

\* CHALLENGING \* **rewarding** \* STAGGERING \* **memorable** \*  
**fantastic** \* INSPIRATIONAL \* *enthusiastic* \* **empowered**  
\* **wicked** \* enlightening \* **INTENSE** \* *intellectually stimulating* \*  
Surprising \* *interesting* \* **BENEFICIAL** \* **passionate**  
\* confidence-building \* *NERVE-wracking* \* **AWESOME** \* **fun!** \*



**Undergraduate  
Research  
Conference**

**April 17-25, 2009**

Showcase for  
undergraduate  
research, scholarship,  
and creative  
presentations

---

## A welcome to participants and attendees

---



MARK W. HUDDLESTON



JULIE E. WILLIAMS

**W**ELCOME to our tenth annual springtime celebration of discovery at the University of New Hampshire. The UNH Undergraduate Research Conference (URC) highlights the outstanding research, scholarship, and creative activities of our students and their faculty mentors. We take pride in—and learn from—their accomplishments.

What began in 2000 has blossomed into an annual tradition that puts UNH students in the spotlight. Our conference is now one of the largest and most diverse in the nation. More than 850 students will present their findings at dozens of events across both the Durham and Manchester campuses, and represent academic achievements in every college and school.

This extraordinary learning experience helps students build the necessary knowledge, skills, and confidence to pursue graduate studies and/or meaningful careers. The URC is a shining example of our students' success and the discovery-based education for which UNH is known.

Whether your visit includes a poster session, an oral presentation, an art exhibit, or a creative presentation, we are confident that you will be impressed with these participants' knowledge and understanding. Thank you for your interest in and support of our remarkable students.

Sincerely,

MARK W. HUDDLESTON, PRESIDENT

JULIE E. WILLIAMS, ASSOCIATE VICE PRESIDENT FOR  
RESEARCH AND OUTREACH SCHOLARSHIP

---

# Lawrence C. Reardon

ASSOCIATE PROFESSOR OF POLITICAL SCIENCE,  
COLLEGE OF LIBERAL ARTS

---

CHRIS REARDON knows how intimidating it can be for students to take on a new research project.

And the URC can be especially daunting because it requires independent study on top of a normal class load, as well as presenting before peers, professors, parents, and professionals. All within some demanding deadlines.

“Doubts and questions arise. Can you do it?” says Reardon, an associate professor of political science at UNH for 18 years and a veteran URC mentor. “But once a writer starts down the road of research, and actually begins to enjoy digging into the recesses of knowledge to find that nugget that will shed light... then I know students get hooked.”

Reardon says one of his greatest rewards is to watch students in the URC turn their enthusiasm for a subject into inquiry, then into research, and finally into becoming

teachers themselves as they bring their audiences on the path to discovery.

“To me, the URC is a perfect proving ground for future academics,” Reardon says. “Students need to learn how to carry out research, to develop methodologically rigorous arguments, and to test out their theories looking at one or more case studies. Once a student understands this process, the student begins to understand more about the academic pursuit.”

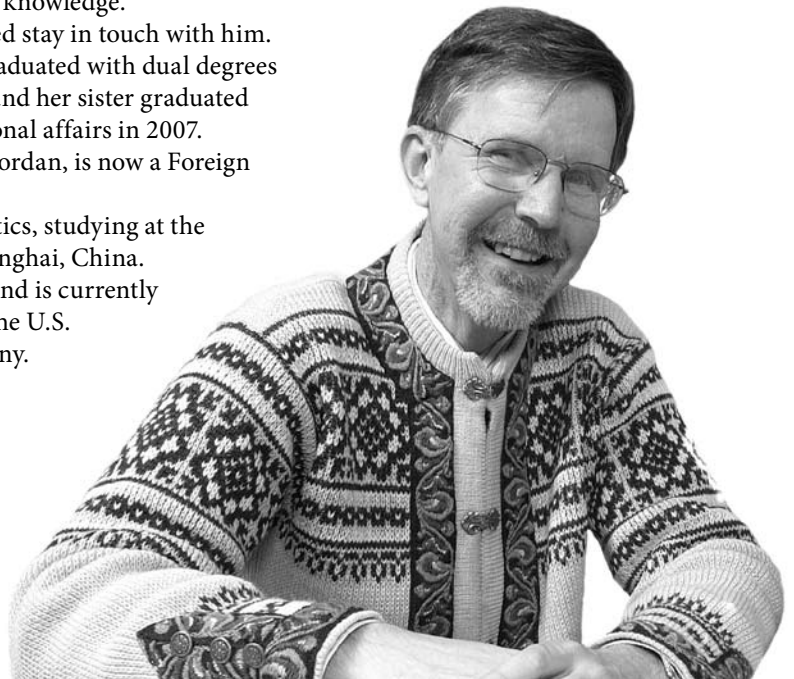
Reardon says the URC is an ideal vehicle for students who are already pursuing independent work, through programs such as the international affairs dual major, to share their discoveries with the UNH community.

“Presenting helps them complete the learning process,” Reardon says. “It’s a fantastic opportunity for them to disseminate their knowledge.”

