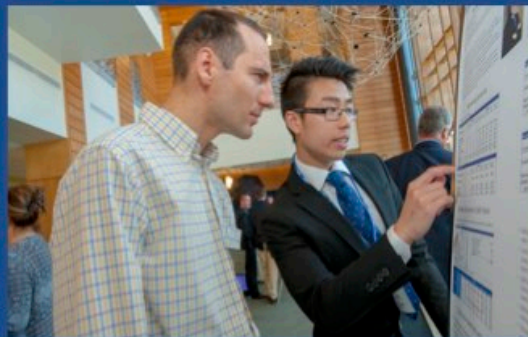




University of  
New Hampshire

## Undergraduate Research Conference | April 10–25, 2015

Showcase for undergraduate research, engagement, scholarship, and creative presentations



## A welcome to participants and attendees

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MARK W. HUDDLESTON



LISA MACFARLANE

**W**ELCOME to the 16TH annual celebration of research and discovery at the University of New Hampshire. The Undergraduate Research Conference highlights the outstanding research, scholarship, and creative activities of our students and their faculty mentors, and it is a privilege to invite you to see their work firsthand.

Since it was launched as a University-wide effort in 2000, the URC has become one of UNH's most exciting traditions, and a showcase for the remarkable ingenuity, talent, and accomplishments that our students develop at UNH. The URC also honors the collaboration and mutual respect that our students and faculty enjoy, and reflects how UNH-inspired research partnerships are improving the quality of life across the Granite State and around the world.

Our conference is one of the largest and most diverse in the nation, and this year marks another record in participation. More than 1,350 students will present their findings at both the Durham and Manchester campuses, representing academic achievements in every college and school and the support of more than 325 faculty mentors.

At UNH, discovery-based education offers every student the opportunity to build the knowledge, skills and confidence he or she needs to turn ideas into action and to achieve lifelong success.

Whether your visit includes a poster session, a formal presentation, an art exhibit, or a creative demonstration, you will be impressed with the participants' knowledge and understanding. Thank you for supporting our students and New Hampshire's flagship public research university.

Best regards,

A handwritten signature in black ink, appearing to read "Mark W. Huddleston".

MARK W. HUDDLESTON, PRESIDENT

A handwritten signature in black ink, appearing to read "Lisa MacFarlane".

LISA MACFARLANE, PROVOST

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## **Inquiry, Discovery, and Engagement:**

### *The UNH Undergraduate Research Conference*



JULIE E. WILLIAMS



LYNNE D. COOPER

**W**ELCOME to our springtime celebration of academic success and achievement at the University of New Hampshire. We take special pride in the efforts of our students and in the dedication of the faculty who mentor and guide them. A hallmark of a UNH education is the opportunity to engage in hands-on research with faculty scholars.

This year, more than 1,350 UNH students mentored by more than 325 UNH faculty members will present their research and scholarship. Presentations will represent many disciplines as well as multidisciplinary learning communities where empirical research, engaged scholarship, and creative scholarship result.

Our undergraduate students also have this unique opportunity to gain essential skills to help them pursue graduate study, learn how to collaborate across disciplines, pursue meaningful careers, and make a difference in the world. Faculty members enjoy mentoring students, and report that working with students strengthens their teaching and research.

One of our goals at UNH is to provide a unique opportunity for undergraduate students to inquire, learn, discover, and engage. For many, the URC is their first opportunity to showcase their work to a much broader audience. They share the results of their scholarship with fellow students, faculty, staff, family members, federal and state agency personnel, business and industry representatives, and members of our local community. This faculty-student partnership and the varied audiences to whom they present are vital to enriching and bringing new learning to life, which often leads to new areas of inquiry.

Please join us in thanking each student presenter and every faculty mentor who is making this great event possible. We encourage you to read the posters, listen to the presentations, and ask questions of our students. We are confident you will be impressed with what you learn and we look forward to your active engagement with the University of New Hampshire!

A handwritten signature in cursive script that reads "Julie E. Williams".

JULIE E. WILLIAMS, SENIOR VICE PROVOST, ENGAGEMENT AND ACADEMIC OUTREACH

A handwritten signature in cursive script that reads "Lynne D. Cooper".

LYNNE D. COOPER, CHAIR, URC PLANNING COMMITTEE

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*All events are free and open to the public.*

*Accessibility accommodation requests may be directed to Lynne Cooper at (603) 862-1997.*



# URC 2015 Calendar

All events are free and open to the public.  
(Building numbers are bold and in parenthesis.)

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## FRIDAY, APRIL 10

6–8 p.m.

2015 Senior B.A. & B.F.A. Exhibition and  
M.F.A. Thesis Exhibition Preview Reception  
Museum of Art,  
Paul Creative Arts Center (6)  
(Exhibition runs April 10–May 15, 2015)

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## TUESDAY & WEDNESDAY, APRIL 14–15

Tuesday, 4–8 p.m.

Graduate Research Conference (GRC)  
Poster Presentations  
Whittemore Center Arena (8)

Wednesday, 10 a.m.–4 p.m.

Graduate Research Conference (GRC)  
Oral Presentations  
Holloway Commons (2)

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## TUESDAY, APRIL 21

10 a.m.–2 p.m.

UNH Manchester Undergraduate  
Research Conference Oral  
Presentations

University Center, 400 Commercial Street,  
Manchester, NH

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## WEDNESDAY, APRIL 22

8 a.m.–5 p.m.

UNH Manchester Undergraduate  
Research Conference Technology Day

2–5 p.m.

Computing Technology Project  
Poster Presentations  
Pandora Mill, 2nd Floor,  
88 Commercial Street, Manchester

8 a.m.–5 p.m.

Engineering Technology Senior  
Project Presentations  
Pandora Mill, 2nd Floor,  
88 Commercial Street, Manchester

11–2 p.m.

Thompson School of Applied Sciences  
Student Showcase  
Stacey's, Cole Hall (10)

Noon–2 p.m.

Paul College of Business and  
Economics University-wide Paul J.  
Holloway Prize Innovation-to-Market  
Competition Charles & Miriam Nelson  
Poster Round  
Peter T. Paul College Building (11)

Noon–2 p.m.

The Naked Arts—Creativity Exposed!  
(Act I)

Museum of Art, Paul Creative Arts Center (6)

1:30–4 p.m.

Interdisciplinary Science and  
Engineering (ISE) Symposium  
Whittemore Center Arena (8)

3:30–6 p.m.

UNH Manchester Undergraduate  
Research Conference Poster  
Presentations

University Center, 400 Commercial Street,  
Manchester

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## THURSDAY, APRIL 22

10 a.m.–1 p.m.

UNH Manchester Undergraduate  
Research Conference Cinema Arts Day  
University Center, 400 Commercial Street,  
Manchester

Noon–2 p.m.

History Department  
Undergraduate Presentations  
Memorial Union Building,  
Rooms 334, 336, and 338 (3)

12:40–2 p.m.

The Naked Arts—Creativity Exposed!  
(Act II)

Paul Creative Arts Center, M-223 (6)

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## FRIDAY, APRIL 24

9–9:30 a.m.

Parents Association Undergraduate  
Research Symposium Welcome  
Breakfast

Memorial Union Building,  
Granite State Room (3)

9:30 a.m.–1:25 p.m.

Parents Association Undergraduate  
Research Symposium  
Memorial Union Building, Granite State  
Room, various rooms (3)

10 a.m.–5 p.m.

Paul College of Business and Economics  
Undergraduate Research Conference  
Peter T. Paul College Building (11)

12:15–1 p.m.

The Naked Arts—Creativity Exposed!  
(Act III)

Memorial Union Building,  
Strafford Room (3)

1–4:30 p.m.

Paul College of Business and  
Economics University-wide  
Paul J. Holloway Prize Innovation-  
to-Market Competition Bud Albin  
Challenge Round  
Peter T. Paul College Building (11)

1:30–4 p.m.

College of Health and Human Services  
Grimes Award Competition  
Pettee Hall, G-10 (9)

1:30–5 p.m.

Psychology Department  
George M. Haslerud URC  
McConnell Hall, Room 340 (13)

2–6 p.m.

Honors English Undergraduate  
Research Conference  
Hamilton Smith Hall,  
English Department (4)

4–8:30 p.m.

Philosophy Department  
Undergraduate Research Conference  
Murkland Hall, G-17 (5)

8 p.m.

Student Composers' Concert  
Paul Creative Arts Center  
Bratton Recital Hall (6)

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## SATURDAY, APRIL 25

7:45 a.m.–2 p.m.

24th Annual College of Life Sciences  
and Agriculture (COLSA) Undergraduate  
Research Conference  
Memorial Union Building, Granite State  
Room, Theatre II (3)

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## FRIDAY, MAY 3

3–4 p.m.

Chemistry Department Poster  
Exhibition  
Parsons Hall, Southwest Lobby (7)

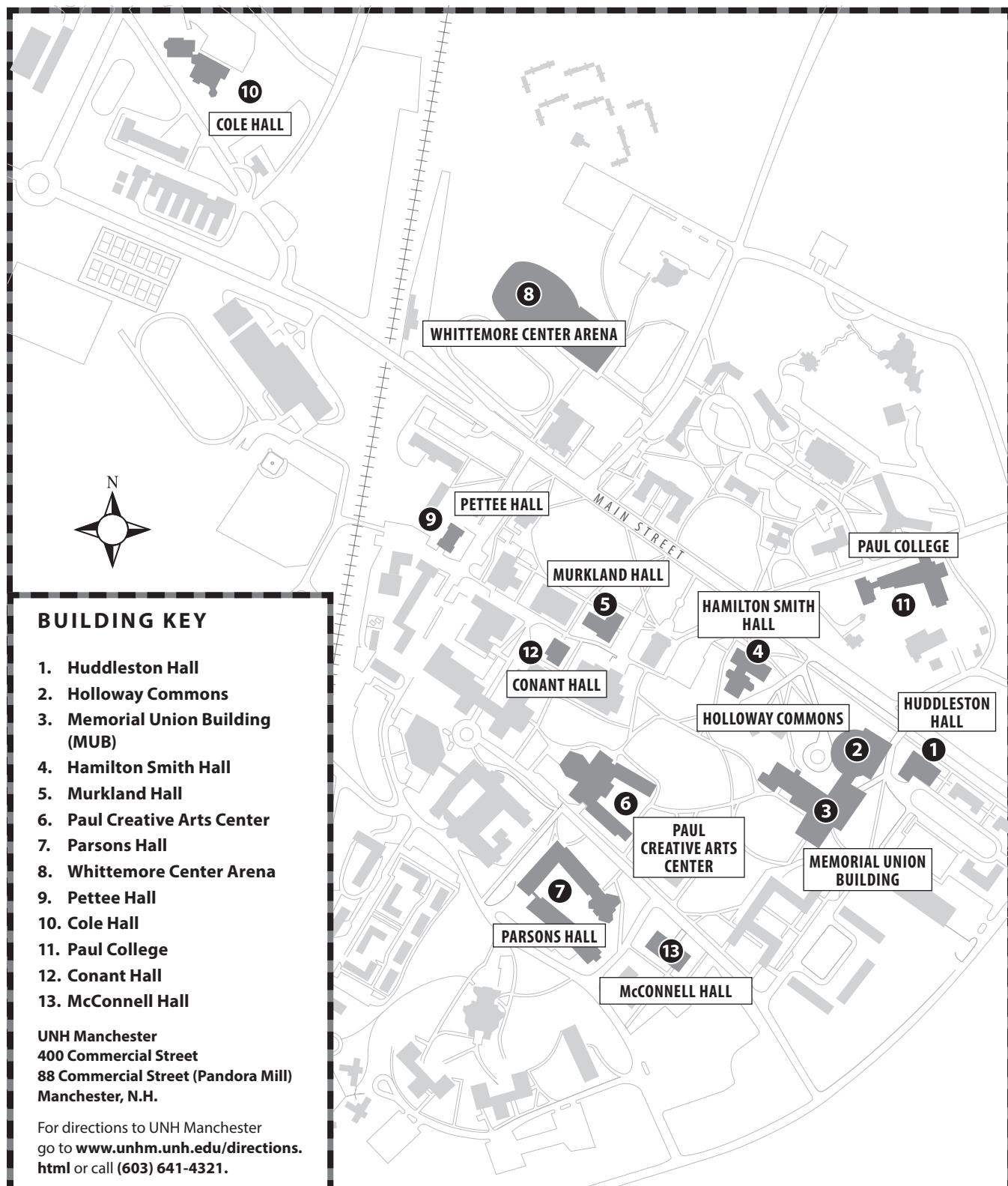
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## TUESDAY, MAY 5

1–5:30 p.m.

Paul College of Business and  
Economics University-wide  
Paul J. Holloway Prize Innovation-  
to-Market Championship Round  
Peter T. Paul College Building (11)

# URC 2015 Campus Map



## 2015 Senior B.A., B.F.A. & M.F.A. Exhibition and Preview Reception

**Friday, April 10**  
**6-8 p.m.**  
**Museum of Art, Paul Creative Arts Center**

This annual show celebrates the achievements of graduating art students from the UNH Department of Art and Art History.

*A list of participants will be available at this event.*

## Graduate Research Conference (GRC)

### Poster Presentations

**Tuesday, April 14**  
**4-8 p.m.**  
**Whittemore Center Arena**

The Graduate Research Conference (GRC) is devoted to celebrating the high quality research being conducted by graduate students at UNH and is designed to showcase research from graduate students in all disciplines. Participants interact with other graduate students and faculty from across campus. Attending the GRC affords the entire university community the opportunity to participate in the graduate education experience.

## Graduate Research Conference (GRC)

### Oral Presentations

**Wednesday, April 15**  
**10 a.m.-4 p.m.**  
**Holloway Commons**

The Graduate Research Conference (GRC) is devoted to celebrating the high quality research being conducted by graduate students at UNH and is designed to showcase research from graduate students in all disciplines. Participants interact with other graduate students and faculty from across campus. Attending the GRC affords the entire university community the opportunity to participate in the graduate education experience.

## UNH Manchester Undergraduate Research Conference

### Oral Presentations

**Tuesday, April 21**  
**10 a.m.-2 p.m.**  
**University Center, Manchester**

The UNHM Oral Presentations feature formal scholarly lectures and/or multimedia presentations reflecting the students' research interests.

**Daphne Galatas**  
 Communication  
*A Modern Greek Tragedy*  
 Adviser: Judith Kumin

**Nelson Gbeve**  
 Communication  
*The Sexual Objectification of Women Is Morally Wrong*  
 Adviser: Jeffrey Klenotic

**Sean Lavelle**

History  
*Political Dogma of Antebellum Manchester*  
 Adviser: Robert Macieski

**Stephanie Parent**

Politics and Society  
*A Comparative Study of the Current and 19th Century Anti-Slavery Movements*  
 Adviser: Melinda Negron-Gonzales

**Alan Provance**

History  
*Bread and Roses: The Simultaneous Struggle of Women's Labor and Women's Suffrage*  
 Adviser: Robert Macieski

## UNH Manchester Undergraduate Research Conference Technology Day

### Engineering Technology Senior Projects

**Wednesday, April 22**  
**8 a.m.-5 p.m.**  
**Pandora Mill, Manchester**

The UNHM Engineering Technology Program presents its annual Senior Project Presentation Day. This event is the culmination of an academic year effort where full-time seniors formally present their projects to peers, faculty members, representatives and technical advisers of sponsoring companies, and special guests.

**Kevin Annis**

Electrical Engineering Technology  
*SNMP Utilization and Application*  
 Adviser: Michael Jonas

**Gregory Bernash****Jacob Frost****Michael Johnson****Nolan Lewis****Tyler Turcotte**

Mechanical Engineering Technology

*UNH Baja, Gearbox and Transaxle*

Advisers: Christopher LeBlanc,

Theodore Tavares

**Jonathan Bunie****Ryan Seymour**

Mechanical Engineering Technology

*Line 0 - Horizontal Calendaring Machine*

Advisers: Christopher LeBlanc,

Theodore Tavares

**Christopher Bye**

Electrical Engineering Technology

*Aerocats RC Plane*

Adviser: Christopher LeBlanc

**Curtis Guild****Matthew York**

Mechanical Engineering Technology

*FSAE Formula Race Car*

Adviser: Todd Gross

**Omer Ibisevic**

Mechanical Engineering Technology

*Jetboil*

Adviser: Theodore Tavares

**Benjamin Jarmak**

Mechanical Engineering Technology

*Automating a Research and Development**Test Process*

Adviser: Theodore Tavares

**Jason Julien**

Mechanical Engineering Technology

*Environmental Effects in Manufacturing*

Adviser: Theodore Tavares

**Brendan LaRocque**

Electrical Engineering Technology

*Ultrasonic Level Sensor System for Residential Oil Tanks*

Adviser: Christopher LeBlanc

**Rachel LePine**

Mechanical Engineering Technology

*Lid Application System*

Adviser: Theodore Tavares

**Nicholas Lehoullier**

Mechanical Engineering Technology

*Automated Flow Control System for a Hydro-Electric Plant*

Adviser: Theodore Tavares

**Stephen Lemieux Jr**

Mechanical Engineering Technology

*Energy Master Action Plan for the**Stratham Cooperative Middle School*

Adviser: Theodore Tavares

**Steven McGrath**

Electrical Engineering Technology

*SIL Upgrade*

Adviser: Shawn Sutton

**Jesse Morgan**

Mechanical Engineering Technology

*An Evaluation and Design of the**Make-Up Air Systems Serving a**Retirement Community*

Adviser: Theodore Tavares

**Trevor Paradis**

Mechanical Engineering Technology

*Stratham Memorial School Biomass**Feasibility Analysis*

Adviser: Christopher LeBlanc

**James Stark**

Mechanical Engineering Technology

*Measuring Thrust Force of Model**Rocket Engines*

Adviser: Theodore Tavares

**John Sullivan**

Mechanical Engineering Technology

*Radio-Controlled Aircraft Motor Thrust**and Torque Measurement Stand*

Adviser: Theodore Tavares

**Forrest Surprenant**

Electrical Engineering Technology

*Centralized Remote Monitoring and**Management for IIS*

Adviser: Michael Jonas

## Thompson School Undergraduate Student Showcase

**Wednesday, April 22****11 a.m.-2 p.m.****Cole Hall (Stacey's)**

Thompson School of Applied Science students translate academic instruction into practical presentations at this year's URC. Join selected students who will showcase their expertise in such diverse areas as food services management and forest and horticultural technology.

**Hannah Bogart**

Integrated Agricultural Management

*Utilizing GIS to Determine Suitable**Locations for a Community Farm in**Brunswick Landing in Brunswick, Maine*

Adviser: A. Richard Vannozzi

**Emma Brunet**

Integrated Agricultural Management

*A Business Start-Up Plan for a Farm**Stand in South Hampton, New Hampshire*

Adviser: Andrew Conroy

**Townsend Carmody**

Integrated Agricultural Management

*All for One Farm: A Diversified Farm that**Engages and Educates the Community*

Adviser: Andrew Conroy

**Manuel Catala****Trent Urie**

Integrated Agricultural Management

*Utilizing GIS to Determine the Best Areas**for Corn Production at Shadagee Farm in**Craftsbury, Vermont*

Adviser: A. Richard Vannozzi

**Whitney Covill**

Civil Technology

*Utilizing GIS to Determine Suitable**Locations for Wind Turbines in**Hampton Falls, New Hampshire*

Adviser: A. Richard Vannozzi



**Robert Dolan**

Integrated Agricultural Management  
*Aquaponics: Sustainability Applied to Greenhouse Operations*  
Adviser: Andrew Conroy

**Robert Dolan**

Integrated Agricultural Management  
*Utilizing GIS to Identify Potential Properties for an Aquaponics Concept Restaurant in the Portsmouth, New Hampshire Area*  
Adviser: A. Richard Vannozzi

**Lucienne Dubois**

Integrated Agricultural Management  
*Utilizing GIS to Inform Pasture Rotation Strategies for Livestock at Turning Point Farm, Durham, New Hampshire*  
Adviser: A. Richard Vannozzi

**Natasha Evans**

Integrated Agricultural Management  
*Using Land Resources More Efficiently to Improve Agricultural Productivity in Jamaica*  
Advisers: Andrew Conroy

**Claire Fletcher**

Integrated Agricultural Management  
*Utilizing GIS to Determine Ideal Search Locations for Wild Chanterelle Mushrooms in Franklin County, Maine*  
Adviser: A. Richard Vannozzi

**Andrew Haggan**

Integrated Agricultural Management  
*Growing Two Acres of Vegetables for His Mansion, a Non-Profit Organization in Deering, New Hampshire*  
Adviser: Andrew Conroy

**Dylan Kelly**

Anthropology  
*Using GIS to Assess the Environmental Impacts of Disc Golf Courses in Coastal New Hampshire*  
Adviser: A. Richard Vannozzi

**Daniel Laggis**

Integrated Agricultural Management  
*Evaluating Areas for Improvement on Laggis Brothers' Farm in East Hardwick, Vermont*  
Adviser: Andrew Conroy

**Paul Liversidge**

Civil Technology  
*Determining Optimal Locations for a Solar Field in Raymond, New Hampshire Using GIS*  
Adviser: A. Richard Vannozzi

**Tara Mullen**

Civil Technology  
*Developing a GIS Database and Mapping of a Middle School Ropes Course to Introduce Sustainability Education Prior to High School*  
Adviser: A. Richard Vannozzi

**Cole Parris**

Integrated Agricultural Management  
*Utilizing GIS to Find a Suitable Location to Start a Cranberry Bog in West Tisbury, Massachusetts*  
Adviser: A. Richard Vannozzi

**Nathan Robertson**

Integrated Agricultural Management  
*Moving Forward: Contoocook Creamery's Milk Plant*  
Adviser: Andrew Conroy

**Dylan Smith**

Integrated Agricultural Management  
*Explorations in Aquaponics*  
Advisers: Jonathan Ebba, Rene Gingras

**Trent Urie**

Integrated Agricultural Management  
*Are Big Bad Farms Really Bad? A Video Documentary Highlighting Existing, Sustainable Farming Practices in Northern New England*  
Adviser: Andrew Conroy

## Peter T. Paul College of Business and Economics Paul J. Holloway Innovation-to-Market Prize Competition

### Charles & Miriam Nelson Poster Competition

**Wednesday, April 22  
Noon-2 p.m.  
Paul College, Room G35**

This poster competition gives all teams entered in the Holloway Prize Innovation-to-Market Competition an opportunity to showcase their research into entrepreneurship. Teams have three minutes to present their business idea, followed by three minutes of Q and A with the judges.

**Jared Allison  
Zachary Howard  
Michael Kelly**  
Management  
*Green Box Homes*  
Adviser: John Ela

**Cullen Barnes**  
Management  
**Jonathan Mantia  
Cameron Walsh**  
Finance and Management  
*R.E.B.E.L. Lighting*  
Adviser: John Ela

**Benjamin Belanger**  
Information Systems Management and Management  
*Understudy - Connecting US Schools with Qualified Substitute Teachers*  
Advisers: Robert Gough, Doug Henderson

**Rachel Cardarelli**  
International Business and Economics and Management  
**Marion Harrington  
Sarah Wiggins**  
Management  
*The Unwrapped Market*  
Adviser: John Ela

**Joseph Corcoran**

Undeclared

**Benjamin Duff**

Accounting

**Anthony Lunardi**

Economics

*Chatter*

Adviser: Goksel Yalcinkaya

**Cameron Cote**

Finance and Accounting

**Lauren Rhodes**

English/Journalism and Communication

*MediaBite*

Adviser: Meghan Heckman

**Stephen Cote****Brian Gioia**

Management

*Clientype*

Adviser: John Ela

**Jacob Cuomo**

Management and Finance

**Devin Garvey**

Marketing and Management

**Zechao Liu****Elizabeth Therrien**

Management

*ParkPal*

Adviser: John Ela

**Tyler Cuvellier****Kyle Richardson**

Management

**Alexander Danielovich**

Finance and Management

*Campus Laundry Service*

Adviser: John Ela

**David DeDonato Jr.**

Finance and Management

**Cameron Higgins**

Management

**Christopher Lang**

Management and Marketing

*SwiftGift*

Adviser: John Ela

**Michael Deris****Rebecca Hall**

Management and Marketing

**Paul Kennedy**

Finance

**Brian Shea**

Management

*Trash to Cash: A New Way to Recycle*

Adviser: John Ela

**Robert Esposito****Curtis Lush****Caemen Weiland**

Computer Engineering

**Jonathan Gual**

Entrepreneurial Studies and Accounting

**Max Lappin****Joshua Romprey**

Entrepreneurial Studies

*Hydrite Smart Watering System*

Adviser: Jeffrey Sohl

**Emily Fisher****Joseph Hamilton****Justin Verdone**

Management

*Toasty Poles*

Adviser: John Ela

**Lauren Irish**

Marketing and Management

**Shane McNeely****Justin Slattery****Cailey White**

Management

*Dualonics: 2-in-1*

Adviser: John Ela

**Matthew Labbe**

Finance and Management

**Conor McCarthy****William Sheehy**

Management

**Wesley Richards**

Marketing and Management

*Forever Charge*

Adviser: John Ela

**Garrett Marchand**

Management

**Nathan Pitoniak**

Finance and Management

*SnowTech*

Adviser: John Ela

**Johnathan Martin**

Marketing and Management

**Adam Shea**

Marketing

*The EZkey*

Adviser: John Ela

**Jason Reuter**

English/Journalism

*News Time: a New Look for News*

Adviser: Meghan Heckman

**Christian Ryan**

Management

**Brandon Shea**

Information Systems Management and Management

*Crowd Control*

Adviser: John Ela

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## The Naked Arts— Creativity Exposed!

