculty advisor: Nick Stergiou

Co-Author(s): Sara Myers, Neil Huben, and Nick Stergiou

1–4:30 PM

JIE XIONG

Graduate: Doctoral

Cross Country and State Level Analysis of e-Commerce Adoption Between Small Businesses in China and the United States

Major: Information Technology

Faculty advisor: Sajda Qureshi

1–4:30 PM

JENNIFER YENTES

Graduate: Doctoral

Gait in Patients with COPD is Mainly Affected in Proximal Musculature

Major: Exercise Science

Faculty advisor: Nick Stergiou

1–4:30 PM

XIAODAN YU

Graduate: Doctoral

Adaptive Use of IT Capabilities in Virtual Teams: Lessons from Google Site, Blackboard, and Email

Major: Information Technology

Faculty advisor: Deepak Khazanchi

BALLROOM

1–4:30 PM

MENGYI ZHA

Undergraduate

Comparative Analysis of Phosphorylation in the
Protein Data Bank: What have we known?

Major: Mathematics

Faculty advisor: Haizhen Zhong

Co-Author(s): Julia Warnke and Haizhen Zhong

4:30 PM

RECEPTION AND VIEWING OF POSTERS

5:45 PM

AWARDS CEREMONY AND CLOSING RECEPTION

— Thank You —

2012 FAIR STEERING COMMITTEE

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Frank Bramlett, English
Paul Davis, Biology
Griff Elder, Mathematics
Lisa Scherer, Psychology
Rosemary Strasser, Psychology

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Christine Beard, Music

COLLEGE OF EDUCATION

Neal Topp, Teacher Education

COLLEGE OF INFORMATION SCIENCE AND TECHNOLOGY

Sanjukta Bhowmick, Computer Science

COLLEGE OF PUBLIC AFFAIRS AND COMMUNITY SERVICE

Jeanette Harder, Social Work

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Ryan Tefft, Geology (undergraduate)
Jenna Yentes, HPER (graduate)

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Wendi Jensen, Coordinator
Catie Miller, Graduate Assistant

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Scott Glasser, Theater
Jeanette Harder, Social Work

Sara Myers, HPER
Dana Richter-Egger,
Chemistry and MSLC
Karen Rolf, Social Work
Mark Schoenbeck, Biology