Many of the URC students Reardon has mentored stay in touch with him. Two are sisters Sarah and Susannah Pratt. Sarah graduated with dual degrees in anthropology and international affairs in 2005, and her sister graduated with dual degrees in political science and international affairs in 2007.

Sarah, who studied Arabic and Arab culture in Jordan, is now a Foreign Service Officer in New Delhi, India.

Susannah is a scholar of Chinese and Asian politics, studying at the University of London, and Fudan University in Shanghai, China. She continued studying Chinese after graduation, and is currently in Chengdu, China, completing a fellowship from the U.S. government by interning at a Chinese travel company.



# URC '09 Contents

Calendar of events	4	<b>Friday, April 24 Events</b>	
Map	5	UNH Manchester URC— Engineering Technology Presentations	21
<b>Wednesday, April 15 and Thursday, April 16 Events</b>		Welcome with Associate Vice President for Research and Outreach Scholarship Julie E. Williams and Parents Association Council President Mark Loopley	21
Graduate Research Conference (GRC)	6	Parents Association Undergraduate Research Symposium	
<b>Friday, April 17 Events</b>		Poster Presentations; session A	22
2009 Senior B.A., B.F.A., and M.F.A. Exhibition and Preview Reception	6	Oral Presentations; session A	24
<b>Tuesday, April 21 Events</b>		Poster Presentations; session B	28
UNH Manchester URC—Oral Presentations	6	Oral Presentations; session B	29
<b>Wednesday, April 22 Events</b>		Oral Presentations; session C	33
Seacoast Reads Exhibition	6	The Naked Arts—Creativity Exposed (Act III)	36
Thompson School Community Leadership Program	7	College of Health and Human Services Grimes Award Competition	36
UNH Office of Community Service Partnerships	7	Honors English Undergraduate Research Conference	36
Whittemore School of Business and Economics Undergraduate Research Conference	8	Psychology Department George M. Haslerud Undergraduate Research Conference	37
The Naked Arts—Creativity Exposed (Act I)	12	Philosophy Undergraduate Research Conference	37
Interdisciplinary Science and Engineering Symposium (ISE)	12	Student Composers' Concert	38
UNH Manchester URC—Poster Presentations	17	<b>Saturday, April 25 Events</b>	
<b>Thursday, April 23 Events</b>		18th Annual COLSA Undergraduate Research Conference	38
UNH Manchester URC—Cinema Day	19	<b>Events in May</b>	
The Naked Arts—Creativity Exposed (Act II)	19	Chemistry Department Poster Exhibition	43
History Department Undergraduate Presentations	21	Whittemore School of Business and Economics Paul J. Holloway Prize University-wide Innovation-to-Market Competition, Championship Round	43
		<b>Additional Features</b>	
		URC 2007 Awards of Excellence	44
		Committed to Undergraduate Research	46
		Acknowledgements	47
		Student Index	48

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

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

# URC '09 Calendar

All events are free and open to the public.

---

## Thursday, April 15–16

**10 a.m.–4 p.m.**  
**Graduate Research Conference (GRC)**  
*MUB, Strafford Room, assigned rooms* ③

---

## Friday, April 17

**6–8 p.m.**  
**2009 Senior B.A. and B.F.A. Exhibition and M.F.A. Thesis Exhibition (I) Preview Reception**  
*Museum of Art, Paul Creative Arts Center (Exhibition runs April 18–May 23)* ①

---

## Tuesday, April 21

**9 a.m.–3 p.m.**  
**UNH Manchester Undergraduate Research Conference Oral Presentations**  
*UNHM Auditorium*

---

## Wednesday, April 22

**9 a.m.–4 p.m.**  
**Whittemore School of Business and Economics Undergraduate Research Conference**  
*MUB, Rooms 330/332, 338/340, Theater II* ③

**10:30 a.m.–Noon**  
**Seacoast Reads Exhibition**  
*MUB, Rooms 330/332* ③

**10:30 a.m.–Noon**  
**Thompson School Community Leadership Program**  
*MUB, Rooms 330/332* ③

**10:30 a.m.–Noon**  
**UNH Office of Community Service Student Partnerships**  
*MUB, Rooms 330/332* ③

**Noon–2 p.m.**  
**The Naked Arts—Creativity Exposed! (Act I)**  
*Museum of Art, Paul Creative Arts Center* ①

**2–5 p.m.**  
**Interdisciplinary Science and Engineering (ISE) Symposium**  
*Kingsbury Hall* ④

**4–6 p.m.**  
**UNH Manchester Undergraduate Research Conference Poster Presentations**  
*UNHM Auditorium*

---

## Thursday, April 23

**11 a.m.–1 p.m.**  
**UNH Manchester Undergraduate Research Conference Cinema Day**  
*UNHM Auditorium*

**12:30–2 p.m.**  
**The Naked Arts—Creativity Exposed! (Act II)**  
*Hennessey Theatre, Paul Creative Arts Center* ①

**12:40–2 p.m.**  
**History Department Undergraduate Presentations**  
*Memorial Union Building, Rooms 338/340* ③

---

## Friday, April 24

**8:30 a.m.–3 p.m.**  
**UNH Manchester Undergraduate Research Conference Engineering Technology Senior Project Presentations**  
*UNHM Auditorium*