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### Act I

**Wednesday, April 22****Noon-2 p.m.****Museum of Art,****Paul Creative Arts Center**

This event exposes the inner creative process of artists working in various disciplines. Presenters will describe the process, research, and other creative aspects undertaken to bring an artistic creation from initial inspiration to the stage or gallery. This may include a performance or excerpts from their work to illustrate their creative scholarship.

**Rebecca Emerson-Brown**

Fine Arts, Ceramics

*Terra Forming: Seed and Stone*

Advisers: Brian Chu, Leah Woods

**Nina Kappel**

English

*Missives from the Farm*

Advisers: Mekeel McBride, Thomas Payne

**Karen Mawikere**

Fine Arts, Photography

*BFA Thesis*

Adviser: Leah Woods

**Carson Morris**

Fine Arts, Sculpture

*BFA Thesis*

Adviser: Leah Woods

**Lyndsey Nowlan****Alexandra Spanier**

Theatre

*Set and Costume Designs for A Shayna**Maidel, a Play by Barbara Lebow*

Adviser: Szu-Feng Chen

**Anne Twombly**

Fine Arts, Painting

*BFA Thesis*

Adviser: Leah Woods

## Interdisciplinary Science & Engineering Symposium (ISE)

### Poster Presentations

**Wednesday, April 22****1:30-2:00pm Awards Ceremony****2:00-4:00pm Open House****Whittemore Center Arena**

The ISE symposium welcomes and encourages scientific presentations from undergraduate students in all colleges and departments. The event features undergraduate research that contributes to or benefits from an interdisciplinary science and engineering perspective. Students have an opportunity to interact with peers and gain professional experience presenting research. Attendees learn more about research and educational opportunities in science and engineering at UNH. The program will include a poster session, refreshments, and an awards ceremony.

### Chemical Engineering

**Group Leader: Dr. Kang Wu****Rita Andary**

Chemical Engineering

*Fourier Analysis of Oscillating Blood Flow*

Adviser: Russell Carr

**Christopher Blais**

Chemical Engineering

*Dynamic Behavior of Membrane-Bound**Capsules*

Adviser: Nivedita Gupta

**Duncan Cromwell**

Chemical Engineering

*Methylcyclohexane Dehydrogenation To**Toluene Over Ir Catalyst*

Adviser: Palligarnai Vasudevan

**Aguedo De Los Santos (McNair Scholar)**

Chemical Engineering

*The Chemical Resistance of Anodic Coating**for Medical & Food Processing Applications*

Adviser: Dale Barkey

**Alison Deyett****Shujie Hou**

Chemical Engineering

*Innate Immune Response to Novel Bacteri-**cidal Surface that Enhances Biointegration*

Adviser: Kyung Jae Jeong

**Rhiannon Jacobs**

Chemical Engineering

*Molecular Dynamics Simulation of M37**Lipase from Psychrophilic Photobacterium**Lypoliticum in Water and Methanol*

Adviser: Harish Vashisth

**Kenan Mazic**

Chemical Engineering

**Avery Normandin**

Biomedical Science

*Assessing Innate Immunity in Implant**Biointegration Using Surface-Treated,**Microporous PDMS Scaffolds*

Adviser: Kyung Jae Jeong

**Sachi Nagada**

Chemical Engineering

*Design of a Tunable Protein Expression and**Display System on Bacterial Spore Surface*

Adviser: Kang Wu

**Christopher Redus**

Chemical Engineering

*Imaging and X-Ray Spectroscopy of**Aerosolized Mixtures of Montmorillonite**and Dicarboxylic Acids*

Adviser: Margaret Greenslade

**Laura Van Beaver**

Neuroscience and Behavior

*Production of Decaffeinated Tea through**Genetic Engineering (ISE)*

Adviser: Subhash Minocha

**Halie White**

Chemical Engineering

*Display of Laccase on Bacterial Spore**Surface for Improved Stability*

Adviser: Kang Wu

**Pablo Yangali**

Chemical Engineering

*Characterization of Geobacillus Strains for**Arsenic Resistance and Remediation*

Adviser: Kang Wu

### Chemistry

**Group Leader: Dr. Roy Planalp****Max Bilodeau**

Chemistry

*Synthetic Approaches to a Diiron**Cluster Complex*

Adviser: Samuel Pazicni

**Bianca Daniela Costa**

Chemical Engineering

*Electrically Responsive Protein Based**Soft Actuators*

Adviser: Leila Deravi

**Tyler Dami**

Chemistry

*Free Radical Skeletal Rearrangements of**Arenes and Diels Alder Reactions with an**Acetylene Equivalent*

Adviser: Richard Johnson

**Justin Dapolito**

Chemistry

*Phenylphenanthrene Synthesis and**Phenyl Group Migration Studies*

Adviser: Richard Johnson

**Christopher DiBona**

Chemistry

*Extraction and Analysis of Ommochromes in Cephalopod Chromatophores*

Adviser: Leila Deravi

**Azaline Dunlap-Smith****Matthew Rauch**

Chemistry

*Exploration of the Synthesis of 1-Methyl-4-Silatranone: A Hyperstable Lactam and an Unprecedented Silatrane*

Adviser: Arthur Greenberg

**Ryan Fitzgerald**

Chemistry

*Synthesis of 4,5-Benzoxepin for Use in Enzymatic Studies*

Adviser: Arthur Greenberg

**Brittney Hutchinson**

Chemistry

*Chain Extension Mannich Reactions with Sulfonyl Imines*

Adviser: Charles Zercher

**Brittney Hutchinson**

Chemistry

*Effectiveness of Peer-Led Team Learning with Different Leader Training in College General Chemistry*

Advisers: Christopher Bauer, Julia Chan

**Peter Kimball**

Chemistry

*Synthesis of a New Pentacene-Based Cyclophane for Use in Organic Thin Film Transistors*

Adviser: Glen Miller

**Jay Nelson**

Chemistry

*Binding Selectivity of Molecular Imprinted Polymers*

Adviser: W. Rudolf Seitz

**Austin Power**

Chemistry

*Hydrogen Bonding within Tyrosinate-Bound Iron Complexes*

Adviser: Samuel Pazicni

**Barry Powers**

Chemistry

*Synthesis and Photocatalytic Carbon Dioxide Reduction of C-Functionalized Cyclam*

Adviser: Gonghu Li

**Ram Subedi (McNair Scholar)**

Chemical Engineering

*The Effect of Morphology on Titanium Dioxide Photocatalysis*

Adviser: Gonghu Li

**David Waste**

Chemistry

*Single-Chain Nano Particles from Sequenced Polyolefins*

Adviser: Erik Berda

**Civil and Environmental Engineering-Industrial****Group Leader: Dr. Tat Fu****Joel Asencio****Taylor Buchalter****Brittany Holbrook****Jonathan Proulx****Stephen Rosenberg****Megan Suffel**

Civil and Environmental Engineering

*Vermont Route 14 over Pekin Brook**Bridge Replacement*

Advisers: Raymond Cook, Jennifer Jacobs

**Jacob Bailey****Thomas Hutter****Paige Libbey****Zachary Wallin**

Civil and Environmental Engineering

*Nashoba Valley Technical High School**Track and Field Design*

Adviser: Thomas Ballestero

**Julen Barruetabena**

Environmental Engineering

**Teagan Dunfey****Connor Halloran****Daniel Welch****Christopher Welsh**

Civil and Environmental Engineering

*Six Flags Roller Coaster of the Future*

Adviser: Erin Bell

**Andrew Bingham****Kelsey Winkler**

Civil and Environmental Engineering

**Dylan Erickson****Rachael Kenny**

Environmental Engineering

*Fourhills Landfill*

Adviser: Jean Benoit

**Megan Burke****Kathleen Hanlon**

Environmental Engineering

**Elizabeth Garvey****Jaclyn Lemieux**

Civil and Environmental Engineering

*SWB San Pedro de Casta Chlorine**Dosing System*

Adviser: M. Robin Collins

**Gregory Clauson****Geoffrey Glover****Ian Sleeper**

Civil and Environmental Engineering

**Brandon Ransom**

Civil and Environmental Engineering and

Computer Science

*Municipal Infrastructure Asset**Management*

Adviser: Charles Goodspeed

**James Commerford****Andrew Matthews****Benjamin Miller**

Civil and Environmental Engineering

*Biotech Production Facility Water Supply and Treatment*

Advisers: M. Robin Collins, Peter King

**Jessica D'Entremont****Stephen Leonardo****Daniel Perreault**

Civil and Environmental Engineering

*Vehicle Mileage Tax*

Adviser: Charles Goodspeed

**Michael Eno**

Civil and Environmental Engineering

**Olivia Jobin****Amy Johnson****Morgan Palmer****Chelsey Serrano**

Environmental Engineering

*Developing Stormwater Solutions for an Island Community*

Adviser: James Malley

**Ryan Houle****Brendan Nallan****Timothy Noble****Kayla Santello****Lucas Sundean**

Environmental Engineering

*Life Cycle Assessment of Throwback Brewery Beer*

Adviser: Kevin Gardner



**Tyler Renz****Priscilla Tengdin**

Civil and Environmental Engineering  
*Measurement Methodology for Equestrian Riding Surfaces*  
 Adviser: Jean Benoit

---

**Civil and Environmental Engineering-Research**

**Group Leader: Dr. M. Robin Collins**

**Matthew Baker****Zachary Chabot****Matthew Dumont**

Civil and Environmental Engineering  
*Tsunami Vertical Evacuation Structure*  
 Adviser: Ricardo Medina

**Tyler Ball****Zachary Champa****Natalia Quintero****John Reilly**

Civil and Environmental Engineering  
*Geo Wall*  
 Adviser: Majid Ghayoomi

**Nicholas Bateman****Patrick Bogle****Nathaniel Colp****Robert Langlands****Ewen MacKinnon****Joshua Mele**

Civil and Environmental Engineering  
*UNH Steel Bridge Team*  
 Adviser: Charles Goodspeed

**Cameron Bellisle****Eric Casey****Jeffrey Koloski****Antonio Santiago****Tyler Shedd**

Civil and Environmental Engineering  
*ASCE Concrete Canoe Team*  
 Adviser: Raymond Cook

**Jacob Blunden****Daniel DelTufo****Michael McLaughlin****Amanda St. Pierre**

Civil and Environmental Engineering

**Michael Moser**

International Affairs and Civil and Environmental Engineering

*Sensing of The Memorial Bridge*

Advisers: Erin Bell, Tat Fu

**Ryan Bottesini****Timothy Nash**

Civil and Environmental Engineering

**Ethan Ely**

Environmental Engineering  
*Transformable Recycled Eco-Engineering Structures (TREES)*  
 Adviser: Robert Henry

**Michael Clough****Laith Qurreh****Scott Syrene**

Civil and Environmental Engineering  
*Residential Use of Intermodal Shipping Containers*  
 Adviser: Robert Henry

**Daniel Crochetiere****Mary-Kathleen Eppig****David Tarushka**

Civil and Environmental Engineering  
*Flood Pavement Evaluation*  
 Adviser: Jo Daniel

**Lief Friedrichs**

Civil and Environmental Engineering  
*Analyzing Building Occupants' Thermal Comfort from Tweets*  
 Adviser: Tat Fu

**Jill Getchell****Adrienne Hill**

Civil and Environmental Engineering  
*Evaluation of Internal Strut Loads in Underground Retaining Structures*  
 Adviser: Majid Ghayoomi

**Mathew Head****Marlin Hueil****Michael Kotowski**

Civil and Environmental Engineering  
*Commercial Cargo Container*  
 Adviser: Robert Henry

**Sarah Jakositz****Pia Marciano**

Environmental Engineering  
*Life Cycle Environmental Impacts Associated with Timber Uses*  
 Advisers: Kevin Gardner, Weiwei Mo

**Travis Manning****Bimochan Poudyal****Ryan van der Heijden**

Civil and Environmental Engineering  
*Effect of Freeze Thaw Cycles on Asphalt Strength*  
 Adviser: Jo Daniel

**Marianna Oliveira Moura****Darline Simoni Balen**

Environmental Engineering  
*Dynamic Environmental Life Cycle Assessment of Economic Development in New Hampshire*  
 Advisers: Kevin Gardner, Weiwei Mo

**Kayla Santello**

Environmental Engineering  
*Life Cycle Assessment (LCA) of Tourism Activities*  
 Adviser: Weiwei Mo

**Chelsey Serrano**

Environmental Engineering  
*The Effects of Dissolved Organic Carbon on Metal Mobility in in-situ Chemical Oxidation Applications*  
 Adviser: Kevin Gardner

---

**Computer Science-Applications**

**Group Leader: Collette Matthias Powers**

**Stephen Arnold****Taylor Quinn**

Computer Science  
*Walk-By Learning Application*  
 Adviser: Christopher Bauer

**Alex Carrozzi****James English**

Information Technology  
**Arturo Hernandez-Martinez**  
 Information Technology and Finance  
*ScheduleIT: Advising Scheduling Solution*  
 Adviser: Radim Bartos

**Christopher Cavanaugh**

Computer Science  
*UNHCMS Chemical Structure Search*  
 Adviser: Philip Collins

**Tyler Collins**

Information Technology

**Evan Graham****Gregory Hilston**

Computer Science  
*Newforma - Daily Report Application*  
 Adviser: Michael DeSouza

**Matthew DeBiase****Vincenzo Fazzolari****Zachary Walker**

Information Technology  
*Xerox Monitoring System*  
 Adviser: Scott Kitterman

**Elisha Emond**

**Ryan McAvoy**

**Christopher Sedgley**

**Tyler Watts**

Information Technology

*Living Bridge Joint CE Project*

Advisers: Erin Bell, Tat Fu

**Kellie Fleitman**

**Tucker Whitehouse**

Information Technology

*WUNH Website Redesign*

Adviser: Faye Curran

**Nicole Gager**

**Daniel Vasta**

Computer Science

*Interactive Touch Game for the Seacoast Science Center*

Adviser: Thomas Butkiewicz

**William Gravelle**

**Samuel Luszc**

**Cameron Weatherby**

Computer Science

*Squad Remotely Aimed Weapons Platform (CS)*

Adviser: Philip Hatcher

**Ethan Pfenninger**

Information Technology

*UNH CEMS RFID*

Adviser: Philip Collins

**Dexter Richards**

Computer Science

*UNHCEMS Material Safety Data Sheet (MSDS) Auto-Downloader and Updater*

Adviser: Philip Collins

**Colin Smith**

**Jason Sullivan**

Computer Science

*RF Field Mapping Tool*

Adviser: Matthew Plumlee

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## Computer Science-Research

**Group Leader: Collette Matthias Powers**

**Nicholas Berry**

**Joseph Joyce**

**Kevin Vaccaro**

Information Technology

*Whitewater - Security*

Adviser: David Hadley

**Spencer Black**

Computer Science

*Current Practices for Product Usability Testing in Web and Mobile Applications*

Adviser: Hong Jin

**James Coddington**

**Nicholas Crombie**

**Jake Perron**

Information Technology

*IPv6 First Hop Security*

Adviser: Scott Kitterman

**John Costa**

**Matthew Dlubac**

**Andrew Scott**

Information Technology

*Whitewater HTTP Performance*

Adviser: David Hadley

**Amy Davies**

Computer Science

*UNH-IOL Conformance Test Suite for iSCSI Extensions for RDMA (iSER)*

Adviser: Robert Russell

**Matthew Dlubac**

Information Technology

*Software Defined Networking in Existing Networks*

Adviser: Scott Valcourt

**Timothy Panepinto**

**William Winslow**

Computer Science

*Digital Television Datacasting*

Adviser: Scott Valcourt

**Maxwell Renke**

Computer Science

*University of New Hampshire Extended Sockets Library*

Adviser: Robert Russell

**Joseph Rogers**

**Brandon Schwarzer**

**Nicholas Turi**

Information Technology

*perfSONAR*

Adviser: Scott Valcourt

**Michaela Tremblay**

Computer Science

*Throwing Exceptions for Concurrency Errors*

Advisers: Michel Charpentier, Philip Hatcher

---

## Earth Sciences/Environmental Science

**Group Leader: Dr. Ruth Varner**

**Tristan Amaral**

Earth Sciences

*Predicting Snow Albedo in New Hampshire Using Three Winters of Seasonal Snow and Weather Observations by the CoCoRAHS-Albedo Network*

Advisers: Jack Dibb, Cameron Wake

**Nathan Battey**

Biology

**John Heavisides**

Physics

**Eryn Murphy**

Marine, Estuarine and Freshwater Biology

**Eric Samuel**

Mechanical Engineering

*Integrated Aquaculture*

Adviser: Larry Harris

**Paige Clarizia**

Environmental Sciences

*Comparison of CH<sub>4</sub> Emission and CO<sub>2</sub> Exchange Between 2013 and 2014 in a Subarctic Peatland*

Adviser: Ruth Varner

**Megan Dalton**

Environmental Sciences

*Atmospheric Nuclear Weapon Testing Horizons: Establishing Depth-Age Relationships in an Alaskan Ice Core*

Adviser: Cameron Wake

**Jessica DelGreco**

Environmental Sciences

*Quantifying Anthropogenic Influence on Tropical Forests Using Charcoal*

Adviser: Michael Palace

**Lisa Demaine**

Environmental Sciences

*Collaboration and Implementation by Citizens and Scientists*

Advisers: Malin Clyde, Alyson Eberhardt

**Michael Dougherty**

Environmental Sciences

*Analysis of the Photodegradation and Sorption of Rhodamine WT in New Hampshire Wetlands*

Adviser: Anne Lightbody

**Liam Joice-Casey**

Geology

*Assessing Early Etna Magma Processes*

Adviser: Julia Bryce

**Alan Jones**

Geology

*Testing Neodymium As A Geochemical Tracer Of Clays And Ceramics In The Belize River Valley*

Adviser: Julia Bryce

**Mark Kotowski**

Environmental Sciences

*Lamprey River Water Quality Analysis*

Adviser: Anne Lightbody

**Apryl Perry**

Environmental Sciences

*Lake Physical and Geochemical Traits Impact CH<sub>4</sub> and CO<sub>2</sub> Concentrations*

Adviser: Ruth Varner

**Laura Logozzo**

Earth Sciences

*Linking Sediment Characteristics to Methane Emission Potential in Subarctic Lakes*

Adviser: Ruth Varner

**Christian May**

Environmental Sciences

*Diurnal Variations in Small Wetland Discharge in NH and MA*

Adviser: Anne Lightbody

**Emma McCabe**

Geology

*Heat Stress on Livestock*

Adviser: Matthew Huber

**Daniel Meeden**

Environmental Sciences

*Quantifying the Drag Force of Woody Riparian Seedlings*

Adviser: Thomas Lippmann

**Elizabeth Pettitt**

Geology

*Geochemical Constraints on Melt Generation Beneath the Adriatic Plate*

Adviser: Julia Bryce

**Jacob Poirier**

Environmental Sciences

*Sediment Erosion in a Tributary to Woodman Brook*

Adviser: Anne Lightbody

**John Prizzi**

Earth Sciences: Oceanography

*Paleo-Monsoon*

Adviser: Rosemarie Came

**Katherine Rocci**

Earth Sciences and Environmental Sciences

*Assessing the Impact of a Bedrock Gradient on Vegetative Diversity*

Adviser: Julia Bryce

**Dylan Schiff**

Environmental Sciences

*Fine-Scale Plant Species Identification in a Poor Fen and Integration of Techniques and Instrumentation in a Classroom Setting*

Advisers: Erik Froburg, Michael Palace, Ruth Varner

**Anna Simpson**

Earth Sciences: Oceanography

*Seafloor Characterization in the Great Bay Estuary*

Adviser: Thomas Lippmann

**Steven Troy**

Biochemistry, Molecular and Cellular Biology

*The Effects of Nanoparticles and Biogenic Polyamines on Horizontal Gene Transformation Efficiency*

Adviser: Subhash Minocha

**Cody Whelan**

Geology

*New Age Constraint of La Colonia Formation (Patagonia, Argentina) Using Magnetostratigraphy*

Adviser: William Clyde

**Electrical & Computer Engineering**

Group Leader: Dr. Kent Chamberlin

**Syed Ali****Jeffrey Page**

Electrical Engineering

**Eric Sheridan**

Computer Engineering

*The RC Project*

Adviser: Wayne Smith

**David Arnoldy**

Computer Engineering

**Michael Gingrich**

Electrical Engineering

*Campus Walking Guide Using GPS*

Adviser: Kent Chamberlin

**Michael Bellomo****Nicholas Bordeianu****Jesse Cassin****Kevin Conboy**

Electrical Engineering

*UNH Gymtel*

Adviser: Richard Messner

**Joseph Bennett****Kieffer Quitayen**

Computer Engineering

**John Sims**

Information Technology

**Max Tibbetts**

Electrical Engineering

*Internet of Things: Sleep-Monitoring System*

Adviser: Andrzej Rucinski

**Elias Berg**

Computer Science

**Steven Giguere****Adam Martiniello**

Computer Engineering

**Michael Tessier****James Youmatz**

Mechanical Engineering

*Dynamic Braille Display*

Adviser: Richard Messner

**Franklin Bongiovanni****Kehan Connors****Daniel Newell**

Electrical Engineering

*Passive Cop-Cam*

Adviser: Michael Carter

**David Bundy****Addison Nute**

Computer Engineering

*Chaotic Communications System for the Secure Transmission of Data*

Adviser: W. Thomas Miller

**Jahanzeb Choudhry**  
Electrical Engineering  
**Mark Duda**  
**Jonathan Gallant**  
Computer Engineering  
*Smart Appliance Interface and Interconnect*  
Adviser: Michael Carter

**Annette Conticchio**  
**Matthew DiOrto**  
**Ryan Zins**  
Electrical Engineering  
*Custom Built Laser Harp*  
Adviser: Richard Messner

**Robert Esposito**  
**Curtis Lush**  
**Caemen Weiland**  
Computer Engineering  
*ISS Test Apparatus Rebuild*  
Adviser: Richard Messner

**Daniel Gianduso, Jr**  
**Noah Johnson**  
Electrical Engineering  
*Digital Electric Theremin with MIDI Output*  
Adviser: Andrzej Rucinski

**Benjamin Gibbons**  
Electrical Engineering  
*Multidirectional Ultrasonic Proximity Sensor*  
Adviser: John LaCourse

**Michael Joseph**  
Electrical Engineering  
*Automotive Gigabit-Ethernet Transmitter*  
Adviser: Michael Carter

**Devin Kehler**  
**Tyler Terenzoni**  
Electrical Engineering  
*Cost Effective Bicycle Safety Camera*  
Adviser: Nicholas Kirsch

**Robert Kelley**  
Computer Engineering  
*Brainwave Analysis & Binaural Stimulation*  
Adviser: Kent Chamberlin

**Stephen Machuzak**  
Electrical Engineering  
*EMD Spectrum Sensing Implemented on FPGA*  
Adviser: Nicholas Kirsch

**Timothy Mitsopoulos**  
Computer Engineering  
*MCU Control of a Novel Locomotion System*  
Adviser: L. Gordon Kraft

**Anthony Puzzo**  
**Robert Rogers**  
Electrical Engineering  
*Electromagnetic Levitation*  
Adviser: Wayne Smith

**Joshua Quinn**  
Electrical Engineering  
*Power Over Ethernet Enabled Network Controlled Lighting*  
Adviser: Richard Messner

**Zachary Romick**  
Electrical Engineering  
*Instrumented Syringe for Persons with Diabetic Retinopathy*  
Adviser: John LaCourse

**Albi Shegani**  
Electrical Engineering  
*Modern SCADA for Electric Grid Substations: Prototype Design Using the IEC 61850 Standard*  
Adviser: Michael Carter

**Peter Svendsen**  
Computer Engineering  
*Measurement of the Backward Force from a Shotgun to Calculate Recoil*  
Adviser: John LaCourse

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## Mechanical Engineering

**Group Leader: Dr. Ken Baldwin**

**Sayward Allen**  
**Nathaniel Cordova**  
**Alex Dzengeleski**  
**Shaun Hespelein**  
**Jarrett Linowes**  
**Sathya Muthukumar**  
**Zhuo Xu**  
**Jianqing Ye**  
Mechanical Engineering  
**Gerald Rosati**  
Computer Engineering  
*Underwater Remotely Operated Vehicle (ROV)*  
Adviser: May-Win Thein

**Jeffrey Auger**  
**Nicholas Campia**  
**Alan Chapman**  
Mechanical Engineering  
*CoolSim Data Center Optimization*  
Adviser: Paul Bemis

**Christopher Aylesworth**  
**Brian Dusinberre**  
**Samuel Gaskin**  
Mechanical Engineering  
*Automated Home Brewery*  
Adviser: Brad Kinsey

**Matthew Baker**  
**Thomas Donahue**  
**Bryan Keiser**  
**Nathan Kowalczyk**  
**Lance Marstaller**  
**Alexander Neufeld**  
**Brett Packard**  
**Bryan Taylor**  
**Christopher Velletri**  
Mechanical Engineering

**Christopher Bye**  
Electrical Engineering Technology  
*UNH AeroCats*  
Adviser: Todd Gross

**Sheldon Baker**  
**Brian Donahue**  
**Austin Trombino**  
Mechanical Engineering  
*Turbulent Axisymmetric Wake with Rotation*  
Adviser: Martin Wosnik

**Christopher Basque**  
**Alec Carignan**  
**Matthew Landry**  
Mechanical Engineering  
*Buoyless Lobster Trap*  
Adviser: Kenneth Baldwin

**Timothy Beauregard**  
**Tyler Lacey**  
Mechanical Engineering  
**Daniel Eltringham**  
Chemical Engineering  
**Daniel Morin**  
Computer Science  
*LunaCats*  
Adviser: May-Win Thein



**Nathaniel Bent**  
**Nathaniel Brown**  
**Corin Craig**  
**Molly Curran**  
**Pedro DeMelo-Damasceno**  
**Andrew DiOrio**  
**Kaare Francis**  
**Ryan Kirby**  
**John Pauley**  
**Jeffrey Sweeny**  
 Mechanical Engineering  
*Wave Energy Conversion Buoy*  
 Advisers: Kenneth Baldwin,  
 M. Robinson Swift

**Gregory Bernash**  
**Jacob Frost**  
**Michael Johnson**  
**Nolan Lewis**  
**Tyler Turcotte**  
 Mechanical Engineering Technology  
**Christopher Billings**  
**Jesse Cole**  
**Kyle Green**  
**Daniel Johnson**  
**Andrew MacMillan**  
**Ethan Morris**  
**Nicholas Russell**  
**Alexander Taaffe**  
 Mechanical Engineering  
*Mini Baja SAE*  
 Adviser: Barbaros Celikkol

**Matthew Birkebak**  
**Timothy Brown**  
 Mechanical Engineering  
*Harbor Security System*  
 Advisers: Shachak Pe'eri, May-Win Thein

**Tamir Blum**  
**Sital Khatiwada**  
**Colin Pellerin**  
**Aaron Rist**  
**Shawn Swist**  
 Mechanical Engineering  
**Michael Koller**  
 Physics  
**Kyle Larrabee**  
 Computer Science  
**Alec Crimmin**  
**Lucas Lopez**  
 Electrical Engineering  
*Stabilization of a Balloon Probe for the  
 Exploration of High Altitude Environments*  
 Adviser: May-Win Thein

**Matthew Bortolino**  
**Spencer Bos**  
**Kevin Cawley**  
**Jonathan DeWolf**  
**Andre Ferreira**  
**Sean Franco**  
**Aaron Fucci**  
**Andrew Hart**  
**Nicholas Morgida**  
**William Mullin**  
**Cameron Quinn**  
**Jame Skeffington-Ward**  
**Brian Vernet**  
 Mechanical Engineering  
**Matthew York**  
 Mechanical Engineering Technology  
**Connor McGurn**  
 Information Technology  
*UNH Precision Racing*  
 Adviser: Todd Gross

**Ryan Cannon**  
**Reese Kincaid**  
**Douglas MacIntosh**  
**Alexander MacKay**  
 Mechanical Engineering  
*Pneumatic Ski/Snowboard Press*  
 Adviser: Brad Kinsey

**Grace Cardarelli**  
**Myles Riddell**  
**Devon Snell**  
 Mechanical Engineering  
*Drop Camera: In Search of the Lost  
 Whaling Fleet*  
 Adviser: Bradley Barr

**Patrick Clapp**  
**Trevor Howe**  
**Sean Kalil**  
**Nicholas Pyzocha**  
 Mechanical Engineering  
*Automatic Jigging Machine*  
 Adviser: Kenneth Baldwin

**Emily Clemons**  
 Applied Mathematics  
**Kiley Donohue**  
**Korey Joback**  
**Connor Larkin**  
**Craig Paggi**  
**Nicholas Sapack**  
**Raymond Vanacore**  
 Mechanical Engineering  
**Jonathan Hart**  
 Computer Science  
**Maxwell Heindl**  
**Samuel Reed**  
**Angela Zukas**  
 Electrical Engineering  
*NASA Magnetospheric Multiscale (MMS)  
 Mission Quadsat Generation D*  
 Adviser: May-Win Thein

**Matthew Coleman**  
**Michael Cullen**  
**Johnathen Farrington**  
 Mechanical Engineering  
*Fire Fighting Robot*  
 Adviser: Barry Fussell

**Laura Damato**  
**Brandon Fall**  
**Jonathan Littlefield**  
**Dana Merrill**  
**Daniel Powell**  
**Daniel Valente**  
 Mechanical Engineering  
**Jeffrey Lapointe**  
**Carlos Perez-Ruiz**  
**Michael Upchurch**  
**Anthony Urena**  
 Computer Science  
**Roland Lacroix**  
 Electrical Engineering  
*ET-NavSwarm*  
 Advisers: Thomas Fuller, Michael John-  
 son, May-Win Thein, Se Young Yoon

**Andrea Dargie**

**Lucas Davies**

**Philip Goff**

**Justyn Sterritt**

**Forrest Walen**

Mechanical Engineering

**Benjamin Novak**

Computer Science

**Paul Willis**

Electrical Engineering

*Autonomous Surface Vehicle*

Adviser: May-Win Thein

**Ian Gagnon**

**William Hall**

**Thomas Kroll**

Mechanical Engineering

*Modeling and Experimental Validation of*

*Offshore Wind Turbine Arrays*

Advisers: Peter Bachant, Ivaylo Ned-  
alkov, John Turner, Martin Wosnik

**Ian Gagnon**

**Vojtech Kubec**

Mechanical Engineering

*Design, Manufacture, and Performance*

*Verification of a Bi-Axial Tensile Testing*

*Machine for Anisotropic Materials*

Adviser: Ioannis Korkolis

**William Gravelle**

**Samuel Luszcz**

**Cameron Weatherby**

Computer Science

**Connor Monahan**

**Benjamin Sanborn**

Mechanical Engineering

*Squad Remotely Aimed Weapons Platform*

Adviser: Philip Hatcher

**Emily Hutchinson**

**Stephanie Medicke**

**Carolyn Przekaza**

Mechanical Engineering

*The Mechanics, Biomimetics and 3-D*

*Printing of Cellular Materials*

Advisers: Ioannis Korkolis, Yaning Li

**Allen Ma**

Mechanical Engineering

*Fluid Transport Behind a Hemisphere*

Adviser: Christopher White

**Bryant Matthews**

**Benjamin Mitchell**

Mechanical Engineering

*Diode Pump Alkali Laser*

Adviser: F. William Hersman

**Ekenedilichukwu Nwokoye**

**Harrison Theodhosi**

Mechanical Engineering

*MicroTube Bending Machine*

Adviser: Ioannis Korkolis

**Tristan Ramey**

**Heather Zukas**

Mechanical Engineering

*Handcycle: Using Reverse Pedaling to*

*Produce Forward Motion*

Adviser: Todd Gross

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## Physics/Mathematics

**Group Leaders: Dr. David Mattingly  
and Dr. Sharon McCrone**

**Matthew Blandin**

Physics

*Observation and Classification of Black  
Pulsating Auroral Features*

Adviser: Marc Lessard

**Jonathan Bower**

Physics

*Design Optimization of a Wide Field-of-  
View Plasma Spectrometer*

Adviser: Eberhard Moebius

**Connor Dieter-Leeds**

Physics

*Investigation of High Temperature  
Superconductivity*

Adviser: Eberhard Moebius

**Meghan Fisher**

**Chrystal Moser**

Physics

*Design and Fabrication of a Miniaturized  
Fluxgate Magnetometer for SIGMA and  
Other Cubesats*

Adviser: Marc Lessard

**Cody FitzGerald**

Mathematics and Genetics

*Phylogenetics and the Space of Trees*

Adviser: Seth Sullivant

**Justin Gilman**

Physics

*Improved Construction of 4-point Probe  
for High Temperature Super-conduction*

Adviser: Eberhard Moebius

**Patrick Greene**

Physics

*Phenomenology of a Toy Model Inspired by  
the Spontaneous Reduction of the Spectral  
Dimension of Spacetime at Small Scales in  
Quantum Gravity*

Adviser: David Mattingly

**John Heavisides**

Physics

*Analysis of MICA Data and Instrumentation*

Adviser: Marc Lessard

**Caitlyn Meditz**

Physics

*UNH Nuclear Physics Research*

Adviser: Karl Slifer

**Makenzie O'Meara**

Physics

*The Q-Meter and Nuclear Magnetic  
Resonance*

Adviser: Karl Slifer

**Herbie Smith**

Physics

*The Toric Approach to F-theory  
Model Building*

Adviser: Per Berglund

**Johnson Whippie**

Physics and Kinesiology

*Bringing Superconductivity into the  
Classroom*

Adviser: Dawn Meredith

---

## Teacher Science and Engineering

**Group Leader: Dr. Stephen Hale**

**Mike Handwork**

**Shani Scarponi**

Winnacunnet High School

*Evolution in Action: Experimental  
Evolution of a Harmless Bacterium*

Adviser: Vaughn Cooper

**Matthew Lowell**

Noble High School

*Stress and Pi: Detecting Bridge Health with Raspberry Pi*

Advisers: Erin Bell, Tat Fu

**Michele Mitnitsky**

Dover High School

*Screening Geobacillus Strains for Arsenic Resistance*

Adviser: Kang Wu

**Bethany Poulin**

Pelham High School

*Methods for Measuring Elongation Values in Pattern-etched Ferrous and Nonferrous Metals Using Matlab*

Adviser: Brad Kinsey

**Gregory Samuel Jr.**

Coe Brown Academy

*Molecular Dynamics Simulations of the M37 Lipase from Psychrophilic Photobacterium lipolyticum: Protein Solvation in Water and Methanol*

Adviser: Harish Vashisth

**Rebecca Steeves**

Lin-Wood High School

*Comparing Conductivity Levels along East and Main Branches of the Pemigewasset River*

Adviser: Vaughn Cooper, Mark Green

## UNH Manchester URC Technology Day

### Computing Technology Poster Presentations

**Wednesday, April 22****2-5 p.m.****Pandora Mill  
Manchester****Saverna Ahmad****Peter Ferro****Ryan O'Neal**

Computer Information Systems

*Macintosh Operating System*

Adviser: Earl Labatt Jr

**Nathaniel Biddle****Kenneth Drews****Refik Karic****Kayla Mackiewicz**

Computer Information Systems

*Capstone Project: Tools Group*

Adviser: Michael Jonas

**Nathaniel Biddle****Neil Champagne****Matthew Heyner**

Computer Information Systems

*Linux and You: An Introduction*

Adviser: Earl Labatt Jr

**Zachery Boynton****Garrett Bryant**

Electrical Engineering Technology

**Trevor Downs****Samuel Sweet****Zebadiah Wood**

Computer Information Systems

*Capstone Project: Modeling Group*

Adviser: Michael Jonas

**Zachery Boynton**

Electrical Engineering Technology

**Tyler McClenaghan**

Computer Information Systems

*Cyanobacteria Bloom Reporting*

Adviser: Mihaela Sabin

**Melissa Bruno****Adam Cheney****Mohamed Fadlalla****Kyle Poirier****Christopher Teahan**

Computer Information Systems

*Capstone Project: Systems Group*

Adviser: Michael Jonas

**Melissa Bruno**

Computer Information Systems

*Compliance with Information**Security Standards*

Adviser: Karla Vogel

**Christopher Bye****Forrest Surprenant**

Electrical Engineering Technology

**Kevin Soucey**

Computer Information Systems

*Invasive Species Mapping*

Adviser: Mihaela Sabin

**Krista Cleary****Stephen Griffin****Dakota Heyman****Russell Sweet**

Computer Information Systems

*Capstone Project: Data Group*

Adviser: Michael Jonas

**Brenden Collins****Tyler McClenaghan****Arias Talari**

Computer Information Systems

*Windows OS*

Adviser: Earl Labatt Jr

**Brenden Collins****Arias Talari**

Computer Information Systems

*Event Participant Reporting*

Adviser: Mihaela Sabin

**Seth Costigan**

Electrical Engineering Technology

**Faruk Durakovic****Joshua Young**

Computer Science

**Russell Sweet**

Computer Information Systems

*Place-Based Planning*

Adviser: Mihaela Sabin

**Jonathan Dylun**

Business

**Christopher Nobrega****Meagan Wolf**

Computer Information Systems

*Lake Organism Identification*

Adviser: Mihaela Sabin

**Maryjean Emerson**

Computer Information Systems

**Rachel Roblee****Hannah Yudkin**

Business

*Lake Water Quality Monitoring*

Adviser: Mihaela Sabin

**Justin Gauthier****Frederick Lochner****Greta Milingyte**

Computer Information Systems

*Delving into the AIX Operating System*

Adviser: Earl Labatt Jr

**Morgan Gaythorpe**  
**Taylor Kessel**  
**Benjamin Leith**  
**Nicholas Tello**  
 Computer Information Systems  
*Capstone Project: Experiment Group*  
 Adviser: Michael Jonas

**William Gill**  
**Seth Thompson**  
**Stefanie Thompson**  
 Computer Information Systems  
*Solaris*  
 Adviser: Earl Labatt Jr

**Stephen Griffin**  
 Computer Information Systems  
*SnowSentry: Snow Load System*  
 Adviser: Mihaela Sabin

**Refik Karic**  
 Computer Information Systems  
**Vitali Taranto**  
 Computer Science  
*Equipment Lending Library*  
 Adviser: Mihaela Sabin

**Taylor Kessel**  
**Camden Marble**  
**Ryan Warrick**  
 Computer Information Systems  
*Android OS*  
 Adviser: Earl Labatt Jr

**Dylan Lindstrom**  
**Christopher Teahan**  
 Computer Information Systems  
*iOS Research Project*  
 Adviser: Earl Labatt Jr

**Nicholas Tello**  
 Computer Information Systems  
*WYSE Thin Client Manager @ SAU40*  
 Adviser: Karla Vogel

## UNH Manchester Undergraduate Research Conference

### Poster Presentations

**Wednesday, April 22**  
**3:30-6 p.m.**  
**University Center**  
**Manchester**

The UNHM Poster Presentations showcase students' independent research and internship projects, service learning activities and civic engagement projects in the learning lab of the city of Manchester.

**Jessica Allanach**  
 Communication  
**Kelsey Sanborn**  
 Communication and Psychology  
*Needs Assessment for YWCA: Financial Literacy for Recent College Graduates*  
 Adviser: Alison Paglia

**Kyle Bassler**  
 History  
*Crime in Antebellum Manchester*  
 Adviser: Robert Macieski

**Jessalyn Benson**  
 History and Environmental  
 Conservation Studies  
*Manchester and the Merrimack*  
 Adviser: John Cerullo

**Lizabeth Bryant**  
 Biological Sciences  
*Clostridium difficile*  
 Adviser: Stephen Pugh

**David Ciampa**  
 History  
*Amoskeag: Portrait of the Emergence of Corporate Power Structure*  
 Adviser: Robert Macieski

**Mason Cross**  
 Biological Sciences  
*Cardiac Catheterization*  
 Adviser: Stephen Pugh

**Evan DaSilva**  
 Biochemistry, Molecular and  
 Cellular Biology  
**Randi Foxall**  
**Ian Ster**  
 Undeclared  
**Ryane Staples**  
 Biological Sciences  
*Measuring the Gene Expression of a Siderophore Biosynthetase in a Low Siderophore Producer Vibrio fischeri Strain*  
 Adviser: Cheryl Whistler

**Morgan Descoteaux**  
 Biological Sciences  
*Patient Care in a Healthcare Clinic*  
 Adviser: Stephen Pugh

**Victoria DiPippo**  
 Humanities  
*Decadence and the Theory of Degeneration in Fin-de-Siècle France*  
 Adviser: John Cerullo

**Taryn Harpool**  
 Biological Sciences  
*The Science of Sales*  
 Adviser: Stephen Pugh

**Courtney Holdsworth**  
 Biological Sciences  
*Water Testing Lab Experience at Manchester Water Works*  
 Adviser: Stephen Pugh

**Amanda Johnson**  
 History  
*Mill Girls*  
 Adviser: Robert Macieski

**Amelia Keane**  
 Biological Sciences  
*Soka Education: A Foundation in Humanities*  
 Adviser: Stephen Pugh

**Tori Kelley**  
 Psychology  
**Sierra Soucy**  
 Communication Arts  
*Needs Assessment for YWCA: Marketing Strategies*  
 Adviser: Alison Paglia



**Alexander Larochelle**

Biological Sciences

*The Structure and Diversity of Zooplankton in Lake Massabesic*

Adviser: Stephen Pugh

**Sean Lavelle**

History

*Political Dogma of Antebellum Manchester*

Adviser: Robert Macieski

**Torrie Lemon**

Biological Sciences

*Working as an LNA for Residents with Alzheimer's and Dementia*

Adviser: Stephen Pugh

**Jason Lindner**

Biological Sciences

*The Role of a Hospital Phlebotomist*

Adviser: Stephen Pugh

**Joman Mahmod**

Biological Sciences

*A Pharmacist in Jordan vs. A Pharmacist in the US*

Adviser: Patricia Halpin

**Elizabeth McLaughlin**

Biological Sciences

*Strokes: Signs, Symptoms, and Treatment*

Adviser: Patricia Halpin

**Mary Nalasco**

Biological Sciences

*Field Paleontology in Bighorn Basin, Wyoming*

Adviser: Stephen Pugh

**Michael Neveu**

Biological Sciences

*Introduction to Dental Implant Restoration*

Adviser: Stephen Pugh

**Alyssa Paquin**

Psychology

*Delayed Effects of mTBI on Executive Functioning*

Adviser: Daniel Seichepine

**Jesse Pinard**

Biological Sciences

*An Introduction to Molecular Genetic Techniques for the Study of Vibrio parahaemolyticus*

Advisers: Patricia Halpin, Cheryl Whistler

**Bruce Rheume**

Biological Sciences

*Genome Sequencing of the Deep-Sea Bacterium *Idiomarina abyssalis**

Adviser: Kyle Mac Lea

**Michael Rocheleau**

Biological Sciences

*Laboratory Technology and Preparation*

Adviser: Patricia Halpin

**Carolyn Silva****Alexandra Topham**

Psychology

*Needs Assessment for the YWCA: Work-Life Balance of Recent College Graduates*

Adviser: Alison Paglia

**Lauren Simmons**

Biological Sciences

*SEE Science Center Internship*

Adviser: Stephen Pugh

**Cori Steck**

Biological Sciences

*LNA: Home Healthcare*

Adviser: Stephen Pugh

**Taran Thapa**

Biological Sciences

*A Day at the Family Health Center-Concord Hospital*

Adviser: Stephen Pugh

**Chelsie Veilleux**

English and History

*The Pandora Mill - from Textiles to Education*

Adviser: Robert Macieski

**Scott Webster**

Biological Sciences

*Nuclear Medicine: The PET Scan*

Adviser: Stephen Pugh

**Phylicia Wisti**

Biological Sciences

*Determining *Peromyscus Mice* Species Distribution Using Polymerase Chain Reaction and Gel Electrophoresis*

Advisers: Kyle MacLea, Stephen Pugh

## UNH Manchester Undergraduate Research Conference Cinema Arts Day

**Thursday, April 23****10 a.m.-1 p.m.****University Center  
Manchester**

The UNHM Communication Arts program has a production track in which students complete introductory and advanced course work in video production, scriptwriting, audio production, film aesthetics, and documentary production. The student films and scripts illustrate student work at different stages in the curriculum.

**Steven Galante**

Communication Arts

*A Day in the Life (Short Film)*

Adviser: Anthony Tenczar

**Andrew George**

Computer Information Systems

*Outbreak Radio Transmission*

Adviser: Anthony Tenczar

**Houston Green**

Communication Arts

*JetHou (Audio Presentation) Habits (Video presentation) Where Are We (Video Presentation)*

Adviser: Anthony Tenczar

**Courtney Holdsworth****Lauren Simmons**

Biological Sciences

*Ringworm*

Adviser: Patricia Halpin

**Alexander LaRoza**

Communication Arts

*Identity Crisis*

Adviser: Anthony Tenczar

**Alexander Lessard**

Communication Arts

*Baleful*

Adviser: Anthony Tenczar

**Meghan Martell**  
Communication Arts  
*Drowsy*  
Adviser: Anthony Tenczar

**Meghan Martell**  
Communication Arts  
*Beauty In Your Eyes*  
Adviser: Anthony Tenczar

**Therese Mehrmann**  
Biological Sciences  
*Adaptations of Respiratory Systems in Aquatic Macro-Invertebrates*  
Adviser: Patricia Halpin

**Christina Minervini**  
Communication Arts  
*Procrastination*  
Adviser: Anthony Tenczar

**Cole Riel**  
Communication Arts  
*Dinner, a Short Film by Cole Riel*  
Adviser: Anthony Tenczar

**Alexis Scargill**  
Communication Arts  
*A Conversation with Arnie Arnesen*  
Adviser: Ian Reddick

## History Department Undergraduate Presentations

**Thursday, April 23  
12:30-2 p.m.  
Memorial Union Building  
Rooms 334, 336, and 340**

The History Department hosts several panels of undergraduate history majors who present research projects from their academic classes, research seminars, independent research projects, and Honors theses. The History Undergraduate Presentations provide History students with the opportunity to share their work with fellow students, professors, and families.