**9–9:30 a.m.**  
**Breakfast with UNH Associate Vice President for Research and Outreach Scholarship Julie E. Williams and UNH Parents Association Council President Mark Loopley**  
*MUB, Granite State Room* ③

**9:30 a.m.–2:30 p.m.**  
**Parents Association Undergraduate Research Symposium**  
*MUB, Granite State Room, assigned rooms* ③

**12:15–1 p.m.**  
**The Naked Arts—Creativity Exposed! (Act III)**  
*MUB, Strafford Room* ③

**1–4 p.m.**  
**College of Health and Human Services Grimes Award Competition**  
*Pettee Hall, Room G10* ⑥

**1–4 p.m.**  
**Psychology Department George M. Haslerud Undergraduate Research Conference**  
*Conant Hall, Room 101* ⑦

**1–4 p.m.**  
**Honors English Undergraduate Research Conference**  
*Hamilton Smith Hall, English Department* ⑤

**4–8:30 p.m.**  
**Philosophy Department Undergraduate Research Conference**  
*Murkland Hall, Room G17* ⑪

**8:00 p.m.**  
**Student Composers' Concert**  
*Bratton Recital Hall, Paul Creative Arts Center* ①

---

## Saturday, April 25

**7:45 a.m.–2 p.m.**  
**18th Annual College of Life Sciences and Agriculture (COLSA) URC**  
*The New England Center* ⑧

---

## Friday, May 8

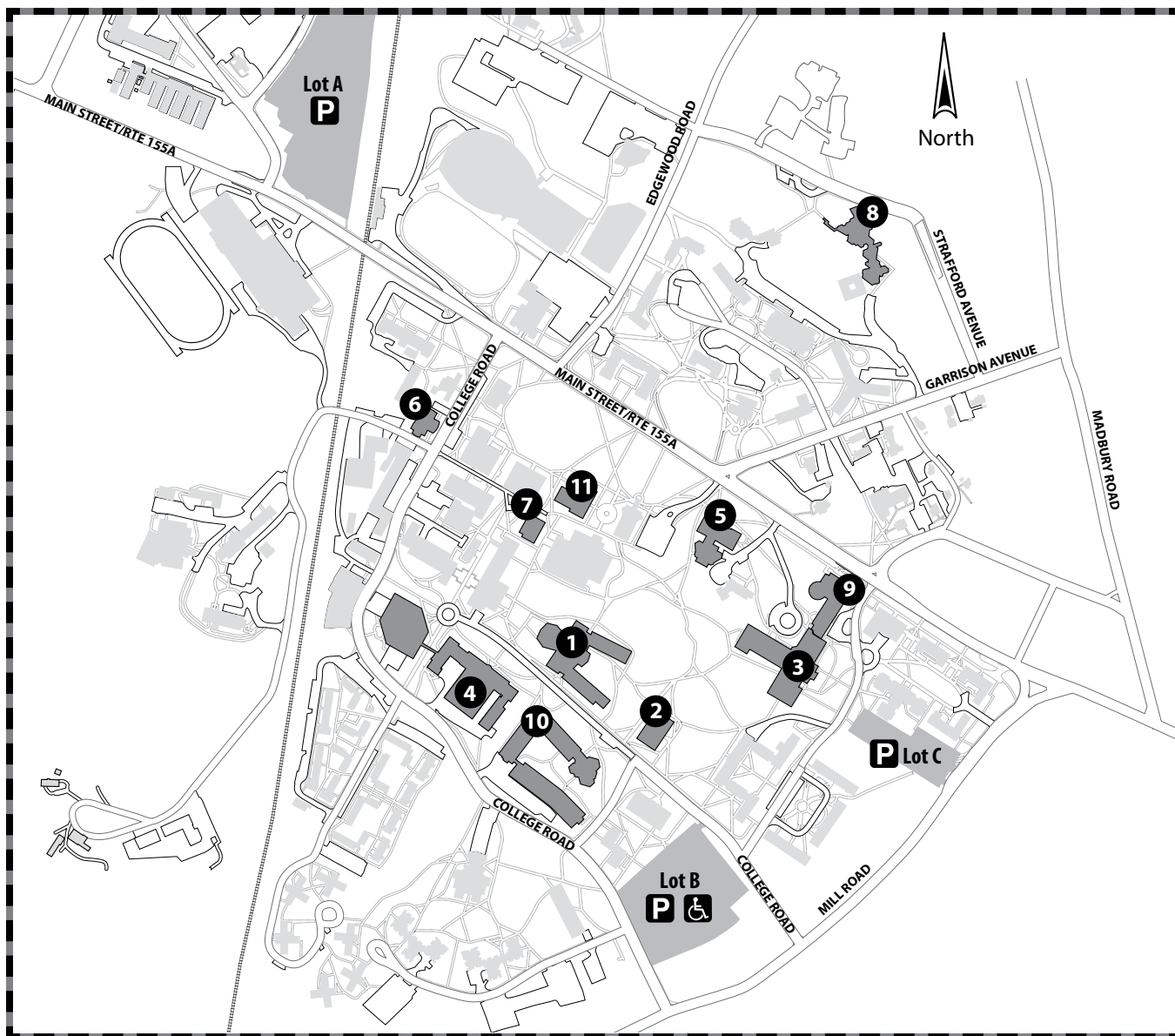
**3–5 p.m.**  
**Chemistry Department Poster Exhibition**  
*Parsons Hall, Iddles Wing* ⑩