**MUB, Room 334, 12:15-1:15 p.m.**

### **Panel I.A: Piracy, and Religious and Ethnic Factors in History**

Moderator: Cynthia Van Zandt

**Benjamin Bertrand**  
History  
*Renegades: A Tale of Conversion and Piracy in the 17th Century*  
Adviser: Cynthia Van Zandt

**Aaron Cooper**  
History  
*A Trade to 'Dye' for: British Pirates and Loggers in the Yucatan During the Age of Exploration*  
Adviser: Cynthia Van Zandt

**William Dykes**  
History  
*Analyzing the Successes and Failures of European Pirates and Settlers at Madagascar*  
Adviser: Cynthia Van Zandt

**MUB, Room 334, 1:15-2 p.m.**

### **Panel I.B.: Religious and Ethnic Factors in History**

Moderator: Cynthia Van Zandt

**Benjamin Bertrand**  
History  
*Examining Depictions of Muslims in the Middle Ages*  
Adviser: David Bachrach

**Megan Liu**  
History  
*The Jewish Communities of al-Andalus*  
Adviser: Yan Lu

**MUB, Room 336, 12:15-2 p.m.**

### **Panel II: Murder, Massacre, Conspiracy, Epidemics, and Gigantomania: Interdisciplinary Approaches**

Moderators: Cathy Frierson and Lucy Salyer

**Steven Cowley**  
History  
*Mapping the Regicides: Using Geographic Information Systems (GIS) to Understand the Manhunt for the Killers of Charles I in 17th-Century New England*  
Adviser: Cynthia Van Zandt

**Kelsey Diemand**  
History  
*The Trials and Tribulations on King Street: John Adams and the Boston Massacre Trials*  
Adviser: Eliga Gould

**Lisa Harning**  
History  
*Comparing and Contrasting Social, Political, and Medical Reactions of 19th-Century Cholera Epidemics in London and New York City*  
Adviser: Nicoletta Gullace

**Joseph Juknievich**  
History  
*Seeing Red: An Examination of the Palmer Raids in New Hampshire and Massachusetts, 1919-1920*  
Adviser: Lucy Salyer

**Sean Thoen (McNair Scholar)**  
History and Russian  
*The Myth of Socialist Industrialization: The Quest to Conquer Time and Space at Magnitostroi*  
Advisers: Cathy Frierson, Ronald LeBlanc

**MUB, Room 338, 12:15-2 p.m.**

**Panel III: Myths and Ideals in Revolution**

Moderator: Janet Polasky

**Peter Bacho**

History

*Thomas Paine*

Adviser: Janet Polasky

**Matthew Dobart**

History

*Napoleon Bonaparte, the Hero of the French Revolution*

Adviser: Janet Polasky

**Christina Doherty**

History

*First in the Hearts of his Countrymen: American Myth and George Washington*

Adviser: Janet Polasky

**Tyler MacDonald**

History

*All Men Are Created Equal: Jefferson's Policies on Slavery and Natives*

Adviser: Janet Polasky

**Erik VanDenBerghe**

History and Political Science

*The Part Catholicism Played in Belgium's Independence of 1830*

Adviser: Janet Polasky

**The Naked Arts—Creativity Exposed!**

**Act II**

**Thursday, April 23**

**12:40-2 p.m.**

**Museum of Art**

**Paul Creative Arts Center**

This event exposes the inner creative process of artists working in various disciplines. Presenters will describe the process, research, and other creative aspects undertaken to bring an artistic creation from initial inspiration to the stage or gallery. This may include a performance or excerpts from their work to illustrate their creative scholarship.

**Matthew Blum**

Theatre: Dance

*My Resolution*

Adviser: Gay Nardone

**Dominic Ryder**

Music Education

*Performance and Analysis of Iannis Xenakis's Rebonds B*

Adviser: Ryan Vigil

**Olivia Sowell**

Theatre

*Hitting a Wall: An Artist's Fear of Failure*

Adviser: David Kaye

**Andrew Upton**

Fine Arts, Photography

*BFA Thesis*

Adviser: Leah Woods

**Parents Association Undergraduate Research Symposium**

**Welcome Breakfast**

**Friday, April 24**

**9-9:30 a.m.**

**Memorial Union Building, Granite State Room**

This informal gathering gives students, faculty and attendees an opportunity to visit before experiencing the large university-wide event that follows - the Parents Association Undergraduate Research Symposium.

**Parents Association Undergraduate Research Symposium**

**Poster Presentations, Session A**

**Friday, April 24**

**9:30-10:40 a.m.**

**Memorial Union Building, Granite State Room**

The Parents Association Undergraduate Research Symposium showcases students from all disciplines. Students present their faculty-mentored projects in either of two interactive poster sessions, or in one of the three oral presentation sessions. University-wide participants come from a variety of disciplines.

**Timothy Amoroso**

Neuroscience and Behavior

**Tina Cannon**

Ashley Desrochers

**Angela Neal**

Psychology

**Chloe Flanagan**

Psychology and Women's Studies

**Brandon Marshall**

Neuroscience and Behavior

*He Said, She Said: Examining Couple**Conflict in Romantic Relationships*

Adviser: Katie Edwards

**Susana Arciniegas****Jillian Aslin****Leah Burke**

Justice Studies and Psychology

*The Role of Demographics, Popularity, and**Peer Legitimacy on Bullying Behavior*

Adviser: Ellen Cohn

**Jordan Badger**

Nutrition

**Mathew Biondolillo**

Psychology

*Does Stage of Change Mediate the Impact**of a Motivator to Increase Activity Levels**Among College Students?*

Advisers: Summer Cook, Jesse Morrell,

David Pillemer

**Jacob Bull**

Psychology

**Siri Cope**

Justice Studies and Psychology

*Ending Stigma through Education:**A Mental Health Curriculum*

Adviser: Joan Glutting

**Laura Damato****Brandon Fall****Jonathan Littlefield****Dana Merrill****Daniel Powell****Daniel Valente**

Mechanical Engineering

**Roland Lacroix**

Electrical Engineering

**Jeffrey Lapointe****Carlos Perez-Ruiz****Michael Upchurch****Anthony Urena**

Computer Science

*ET-NavSwarm*

Advisers: Thomas Fuller, Michael Johnson,

May-Win Thein, Se Young Yoon

**Tien Dang (McNair Scholar)**

Biomedical Science

**Joseph Miseirvitch**

Animal Science

*Characterizing the Angiogenic Properties**of Brain Cancer Cells Using the Glioma**U-373 Cell Line*

Adviser: Paul Tsang

**Lauren DeSotto**

Psychology

**Valerie Hall**

Psychology

*Who's Intervening?: A Study of Variables**Influencing Positive Bystander Intervention*

Adviser: Katie Edwards

**Jennifer Dickson**

Biomedical Science

*The MinION: A Miniaturized DNA/RNA**Sequencer*

Adviser: Matthew Macmanes

**Andraya Ehrlich**

Biology

**Sarah Piet**

Biochemistry, Molecular and Cellular

Biology

**Nicolette Schwab**

Biomedical Science

*The Influence of Extracellular-Regulated**Kinases (ERKs) on Granulosa Cell Fate in**the Bovine Follicle*

Adviser: David Townson

**Andraya Ehrlich**

Biology

**Cameron Graaskamp**

Biochemistry, Molecular and Cellular

Biology

*Investigation of a Fas Decoy Receptor in**the Bovine Corpus Luteum*

Adviser: David Townson

**Keelan Forey**

Health Management and Policy

*Attitudes, Behaviors, and Beliefs of At-Risk**Men and Women Regarding the Human**Papillomavirus and Its Vaccine*

Adviser: James Lewis

**Nihco Gallo**

Mechanical Engineering

*Subtlety, Sophistication, and the**Contemplation of Proportion*

Adviser: Leah Woods

**Laura Galvin**

Kinesiology

*Walking Speed and Quality of Life in Older**Adults at Risk for Mobility Limitations*

Adviser: Summer Cook

**Sarah Garstka**

Nutrition

*Photovoice: Perceptions of Somersworth,**NH Youth on Safety, Health, and Overall**Well-Being in Their Local Community*

Adviser: Semra Aytur

**Tricia Gunther**

Wildlife and Conservation Biology

*The Relationship between Kinship and**Physical Proximity in Captive Primates*

Adviser: Leslie Curren

**Stephanie Harding**

Health Management and Policy

*Differences in Patient Satisfaction between**Critical Access and Prospective Payment**System Hospitals in Northern New England*

Adviser: Leslie MacLeod

**Olivia Hastings**

Communication Sciences and Disorders

*Stereotypes and Stigma of Non-Native**Accent: Character and Cultural Portrayals**in Children's Film*

Adviser: Jeanne O'Sullivan



**Crystal Hermawan**

Biomedical Science

**Nicole Jaskiewicz**

Biochemistry, Molecular and Cellular Biology

*O-GlcNAcylation Alters Keratin 8/18 Architecture of HPV-16 Infected Cervical Cancer (SiHa) Cells*

Adviser: David Townson

**Nicole Jaskiewicz**

Biochemistry, Molecular and Cellular Biology

**Stephanie Parisi**

Biomedical Science

*In Vitro Effects of O-GlcNAcylation on Keratin 8/18 Filaments in Cervical Cancer Cells*

Adviser: David Townson

**Jennifer Lange**

Occupational Therapy

*Promoting Social Interaction Skills to Influence Employment for Older Youth with Autism Spectrum Disorders*

Adviser: Lou Ann Griswold

**Elsa Lindgren**

Neuroscience and Behavior

*Investigating the Relationship between Dementia and Other Health Factors Using the St. Louis University Mental Status Exam and Primary-Care Health Measures*

Advisers: Robert Drugan, Rebecca Warner

**Timothy Marquis**

Biomedical Science

*A Proto-Pluritropic Cell Type and Its Expression of Novel Glycoprotein Hormones in the Pituitary of the Basal Vertebrate, the Sea Lamprey*

Adviser: Stacia Sower

**Keshav Nepal (McNair Scholar)**

Biomedical Science

*The Influence of OmniGen AF on Immune Cell Accumulation, Ovulation Rate and Fertility in the Female Rat*

Adviser: David Townson

**Amy Parker**

Nutrition

*Early Sleep Midpoints Are Associated with Increased Fruit, Water, and Fiber Intakes**and Decreased Discretionary Calories in a Young Adult Cohort*

Adviser: Jesse Morrell

**Taylor Patterson**

Geography

*Mapping Campus Monuments and Memorials: Evaluating Place and Space*

Adviser: Mary Stampone

**Shayna Purdy**

Zoology

**Nicole Sharpe**

Biology

*Alteration of Flight Initiation Distance in House Sparrows (*Passer domesticus*) in Response to Potential Predators and Environmental Factors*

Adviser: Leslie Curren

**Jaclyn Querido**

Nutrition

*How Does Inaccurate Perception of Weight Compared to Actual BMI Status Affect the Diet Score of College Students?*

Adviser: Jesse Morrell

**Jessica Salley**Communication Sciences and Disorders  
*Academic, Athletic, and Social Effects of Concussions*

Adviser: Bryan Ness

**Allison Scagel**

Wildlife and Conservation Biology

*Does Being Alone Induce Stress in Domestic Dogs (*Canis lupus familiaris*)?*

Adviser: Leslie Curren

**Laura Van Beaver**

Neuroscience and Behavior

*Production of Decaffeinated Tea through Genetic Engineering*

Adviser: Subhash Minocha

**Alanna Young**

Occupational Therapy

*Friendships for Older Youth with Autism Spectrum Disorder*

Adviser: Lou Ann Griswold

**MUB, Granite State Room****Advanced Technical Writing**

Adviser: Christine O'Keefe

**Cole Caviston**

Political Science

*Trends in Technical Writing (Journalism and Political Science)***Robert Chase**

Political Science

*Technical Writing in Washington***Jennifer Coneeny**

English

*Anything to Do with Technical Writing***Sara Cormier**

English

*Technical Writing in the Publishing World***Peter Klouda**

English

*Professional and Technical Writing in Editing*

Adviser: Petar Ramadanovic

**Sophie Mushell**

English

*Technical Writing: English Major***Madalyn Northcutt**

English

*Trends in Insurance Field***Amelia Ordway**

English

*Trends in Technical Writing***Melanie Platt**

Linguistics

*Dialect Change in Southern NH***Marissa Ramsdell**

English

*Professional and Technical Writing in Equine Management***Molly Roman**

English

*Technical Writing in Sales and Marketing*

## Parents Association Undergraduate Research Symposium

### Oral Presentations, Session A

**Friday, April 24**  
**9:30-10:40 a.m.**  
**Memorial Union Building**

The Parents Association Undergraduate Research Symposium showcases students from all disciplines. Students present their faculty-mentored projects in either of two interactive poster sessions, or in one of the three oral presentation sessions. University-wide participants come from a variety of disciplines.

#### MUB, Room 207

### ***Classics and Italian Studies: Identity and Status in Ancient Greece, Italy and the Italian Diaspora***

Moderator: Amy Boylan

**Kaelina Lombardo**  
Genetics

*Sacco and Vanzetti: An Exploration of the Incident That Changed Their Lives as Presented in the Media*  
Adviser: Amy Boylan

**Madison Pierce**  
English Teaching  
*Eugenics and the Italian American Experience*  
Adviser: Amy Boylan

**Emily Schostack**  
Art History and Classics  
*Vergil and the Emperor in Pompeii*  
Advisers: Harriet Fertik, Eleanor Hight, Robert Smith

**Jack Vachon**  
Classics and History  
*Putting Greek Myths on the Map: Homer's Catalog of Ships*  
Adviser: Robert Smith

#### MUB, Room 233

### ***Comm-entary 2015: A Selection of Research Published in the Student Communication Journal***

Moderator: Kevin Healey

**Gennifer Davidson**  
Communication  
*How to Live*  
Adviser: Michael Jackson

**Lauren Nawfel**  
Communication  
*Beyond Digital Dualism: The Conceptual Fallacy of the Online/Offline Dichotomy*  
Adviser: Michael Soha

**Emily Sorey-Backus**  
Communication  
*What Is Expected of a Man*  
Adviser: Jennifer Borda

**Jessica Wojenski**  
Communication and Women's Studies  
*Re-Defining Political Activism in Post-Modernity*  
Adviser: Michael Soha

#### MUB, Room 321

### ***Effects of Aerobic and Resistance Exercise Training***

Moderator: Robert Kertzer

**Rebecca Daniels**  
Kinesiology  
*Effects of Resistance Training on Power and Function in Older Adults*  
Adviser: Summer Cook

**Nicole DeMidio**  
Kinesiology  
*Myocardial Perfusion following High-Intensity Interval and Aerobic Exercise in Males*  
Adviser: Tim Quinn

**Ashley Meyer**  
Kinesiology  
*Sex Differences in Regional Distribution of Muscle, Intermuscular and Subcutaneous Adipose Tissue in Older Adults*  
Adviser: Summer Cook

**Cory Snyder**  
Kinesiology  
*Does High-Intensity Intermittent Exercise Volume Impact Arterial Compliance in High-Intensity Trained Athletes?*  
Adviser: Tim Quinn

**Elissa Solomon**  
Kinesiology  
*Assessment of Delayed-Onset Muscle Soreness in College-aged Females following a Bout of Blood-Flow-Restricted Exercise*  
Adviser: Summer Cook

#### MUB, Room 237

### ***Exploring Anthropology: Session I***

Moderator: Meghan Howey

**Jennifer Allen**  
Biomedical Science and English  
*How Patients Think: An Assessment of Clinician Competence*  
Adviser: Natalie Porter

**Leslie Duff**  
Anthropology  
*Examining Distributions of Turtle Bone and Obsidian Associated with Circular Shrine Structures*  
Adviser: Eleanor Harrison-Buck

**Jennie Marinucci**  
Biomedical Science  
*Cross-Cultural Gerontology: Exploring Successful Aging from a Health Professional View*  
Adviser: Natalie Porter

**Madeline Moison**  
Anthropology  
*Anthropology and The University*  
Adviser: Sara Withers

**Benjamin Rideout**  
Anthropology  
*Cultural Contact in the Ancient Near East: The Effects of the Egyptian Empire on its Neighbors*  
Adviser: Meghan Howey

**MUB, Theatre I****Exploring Spanish: Session I**

**Moderator:** John Chaston  
**Judge:** Holly Cashman

**Marie Ainaire**

Spanish

*The Communicative Effects of Indirect Object Pronoun and Preposition Placement in Spanish*

Adviser: John Chaston

**Kevin Dwyer**

International Affairs and Spanish

*Getting the Most Out of a Conversation: Learning New Vocabulary*

Adviser: Lina Lee

**Spencer LeFlem**

Spanish

*Expressing Obligations, Necessity, and Convenience in Spanish: Uses of Subjunctive, Indicative, and Infinitive*

Adviser: John Chaston

**John O'Mahony**

Spanish

*Translating Zafrón: The Nuances of Exploring the Cemetery of Forgotten Books in English*

Adviser: John Chaston

**Jaime Reagan**

Spanish

*Word Order and Meaning in Spanish Reverse Constructions*

Adviser: John Chaston

**MUB, Room 330**

**International Affairs: Challenges in Sustainable Development: Poverty, Inequality, and the Environment**

**Adviser:** Molly Wallace  
**Moderator:** Jennifer Purrenhage

**Olivia Loos**

International Affairs and Economics  
*Chilean Microenterprise Development: Threats, Opportunities, and Successes*

**Aseebulla Niazi**

International Affairs and International Business and Economics

*Building a Mega City, Cheating Migrant Workers: The Role of Migrant Workers in the Development of UAE*

**Leonidas Ocampo**

International Affairs and Political Science

*The Smog: Air Quality and Pollution in Beijing*

**Elizabeth Resnick**

International Affairs and Political Science

*Growing Inequality in Public Education: Maintaining the Status Quo in Argentina*

Adviser: Molly Wallace

**Hannah Whalen**

International Affairs and Environmental Conservation Studies

*Assessing the Effectiveness of Ecotourism in Costa Rica*

**Molly Wogan**

International Affairs and Spanish

*A Societal Greyscale: Social Stratification in the Dominican Republic*

**MUB, Room 332**

**International Affairs: Dimensions of Culture: Media, Food, Language, Business**

**Adviser:** Molly Wallace  
**Moderator:** Alex Lindsay

**Morgan Karanasios**

International Affairs and Political Science  
*French Visual Culture in Its Magazines*

**Emily Loud**

International Affairs and Linguistics

*France's Reaction to English Globalization*

**Mackenzie Mozitis**

International Affairs and Management

*The Impact of Globalization on Italian Food Culture*

**Chad Perkins**

International Affairs and German  
*Global Stereotypes and the Media's Influence: The Case of American Stereotypes in Germany*

**Alexandra Roy**

International Affairs and Management  
*Culture in the Italian Workforce*

**MUB, Room 336**

**International Affairs: Global Health Issues**

**Adviser:** Molly Wallace  
**Moderator:** Jerry Marx

**Ashley Cochran**

International Affairs and Spanish  
*The Modern Pursuit for the Fountain of Youth in Costa Rica*

**Ayi D'Almeida**

International Affairs and Psychology  
*Why the U.S. Youth Obesity Rate Has Been Increasing: It's Not as Simple as You Think*

**Christian Seasholtz**

International Affairs and Biomedical Science  
*The Doctor Will See Your Social Security Card Now: Spanish Healthcare in the Wake of Recession*

**Catherine Wanjiru**

International Affairs and Tourism Planning and Development  
*Women Living with HIV/AIDS: Comparing Communities in Kenya and the U.S.*

**MUB, Room 334**

**International Affairs: National Identities and Economies in the EU**

**Adviser:** Molly Wallace  
**Moderator:** Gregg Orifici

**Christine DiGirolamo**

International Affairs and Information Systems Management  
*Divided Spain: Independence Movements in the Basque Country and Catalonia*

**Allison Enck**

International Affairs and Environmental  
Conservation Studies

*The Role of the EU and Globalization in  
the Catalan Independence Movement*

**Gretchen Klempa**

International Affairs and Political Science  
*France's Objection to Turkey's Accession to  
the EU*

**Cameron Palczynski**

International Affairs and Linguistics  
*Public Perceptions of the Rise of German  
Nationalism*

**Catherine Pinone**

International Affairs and Spanish  
*The Impact of the Euro on the Spanish  
Economy*

**MUB, Room 340**

**Multidisciplinary Session I:  
Exploring the Outdoor  
Experience**

Moderator: Brent Bell

**Bradley Anderson**

Nutrition  
*Dietary Characteristics of Long-Distance  
Hikers: A Cross-Sectional Study of the  
Nutritional Needs of Long-Distance Hikers  
on the Appalachian Trail*  
Adviser: Jesse Morrell

**Christien Clark**

Environmental Conservation Studies  
*My Philosophy of Education*  
Adviser: Brent Bell

**Anne Howard**

Sustainable Agriculture and Food Systems  
and Humanities  
*Philosophy of Outdoor Education: Mentor-  
ship and Authenticity*  
Adviser: Brent Bell

**Sophie Rathjen**

Kinesiology and Sustainable Agriculture  
and Food Systems  
*Critical Thinking: A Perspective Beyond  
Your Own*  
Adviser: Brent Bell

**MUB, Strafford Room**

**Multidisciplinary Session II:  
Examining Memory, Persuasion,  
and Parenting**

Moderator: Ellen Cohn

**Victoria Barnaskas**

Sociology  
*The Effects of Helicopter Parenting on  
College Students*  
Adviser: Catherine Moran

**Melissa Dongo (McNair Scholar)**

Psychology  
*Evaluating Episodic Memory in Children  
Using a Science-Learning Event*  
Adviser: Michelle Leichtman

**David Wigemark**

Neuroscience and Behavior  
*The Implications of Brain Oscillations on  
the Relationship between Source Memory  
and MAO-A Gene Variations*  
Adviser: Robert Ross

**Shannon Zimmerman**

Psychology  
*Power of Persuasion: How Group Dynam-  
ics and Behaviors Influence Juror Decisions*  
Adviser: Ellen Cohn

**MUB, Room 338**

**Optimizing Techniques in the  
Health Sciences**

Moderator: Ben Towne

**Ashley Bartlett**

Athletic Training

**Max Hendrickx**

**Ashley Saracy**  
Athletic Training and Kinesiology  
*Overbuilt-Style Football Helmet Face-  
masks and Their Perceived Influence on  
Player Behavior*  
Advisers: Johna Register-Mihalik,  
Erik Swartz

**Anna Brilliant**

Kinesiology  
*Test-Retest Reliability of Isometric Knee  
Extension Strength Asymmetry*  
Adviser: Dain LaRoche

**Julia Carney****Brett Sexton**

Athletic Training  
*Prevention of Head Impacts in Football Using  
the HuTTM Technique: Season One*  
Adviser: Erik Swartz

**Sarah Flaherty**

Kinesiology  
*Using a Peer-Guided Model to Enhance  
Participation in an Exercise Program for  
Young Adults with Intellectual Disabilities*  
Adviser: Michelle Grenier

**Kelsey Zukowski**

Occupational Therapy  
*Criterion-Related Validity of the Children's  
Occupational Performance Questionnaire*  
Adviser: Shelley Mulligan

**MUB, Room 203**

**Political Science: Chinese War  
and Peace**

Adviser: Lawrence Reardon

Moderator: Lionel Ingram

**Jacob Bacon**

Political Science  
*China's Expanding Military and  
Maritime Disputes*

**James Caviston**

Political Science  
*The Chinese Dragon Goes to Sea*

**Carson Chapman**

Political Science  
*China's Development of a Blue Water Navy*

**Malone Soeun**

Political Science  
*Tensions Rising in the Asia-Pacific*

**Connor White**

Political Science  
*The Fall of Sino-US Relations and the  
Rise of the PLAN*

**MUB, Room 304****Political Science: Making Money by Hook or by Crook**

Adviser: Lawrence Reardon  
Moderator: Christine Turner

**Sean Hogan**

Economics

*State, Industry, and Competitive Advantage*

**Joseph Skerry**

Political Science

*ISIS/ISIL*

**Joseph Sweeney**

Political Science

*Flexing Resources: Manipulation of Natural Resource Market Supplies*

**Travis Szczepaniak**

Political Science

*The Standard Oil Monopoly: Changing the Future of Big Business*

**MUB, Rockingham Lounge****Political Science: Multicultural Theory**

Adviser: Marla Brettschneider  
Moderator: Michael Cole

**Francesca Bragan**

International Affairs and Political Science

*Ferguson vs. Pumpkinfest #1: A Study of Race Bias in Media Coverage*

**Adam Howard**

Political Science

*Ferguson vs. Pumpkinfest #2: A Study of Race Bias in Media Coverage*

**Cecilia Martins**

Justice Studies and Political Science

*Institutions of Service: A Model That Sustains*

**Robert Richard-Snipes**

Political Science and Women's Studies

*Ferguson vs. Pumpkinfest #3: A Study of Race Bias in Media Coverage*

**Kelsey Walsh**

Political Science

*Ferguson vs. Pumpkinfest #4: A Study of Race Bias in Media Coverage*

**MUB, Room 302****Political Science: Rewriting History, Chinese-Style**

Adviser: Lawrence Reardon  
Moderator: Chen Haojun

**Jenna Calcavecchia**

International Affairs and German

*China U: Confucius Institutes and the Impact on Higher Education*

**Andrew Collyer**

Political Science

*Chinese Military Modernization in a Changing World*

**Martin McCormick**

Political Science

*China's Past Haunting Their Present*

**Tanner O'Brien**

Political Science

*Censoring the Chinese Internet*

## Parents Association Undergraduate Research Symposium

**Poster Presentations, Session B**

**Friday, April 24**

**10:50 a.m.-Noon**

**Memorial Union Building,  
Granite State Room**

The Parents Association Undergraduate Research Symposium showcases students from all disciplines. Students present their faculty-mentored projects in either of two interactive poster sessions, or in one of the three oral presentation sessions. University-wide participants come from a variety of disciplines.