---

## Wednesday, May 13

**8 a.m.–2 p.m.**  
**Whittemore School of Business and Economics University-wide Paul J. Holloway Prize Innovation-to-Market Championship Round**  
*Holloway Commons* ⑨

# Campus Map



## BUILDING KEY

- |                                  |                       |
|----------------------------------|-----------------------|
| 1. Paul Creative Arts Center     | 6. Pettee Hall        |
| 2. Horton Hall                   | 7. Conant Hall        |
| 3. Memorial Union Building (MUB) | 8. New England Center |
| 4. Kingsbury Hall                | 9. Holloway Commons   |
| 5. Hamilton Smith Hall           | 10. Parsons Hall      |
|                                  | 11. Murkland Hall     |

UNH Manchester  
400 Commercial Street  
Manchester, N.H.

For directions to UNH Manchester go to  
[www.unhm.unh.edu/directions.html](http://www.unhm.unh.edu/directions.html)  
or call (603) 641-4321.



## Graduate Research Conference (GRC)

**Thursday, April 16**  
**10 a.m.–4 p.m.**  
**Memorial Union Building,**  
**Strafford Room**

The Graduate Research Conference 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.

## 2009 Senior B.A. and B.F.A. Exhibition and M.F.A. Thesis Exhibition (I) Preview Reception

**Friday, April 17**  
**6–8 p.m.**  
**Museum of Art**

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

*Participants include:*

**B.A. Studio Art degree candidates**  
 Information on participants will be available at this event.

**Bachelor in Fine Arts degree candidates:**

**Maura Carignan, ceramics**  
**Jameson Copp, ceramics/sculpture**  
**Jessica Engel, photography**  
**Ryan Howell, photography**  
**Bob Jones, sculpture**  
**Kelsey Keenan, sculpture**  
**Amber Tozzie, sculpture**  
 Adviser: Ben Cariens

## UNH Manchester Undergraduate Research Conference

### Oral Presentations

**Tuesday, April 21**  
**9 a.m.–3 p.m.**  
**UNHM Auditorium**

Oral Presentations are formal scholarly lectures and/or multimedia presentations reflecting students' research interests.

**Dominic DeSando**  
 Computer Information Systems  
*Using Non-Profit Information Technology Development as the Basis for Learning and Instruction*  
 Adviser: Mihaela Sabin

**Timothy Huffman**  
 Communication Arts  
*Seeing Red: Soviets in American Cinema from 1918–1929*  
 Adviser: Jeffrey Klenotic

**Meghan Marcus**  
 Communication  
*Will It Play in Manchester? The Sound Revolution of 1929*  
 Adviser: Jeffrey Klenotic

**Patrick McGuigan**  
 History  
*Fianna of Ireland*  
 Adviser: Ann Donahue

**Elizabeth Neilan**  
 History  
*Ensuring Warmth from the Millyard—SESL Project*  
 Adviser: Kate Hanson

**Katherine Potter**

Psychology and Communication Arts  
*Where Are All the Women? Psychological and Social Factors Contributing to Gender Gaps in the Financial Services Industry.*  
 Adviser: Alison Paglia

**Andrew Schwab**

Computer Information Systems  
*Linking Community and Academic Goals: New Hampshire Catholic Charities' Asset Mapping Database*  
 Adviser: Mihaela Sabin

**Joseph Vaskelionis**

History  
*Clash of Cultures: Indian-American Conflict*  
 Adviser: John Resch

## Seacoast Reads

**Wednesday, April 22**  
**10:30 a.m.–Noon**  
**Memorial Union Building,**  
**Rooms 330/332**

The Seacoast Reads exhibition displays the work of UNH student volunteers who tutor young children in elementary schools and after-school programs in literacy. Since 1998 almost one thousand UNH students have worked through Seacoast Reads to tutor a like number of children. Sponsored by the Graduate Program in Reading and housed in the Department of Education, Seacoast Reads draws students from across the University and represents one of the largest service and outreach organizations on campus.

## Thompson School Community Leadership Program

### Portfolio, Research and Independent Study Presentations

**Wednesday, April 22**  
**10:30 a.m.–Noon**  
**Memorial Union Building,**  
**Rooms 330/332**

The Community Leadership Program is an innovative associate degree and diploma program that prepares students of all ages to work effectively within community organizations and to be active, influential citizens. This exhibition displays students' leadership portfolios and highlights significant community projects and partnerships.