**Stefanie Allen**

Psychology

**Jenna Clarkson**

Psychology and Biochemistry, Molecular and Cellular Biology

*Negative Life Events and Their Effect on RVB*

Adviser: Ellen Cohn

**Timothy Amoroso**

Neuroscience and Behavior

*A Comparison of Prolonged Exposure Therapy and MDMA-assisted*

*Psychotherapy in People with Chronic*

*Posttraumatic Stress Disorder*

Adviser: Katie Edwards

**Aisha Bhutto**

Psychology

*Examining the Relationship Between*

*Prosodic Variability and Gesture Rates in Spontaneous Speech*

Adviser: Maureen Gillespie

**Matthew Birkebak****Timothy Brown**

Mechanical Engineering

*Harbor Security System*

Advisers: Shachak Pe'eri, May-Win Thein

**Samantha Boulton****Mary Mullen**

Nursing

*Women's Studies: Race Matters*

Advisers: Courtney Marshall

**Victoria Clark**

Family Studies

**Meagan Dow****Bradley Moore**

Undeclared

**Jake Reardon**

Athletic Training

*What is the Risk of Not Sleeping?*

Adviser: Brent Bell

**Hannah Cole****Kala Frye****Jacqueline Sullivan**

Neuroscience and Behavior

*The Role of Dietary-derived Pigments in the Nudibranch Melibe leonina*

Adviser: Winsor Watson



**Kerry Cottle**

Occupational Therapy  
*Exploring the Adaptive Process of Artists with Acquired Disability*  
 Adviser: Kerryellen Vroman

**Alana Davidson**

Nutrition  
*Food Insecurity Among Undergraduate Students*  
 Adviser: Jesse Morrell

**Lisa Demaine**

Environmental Sciences  
*Collaboration and Implementation by Citizens and Scientists*  
 Advisers: Malin Clyde, Alyson Eberhardt

**Danielle Desmarais**

Biomedical Science  
*Ebola Preparedness in the United States*  
 Adviser: Thomas Pistole

**Sarah DiIanni****Nicholas Duggan****Hanne Hansen****Jaclyn Johnston****Amanda LeBel****Patricia Levesque****Megan Lusignan****Hayley Robertson****Ahlia Slone**

Neuroscience and Behavior

**Andrew Kitt**

Psychology  
*The Effects of Spatial Frequency on Global and Local Stereo Acuity*  
 Adviser: William Stine

**Sarah DiIanni****Nicholas Duggan****Hanne Hansen****Jaclyn Johnston****Amanda LeBel****Patricia Levesque****Megan Lusignan****Hayley Robertson****Ahlia Slone****Eliza Wood**

Neuroscience and Behavior  
*The Role of Putative On- and Off-Cell Channels in Motion Induced Blindness*  
 Adviser: William Stine

**Janice Disla (McNair Scholar)**

Psychology  
*Overparenting: A Cross-Cultural Analysis*  
 Adviser: David Pillemer

**Zachary Doucette**

Health Management and Policy  
*Student Health Benefits Plan Marketing Research*  
 Adviser: James Lewis

**Joshua Evans**

Biomedical Science  
*The Effects of Polybrominated Diphenyl Ether (PBDE) Dose on Hepatic Phosphoenolpyruvate carboxykinase (PEPCK) Enzyme Activity in Rats*  
 Adviser: Gale Carey

**Lisa Flaman**

**Melissa Ryan**  
 Genetics

**Nicole Petersen****Megan Thompson**

Biochemistry, Molecular and Cellular Biology  
*Identification and Characterization of Genes Involved in Root Growth Under Salt Stress in Arabidopsis*  
 Adviser: Estelle Hrabak

**Chloe Flanagan**

Psychology and Women's Studies

**Ellen Haynes****Angela Neal**

Psychology

**Kayla Putnam**

Social Work  
*Role-Play: Hyper-Gender Ideology and Women's Dating Violence Perpetration and Victimization*  
 Adviser: Katie Edwards

**Emily Fontaine**

Linguistics

**Emily Vaughn**

Nursing  
*How Media Polarizes the Genders*  
 Adviser: Courtney Marshall

**Holly Foshier**

Recreation Management and Policy  
*Exploring New Hampshire Recreation Directors' Perceptions of Youth Sports Leadership and Coach Development*  
 Adviser: Robert Barcelona

**Akaylah Glidden**

Ecogastronomy and Nutrition

**Mary Hammar****Brenna Robinson****Emily Villeneuve**

Nutrition

*Does the UNH Campus Offer a Healthy Eating Environment?*

Adviser: Jesse Morrell

**Karlyn Greene**

Psychology and Political Science  
*Action Oriented vs. Expressive Goals in Disclosure of Victimization*  
 Adviser: Victoria Banyard

**Lauren Guetling****Ashley MacPherson****Katherine Seavey**

Psychology

*Depression and Social Support in LGBTQ+ Victims of Intimate Partner Violence*  
 Advisers: Katie Edwards, Kara Anne Rodenhizer

**Tricia Gunther**

Wildlife and Conservation Biology

**Thea Kristensen****Katrina Papanastassiou**

Ecology, Evolution and Behavior  
*Evaluating Genetic Diversity Between Populations of New England Cottontail (*Sylvilagus transitionalis*) and Eastern Cottontail (*Sylvilagus floridanus*)*  
 Adviser: Adrienne Kovach

**Lindsay Havens****Kaelina Lombardo**

Genetics

*Timeline of Phenotypic Development in the Asian Multicolored Lady Beetle (*Harmonia axyridis*)*  
 Adviser: Matthew Macmanes

**Suzanne Hogan**

Nutrition

*Effect of Whole Grain Consumption on Markers of Metabolic Syndrome*  
 Advisers: Joanne Curran-Celentano, Jesse Morrell

**Garrett Klokman**

Biochemistry, Molecular and Cellular Biology  
*Production of Estradiol and Matrix Metalloproteinases by an Immortalized Human Granulosa Cell Line*  
 Advisers: Paul Tsang

**Molly Lawrence-Webb**

Wildlife and Conservation Biology  
*Effects of Increased Soil Moisture on Aggressive Behavior in Pavement Ants*  
 Adviser: Leslie Curren

**Jessica Manuel**

Animal Science  
*Human Identification Among Nonhuman Primates*  
 Adviser: Leslie Curren

**Kenan Mazic**

Chemical Engineering

**Avery Normandin**

Biomedical Science  
*Assessing Innate Immunity in Implant Biointegration Using Surface-Treated, Microporous PDMS Scaffolds*  
 Adviser: Kyung Jae Jeong

**Molly Ohman**

Occupational Therapy  
*Young Primary School Children's Perceptions of Stigma Associated with Learning Disabilities*  
 Advisers: Susan Merrill

**Sara Page****Erika Rudiger****Caroline Tarbell****Jullian Turner**

Kinesiology  
*NCAA Division 1 College Athletic Department Career Aspirations*  
 Adviser: Heather Barber

**Chad Roberge****Tessa Smith**

Psychology  
*General Strain Theory, Perceptions of Police Legitimacy, and Juvenile Rule Violating Behavior*  
 Adviser: Ellen Cohn

**Mary Rossi**

Human Development and Family Studies  
*Laughing Out Loud: Humor Usage in Young Childhood Classrooms*  
 Adviser: Corinna Tucker

**David Susca**

Recreation Management and Policy  
*The Relationship between School Connectedness and Problem Substance Use*  
 Adviser: Karen Vangundy

**Steven Troy**

Biochemistry, Molecular and Cellular Biology  
*The Effects of Nanoparticles and Biogenic Polyamines on Horizontal Gene Transformation Efficiency*  
 Adviser: Subhash Minocha

**MUB, Granite State Room****Advanced Technical Writing**

Adviser: Christine O'Keefe

**Morgane Gaudissart**

Civil and Environmental Engineering  
*Technical Writing in Environmental Engineering*

**Stacy Ann Johnson**

Civil and Environmental Engineering  
*Technical Writing in Environmental Engineering*

**Margaret O'Donnell**

Communication  
*Technical Writing in News Media*

**Monica Poisson**

Nutrition  
*Technical Writing in Nutrition*

**Dylan Sullivan**

Information Systems Management  
*Technical Writing*

## Parents Association Undergraduate Research Symposium

### Oral Presentations, Session B

**Friday, April 24**

**10:50 am-Noon**

**Memorial Union Building**

The Parents Association Undergraduate Research Symposium showcases students from all disciplines. Students present their faculty-mentored projects in either of two interactive poster sessions, or in one of the three oral presentation sessions. University-wide participants come from a variety of disciplines.

**MUB, Room 233**

### Communication Honors and Independent Study Research

Moderator: Kevin Healey

**Tony AbouJaoude**

Communication  
*Communicating Community: A Case Study in Consumerism*  
 Adviser: Lawrence Prelli

**Heather Campbell**

Communication  
*Who Decides #BlackLivesMatter? Mass Amateurism and News Media*  
 Adviser: Michael Soha

**Katherine McAuliffe**

Communication and English/Journalism  
*Exploring Public Radio*  
 Adviser: Kevin Healey

**Gabrielle Terry**

Communication  
*From Conflict Resolution to Transformation: A Case Study*  
 Adviser: Sheila McNamee

**MUB, Room 237****Exploring Anthropology: Session II**

Moderator: Svetlana Peshkova

**Emily Belanus**

Anthropology

*Abortion in Islam*

Adviser: Svetlana Peshkova

**Jessica David**

Anthropology

*NGOs Creatively Navigating Restrictions in the Middle East and North Africa*

Adviser: Svetlana Peshkova

**Lane McDonough**

Women's Studies

*Gender Reassignment in Iran*

Adviser: Svetlana Peshkova

**Alexa Procaccianti**

Women's Studies

*Anthropology, Islam, and Gender*

Adviser: Svetlana Peshkova

**Subha Singh (McNair Scholar)**

Anthropology

*HIV Knowledge among Muslim University Women*

Adviser: Joe Lugalla

**MUB, Theatre I****Exploring Spanish: Session II**

Moderator: John Chaston

Judge: Holly Cashman

**Wyatt Berrier**

Spanish and Anthropology

*The Role of Interaction and Negotiation in Second Language Acquisition*

Adviser: Lina Lee

**Katrina Corallino**

Spanish

*L1 Interference and Errors*

Adviser: Lina Lee

**Robert Delgado**

Spanish

*The Ambiguity of Translating the Spanish Singular You*

Adviser: Holly Cashman

**Jennifer Flood**

Environmental and Resource Economics and Spanish

*The Benefits of Acquiring a Second Language with Contact and Feedback from Native Speakers*

Adviser: Lina Lee

**Chloe Gaudissart**

Linguistics and Spanish

*Variation in Discourse Markers in the Spanish-Speaking World*

Adviser: Holly Cashman

**Katherine Mckay**

Political Science and Spanish

*Bilingual Practices of English/Spanish in Latin-American Popular Culture*

Adviser: Holly Cashman

**MUB, Room 330****International Affairs: Managing Conflict: Human Security, Justice, and Peacebuilding**

Adviser: Molly Wallace

Moderator: Christine Turner

**Kerri Hagstrom**

International Affairs and History

*The Business of Terror*

**Lena Khawatmi**

International Affairs and Political Science

*Civil Society in Water Crisis Management: The Case of the Jordan River Valley*

**Fernanda Lima**

International Affairs and Communication

*Goal! Or Maybe Not?: Changes for Rio Favela Residents after Pacification in 2010*

**Kevin McAleese**

International Affairs and Political Science and Economics

*Conflict Resolution in Nagorno-Karabakh*

**Sarah Pollard**

International Affairs and French

*Seeking Justice: Senegal's Twenty-Year Delay in the Prosecution of Hissène Habré*

**Hannah Waller**

International Affairs and Political Science  
*Peacebuilding in Bosnia-Herzegovina*

**MUB, Room 332****International Affairs: National Economies in a Global Market**

Adviser: Molly Wallace

Moderator: Beth Kilinc

**Andrea Dionne**

International Affairs and Linguistics

*Sex Trafficking in Japan*

**Noelle Kotelly**

International Affairs and Economics

*Argentina's Crisis in Consumerism*

**Bryan Merrill**

International Affairs and Political Science and Economics

*Russian Roulette: Evaluating the Effects of Russia's Natural Resource Endowments on Tertiarization*

**Michael Moser**

International Affairs and Civil and Environmental Engineering

*The 2008 Financial Crisis: Comparing French and U.S. Recovery Efforts*

**Rachel Provost**

International Affairs and Civil and Environmental Engineering

*Coffee Certification in Costa Rica*

**MUB, Room 334****International Affairs: Relations between Immigrant/Refugee Communities and the Host Country: Challenges and Successes**

Adviser: Molly Wallace

Moderator: Catherine D'Auteuil

**Jenna Calcavecchia**

International Affairs and German

*Why Berlin Is Accepting of Immigrants*

**Tim Doucette**

International Affairs and French  
*Liberté, Égalité, Fraternité: How Are Immigrants Integrated through French Schools?*

**Kevin Dwyer**

International Affairs and Spanish  
*Discriminación: How It Affects the Mental Health of Immigrants in Spain*

**Emily Kwesell**

International Affairs and English/Journalism  
*Protecting Liberté, Égalité, Fraternité: The Effects of Nativism on French Immigration Policies*

**David Mansfield**

International Affairs and Psychology  
*A Study of Racial Tension in France*

**Anna Wageling**

International Affairs and Political Science  
*Once a Refugee, Always a Refugee: How Regional Humanitarian Crises Have Affected Jordan Socially, Economically, and Politically*

**MUB, Room 336**

**Multidisciplinary Session III:  
 Representation, Revolution,  
 and Protest**

Moderator: Siobhan Senior

**Randal Coulstring**

Undeclared

**Kyle Parks-Damon**

Civil and Environmental Engineering  
*From the Archives: UNH's Black Student Protests 1998-1999*  
 Advisers: Monica Chiu

**Nathan Faro**

Music Theory  
*Rediscovering Revolutions: The Use of Folk Song in Amy Beach's Variations on Balkan Themes*  
 Adviser: Rose Pruiksma

**Lindsey Swank**

English Teaching  
*Native American Literature 2.0: Getting Indigenous Authors on the Web*  
 Adviser: Siobhan Senior

**Brian Waterhouse**

Philosophy  
*Psychedelics and Liberation*  
 Adviser: Nicholas Smith

**MUB, Room 321**

**Multidisciplinary Session IV:  
 Investigating Adolescence,  
 Memory, and Community Health**

Moderator: Robert Ross

**Abigail Burmeister**

Sociology  
*Gender Socialization: Its Effects on Adolescents*  
 Advisers: Nena Stracuzzi

**Melanie Green**

Ecogastronomy and Nutrition  
*It Takes a Village: Partnerships for Community Health*  
 Adviser: Semra Aytur

**Katie Parent**

Social Work and Psychology  
*The Role of Adult Confidants on Adolescent Outcomes*  
 Adviser: Ellen Cohn

**Thomas Reese**

Psychology  
*Do You Raise the Criminal?: The Effects of Parenting Styles on Adolescent Legal Attitudes*  
 Advisers: Alexander Blandina, Ellen Cohn

**Randall Wallbaum**

Neuroscience and Behavior  
*Influence of Genetic Polymorphisms in COMT Gene on Oscillatory Power During Contextual Memory*  
 Adviser: Robert Ross

**MUB, Room 302**

**Political Science: Development  
 through Failure**

Adviser: Lawrence Reardon  
 Moderator: Tegan O'Neill

**Kayla Burke**

Political Science  
*ISIS: A Growing Threat*

**John David**

Political Science  
*Russian Economic Failure Since the Fall of the USSR*

**Adam Howard**

Political Science  
*Argentina and Brazil: Currency Pegs and Developing Economies*

**Nathan Marcucci**

Political Science  
*Russia, Pick Your Poison*

**Sean Mitchell**

Political Science and Economics  
*Goodbye Greece: Existing of the Eurozone*

**MUB, Room 203**

**Political Science: Global  
 Governance and New Security  
 Threats**

Moderator: Lionel Ingram

**Laura Rose Donegan**

Political Science  
*A Just and Sustainable Solution to the Boat People Predicament in Australia?*  
 Adviser: Lionel Ingram

**Allison Enck**

International Affairs and Environmental Conservation Studies  
*The Independence Referendum in Catalonia*  
 Adviser: Alynna Lyon

**Vinny Mwano**

Political Science  
*Access to Clean Water: Global Politics and the Role of International Organizations*  
 Adviser: Alynna Lyon

**Leonidas Ocampo**

International Affairs and Political Science  
*Chinese Internet Censorship*  
 Adviser: Lawrence Reardon

**Robert Richard-Snipes**

Political Science and Women's Studies  
*Boko Haram and #bringbackourgirls*  
 Adviser: Alynna Lyon

**MUB, Room 304****Political Science: The Drug Wars**

Moderator: Alden F. Reed

**Emily Gold**

International Affairs and Political Science  
*May Contain Cocaine: Early U.S. Drug Regulations and Their Connection to Current Policies*  
 Adviser: Mary Malone

**Annemarie Guare**

Political Science  
*Drug Policy Reform in Uruguay: A Lesson to Be Learned*  
 Adviser: Mary Malone

**Matthew Holmes**

History  
*British Views on the Opium Wars*  
 Adviser: Yan Lu

**Andrew Mudgett**

Justice Studies and Political Science  
*Marijuana Legalization: The Necessary Policy: Comparing Uruguay and Colorado Approaches*  
 Adviser: Mary Malone

**MUB, Room 338****Research in Health Sciences**

Moderator: Melissa Rodgers

**Kelsey Bennion**

Communication Sciences and Disorders  
*Richard Dadd: Madness Sparks Brilliance*  
 Adviser: Rebecca Karo

**Kayla Gray**

Kinesiology  
*The Correlational Study of Various Power Tests and Torque Acceleration Energy as Methods to Predict Sprint Performance*  
 Advisers: Ronald Croce, Tim Quinn

**Christina Kelly**

Occupational Therapy  
*Muslim Pakistani Women with Disabilities*  
 Adviser: Svetlana Peshkova

**Adelaide Murray**

Health Management and Policy  
*Comparative Analyses of Flu Prevention at New England State Universities: Targeted Recommendations for Change*  
 Advisers: Rosemary Caron, Marc Hiller

**Nicole Paddock**

Occupational Therapy  
*A Survey of UNH Students' Attitudes about Mental Health Disorders and Its Influence on Help-Seeking Behaviors*  
 Adviser: Kerryellen Vroman

**MUB, Room 340****Risk and Human Experience**

Adviser and Moderator: Brent Bell

**Christina Brown**

Psychology

**Maxwell Mozes**

Undeclared

**Kendall Polverari**

Communication

**Martin Rebrovic**

Athletic Training  
*Why Are People Not Taking Drastic Actions to Mitigate Climate Change Given the Risks?*

**Christopher Cleary**

Kinesiology

**Sydney Duncan**

Athletic Training

**Christian Rodriguez**

Undeclared

**Jennifer Royka**

Communication

*What Are the Risks of Being Social in College?*

**Evan Collins**

Computer Science

**Emily Eno**

Nutrition and Zoology and  
 Computer Science

**Thomas Miller**

Political Science

**Lucy Spence**

Zoology

*How Does Your Major Affect the Type of Risks You Take?*

**Brendan Freund**

English/Journalism

**Emma Gallagher**

Zoology

**David McDonald**

Health Management and Policy

**Isaac Traynor**

Zoology

*Music's Influence on Young Adult Behavior*

**Shannon Scribner**

Kinesiology and Management and Political Science

*Why Is Not Going to College a Risk?*

**MUB, Room 207****Voices of the UNH Writing Center: Social Communication and Collaboration**

Moderator: Sarah Franco

**Colton Huelle**

English Literature

*Finding the Collective Voice #1: An Overview of Collaboration in Writing and Writing Center Work*

Adviser: Molly Tetreault

**Emma Kantola**

Marketing and English

*Finding the Collective Voice #2: An Overview of Collaboration in Writing and Writing Center Work*

Adviser: Molly Tetreault

**Brandon Lyman**

Mathematics and Economics

*Finding the Collective Voice #3: An Overview of Collaboration in Writing and Writing Center Work*

Adviser: Molly Tetreault



**Kaila Salsman**

English Teaching

*Let's Talk: Exploring Social Communication in the Writing Center*

Adviser: Alecia Magnifico

## Parents Association Undergraduate Research Symposium

### Oral Presentations, Session C

**Friday, April 24****12:15-1:25 p.m.****Memorial Union Building**

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#### MUB, Room 233

### ***Distinguished Student Research in Communication***

Moderator: Michael Jackson

**Mikayla Collins**

Communication

*Persuasion Techniques in Reconceptualization Science: Rethinking Low-Dose Ionizing Radiation*

Adviser: Michael Jackson

**Justin Fortier**

Communication

*Color in Film*

Adviser: Lawrence Prelli

**Leigh Fraser**

Communication

*Songs of Faith and Devotion: The 1980's, Religion and Dark Salvation in Gothic Subculture*

Adviser: Kevin Healey

**Susan Yen**

Communication

*What Can McCurry's Photographs Do for the Children?*

Adviser: Michael Jackson

#### MUB, Theatre I

### ***Exploring Spanish: Session III***

Moderator: John Chaston

Judge: Jaume Marti-Olivella

**Laura Bello**

Spanish

*Code-Switching y la Música Española*

Adviser: Holly Cashman

**Allessandra Chinetti**

Spanish and Communication

*The Use of Child Protagonists in Post-War Spanish Cinema*

Adviser: Jaume Marti-Olivella

**Eva Golden**

Marine, Estuarine and Freshwater Biology and Spanish

*The Effect of Syllable Position on the Pronunciation of Sibilants and Liquids in Puerto Rican Spanish*

Adviser: John Chaston

**Sean King**

Spanish

*The Don Quixote of Northanger Abbey*

Adviser: Carmen Garcia-Rasilla

**Olivia Marple**

English/Journalism and Spanish

*Navigating the Borders between Patriarchy and Female Power: An Analysis of the Portrayal of Women in Spanish Cinema from 1948 to 2014*

Adviser: Jaume Marti-Olivella

**Danielle Mason**

Sociology and Spanish

*The Role of Study Abroad in Language Acquisition*

Adviser: John Chaston

#### MUB, Room 332

### ***Feminism in Action***

Adviser and Moderator: Joelle Ryan

**Shannon Alper**

Women's Studies and Psychology

**Anna Jones**

Women's Studies

**Douglas Marino**

Political Science

**Chloe Martin**

Women's Studies

**Shayla Riggs**

Women's Studies

**Jennifer Turner**

Social Work

**Alexa Wheeler**

History and Women's Studies

#### MUB, Room 340

### ***Multidisciplinary Session V: Part 1—Exploring Perspectives of Patient, Parent, and Student***

Moderator: Myles Lynch

**Alyssa Calef**

Social Work

*Student Perspectives on Advance Directives*

Adviser: Laura Davie

**Emma O'Brien**Human Development and Family Studies  
*Expect the Unexpected: Evaluation of the Parent Education Program Family Crashers*  
Advisers: Frederick Alleva, Tyler Jamison**Emily Schlachter**