**Katelyn Atwater**  
Community Leadership  
*What is Mitochondrial Disease?*  
Adviser: Timothy Barretto

**Sara Bucciarelli**  
Community Leadership  
*Final Capstone Project*  
Adviser: Timothy Barretto

**Jesse Burdwood**  
Community Leadership  
*Raising Money for the Developmentally Disabled*  
Adviser: Timothy Barretto

**Jamilee Fish**  
Community Leadership  
*Girls Fight Back*  
Adviser: Timothy Barretto

**Kaitlin Lafreniere**  
Community Leadership  
*Community Leadership*  
Adviser: Timothy Barretto

**Kyle McAdam**  
Community Leadership  
*UNH Recycling Coalition*  
Adviser: Timothy Barretto

**Catherine Plante**  
Community Leadership  
*Volunteer Best Practices*  
Adviser: Kate Hanson

## UNH Office of Community Service Partnerships

**Wednesday, April 22**  
**10:30 a.m.–Noon**  
**Memorial Union Building,**  
**Rooms 330/332**

This display showcases the work of student service organizations and student groups—ranging from spring break trips to residence hall community partnerships—engaged in community service and service-learning projects throughout the year.

**Samantha Allard**  
English Teaching

**Joy Heinzman**  
Spanish

**Michael LeBlanc**  
Social Work

**Kelsey Ramsey**  
**Jason Shuster**  
Undeclared

**Kiah Wiggin**  
Animal Sciences: Pre-veterinary Medicine  
*Hubbard Hall Council Makes Blankets for Project Linus*  
Adviser: Faina Bukher

**Samantha Allard**  
English Teaching

**Karen Doyen**  
General Biology

**Joy Heinzman**  
Spanish  
*Hubbard Hall Council Makes Hats for Save the Children: Knit One, Save One*  
Adviser: Faina Bukher

**Katie Brym**  
Theatre  
*Oxfam America Hunger Banquet*  
Adviser: Marianne Fortescue

**Amanda Dezak**  
**Kristina Griffin**  
Health Management and Policy  
*Alpha Phi Omega*  
Advisers: Marianne Fortescue, Martha Lawing

**Kayla Hampe**  
Civil Engineering  
**Nicolette Pocius**  
Marine and Freshwater Biology

**Valerie Schoepfer**  
Environmental Science: Soil and Watershed Manageme  
*Alternative Spring Break 2009*  
Adviser: Julie Tracy

**Emily Ramlow**  
Environmental Conservation Studies  
*Christensen Hall Little Buddies Program*  
Adviser: Hannah Foust



## Travis Fleury, URC 2005

BUSINESS ADMINISTRATION,  
WHITTEMORE SCHOOL OF BUSINESS AND ECONOMICS

In 2005, Travis Fleury's marketing class tackled a daunting challenge: Boost traffic to the Web giant Yahoo! among "teens and tweens."

Working as a "corporation," class members conducted intensive market research, came up with a slogan ("Y! Not"), and developed an advertising campaign, including TV and magazine ads. Professor Peter Masucci, at the Whittemore School of Business and Economics, was so impressed by the result that he encouraged the entire class to enter it in the URC.

Fleury says preparing for the URC taught him critical lessons about teamwork, research, project management, and presentation skills—and delivering under tight deadlines.

### *Where is he now?*

While the national news highlights slow real estate markets and tighter loan restrictions, Fleury, a licensed mortgage consultant for New Market Lending in Dover, says he's busier than ever.

Homeowners and businesses are re-financing their loans to take advantage of new, lower mortgage rates; and first-time buyers are finding that shrinking real estate prices have put home ownership within their reach.

"A lot of times I find myself having to present something to an investor that requires us to put together a professional, and very complex, package," Fleury says. "I'm very comfortable in presenting to large and diverse crowds now, and the URC definitely helped me prepare for that."

When he was at UNH, Fleury learned how to thrive under pressure, both at the URC and as an emergency medical technician working on the McGregor Memorial EMS squad (formerly the Durham Ambulance Corps). He still volunteers for ambulance duty—upwards of 100 hours a month—and has responded to some 700 ambulance calls. He was elected administrative vice president of the squad in February.



## Whittemore School of Business and Economics Undergraduate Research Conference

**Wednesday, April 22**  
**Memorial Union Building**

**MUB, Rooms 338/340**

**Law and Economics**  
**9–11 a.m.**

The U.S. legal system provides implicit and explicit rules which allocate benefits and costs among the individuals and organizations in our society. Poster presentations showcase students' independent research on the legal system and the economic consequences of property, contracts, torts, criminal law and mediation.

**Moderator: James Wible**

**Nathan Batchelder**  
**Matthew DeGruttola**  
**Brent Hayes-Hand**  
**Timothy Lajoie**  
**Walter McHugh**  
**Jonathan Miner**  
**Kittisak Srisoonthornthai**  
**Branden Sweetser**  
Economics

**Rebekah Davis**  
Economics and English Literature

**Joseph Breda**  
Economics and Finance

**Laura LaPlante**  
Economics and Philosophy

**Robert Bullerwell**  
**Adam Laferriere**  
**Daniel Ricci**

**Timothy Upton**  
**Richard Wasson**  
**Aaron Woods**  
Finance

**Elizabeth Harmuth**  
Finance and Management

**Peter Aiello**  
Financial and Managerial Economics

**Samantha Gingras**  
International and Development  
Economics

**Matthew Young**  
Economics  
Adviser: James Wible

---

### **MUB, Rooms 338/340**

#### ***Atkins Investment Group*** **1–3 p.m.**

Students research and analyze current economic developments, industry sectors and specific company stock performance to manage a portfolio known as the Wildcat Investment Fund. The fund uses real dollars to buy and sell investments.

Moderator: Stephen Ciccone

**Alexander Cugini**  
**Kirsten Fournier**  
**Jessica Whelan**  
Accounting

**Devin Bates**  
**William Keenan**  
**Sarah Marschok**  
**Conor O'Keefe**  
**Michelle Pirro**  
Economics

**Thomas Carter**  
**Benjamin Collins**  
Entrepreneurial Venture Creation

**Christopher Antlitz**

**Daniel Arnault**  
**Ryan Bergeron**  
**Trevor Boire**  
**Ryan Callaghan**  
**Adam Cohen**  
**Matthew Cohen**

**Jennifer Dietz**  
**Ryan Goodrich**  
**Ryan Guidice**  
**Brittany Hill**  
**Wade Hudson**  
**Ryan Klapprodt**  
**Nicholas Krates**  
**Zachary Leach**  
**Robert Macfarlane**  
**Anthony Macleod**  
**Philip Lund**  
**John McGrath**  
**Colin Reilly**

**Robert Rubino**  
**Edward Stitz**  
Finance

**Jason Norton**  
Finance and Entrepreneurial Venture  
Creation

**Jeffrey Comstock**  
International Business and Economics

**Clark Dhein**  
Marketing

**Kyle Flynn**  
Philosophy  
Adviser: Stephen Ciccone

---

### **MUB, Rooms 338/340**

#### ***Paul J. Holloway Prize*** ***University-wide*** ***Innovation-to-Market*** ***Poster Session***

**11 a.m.–1 p.m.**

Moderator: William Naumes

**Jay Agarwal**  
Chemistry  
*Vosont*  
Adviser: Thomas Towle

**Muazzam Ali** (*graduate student*)  
**Brian Findlay** (*graduate student*)  
**Ryan O'Rourke** (*graduate student*)  
**Kathleen Schmidt** (*graduate student*)  
*Sanna*  
Adviser: Richard Saavedra

**Timothy April**  
**Jesse Taylor**  
Computer Engineering  
**Dylan Fransway**  
Electrical Engineering  
*Home Power Monitoring*  
Adviser: Michael Carter

**Scott Cannon** (*graduate student*)  
**Michael Klein** (*graduate student*)  
**Robert Marshall** (*graduate student*)  
**Jeremy Paulin** (*graduate student*)  
*PWI Consulting*  
Adviser: Jun Li

**Scott Cannon** (*graduate student*)  
*Allertest*  
Adviser: Jun Li

**Coleman Connolly**  
Marketing

**Jason Norton**  
**Michelle Pirro**  
Finance and Entrepreneurial Venture  
Creation  
*ComposiMold*  
Adviser: Howard F. Allen

**Benjamin Damon**  
*Spyglass*  
Adviser: Michael Merenda

**Joseph Dulac**  
**Meaghan Estes**  
**Brett Jennings**  
**Lauren McHugh**  
**Cali Rodriguez**  
Marketing  
*Ski Solutions*  
Adviser: Ludwig Bstieler

**Tina Dussault** (*graduate student*)  
*Fourmedible*

**John Eager** (*graduate student*)  
**John Foreman** (*graduate student*)  
**Christian Franke** (*graduate student*)  
**Katie Graham** (*graduate student*)  
*WinAbu*  
Adviser: Jun Li

**Forest Fyrberg** (*graduate student*)  
**Matthew Kramer** (*graduate student*)  
**Lori Taylor**  
Entrepreneurial Venture Creation  
*UNHCEMS*  
Adviser: Peter Lane

**Jake Galli**  
**Stephen Lynch**  
Marketing  
*United Home Health Care*  
Adviser: Howard Allen

**Tor Harris**  
Environmental Engineering  
**Kathleen Leonard**  
**Brianna Mills**  
**Lori Taylor**  
Entrepreneurial Venture Creation  
*HydroBreeze*  
Adviser: Jeffrey Sohl

**Shane Jordan**

Management  
*X-Brush*  
Adviser: Michael Merenda

**Ashley Kelloway**

Marketing

**Richard Smith**

Finance and Entrepreneurial Venture Creation  
*SmithWay Green*  
Adviser: William Hassey

**Tyler King**

Environmental Science: Hydrology  
*Bear Hug*  
Adviser: Matthew Davis

**Jason Lewis**

**Matthew Minuti**

**Tyler Rideout**

Electrical Engineering  
*Adaptive Audio*  
Adviser: Kent Chamberlin

**Anthony Matrumalo**

Entrepreneurial Venture Creation  
*Another Way—Life Celebrations*  
Adviser: Howard Allen

**Brian McKenna** (*graduate student*)

**Timothy Redfern** (*graduate student*)

**Joseph Tauras** (*graduate student*)

*Infineaty*  
Adviser: Robert Gough

**Brendan Moore-Penaskovic**

Marketing  
*Dynamic Dining*  
Adviser: William Hassey

**Jeff Nichols** (*graduate student*)

**Christopher Suprock** (*graduate student*)

*Wireless Sensor Integrated Metal Cutting Tool Holder*  
Advisers: Robert Jerard, Barry Fussell