Nursing

*Patient Perceptions of Bedpan Use*

Advisers: Raelene Shippee-Rice, Carol Williams-Barnard

## Part 2—Challenges of Body and Vision

Sarah DiIanni  
 Nicholas Duggan  
 Hanne Hansen  
 Jaclyn Johnston  
 Amanda LeBel  
 Patricia Levesque  
 Megan Lusignan  
 Hayley Robertson  
 Ahlia Slone  
 Neuroscience and Behavior  
*The Influence of Real and Perceived Motion on Putative On- and Off-Cell Channels in Motion Induced Blindness*  
 Adviser: William Stine

Sarah DiIanni  
 Nicholas Duggan  
 Hanne Hansen  
 Jaclyn Johnston  
 Amanda LeBel  
 Patricia Levesque  
 Megan Lusignan  
 Hayley Robertson  
 Ahlia Slone  
 Neuroscience and Behavior

Andrew Kitt  
 Psychology  
*Stereo Acuity as a Function of Stimulus Separation: Examining Crowding Effects While Controlling for Spatial Frequency*  
 Adviser: William Stine

Puskar Siwakoti (McNair Scholar)  
 Biomedical Science  
*Influence of Phenotypic Switching on Virulence by Emergent *Vibrio parahaemolyticus**  
 Adviser: Cheryl Whistler

### MUB, Room 321

#### Multidisciplinary Session VI: Creative Studies in Literature, Film, Theatre and Art

Moderator: Courtney Marshall

Nihco Gallo  
 Mechanical Engineering  
*Subtlety, Sophistication, and the Contemplation of Proportion*  
 Adviser: Leah Woods

Elizabeth Girard  
 Theatre  
*Noverre's Ballet D'Action*  
 Adviser: Rebecca Karo

Samantha Granville  
 English/Journalism  
*The Yellow Wallpaper: The Role of Women and Mental Illness*  
 Adviser: Courtney Marshall

William Sturtevant  
 English  
*Gender and Survival in Horror Movies*  
 Adviser: Delia Konzett

### MUB, Room 304

#### Political Science: The Art of Politics

Moderator: William J. Nunnally

Bradley Fredette  
 Political Science and History  
*Machiavelli's Art of War*  
 Adviser: John Kayser

Aaron Jones  
 Political Science  
*The 2015 Canadian Election: Will the Harper Government Stay in Power?*  
 Adviser: Susan Siggelakis

Alvaro Maranon  
 International Affairs and Political Science  
*Machiavelli's Art of War and the Role of the Military*  
 Adviser: John Kayser

Abbygale Martinen  
 Political Science  
*The Influence of John Locke on the United States Government*  
 Adviser: John Kayser

### MUB, Room 302

#### Political Science: Transaction Costs of Chinese Economic Development

Adviser: Lawrence Reardon  
 Moderator: Chen Haojun

Zachary Dumont  
 Political Science  
*The Chinese Impact on Global Climate Change*

Deirdre LaSelva  
 Justice Studies and Political Science  
*Chinese Exports--A Risky Business*

Paul Moore  
 Political Science  
*China's Economic Collapse under Mao Zedong*

Kristy Parhiala  
 Political Science  
*The China Model?*

Gino Sergio  
 Political Science  
*The Sino-Soviet Split: Divorce Communist style*

## Peter T. Paul College of Business and Economics Undergraduate Research Conference

### Poster Presentations

**Friday, April 24**  
**10 a.m. - 5 p.m.**  
**Paul College Building**

Through original research and valuable guidance from mentors, this event helps students gain deeper academic knowledge as well as professional experience. This URC event includes poster presentations, oral presentations, and feedback from University and business leaders.

**Paul College G25, 12-1:30 p.m.**

### ***Business Analytics and Spreadsheet Modeling***

**Moderator: Roger Grinde**

**Tyler Angle**

Finance and Information Systems Management

**Michael Campbell**

Information Systems Management and Computer Science

**Rachel Cardarelli**

International Business and Economics and Management

**Alyssa Cowan**

Information Systems Management and Management

*UNH Housing Laundry Services Modeling and Pricing Analysis*

Adviser: Roger Grinde

**Michael Bettencourt**

Information Systems Management

**Elizabeth Forde**

**Alexander Ossinger**

Finance and Information Systems Management

**Gabriel Lee**

Information Systems Management and Finance

**Logan Mortenson**

Applied Mathematics

*Impact of Private Apartments on UNH Housing*

Adviser: Roger Grinde

**Mary Cann**

Information Systems Management and Management

**Mariya Kobets**

**Christopher Morelli**

Accounting and Information Systems Management

**Athena Rondeau**

**Hailey White**

Marketing and Information Systems Management

*Project Graduation*

Adviser: Roger Grinde

**Charles Demarco**

**Kevin Rossi**

Finance and Information Systems Management

**Jacob Gomez**

Information Systems Management and Finance

**William Lawrence**

Information Systems Management  
*UNH Public Transportation Expansion*

Adviser: Roger Grinde

**Kelly Horton**

**Jasmine Yang**

Information Systems Management

**Cory Nitschelm**

Information Systems Management and Management

**Nicole Taglilatela**

Information Systems Management and Finance

*Durham Motor Vehicle Analysis*

Adviser: Roger Grinde

**Viktoras Kozica**

**Kieran Sexton**

Information Systems Management

**Kien Tran**

Entrepreneurial Studies and Information Systems Management

**Harrison Wolcott**

Finance

*UNH Dining Late-Night Operations*

Adviser: Roger Grinde

**Avi Patel**

Accounting and Information Systems Management

**Colin Reed**

**Kyla Wester**

**Charles Wooster**

Finance and Information Systems Management

**Sean Whittier**

Information Systems Management  
*Hamel Innovations*

Adviser: Roger Grinde

**Paul College G25, 10-11:30 a.m.**

### ***Business for People, Planet, and Profits***

**Moderator: Fiona Wilson**

**Edith Allard**

International Affairs and English/Journalism  
*Chipotle: How Food With Integrity Appeals to People, Planet, and Profits*

Adviser: Fiona Wilson

**Marta Avots**

International Business and Economics  
*Burt's Bees: People, Planet & Profits*

Adviser: Fiona Wilson

**Brendan Beale**

Finance and Accounting

*Toyota: The Start of a Revolution in Sustainable Cars*

Adviser: Fiona Wilson

**Lilah Cherim**

Undeclared

*Algae: the Future of Energy?*

Adviser: Fiona Wilson

**Andrew DeMeo**

Environmental Engineering

*Palm Oil: People, Planet, and Profits*

Adviser: Fiona Wilson

**Devereux Evans**

Accounting and Finance

*BMW: Advances in Electric Automobile Technology for the Benefit of People, Planet, and Profit.*

Adviser: Fiona Wilson

**Elliot Gordon**

Finance

*The Chevron Way*

Adviser: Fiona Wilson

**Charlotte Harris**

Communication

*Marriott Hotels: An Analysis of People, Planet, and Profits*

Adviser: Fiona Wilson

**Adam O'Neil**

Electrical Engineering

*Cisco Systems, Inc.: An Analysis of People, Planet & Profits*

Adviser: Fiona Wilson

**Jacob Riehl**

Undeclared

*Keurig Green Mountain: A Case Study in People, Planet & Profits*

Adviser: Fiona Wilson

**Thalia Thomas**

Mathematics

*Ben & Jerry's: An Analysis of People, Planet, and Profits*

Adviser: Fiona Wilson

**Andrew Ware**

Mechanical Engineering

*Tesla Motors: An Exploration and Explanation of Business for People, Planet, and Profits*

Adviser: Fiona Wilson

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**Paul College G45, 10-11:30 a.m.****EcoGastronomy: Capstone Research and Projects**

Moderator: Dan Winans

**Jaime Basiliere**

Ecogastronomy and Management

*The Wines from Down Under: Wine Tasting of Australian Wines*

Adviser: Daniel Winans

**Garlande Beckett**

Ecogastronomy and Nutrition

*Ancient Grains: A New Food Trend*

Adviser: Joanne Curran-Celentano

**Taylor Bennett**

Ecogastronomy and Hospitality Management

*Evaluation of California Wine Production Responses to Climate Change*

Adviser: Hector Galbraith

**Kristina Borchert**

Ecogastronomy and Hospitality Management

*PalmSomm: A Personalized Sommelier Smartphone Application*

Adviser: Nelson Barber

**Christopher Casale**

Ecogastronomy and Philosophy

*Stressed Out Vines: The Comparison of New & Old World Wine Philosophies*

Adviser: Daniel Winans

**Sacha Cavezzali**

Ecogastronomy and Hospitality Management

*A Business Plan for a Sustainable Hotel in Hawaii*

Advisers: Clayton Barrows, Daniel Winans

**Jordan Daly**

Ecogastronomy and Finance and Hospitality Management

*Daly's: Business Proposal for Farm-to-Table Restaurant*

Adviser: Daniel Winans

**Mikaela DiGesú**

Ecogastronomy and Economics

*Cold Climate vs Warm Climate Viticulture: How Where Grapes Are Grown Affect the Wine We Drink*

Adviser: Daniel Winans

**Erica Gallo**

Ecogastronomy and Nutrition

*The Current State of Elementary Level Nutrition Education*

Adviser: Amanda Lee

**Katherine Gruezké**

Ecogastronomy and Hospitality Management

*The Buzz on Bees: The Impact of Bees on Our Food Systems*

Adviser: Daniel Winans

**Kelsey MacDonald**

Ecogastronomy and Nutrition

*Culinary Assessment of Sweet Potato Varieties*

Advisers: Joanne Curran-Celentano, Rebecca Sideman, Daniel Winans

**Lucy McGinty**

Ecogastronomy and Hospitality Management

*ABC Burgers: Business Plan for a Food Truck*

Adviser: Daniel Winans

**Kelsey McGovern**

Ecogastronomy and Women's Studies

*From Mindless to Mindful: How Does Mindful Eating Help Solve Eating Issues?*

Adviser: Courtney Marshall

**Eleni Ottalagana**

Ecogastronomy and Nutrition

*SimplyEleni: Registered Dietitian Specializing in Personalized Services with a Holistic Approach to Health*

Adviser: Daniel Winans

**Hannah Rivers**

Ecogastronomy and English/Journalism

*The Dining Hall Guide*

Adviser: Daniel Winans

**Erin Short**

Ecogastronomy and Sustainable

Agriculture and Food Systems

*Aliment: A Food Truck Business Plan*

Adviser: Daniel Winans

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**Paul College, Great Hall****Economics Capstone Presentations**

Moderator: Aziz Saglam

**Jaime Adams**

Economics and English Teaching

*An Investigation into the Effects of Laws and Punishments on Underage Drinking*

Adviser: Aziz Saglam

**Matthew Anderson**

Economics

*What Economic Variables Affect Job Satisfaction?*

Adviser: Aziz Saglam

**Chun Chen**

Economics

*Starting Salaries of College Students and Tuition Payback Period*

Adviser: Aziz Saglam

**Aaron Dow**

Economics

*Analysis of College Characteristics That Influence Tuition Rates*

Adviser: Aziz Saglam

**Danielle Fregeau**

Economics

*What makes a Successful Microfinance Institution?*

Adviser: Aziz Saglam

**Brendan Garrett**

Economics

*Determinants of NFL Offensive Skilled Position Player Salaries*

Adviser: Aziz Saglam

**Lauren Howell**

Economics

*Why Do Americans Enlist in the Military?*

Adviser: Aziz Saglam

**Noelle Kotelly**

International Affairs and Economics

*Decrease in Oil Prices vs. Consumer Spendings*

Adviser: Aziz Saglam

**Michael MacDonald**

Economics

*How do Performance Enhancing Drugs Affect Salaries in Major League Baseball?*

Adviser: Aziz Saglam

**William Meyer**

Economics and History

*The Historical Context of the Wage Recovery from the 2007-2008 Recession Compared to Previous U.S. Recessions*

Adviser: Aziz Saglam

**Catherine Putney**

Economics

*An Economic Valuation of NHL Salaries: A Roster Regression Analysis*

Adviser: Aziz Saglam

**James Riley**

Economics

*Financial Advisors' Compensation and Returns on Assets*

Adviser: Aziz Saglam

**Kristopher Roller**

Economics

*Sex Discrimination Based On Applicants' Resumes*

Adviser: Aziz Saglam

**Tyler Saltzman**

Economics

*Determinants of Winning Salary for PGA Golfers*

Adviser: Aziz Saglam

**Thomas Van Dalsum**

Economics

*The Pharmaceutical Industry and Orphan Drugs*

Adviser: Aziz Saglam

**Samantha-Jo Virga**

Economics

*Economic Impact of Global Anxiety on Equity Markets*

Adviser: Aziz Saglam

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**Paul College, Great Hall****Labor Economics**

Moderator: Reagan Baughman

**Michael Darisse**

Economics

*Labor Economics 1*

Adviser: Reagan Baughman

**Daniel Dion**

Economics

*Labor Economics 2*

Adviser: Reagan Baughman

**Brendan Garrett**

Economics

*Labor Economics 3*

Adviser: Reagan Baughman

**Kaitlyn Kelley**

Economics

*Labor Economics 4*

Adviser: Reagan Baughman

**Muhammad Khan**

Finance

*Labor Economics 5*

Adviser: Reagan Baughman

**Christina Kijewski**

Political Science

*Labor Economics 6*

Adviser: Reagan Baughman

**Jacob Lehoux**

Economics

*Labor Economics 7*

Adviser: Reagan Baughman

**Michael MacDonald**

Economics

*Labor Economics 8*

Adviser: Reagan Baughman

**Owen Martin**

Political Science

*Labor Economics 9*

Adviser: Reagan Baughman

**Patrick Meade**

Kinesiology

*Labor Economics 10*

Adviser: Reagan Baughman

**Kristopher Roller**

Economics

*Labor Economics 11*

Adviser: Reagan Baughman

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**Paul College, Great Hall****Multidisciplinary Poster Presentations**

Moderator: Lin Guo

**Matthew Anderson**

Economics

**Justin Cawley**

Economics

**Tyler Saltzman**

Economics

**Thomas Van Dalsum**

Economics

*What Factors Affect Blood Donation?*

Adviser: Ju-Chin Huang



**Kyle Boudrot**

Management and Entrepreneurial Studies

**Marianne Travers**

Marketing and Hospitality Management

**Michael Zielinski**

Marketing

*Barilla Analysis*

Adviser: M. Billur Akdeniz

**Rayce Calef**

Marketing and Management

**Shannon Doherty****Jonathan Milone****Kasi Murphy**

Marketing

*Marketing Opportunity Analysis-*

*Newman's Own*

Adviser: M. Billur Akdeniz

**Jessica Denoncour**

Accounting

*The Emergence of Assurance on Sustainability Reporting: A Stakeholder Perspective*

Adviser: Michael Ozlanski

**Kathleen Gillespie**

Finance

*Unequal Pay: The Role of Gender*

Adviser: Caitlin DeSoye

**Marley Harunk**

Accounting

*The Lehman Brothers: A Lesson in Ethics and the Law*

Adviser: David Hasseldine

**Jeffrey Lertora**

Marketing

*Influences on Healthy Eating Intention*

Adviser: Lin Guo

**David Mesa**

Finance and Economics

*Taking a New Approach in Valuating Stock Prices in Latin-America*

Adviser: Michael Goldberg

**Qian Wang**

Accounting

*Ethnic Foods' Business Impact in the United States*

Adviser: Pei-Jou Kuo

**Alyssa Washakowski**

Management and Finance

*The Moderating Effects of Praise on the Relationship Between Job Task and Work Motivation*

Adviser: Jennifer Franczak

**Alexander Whitmore**

Finance and Management

*The Next Generation of Real Estate*

Adviser: Caitlin DeSoye

**Hunter Whitmore**

Finance and Management

*Green Construction*

Adviser: Jeffrey Sohl

**Sarah Wiggins**

Management

*Can Agritourism Change Lives for the Better?*

*A Case Study in Chile*

Adviser: Nelson Barber

**Rachel Winsor**

Marketing

*The Magic of the Mouse*

Adviser: Bruce Pfeiffer

## Peter T. Paul College of Business and Economics Undergraduate Research Conference

### Oral Presentations

**Friday, April 24**

**10 a.m.-5 p.m.**

**Paul College Building**

Through original research and valuable guidance from mentors, this event helps students gain deeper academic knowledge as well as professional experience. This URC event includes poster presentations, oral presentations, and feedback from University and business leaders.

### Paul College 185

### Atkins Investment Group

**Janine Appleton**

Biomedical Science

**Antonio Nastasia**

Political Science

**Alexander Ossinger**

Finance and Information

Systems Management

*Healthcare*

Advisers: Stephen Ciccone, Ahmad Etebari

Etebari

**Nicholas Bagley**

Economics

**Jonathan Harrison****John Schwartz**

Finance

*Utilities*

Advisers: Stephen Ciccone, Ahmad Etebari

**Austin Bauer****Niccolo Hilgendorf****Samantha-Jo Virga**

Economics

*Economic Strategy*

Advisers: Stephen Ciccone, Ahmad Etebari

**Jose Bowen****Patrick Sloyan**

Finance

**Joshua Caouette**

Kinesiology

*Consumer Staples*

Advisers: Stephen Ciccone, Ahmad Etebari

**Gaetan Ciot****Jonathan Kiskinis**

Finance

**Kendre Rodriguez**

Entrepreneurial Studies

*Consumer Discretionary*

Advisers: Stephen Ciccone, Ahmad Etebari

**Anna Darling****Eric Paul**

Finance

**Jacob Lehoux**

Economics

Finance

*Energy*

Advisers: Stephen Ciccone, Ahmad Etebari

**Charles Demarco**

Finance and Information Systems

Management

**Matthew Doubleday**

Accounting

**Garrett Malagodi**

Computer Engineering

*Technology & Media*

Advisers: Stephen Ciccone, Ahmad Etebari

**Alexander Febonio**  
**Matthew Protzmann**  
**Richard Roy**  
 Finance  
*Fixed Income*  
 Advisers: Stephen Ciccone, Ahmad Etebari

**Ryan Feeney**  
**Gregory Meininger**  
 Finance  
**Eric Murray**  
 Accounting  
*Financial Institutions*  
 Advisers: Stephen Ciccone, Ahmad Etebari

**Marielle Gallant**  
**Galen Hand**  
 Finance  
**Bryan Merrill**  
 International Affairs and Political Science  
 and Economics  
*Enviromental, Social & Governance*  
 Advisers: Stephen Ciccone, Ahmad Etebari

**Jacob Gomez**  
 Information Systems Management  
 and Finance  
**Finn Johnson**  
 Economics  
**Matthew Maloney**  
 Finance  
*Telecommunications*  
 Advisers: Stephen Ciccone, Ahmad Etebari

**Daniel Lambert**  
**Ryan Lavin**  
 Finance  
*Officers of Atkins Investment Group*  
 Advisers: Stephen Ciccone, Ahmad Etebari

**Justin Lappin**  
**Michael O'Donnell**  
 Finance  
**Nicholas Simo**  
 International Business and Economics  
*Basic Materials*  
 Advisers: Stephen Ciccone, Ahmad Etebari

**Jason Michonski**  
 Finance  
**David Nardella**  
 Accounting  
**William Taveras**  
 Mechanical Engineering  
*Industrials*  
 Advisers: Stephen Ciccone, Ahmad Etebari

## Paul College 125

### **Marketing Workshop 1A**

**Moderator: Peter Masucci**

**Katharine Ambrose**  
**Maegan Grew**  
**Cameron Schilling**  
**Weibin Ye**  
 Marketing  
**Daniel Lawson**  
 Marketing and Management  
**Kelly McColough**  
 Marketing and Hospitality Management  
**Melanie Smith**  
 Marketing and Entrepreneurial Studies  
*Sharon's Granola: Design and Development of a Marketing Campaign to Support the Launch of a New Consumer Product*  
 Adviser: Peter Masucci

**Thomas Auger**  
 Marketing  
**Lindsey Davis**  
**Johnathan Martin**  
**Erin Preisner**  
 Marketing and Management  
**Alison Fein**  
 Marketing and International  
 Business and Economics

**King Hung Loh**  
 Marketing and Finance  
**Matthew McAuliffe**  
 Marketing and Entrepreneurial Studies

**Lianna McGauley**  
 Marketing and Management  
 and Theatre: Dance  
**Sarah Pearsall**  
 Marketing and Art Studio  
*Harley Davidson: Design and Development of a Marketing Campaign to Increase Participation in the Annual Laconia Motorcycle Week Event*  
 Adviser: Peter Masucci

**Shannen Batula**  
**Andrea Butler**  
**Allison Moloney**  
**Sarah St. Pierre**  
 Marketing  
**Julia Borchert**  
 Marketing and International  
 Business and Economics  
**Dylan Cedrone**  
**Briana Proctor**  
 Marketing and Management  
**Daniel Hayes**  
**Robert Henriksen**  
 Marketing and Information Systems  
 Management  
**Aaron Starkman**  
 Marketing and Finance  
*Northwestern Mutual: Research and Development of Marketing Programs to Increase Recruitment of Sales Representatives*  
 Adviser: Peter Masucci

**Nicole Bice**  
**Lauren Cox**  
**Julia Ghigliotti**  
**Matthew Litz**  
**Eric St. Jean**  
**Matthew Willows**  
 Marketing  
**Martin Gorman**  
 Marketing and Entrepreneurial Studies  
*UNH Wildcat Marching Band: Research and Development of Marketing Programs Aimed at Increasing Awareness and Recruitment*  
 Adviser: Peter Masucci

**Paul College 135****Marketing Workshop 1B**

Moderator: Peter Masucci

**Gil Adams**

Shannon Doherty

Winslow Estevez

Alyssa Howard

Anne Meaney

Justin Paquette

**Christopher Shaheen**

Marketing

**Matthew Kaye**

Marketing and Finance

**Kathleen Kilbourn**

**Kristianna Purington**

Marketing and Management

*Constellation Brands - Project #2: Research and Development of a Marketing Plan and Associated Programs to Introduce a New Wine Brand into the Market*

Adviser: Peter Masucci

**Chelsey Canto**

Marketing and Communication

**Joey Clougherty**

**Zachary Zeller**

Marketing and Finance

**Nicholas DePace**

**Morgan Faustino**

**Alexandra Malagodi**

Xavier Ng

**Summer Olson**

**Brayden Rudert**

Marketing

**Kayla Wyatt**

Marketing and Entrepreneurial Studies

*Robie's Country Store and Museum: Development of a Marketing Plan and Associated Programs to Reinvigorate Business at the Store as well as Increase the Number of Visitors to the Museum*

Adviser: Peter Masucci

**Peter Cummings**

Marketing and Finance

**Kaitlyn McLaughlin**

**Jacob McNamara**

Marketing and Management

**Thi Tuyet Pham**

**Maxwell Smith**

**Jamie Stevenson**

**Casey Sweeney**

**Benjamin Walsh**

**Benjamin Wauters**

**Rachel Winsor**

Marketing

**Brian Walker**

Marketing and Music

*Constellation Brands - Project #1: Design and Development of Marketing Programs, Including Guerilla Tactics, to Reinvigorate and Increase Sales the Ravenswood Family of Wines*

Adviser: Peter Masucci

**Hallianna D'Andreti**

Marketing and Management

**Garrett Ducey**

**Mitchell Hamor**

Marketing and Finance

**Mitchell Hartmann**

**Sarah Osiecki**

**Sam Romano**

**Patricia Vossler**

**Conor Woelfel**

Marketing

**Zachary Moore**

Marketing and International Business and Economics

**Amelia Topoulos**

Marketing and Health

Management and Policy

*Kent Stephens' Stage Force: Research and Development of Marketing Programs to Increase Awareness and Audience Size for this Regional Theater Company*

Adviser: Peter Masucci

**Paul College 125****Marketing Workshop 2A**

Moderator: Peter Masucci

**Samantha Baril**

**Meredith Cline**

**Taylor Sanborn**

**Michael Zielinski**

Marketing

**Rayce Calef**

**Jessica Wood**

Marketing and Management

**William French**

Marketing and International Business and Economics

**Marianne Travers**

Marketing and Hospitality Management

**Samantha Uvino**

Marketing and Finance

**Jillian Wilbur**

Marketing and Nutrition

*L. L. Bean - Project #2: Research and Development of Social Media Marketing Strategies Designed to Attract and Build Credibility with Younger Customers*

Adviser: Peter Masucci

**Matthew Beaulieu**

**Kevin Brown**

**Nicolette Nassiopoulou**

**Holly Strand**

**Robert Walsh**

Marketing

**Haley Borcharding**

**Samuel Pierce**

Marketing and Information Systems Management

**Christopher Theriault**

**Brian Wilson**

Marketing and Finance

**Kimberly Vaughn**

Marketing and Management  
*eFish USA: Development of a Marketing Campaign to Increase Brand Awareness and Drive Customers to their eCommerce Website*

Adviser: Peter Masucci

**Austin Butler****Alexander Fandozzi****Nicholas Fuller****James Kersey****Sarah Tibbo****Regina Yip**

Marketing

**John Chalas**

Marketing and Finance

**Devin Garvey****Heather Kashman****Jessie Ryan**

Marketing and Management

*FanLockr: Research and Development of a Marketing Campaign to Increase Awareness and Grow User Base*

Adviser: Peter Masucci

**Haley Coy****Mark Hamilton****Tate Hartmann****Alex Lapointe****Kasi Murphy****Sheamus Standish****Hannah Toporoff**

Marketing

**Leonard Mullen**

Marketing and Information

Systems Management

**Albert Pace****Nicole Zahka**

Marketing and Management

**Catherine Veilleux**

Marketing and Entrepreneurial Studies

*L. L. Bean - Project #1: Design and Development of Marketing Programs to Attract and Retain Younger Customers*

Adviser: Peter Masucci

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**Paul College 135****Marketing Workshop 2B**

Moderator: Peter Masucci

**Caitlin Ayer****Ashley Benuck****Nicole Blake****Samantha Houle**

Marketing

**Adam Carlin**

Marketing and Finance

**Michael Colorusso**

Marketing and Entrepreneurial Studies

**Derek Cummings****Wesley Richards**

Marketing and Management

**Lauren Easler**

Marketing and Art Studio

*University Instrumentation Center: Research and Development of a Marketing Plan to Promote the Rental Usage of Specialized Scientific Instruments Outside of UNH*

Adviser: Peter Masucci

**Jessica Blumenthal****Kathryn Chisholm****Meagan Dolan****Christopher Kaski****Colleen Kelly****Jonathan Milone****Jenny Nguyen****Allison Sherwood****Douglas Wentworth**

Marketing

**Douglas Hopkins**

Marketing and Economics

**Kelsey Krapf**

Marketing and Communication

*Kennebunk Savings Bank: Design and Development of Marketing Programs to Promote the Opening of a New Branch in Durham, and to Attract New Customers from the UNH Community*

Adviser: Peter Masucci

**Melissa Bogel****John Bull****Jaclyn Harding****Molly Megna****Alexandra Popovici****Taylor Ryan****Casey Whalen**

Marketing

**Delaney Dameron**

Marketing and Economics

**Evan Gard**

Marketing and Environmental

Conservation Studies

**Peter Heislein**

Marketing and Management

**Justin Spitz**

Marketing and Finance

*Red Carpet Florist & Gift Boutique: Research and Development of a Marketing Plan and Programs to Increase Awareness and Expand Business*

Adviser: Peter Masucci

**Daniel Burk****Julie Fierley****Meaghan Foley****Jaclyn Hodas****Shannon Kinch****Andrew Tonge**

Marketing

**Erik Everton****Laura Mann**

Marketing and Management

**Carly Lord**

Marketing and Information Systems

Management and Hospitality Management

**Connor Roelke**

Marketing and Communication

*Alive Organic Matters: Design and Development of a Marketing Plan and Programs to Increase Awareness and Sales of Fertilizer Products Made from Worm Castings*

Adviser: Peter Masucci

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**Paul College G45****Multidisciplinary Oral Presentations**

Moderator: John Hasseldine

**Alex Lapointe****Benjamin Walsh**

Marketing

**Eric Skyta**

Entrepreneurial Studies

*The Peanut Butter Chronicles*

Adviser: M. Billur Akdeniz

**William Meyer**

Economics and History

*Combining Regional Approaches to Climate Change: An Economic Analysis of Linking Regional Permit Trading Systems*

Adviser: Robert Mohr

**Aaron Scheinman**

Economics

*The Access to Capital Project: Exploring Equity Crowdfunding as a Boost to Nigeria's Startup Economy*

Adviser: John Orcutt

## The Naked Arts— Creativity Exposed!

### Act III

**Friday, April 24**  
**12:15-1 p.m.**  
**Memorial Union Building,**  
**Strafford Room**

This event exposes the inner creative process of artists working in various disciplines. Presenters will describe the process, research, and other creative aspects undertaken to bring an artistic creation from initial inspiration to the stage or gallery. This may include a performance or excerpts from their work to illustrate their creative scholarship.

**Claire Cortese**  
English and Studio Art  
*Eros The Process of Poetry*  
Advisers: Mekeel McBride, Thomas Payne

**Austin Leavitt**  
English  
*Insomnia The Process of Poetry*  
Advisers: Mekeel McBride, Thomas Payne

## Peter T. Paul College of Business and Economics Paul J. Holloway Innovation-to-Market Prize Competition

### Bud Albin Challenge Round

**Friday, April 24**  
**1 p.m. - 4:30 p.m.**

This competition takes students out of the classroom and into the real world. Students are required to research and prepare strategies for commercializing new products and services, which they present to a panel of industry judges. Prizes are awarded for the most feasible and fundable approaches for starting, acquiring, or expanding a business venture.

*A list of participants will be available at this event.*

## College of Health and Human Services Grimes Award Competition

**Friday, April 24**  
**1:30-4 p.m.**  
**Pettee Hall, Room G10**

Jack and Marianna Grimes and family, all UNH graduates, endowed the funds for this celebration of excellence in undergraduate research. The oral presentation competition includes finalists who have been selected by CHHS faculty after rigorous scientific review of written proposals.

*A list of participants will be available at this event.*

## Psychology Department George M. Haslerud Undergraduate Research Conference

**Friday, April 24**  
**1:30-5:00 p.m.**  
**McConnell Hall, Room 340**

The George M. Haslerud Undergraduate Research Conference, named for the late Professor Emeritus of Psychology, recognizes and celebrates undergraduate research conducted by honors psychology students. Students present their original research projects before an audience of UNH faculty, staff, graduate students, fellow undergraduates, and friends and family.

**Casey Benner**  
Justice Studies and Psychology  
*Unwanted Sexual Experiences: Gender Differences in Reporting Rates via Web Survey vs. Paper Survey*  
Adviser: Ellen Cohn

**Laura Hapke**  
Psychology  
*Perceived Social Support Networks among Children with Intellectual and Developmental Disabilities*  
Adviser: Pablo Chavajay

**Brendan Lortie**  
Psychology  
*Personal Intelligence in the Workplace*  
Adviser: John Mayer

**Ashley MacPherson**  
Psychology  
*The Fifty Shades Effect: Does Erotic Literature Influence Body Dissatisfaction?*  
Advisers: Katie Edwards, Kara Anne Rodenhizer

**Nadine Maliakkal**  
Psychology  
*Parents, Peers, and Rule-Violating Behaviors*  
Adviser: Ellen Cohn



**Alexa Roberts**

Psychology

*Positive Youth Development: Voices of the Youth in Peer Solutions: Stand & Serve After-School Program*

Adviser: Victoria Banyard

**Michela Salusti-Simpson**

Psychology

*Positive Youth Development: A Program Evaluation of Peer Solutions: Stand & Serve*

Adviser: Victoria Banyard

**Emily Stone**

Psychology and Social Work

*Preschoolers Remember a Science Lesson*

Adviser: Michelle Leichtman

## Honors English Undergraduate Research Conference

**Friday, April 24****2-6 p.m.**

**Hamilton Smith Hall,  
English Department**

To complete Honors-in-English, students must conduct a semester-long research project, culminating in a 30-40 page senior thesis. The Honors English Undergraduate Research Conference provides these students and students in the linguistics program with the opportunity to share their work with their fellow students, professors, and families. The presentations include poetry, autobiographical writing, journalism, and scholarship on literary texts from several different centuries.

**Nicole Anderson**

English

*The Secrets We Bear*

Adviser: Clark Knowles

**Spencer Benson**

English

*Race and Gender in Film*

Adviser: Delia Konzett

**Brady Brickner-Wood**

English

*Me against the World: Realizing the Social and Political Relevance of Tupac Shakur*

Adviser: Petar Ramadanovic

**Julia Brush**

English and Classics

*We Are an Art Form: Poems*

Adviser: Mekeel McBride

**Madalyn Northcutt**

English

*Race in America*

Adviser: Delia Konzett

**Melanie Platt**

Linguistics

*Narrative Analysis of West End Speakers*

Adviser: Maya Ravindranath

**Joshua Richardson**

English

*Examining Race Representation in Film*

Adviser: Delia Konzett

**Jacklyn Trexler**

English and Philosophy

*Blake, Nietzsche, and Slave Morality*

Adviser: Michael Ferber

**Kathleen Uhlman**

Linguistics

*Use and Perception of Taboo Language in College-Aged Females*

Adviser: Rochelle Lieber

**Mackintosh Willingham**

Theatre

*Sponsor Me: The Evolution of the Sport, Culture, and Film that Created the Multi-million Dollar Skateboarding Industry*

Adviser: Delia Konzett

**Mackintosh Willingham**

Theatre

*Has the American Indie Film Sold Out?*

Adviser: Delia Konzett

## Philosophy Department Undergraduate Research Conference

**Friday, April 24****4-8:30 p.m.****Murkland Hall, Room G17**

The Philosophy URC is a mosaic of concise and meaningful student presentations, varying from such philosophical topics as applied ethics, language theory, and social justice. Standard presentations predominantly last fifteen minutes and are subsequently followed by a brief question-and-answer period.

**Anna Allen**

Ecogastronomy and Philosophy

*Bridging the Gap: Existentialism and Eastern Traditions*

Adviser: Drew Christie

**Thomas Berry****Dustin Newhouse**

Philosophy

**Jacklyn Trexler**

English and Philosophy

*Philosophy on Campus*

Adviser: Willem De Vries

**Joshua Hamor**

Philosophy

*Offline Simulation Theory and Timothy Williamson's Epistemology of Counterfactual Conditionals*

Adviser: Paul McNamara

**Philip Horner-Richardson**

Philosophy

*Two Views of Nature: Teleology and Mechanism in Kant*

Adviser: Willem De Vries

**Dustin Newhouse**

Philosophy

*Deconstructing Autonomy in Capitalism*

Adviser: Nicholas Smith

**Amy Simon**

International Affairs and Philosophy

*Meursault, an Absurd and Nietzschean Man*

Adviser: Willem De Vries

**Ann Veatch**

Philosophy

*Third-Wave Feminism and the Millennial Generation*

Adviser: Willem De Vries

**Brian Waterhouse**

Philosophy

*Psychedelics and Liberation*

Adviser: Nicholas Smith

## Student Composers' Concert

**Friday, April 24****8 p.m.****Bratton Recital Hall,  
Paul Creative Arts Center**

The UNH Student Composers' Concert is an annual event that features the music of undergraduate and graduate students of the Music Department. The music is newly composed, and is almost exclusively performed by fellow music students.

Adviser: Michael Annicchiarico

**Nathan Faro**

Music Theory

*Soapbox Sonata for Solo Flute***Nathan Faro**

Music Theory

*Chorale for Brass Quintet***Katja Kleyensteuber**

Music Education

*Great Scott!***Frank Noah**

Music

*Piano Sonata #1 Trumpet Sonata*

## 24th Annual COLSA Undergraduate Research Conference

### Poster Presentations

**Saturday, April 25****7:45 a.m.-2 p.m.****MUB (Granite State Room  
and Theatre II)**

Student presentations at the Annual COLSA URC are based on research conducted in any of the college's departments. Research ranges from field studies to molecular biology to genomics studies. Registrants will be notified by the COLSA URC committee if they are selected for an oral presentation.

**Adam Aasen**

Daniel Minukhin

Elizabeth Smedley

Neuroscience and Behavior

**Kaleigh Erickson**

Marine, Estuarine and Freshwater Biology

*Encoding of Information About Action and Context by Medial thalamus in the Rat*

Advisers: Brett Gibson, Robert Mair

**Mason Adams**

Biomedical Science

**Kasey Cushing**

Biochemistry, Molecular and

Cellular Biology

*Healthy Green Campus: Measuring Flame Retardants in UNH Dorms*

Adviser: Gale Carey

**Anna Alexandrou**

Benjamin Gallo

Marine, Estuarine and Freshwater Biology

*Presence of B-N-Methylamino-L-alanine in Sediment and Plankton Samples from New Hampshire Lakes*

Advisers: James Haney, Amanda Murby

**Anna Alexandrou**

Marine, Estuarine and Freshwater Biology

**Jessica Eisfeller**

Biochemistry, Molecular and

Cellular Biology

*Presence Of the Hepatotoxic Microcystins In Vaccinium spp. In New Hampshire Lakes*

Advisers: James Haney, Amanda Murby

**Stephanie Allaire**

Kelly Mitchell

Biology

*Detection of Cyanotoxins from Feathers of Common Loon Chicks with Implications for Measuring Bioaccumulation of Cyanotoxins from Lakes*

Adviser: James Haney

**Mark Anthony**

Brienne Wheelock

Environmental Sciences

*Effects of Allelopathic Chemicals Produced by Alliaria petiolata on Arbuscular Mycorrhizae Fungi*

Adviser: Serita Frey

**Janine Appleton**

Connor Bell

Hannah Glanville

Molly Hartley

Julie Peterson

Biomedical Science

*The Flavor of Animal Life: Double in Situ**Hybridization of Evolutionarily Ancient Sensory Receptors in the Cnidarian, Hydra magnipapillata*

Adviser: David Plachetzki

**Bregieta Arvidson**

Marine, Estuarine and Freshwater Biology

*Microanalysis of Photo-active Gradients in the Colonial Cyanobacteria Nostoc using**Fiber-optic Probe Technology*

Adviser: Alan Baker

**Rebecca Audette**

Biomedical Science

**Tyler Koloski**

Biochemistry, Molecular and

Cellular Biology

*Regulation of the Surfactant Serrawettin W2 in Serratia sp. Strain SCBI*

Adviser: Louis Tisa

**Jordan Badger**

Nutrition

**Mathew Biondolillo**

Psychology

*Does Stage of Change Mediate the Impact of a Motivator to Increase Activity Levels Among College Students?*

Advisers: Summer Cook, Jesse Morrell, David Pillemer

**Briah Parchment (McNair Scholar)**

Biomedical Science

**Michael Marx**

Neuroscience and Behavior

**Marsha Barden****Barbara Brothwell****Barbara White**

Occupational Therapy

**Jerilee Zezula**

Applied Animal Science

*Determining the Effects of Therapy Dog Interactions on Human Blood Pressure and Salivary Stress Hormone Concentrations*  
Adviser: Paul Tsang

**Monique Beaulieu**

Zoology

*How Do Domesticated Dogs Respond to Different Modalities When Using Skype trade*  
Adviser: Leslie Curren

**Kaylyn Bergquist**

Genetics

**Julie Cupido**

Biology

*The Effects of Cytokinin on Adventitious Root Formation in Arabidopsis Thaliana*  
Adviser: Dennis Mathews

**Lydia Birch**

Biomedical Science

**Kara Foley**

Environmental Sciences

*Investigating Failed Loon Eggs: A Model for Bioaccumulation in Lake Ecosystems*  
Advisers: James Haney, Amanda Murby

**Connor Breton**

Environmental Sciences

**Katherine Sinacore**

Undeclared

*Can Tropical Teak Plantations be Managed Sustainably for Both Timber and Water? An Experimental Thinning Study in Panama.*  
Advisers: Heidi Asbjornsen, Jefferson Hall

**Ryan Brown**

Zoology

*The Accuracy and Sensitivity of Handheld Fluorometers as a Tool for Monitoring Cyanobacteria in Lakes*

Advisers: James Haney, Amanda Murby

**Bethany Bucciarelli**

Neuroscience and Behavior

**Allison Duquette**

Biology

*Personality Type in Relation to Learning Performance in Goats (Capra aegagrus hircus)*  
Adviser: Leslie Curren

**Brittany Buchanan**

Wildlife and Conservation Biology

*Effects of Distractedness on Accuracy in a Cognitive Task*  
Adviser: Leslie Curren

**Seth Burgess****Ashley Medeiros**

Biochemistry, Molecular and Cellular Biology

*Isolation and Analysis of Glycolipids, N-linked Glycans, and O-linked Glycans from a Single Sample of Human Serum*  
Advisers: David Ashline, Vernon Reinhold

**Evan Carignan**

Environmental Sciences

*The Effect of Plant Nodulation on Cu<sup>2+</sup> Tolerance by Hippophae rhamnoides*  
Adviser: Louis Tisa

**Christopher Carroll****Kaelina Lombardo**

Genetics

**Lindsay Havens****Lauren Kordonow**

*Multi-level Comparison of CGI Distribution Across Thirty-Six Animal Genomes*  
Advisers: Matthew Macmanes, David Plachetzki

**Katherine Cart**

Biology

*Changes in Turbidity in Maine Estuaries: Effect on Neomysis americana and Mysis stenolepis Feeding Behavior and Diet*  
Adviser: Jonathan Pennock

**Devan Chirgwin**

Genetics

**Nancy Whitehouse**

Biochemistry, Molecular and Cellular Biology and Animal Science

*Evolving the Plasma Free AA Dose-response Techniques to Determine Bioavailability of Met in RP-Met Supplements*  
Adviser: Andre Brito

**Krista Ciaccio**

Biology

*Ecological and evolutionary implications of maternal investment in a small carpenter bee*  
Adviser: Sandra Rehan

**Elizabeth Clark**

Animal Science

*Development of Model to Predict Colostrum Quality using Dairy Herd Improvement Data*  
Adviser: Peter Erickson

**Waylin Clegg**

Sustainable Agriculture and Food Systems  
*Investigating Alternative Pest Management Strategies for 'Cabbage Maggot' Delia radicum on Radishes*  
Adviser: Richard Smith

**Hannah Cole****Kala Frye****Jacqueline Sullivan**

Neuroscience and Behavior

*The Role of Dietary-derived Pigments in the Nudibranch Melibe leonina*  
Adviser: Winsor Watson

**Corey Collins**

Neuroscience and Behavior

*Feeding and Satiation of Melibe leonina*  
Adviser: Winsor Watson

**Caroline Connors**

Ecogastronomy and Nutrition

**Valerie Nesom**

Nutrition

*Evaluating the Adequacy and Accessibility of Recreation Facilities at UNH*  
Adviser: Jesse Morrell

**Brandon McDonald**

Biomedical Science

**Matthew Coyle****Randi Foxall****Sabrina Pankey**

*A Tale of Two Evolutionary Paths: A Comparison of Symbiotic Evolution of *Vibrio fischeri* Colonization of *Euprymna scolopes* and Laboratory Culture Driven Evolution*  
Adviser: Cheryl Whistler

**Caitlin Culver**

Genetics

*Searching for Sex Determination Markers in Cold Hardy Kiwi (*Actinidia arguta*) via RAPD PCR*

Adviser: Iago Hale

**Sumer Panesar****Kyle Scarano****Evan DaSilva**

Biomedical Science

*Applying Nematode Chemotaxis for Assessment of *Vibrio parahaemolyticus* Virulence*

Adviser: Cheryl Whistler

**Megan Dalton**

Environmental Sciences

*Atmospheric Nuclear Weapon Testing*

*Horizons: Establishing Depth-Age*

*Relationships in an Alaskan Ice Core*

Adviser: Cameron Wake

**Tien Dang (McNair Scholar)**

Biomedical Science

**Joseph Miseirvitch**

*Characterizing the Angiogenic Properties of Brain Cancer Cells Using the Glioma U-373 Cell Line*

Adviser: Paul Tsang

**Alana Davidson**

Nutrition

*Food Insecurity Among*

*Undergraduate Students*

Adviser: Jesse Morrell

**Jacob DeBow**

Wildlife and Conservation Biology

*Comparison of Multiple Methods Used to*

*Estimate Foliar Production and Canopy*

*Composition of a Forest*

Advisers: Lucie Lepine, Andrew Ouimette

**Jaime DeForest**

Zoology

*The Effects of Sex and Age on Dogs' Ability to Improve on a Novel Cognitive Task*

Adviser: Leslie Curren

**Tiffany DeGroot****Bethany Parker**

Biochemistry, Molecular and Cellular Biology

**Ashley Marcinkiewicz**

*Competitive Advantage of *Vibrio parahaemolyticus* Harboring Lysogenic f237-like Phage*

Adviser: Cheryl Whistler

**Tiffany DeGroot****Bethany Parker**

Biochemistry, Molecular and Cellular Biology

**Ashley Marcinkiewicz**

*The Effects of Temperature on Relative Fitness of *V. parahaemolyticus* Strains from the Great Bay Estuary*

Adviser: Cheryl Whistler

**Abigail Desrosiers**

Biomedical Science

**Allison Duquette**

Biology

**Sarah Geromini****Anastasia Zielinski**

Zoology

*Effects of Bugling on Roosevelt Elk (*Cervus canadensis roosevelti*) Vigilance*

Adviser: Leslie Curren

**Elizabeth Deyett****Emily Shultz****Megan Hartwick****Erin Urquhart**

Biomedical Science

*Optimized Separation of Estuarine*

*Plankton To Determine Associations*

*with *Vibrios**

Adviser: Steve Jones

**Jennifer Dickson**

Biomedical Science

*The MiniION: A Miniaturized DNA/RNA Sequencer*

Adviser: Matthew Macmanes

**Emma Downing**

Sustainable Agriculture and Food Systems

*New Hampshire Dairy Farm Succession:*

*Conversations about Strategies and*

*Challenges of Preserving the Family Farm.*

Advisers: Andrew Conroy,

Catherine Moran

**Lisa Doyle**

Biology

**Benjamin Gallo****Enrica Jossi**

Marine, Estuarine and Freshwater Biology

*Loon Chick Blood as a Bioindicator of*

*Cyanotoxins*

Advisers: James Haney, Amanda Murby

**Austin Drake****Theodore Kazan****Cora Lehet****Hayley Robertson**

Neuroscience and Behavior

*Complex Encoding of Information About*

*Actions and Context in Rat Prefrontal*

*Cortex in Correlation with Cell Width*

Advisers: Brett Gibson, Robert Mair

**Thomas DuBois****Judith Hoskin**

Genetics

*Identification of Palmitoyltransferase*

*Loss-of-Function Mutants in *Arabidopsis thaliana**

Adviser: Estelle Hrabak

**Thomas DuBois**

Genetics

*The Identification of Palmitoyltransferase*

*Mutants in *Arabidopsis thaliana**

Adviser: Estelle Hrabak

**Thomas DuBois****Judith Hoskin**

Genetics

**Megan Honeywell**

Biochemistry, Molecular and Cellular Biology

*Characterization of Plant Palmitoyltransferase Mutants in *Arabidopsis thaliana**

*Using Genetic and Biochemical Approaches*

Adviser: Estelle Hrabak

**Erin Ducharme**

Marine, Estuarine and Freshwater Biology  
*The Impact of Feeding on Horseshoe Crab Activity*  
 Adviser: Winsor Watson

**Andraya Ehrlich**

Biology

**Sarah Piet**

Biochemistry, Molecular and Cellular Biology

**Nicolette Schwab**

Biomedical Science

*The Influence of Extracellular-Regulated Kinases (ERKs) on Granulosa Cell Fate in the Bovine Follicle*  
 Adviser: David Townson

**Andraya Ehrlich**

Biology

**Cameron Graaskamp**

Biochemistry, Molecular and Cellular Biology

*Investigation of a Fas decoy Receptor in the Bovine Corpus Luteum*  
 Adviser: David Townson