**Apurva More** (*graduate student*)

**Deborah Mughnerini** (*graduate student*)

*Conterrene*  
Adviser: William Burke

**Kenneth Ouellette**

Entrepreneurial Venture Creation and Management  
*Windriver*  
Adviser: Howard Allen

**Stephanie Payeur** (*graduate student*)

*Lab Test Direct*  
Adviser: Jun Li

**Daniil Shilov**

Finance and Entrepreneurial Venture Creation  
*InterPreview*  
Adviser: William Hassey

**Alexander Shyrokov** (*graduate student*)

*StaticLine Interactive*  
Adviser: Peter Masucci

**Igor Tsentalovich**

**Russell Wilcox**  
Mechanical Engineering  
*Virtua Com*  
Adviser: William Naumes

**MUB, Rooms 338/340**

**WSBE Individual Posters and Presentations**  
**3–5 p.m.**

Moderator: TBD

**Devin Bates**

Economics  
*Is There an Upside to the Brain Drain?*  
Adviser: Bruce Elmslie

**Clark Dhein**

Marketing  
*Guerilla Marketing: Analysis of the Benefits and Drawbacks*  
Adviser: William Machanic

**Katherine Doran**

Hospitality Management  
*The Origins and Modern Implications of Etiquette*  
Adviser: Clayton Barrows

**Min Shin**

Finance, International Business and Economics  
*Workforce Housing Coalition of the Greater Seacoast*  
Adviser: Meera Venkatachalam

**Joshua Stuhr**

Hospitality Management  
*A Hotelier's Guide to Going Green*  
Adviser: Joseph Durocher

**Carly Beldon**

**Ali Bickford**

**Casey Cardinal**

**Christine Frazier**

**Greg Halama**

**Arianne Harter**

**Lauren McHugh**

**Cara Sandberg**

**Courtney Sweeney**

**Brenna Tenore**

Marketing  
*UNH Summer School Research Project*  
Adviser: Charles Martin

**MUB, Theatre II**

**Marketing Workshop**  
**12:30–6 p.m.**

Students are organized into teams and work for an entire semester on a marketing problem given them by an outside company or organization. These real-world situations require extensive field research and data analysis, and research findings are then used to design and implement marketing programs to solve the client problem.

**Designing a Marketing Campaign for the NH 55% Initiative—Part 2**

Moderator: Peter Masucci

**Clark Dhein**

**Phillip Hannafin**

**Traquis Hart**

**Sarah Harvey**

**Kelli LaPerch**

**Katelyn Peters**

**John Sawyer**

Marketing  
Adviser: Peter Masucci

### ***Implementing a Marketing Campaign for the NH 55% Initiative—Part 3***

Moderator: Peter Masucci

Sara Bethel  
Coleman Connolly  
Joseph Dulac  
Nicholas Fiorilla  
Allison Fricke  
Cali Rodriguez  
Devon Roy  
Chris Spanos  
Julie Stevens  
Marketing  
Adviser: Peter Masucci

### ***Increasing Awareness and Promotion of the Joan and James Leitzel Center at UNH***

Moderator: Peter Masucci

Brittney Desmond  
Alysha Hajdusek  
Nicholas Kostis  
Michael Segreti  
Lindsay Thibeault  
Kyle Wilson  
Marketing  
Adviser: Peter Masucci

### ***Marketing a New “Green” Apartment Complex at UNH from Bryant Proper***

Moderator: Peter Masucci

Alex Belaidi  
Kristen Casey  
Dan Grube  
Lisa Kemp  
Christy Pallis  
Marissa Palmisano  
Laura Taylor  
Francesca Tippit  
Kevin Wood-Friend  
Marketing  
Adviser: Peter Masucci

### ***Marketing Lenk Orthodontics, DMD, on Campus and Across the Seacoast Area***

Moderator: Peter Masucci

Samantha Bonenfant  
Neena Daftari  
Andrew Hatch  
Thomas Manning  
Craig Parsons  
Jocelyn Schoolsky  
Michelle Sheehan  
Danielle Travaglini  
Marketing  
Adviser: Peter Masucci

### ***Marketing the Connors Writing Center Oral Presentation Services***

Moderator: Peter Masucci

Michael DiBenedetto  
Mallory Dufresne  
Ryan Maiola  
Lauren McHugh  
Matthew Parker  
Victoria Patterson  
Kathryn Rohlicek  
Christopher Rush  
Garrett White  
Marketing  
Adviser: Peter Masucci

### ***Marketing the New Hampshire Lottery at Point-of-Sale Locations***

Moderator: Peter Masucci

Theodore Bahtsevanos  
Tricia Burnham  
Andrew Buzzell  
Keri Deming  
Krysten Duarte  
Heather Henning  
Ashton Lajeskie  
Jeffrey Lee  
Mary LeRose  
Kelley Riley  
Marketing  
Adviser: Peter Masucci