**Dina El-Tahlawy****Amanpreet Kaur**

Biochemistry, Molecular and Cellular Biology

*Applying the Mortalin Staining Pattern to Determine Whether Calcium-Treated SK-BR-3 Breast Cancer Cells Display Decreased Proliferation Due to the Calcium-Mediated Inactivation of the MAPK-ERK Signaling Pathway*  
 Adviser: Charles Walker

**Elaina Enzien**

Sustainable Agriculture and Food Systems  
*Chicken Coops and Rice Paddies: Experiencing Panama Through Global Brigades*  
 Adviser: Andrew Conroy

**Joshua Evans**

Biomedical Science

*The Effects of Polybrominated Diphenyl Ether (PBDE) Dose on Hepatic Phosphoenolpyruvate carboxykinase (PEPCK) Enzyme Activity in Rats*  
 Adviser: Gale Carey

**Lisa Flaman****Melissa Ryan**

Genetics

**Nicole Petersen**

Biochemistry, Molecular and Cellular Biology

**Megan Thompson**

*Identification and Characterization of Genes Involved in Root Growth Under Salt Stress in Arabidopsis*  
 Adviser: Estelle Hrabak

**Sean Fogarty**

Sustainable Agriculture and Food Systems  
*Carbon Fluxes Across Four Land Use Types in New Hampshire*  
 Advisers: Lucie Lepine, Andrew Ouimette

**Sotirios Georgiadis**

Biochemistry, Molecular and Cellular Biology

*Healthcare Data Informatics: UNH Panama 2015*

Adviser: Clyde Denis

**Sarah Geromini**

Zoology

*A Revision of the Ant-like Litter Beetle Genus Custotychus (Coleoptera: Staphylinidae: Pselaphinae)*  
 Adviser: Donald Chandler

**Heidi Giguere**

Wildlife and Conservation Biology  
*The Establishment of Invasive Shrub Glossy Buckthorn (Frangula alnus) in Naturally Occurring Forest Canopy Gaps in Southern New Hampshire*  
 Adviser: Thomas Lee

**Akaylah Glidden**

Ecogastronomy and Nutrition

**Mary Hammar****Brenna Robinson****Emily Villeneuve**

Nutrition

*Does the UNH Campus Offer a Healthy Eating Environment?*  
 Adviser: Jesse Morrell

**Megan Grass**

Biomedical Science

*Tracing The Metabolism of 13C-labeled Amino Acids and Glucose in Fungal Cultures*  
 Advisers: Erik Hobbie, Andrew Ouimette

**Tricia Gunther**

Wildlife and Conservation Biology  
*The Relationship Between Kinship and Physical Proximity in Captive Primates*  
 Adviser: Leslie Curren

**Tricia Gunther**

Wildlife and Conservation Biology

**Thea Kristensen**

Ecology, Evolution and Behavior

**Katrina Papanastassiou**

*Evaluating Genetic Diversity Between Populations of New England Cottontail (Sylvilagus transitionalis) and Eastern Cottontail (Sylvilagus floridanus)*  
 Adviser: Adrienne Kovach

**John Hastings**

Environmental Sciences

*Assessing Methods for Generating Estimates of Leaf Area Index in Northern Temperate Forests*  
 Advisers: Lucie Lepine, Andrew Ouimette

**Kaelina Lombardo**

Genetics

**Lindsay Havens**

*Timeline of Phenotypic Development in the Asian Multicolored Lady Beetle (Harmonia axyridis)*  
 Adviser: Matthew Macmanes

**Crystal Hermawan**

Biomedical Science

**Nicole Jaskiewicz**

*O-GlcNAcylation Alters Keratin 8/18 Architecture of HPV-16 Infected Cervical Cancer (SiHa) Cells*  
 Adviser: David Townson

**Suzanne Hogan**

Nutrition

*Effect of Whole Grain Consumption on Markers of Metabolic Syndrome*  
 Advisers: Joanne Curran-Celentano, Jesse Morrell

**Saba Ilyas**

Biomedical Science

**Feng Xu**

*Does the Presence of Hemolysin Genes correlate with the competitive fitness of V. parahaemolyticus*  
 Adviser: Cheryl Whistler



**Emily Jalbert**

Psychology and Neuroscience and Behavior

**Joseph McKee**

Neuroscience and Behavior

**Cassandra Wante**

Psychology

*Encoding of Information About Actions and Context in Rat Prefrontal Cortex: Effects of Thalamic Inactivation*

Advisers: Brett Gibson, Robert Mair

**Stephanie Parisi**

Biomedical Science

**Nicole Jaskiewicz***In Vitro Effects of O-GlcNAcylation on Keratin 8/18 Filaments in Cervical Cancer Cells*

Adviser: David Townson

**Alexander Jordon**

Biochemistry, Molecular and Cellular Biology

**Briana VanVerdeghem**

Biomedical Science

*Effects of Diabetic Conditions on Endothelial Cell Function in Relation to Atherogenesis*

Adviser: Thomas Foxall

**Elizabeth Kern**

Neuroscience and Behavior

*Norepinephrine and the Attentional Set Shifting Task in a Rat Model of Fetal Alcohol Spectrum Disorder*

Adviser: Jill McGaughy

**Galina Kinsella**

Biomedical Science

*Effects of Audible Human Disturbance on Koala (*Phascolarctos cinereus*) Behaviour in Queensland, Australia and Implications for Management*

Advisers: Andrew Conroy, Leslie Curren, Alistair Melzer

**Garrett Klokman**

Biochemistry, Molecular and Cellular Biology

*Production of Estradiol and Matrix Metalloproteinases by an Immortalized Human Granulosa Cell Line*

Advisers: Paul Tsang

**Sarah Kremer**

Ecology, Evolution and Behavior

*Experimental Adaptation of a Clinical Cystic Fibrosis Isolate to Biofilm Conditions*

Adviser: Vaughn Cooper

**Katharine Langley**

Ecology, Evolution and Behavior

*Toxic Cyanobacteria Aerosols from Lake Attitash, MA and Implications for Public Health*

Adviser: James Haney

**Molly Lawrence-Webb**

Wildlife and Conservation Biology

*Effects of Increased Soil Moisture on Aggressive Behavior in Pavement Ants*

Adviser: Leslie Curren

**Gwyneth Welch**

Neuroscience and Behavior

**Kevin Leahy***Temporal Characterization of the DNA Damage Response in Human Embryonic Kidney Cells Treated with the Cytotoxic Drug Camptothecin.*

Adviser: Feixia Chu

**Kelley Lieto**

Environmental Sciences

*Below Ground Root Growth in Relation to Soil Nutrient Availability*

Advisers: Lucie Lepine, Andrew Ouimette

**Renee Loeffel**

Zoology

**Haley Millen****Jessica O'Toole***Marine, Estuarine and Freshwater Biology The History of Toxins in Lakes, Told by Trees*

Adviser: James Haney

**Sean Lombard**

Biomedical Science

*Comparative social evolution in the Australian small carpenter bee*

Adviser: Sandra Rehan

**Emily Lundstedt**

Biomedical Science

*The Effects of Nocardia Strains Cas13 and Fa12 on Actinorhizal Plant Nodulation and Symbiosis*

Advisers: Faten Ghodhbane-Gtari, Louis Tisa

**Kelsey MacDonald**

Ecogastronomy and Nutrition

*Culinary Assessment of Sweet Potato Varieties*

Advisers: Joanne Curran-Celentano, Rebecca Sideman, Daniel Winans

**Alexis Mack**

Chemical Engineering

**Stephanie Sykes***Marine, Estuarine and Freshwater Biology Aerosolized Cyanotoxins from New England Dams*

Advisers: James Haney, Amanda Murby

**Alexis Mack**

Chemical Engineering

**Sean Perry**

Biomedical Science

*Toxic Cyanobacteria Aerosols: Tests of Filters for Cells and Toxins*

Advisers: James Haney, Amanda Murby

**Hillary Manning**

Biomedical Science

*A Comparative Quantitative Study of Anatomical Homogeneity Between the Distal and Proximal Regions of a Sunflower Leaf*

Adviser: Wayne Fagerberg

**Jessica Manuel**

Animal Science

*Human Identification Among Nonhuman Primates*

Adviser: Leslie Curren

**Timothy Marquis**

Biomedical Science

*A Proto-Pluritropic Cell Type and Its Expression of Novel Glycoprotein Hormones in the Pituitary of the Basal Vertebrate, the Sea Lamprey*

Adviser: Stacia Sower

**Molly McGovern**

Environmental Conservation Studies

*Looking Back to Plan Ahead: Macroalgal Trends in the Great Bay Estuary 1978-2014*

Adviser: David Burdick

**Melissa McLaughlin**

Biochemistry, Molecular and Cellular Biology

*Early Signaling Events Involved in Establishing the Symbiotic Relationship Between *Elaeagnus angustifolia* and *Frankia* sp. Strains EAN1pec, Eu11c, and Eu11f*

Adviser: Louis Tisa

**Luke Miller**

Sustainable Agriculture and Food Systems  
*Novel Production Methods for Greenhouse African Marigolds: Sensor Based Irrigation and Controlled Release Fertilizers*  
 Adviser: Andrew Ogden

**Shannen Miller**

Environmental Sciences  
*The Affects Land Use Has on the Amount of DOC in Water*  
 Adviser: William McDowell

**Erika Moretti**

Zoology  
*An Investigation of the Potential Impacts of Invasive Green and Blue Crabs on the American Lobster Fishery in the Great Bay Estuary*  
 Adviser: Winsor Watson

**Keshav Nepal (McNair Scholar)**

Biomedical Science  
*The Influence of OmniGen AF on Immune Cell Accumulation, Ovulation Rate and Fertility in the Female Rat*  
 Adviser: David Townson

**Jonathan Nowick**

Environmental Sciences

**Ryan Stephens**

*Do Diets of Woodland Jumping Mice and Southern Red-Backed Voles Differ Across Forest Types?*  
 Advisers: Erik Hobbie, Rebecca Rowe

**Mary Offutt**

Biology and Marine, Estuarine and Freshwater Biology  
*Supplementation of Ciona intestinalis in the Diet of the Green Sea Urchin Strongylocentrotus droebachiensis*  
 Adviser: Larry Harris

**Amy Parker**

Nutrition  
*Early Sleep Midpoints are Associated with Increased Fruit, Water, and Fiber Intakes and Decreased Discretionary Calories in a Young Adult Cohort*  
 Adviser: Jesse Morrell

**Ashton Parker**

Sustainable Agriculture and Food Systems  
*Management Practices of a 4000 Head Grass-Fed Beef Farm in New York*  
 Adviser: Andrew Conroy

**Margot Popecki**

Neuroscience and Behavior

**Hallett Sargent**

Environmental Sciences  
*Detecting the Presence of Microcystins in Lake Erie*  
 Advisers: James Haney, Timothy Moore, Amanda Murby

**Stacie Powers**

Environmental Conservation Studies  
*Growth Rate of Calcium- Fertilized Sugar Maple and Yellow Birch Trees at Hubbard Brook*  
 Advisers: Heidi Asbjornsen, Matthew Vadeboncoeur

**Vamsi Prasad**

Neuroscience and Behavior  
*Association Between Polymorphisms in the Serotonin Transporter Gene and Brain Oscillatory Power During Source Memory*  
 Adviser: Robert Ross

**Shayna Purdy**

Zoology

**Nicole Sharpe**

Biology  
*Alteration of Flight Initiation Distance in House Sparrows (Passer domesticus) in Response to Potential Predators and Environmental Factors*  
 Adviser: Leslie Curren

**Jaclyn Querido**

Nutrition  
*How Does Inaccurate Perception of Weight Compared to Actual BMI Status Affect the Diet Score of College Students?*  
 Adviser: Jesse Morrell

**Tyler Remick**

Wildlife and Conservation Biology

**Ryan Stephens**

*Truffle Abundance and Mycophagy by Small Mammals in Northern New England Forests*  
 Adviser: Rebecca Rowe

**Kim Remillard**

Biomedical Science  
*Determination of p53 Distribution and Functionality in Canine Acute Myeloid Leukemia*  
 Adviser: Charles Walker

**Samuel Rice**

Environmental Conservation Studies  
*Isotopic Analyses of Post-fire Fungi Indicate that Morchella is Saprotrophic*  
 Adviser: Erik Hobbie

**Stephanie Royka**

Genetics  
*Genetic Identification of Host Species from Bloodmeals of Black-Legged Ticks*  
 Adviser: Adrienne Kovach

**Allison Scagel**

Wildlife and Conservation Biology  
*Does Being Alone Induce Stress in Domestic Dogs (Canis lupus familiaris)?*  
 Adviser: Leslie Curren

**Kelsie Schanlaber**

Biochemistry, Molecular and Cellular Biology  
*Investigating Non-Transcriptional Apoptosis in Severely Stressed Human Acute Myelogenous Leukemia Cells through Blockage of p53 Nuclear Import*  
 Adviser: Charles Walker

**Randy Shoe****Erin Smith**

Wildlife and Conservation Biology  
*Implications of New England Cottontail Habitat Management on the Metapopulation Dynamics of Declining Shrub-Dependent Songbirds - A Pilot Study*  
 Adviser: Matthew Tarr

**Puskar Siwakoti (McNair Scholar)**

Biomedical Science  
*Influence of Phenotypic Switching on Virulence by Emergent Vibrio parahaemolyticus*  
 Adviser: Cheryl Whistler

**Emily Sluder**

Environmental and Resource Economics  
*Grid Parity and Comparative Energy Costs*  
 Adviser: Douglas Morris

**Alexandra Soucy**

Nutrition  
*Effects of Polybrominated Diphenyl Ether (PBDE) Dose on Liver Global Gene Expression in Rats*  
 Adviser: Gale Carey

**Kristina Spencer**

Neuroscience and Behavior

*Stress Reactivity and Depressive-like Behavior Following Long Versus Short Acclimation Period in Rats Exposed to Intermittent Swim Stress or Home Cage Control*

Advisers: Robert Drugan, Nate Stafford

**Andrew Uccello**

Biology

**Ryan Stephens***Variation in Truffle Consumption by *Myodes gapperi* Between Managed and Unmanaged Forests in Northern New Hampshire*

Adviser: Rebecca Rowe

**India Stribling**

Neuroscience and Behavior

*Effects of Exercise on Intermittent Swim Stress-induced Ultrasonic Vocalizations and Subsequent Behavioral Depression.*

Advisers: Robert Drugan, Nate Stafford

**Stephanie Sykes**Marine, Estuarine and Freshwater Biology  
*Mechanisms Underlying Lobster**Trap Saturation*

Advisers: Elizabeth Morrissey,

Winsor Watson

**Steven Troy**Biochemistry, Molecular and  
Cellular Biology*The Effects of Nanoparticles and Biogenic Polyamines on Horizontal Gene Transformation Efficiency*

Adviser: Subhash Minocha

**Laura Van Beaver**

Neuroscience and Behavior

*Production of Decaffeinated Tea through Genetic Engineering*

Adviser: Subhash Minocha

**Alicia Walsh**

Biomedical Science

*Carnivore Diet Identification Through Scat and Genetic Analysis in Namibia, Africa*

Adviser: Andrew Conroy

**Hannah Whalen**International Affairs and Environmental  
Conservation Studies*Evaluating the Role of Private Lands in the Conservation of Biodiversity*

Advisers: Kimberly Babbitt, Jennifer

Purrenhage

**David Wigemark**

Neuroscience and Behavior

*The Implications of Brain Oscillations on the Relationship Between Source Memory and MAO-A Gene Variations.*

Adviser: Robert Ross

**Coty Winn**

Biomedical Science

*Veteran Transition Assistance Program*

Adviser: Bryan Ness

**Michael Workman**

Biomedical Science

*Effects of Fetal Alcohol Spectrum Disorder on Distractibility and Attention*

Adviser: Jill McGaughy

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## 24th Annual COLSA Undergraduate Research Conference

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### Oral Presentations

**Saturday, April 25****7:45 a.m. - 2 p.m.****MUB (Granite State Room and Theatre II)****Bradley Anderson**

Nutrition

*Dietary Characteristics of Long-Distance Hikers: A Cross-Sectional Study of the Nutritional Needs of Long-Distance Hikers on the Appalachian Trail*

Adviser: Jesse Morrell

**Rebecca Graves**

Zoology

**Ryan Stephens**

Wildlife and Conservation Biology

*Effects of Age, Density, and Seasonality on Molt Pattern in the Mammal Genus *Peromyscus**

Adviser: Rebecca Rowe

**Tricia Gunther**

Wildlife and Conservation Biology

*The Relationship Between Kinship and Physical Proximity in Captive Primates*

Adviser: Leslie Curren

**Jessica Kaczynski**

Environmental and Resource Economics

*Waste Water Treatment in New Hampshire*

Adviser: John Halstead

**Galina Kinsella**

Biomedical Science

*Effects of Audible Human Disturbance on Koala (*Phascolarctos cinereus*) Behaviour in Queensland, Australia and Implications for Management*

Advisers: Andrew Conroy, Leslie Curren, Alistair Melzer

**Timothy Marquis**

Biomedical Science

*A Proto-Pluritropic Cell Type and Its Expression of Novel Glycoprotein Hormones in the Pituitary of the Basal Vertebrate, the Sea Lamprey*

Adviser: Stacia Sower

**Michael Workman**

Biomedical Science

*Effects of Fetal Alcohol Spectrum Disorder on Distractibility and Attention*

Adviser: Jill McGaughy

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## Chemistry Department Poster Exhibition

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**Friday, May 1****3-4 p.m.****Parsons Hall, Southwest Lobby**

The Chemistry Department Poster Exhibition is the result of students' yearlong senior thesis research in such areas as organic, inorganic, physical or analytical chemistry, and under the direction of their research adviser.

**Max Bilodeau**

Chemistry

*Synthetic Approaches to a Diiron Cluster Complex*

Adviser: Samuel Pazicni

**Tyler Dami**

Chemistry

*Free Radical Skeletal Rearrangements of Arenes and Diels Alder Reactions with an Acetylene Equivalent*

Adviser: Richard Johnson

**Justin Dapolito**

Chemistry

*Phenylphenanthrene Synthesis and Phenyl Group Migration Studies*

Adviser: Richard Johnson

**Christopher DiBona**

Chemistry

*Extraction and Analysis of Ommochromes in Cephalopod Chromatophores*

Adviser: Leila Deravi

**Azaline Dunlap-smith****Matthew Rauch**

Chemistry

*Exploration of the Synthesis of 1-Methyl-4-Silatranone: A Hyperstable Lactam and an Unprecedented Silatrane*

Adviser: Arthur Greenberg

**Kelly Hunt**

Chemistry

*Cage-like Carbohydrate That Can Trap and Kill a Cancer Cell*

Advisers: Arthur Greenberg, Patricia Wilkinson

**Brittney Hutchinson**

Chemistry

*Chain Extension Mannich Reactions with Sulfonyl Imines*

Adviser: Charles Zercher

**Brittney Hutchinson**

Chemistry

*Effectiveness of Peer-Led Team Learning with Different Leader Training in College General Chemistry*

Advisers: Christopher Bauer, Julia Chan

**Peter Kimball**

Chemistry

*Synthesis of a New Pentacene-Based Cyclophane for Use in Organic Thin Film Transistors*

Adviser: Glen Miller

**Jay Nelson**

Chemistry

*Binding Selectivity of Molecular Imprinted Polymers*

Adviser: W. Rudolf Seitz

**Audrey Phillips**

Chemistry

*TBA-354, Nitroimidazole and the Effects Against Drug-Resistant Tuberculosis*

Adviser: Arthur Greenberg

**Barry Powers**

Chemistry

*Synthesis and Photocatalytic Carbon Dioxide Reduction of C-functionalized Cyclam*

Adviser: Gonghu Li

**Karen Richards**

Biomedical Science

*Conductive Cellulose Materials Coated in Silver Particles*

Adviser: Erik Berda

**Annika Taylor**

Chemistry

*Biodegradable Polymer Wafer Fabrication and Drug Delivery Applications*

Adviser: Arthur Greenberg

**David Waste**

Chemistry

*Single-chain Nano Particles from Sequenced Polyolefins*

Adviser: Erik Berda

**Steven Young**

Chemistry

*A Greener Route to the Production of Polymers*

Adviser: Arthur Greenberg

## Peter T. Paul College of Business and Economics

### Paul J. Holloway

### Innovation-to-Market Prize Competition

### Championship Round

**Tuesday, May 5****1 p.m. - 5:30 p.m.****Holloway Commons,  
Squamscott Room**

This competition takes students out of the classroom and into the real world. Students are required to research and prepare strategies for commercializing new products and services, which they present to a panel of industry judges. Prizes are awarded for the most feasible and fundable approaches for starting, acquiring, or expanding a business venture.



# Acknowledgments

The UNH Undergraduate Research Conference has grown to become a signature event at the University, an annual highlight of the spring semester and one of the largest and most diverse conferences of its kind. Bringing the URC to fruition each year is the result of a collaborative, behind-the-scenes network of a great many campus community members. Here, we acknowledge these individuals and campus institutions, and thank them for helping make URC 2015 happen.

## *Special thanks to:*

### **UNH Parents Association**

### **Office of the Vice President for Student and Academic Services**

### **Office of the Senior Vice Provost for Engagement and Academic Outreach**

### **All Faculty Mentors**

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College of Engineering and Physical Sciences (CEPS) Dean's Office

College of Life Sciences and Agriculture

Hamel Center for Undergraduate Research

Institute for the Study of Earth, Oceans, and Space

Memorial Union Building Administrative Staff

New Hampshire NASA Experimental Program to Stimulate Competitive Research (EPSCoR)

New Hampshire Space Grant Consortium

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URC Office Assistants: Meghan Hahr '18 and Lynn Motanya '18

Web and Mobile Development

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Janet Cass, Director, Parents Association

Kent Chamberlin, Co-chair, ISE Symposium, Professor, Electrical and Computer Engineering

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Molly Doyle, Co-chair, Parents Association Undergraduate Research Symposium; Administrative Director, Hamel Center for Undergraduate Research

Nora Draper, Assistant Professor, Communication

Felicia Fowler, Graduate Assistant/Co-Coordinator, Graduate Research Conference (GRC)

Kate Gaudet, Assistant Director, Honors Program

Rob Haskins, Chair, Naked Arts; Associate Professor, Music Department

John Hasseldine, Chair, Paul College URC, Professor, Accounting

Tara Hicks Johnson, Co-chair, ISE Symposium; Outreach Specialist, CCOM

Myles Lynch, Graduate Assistant/Co-coordinator, Graduate Research Conference (GRC)

Robert McGann, Director, UNH Admissions

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Paul Tsang, Faculty Director, Hamel Center for Undergraduate Research, and Professor, Molecular, Cellular and Biomedical

Ruth Varner, Co-chair, ISE Symposium; Director of Leitzel Center, Associate Professor, Earth Systems Research Center

Julie Williams, Senior Vice Provost, Engagement and Academic Outreach

## **2015 URC Event Chairs/Co-chairs:**

Michael Annicchiarico, Student Composers' Concert

Carole Berry, Kent Chamberlin, Tara Hicks Johnson and Ruth Varner, Interdisciplinary Science & Engineering Symposium

Jennifer Borda and Molly Doyle, Parents Association Undergraduate Research Symposium

Myles Lynch and Felicia Fowler, Graduate Research Conference

Val Dusek and Willem deVries, Philosophy Department Undergraduate Research Conference

Rob Haskins, Naked Arts—Creativity Exposed!

John Hasseldine, Paul College Undergraduate Research Conference

Delia Konzett, Honors English Undergraduate Research Conference

Cathy Frierson, History Department Undergraduate Research Conference

Dan Reagan, UNHM Undergraduate Research Conference - Oral, Poster, Cinema Day, Technology Day

Michael Merenda and Cynthia Nizzari-McClain, Paul College Holloway Prize University-wide Innovation-to-Market Nelson, Albin and Championship Rounds/Competition

Subhash Minocha and Pamela Wildes, 24th Annual COLSA URC

Jennifer Moses, 2015 Senior B.A. & B.F.A. Art Exhibition & Reception and M.F.A. Thesis Exhibition

Susan Moore and David Pillemer, Psychology Department George M. Haslerud URC

Cindi Rohwer, Chemistry Department Poster Exhibition

Neil Vroman, CHHS Grimes Award Competition



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