### ***Marketing the Town of Durham as a Place to Locate New Businesses***

Moderator: Peter Masucci

Stasha Fraser  
Samantha Gregerson  
Jenna Hulbert  
Brett Jennings  
Jason Lapoint  
Nathan Levesque  
Christopher Martin  
Michelle Petrovic  
Stefani Yiokarinis  
Marketing  
Adviser: Peter Masucci

### ***Promoting DynDNS on the UNH Campus***

Moderator: Peter Masucci

Garrett Callahan  
Ian Cox  
Danielle Crepeau  
Jessica DeGeorge  
Melissa Doo  
Joseph Madden  
Ryan O'Hara  
Marketing  
Adviser: Peter Masucci

### ***Promoting Lamprey Networks, Inc. on the UNH Campus***

Moderator: Peter Masucci

Nicholas Barraclough  
Kimarie Dinardo  
Heidi Doiron  
Meaghan Estes  
Jake Galli  
Drew Healey  
Trevor Messineo  
Brendan Moore-Penaskovic  
Melissa Nelson  
Meghan Tylec  
Marketing  
Adviser: Peter Masucci

## **Promoting the Holloway Prize Competition on the UNH Campus**

Moderator: Peter Masucci

Patrick Colburn  
Morgan Dorval  
Lauren Herman  
Stephen Kelley  
Maria Linares  
Tyler Loopley  
Jenna Scali  
Marketing  
Adviser: Peter Masucci

## **Promoting the Liberty Mutual Brand on the UNH Campus**

Moderator: Peter Masucci

Christopher Campion  
Nathan Filicicchia  
Christine Frazier  
Patrick Hussey  
Rachael Kane  
Ashley Kelloway  
Joel Knight  
Colby Lamson  
Kellie Norris  
Sarah Rajchel  
Marisa Sullivan  
Marketing  
Adviser: Peter Masucci

## **The Naked Arts—Creativity Exposed (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 gallery.

**Jameson Copp**  
Fine Arts (sculpture)  
*An Exploration From Landscape*  
Adviser: Benjamin Cariens

**Jessica Engel**  
Fine Arts (photography)  
*Strange Perceptions*  
Adviser: Julee Holcombe

**Ryan Howell**  
Fine Arts (photography)  
*Memory and Photography*  
Adviser: Benjamin Cariens

**Bob Jones**  
Fine Arts (sculpture)  
*The Human Condition*  
Adviser: Jennifer Moses

**Joshua Torbick**  
Art Studio  
*Coming and Going: Furniture for the Hall*  
Adviser: Leah Woods

## **Interdisciplinary Science and Engineering Symposium (ISE)**

**Wednesday, April 22**  
**2:00–5:00 p.m.**  
**Kingsbury Hall**

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, remarks from university leaders, refreshments, and an awards ceremony.

**Todd Allen**  
**John Duggan**  
**Jonathan Lamontagne**  
**Joseph Nichols**  
Civil Engineering  
*UNH Old Reservoir Dam*  
Adviser: Kevin Gardner

**Katherine Andruchuk**  
**Mary Ferguson**  
**Seth Lizotte**  
**Krystian Manitiuss-Kozlowski**  
**Kyle Urso**  
**Lawrence Yassany**  
Civil Engineering  
*Wood Island Feasibility Study*  
Adviser: Kevin Gardner

**Marc Bamberger**  
**Justin Bray**  
**Alexander Koulet**  
**Josef Super**  
**Ryan Tebbetts**  
Mechanical Engineering  
*UNH Fire Fighting Robot Team Presents “Fire Chief”*  
Adviser: Todd Gross

**Jeffrey Barnard**  
Mechanical Engineering  
*Cooling Fluid Distribution Design, Characterization, and Refinement*  
Adviser: Greg Chini

**Jamie Bemis**  
Mechanical Engineering  
**Dana Etherington**  
Mechanical Engineering  
*Thermal Analysis of UNH Data Center*  
Adviser: John McHugh

**Jamie Bemis**  
Mechanical Engineering  
*Determining Solid Fraction of Liquefied Biomass*  
Adviser: Christopher White

**Nicholas Bencivenga**  
Chemistry  
*Preparation of Novel Bifunctional Polymerizable Copper(II) Ligands*  
Advisers: Roy Planalp, Rudolph Seitz

**Mark Betts**  
Mechanical Engineering  
**Andrew Kelley**  
Electrical Engineering  
*TrueTurn Turntable*  
Adviser: Joseph Klewicki

**Lindsay Birk**

Political Science and History

**Katherine Bragg**

Communication and International Affairs

*Making Waves with Tidal Power: Implementing Tidal Power in New Hampshire*

Adviser: John Aber

**Alyssa Birt**

Animal Sciences: Bioscience and Technology

**Rajtilak Majumdar** (graduate student)*Regulation of Gene Expression of the Polyamine Pathway Genes: What Does a Promoter Look Like?*

Adviser: Subhash Minocha

**Michaela Bogosh****Michael Curry****Kevin Garvey****Stephen Morgan** (UNH McNair Scholar)**Angela O'Donnell****Benjamin Roesch****Alexander Vadney**

Civil Engineering

**Nathan Little****Amanda Loughlin****Kristen Meisner**

Environmental Engineering

*Wind-2-Water: Brackish Groundwater Desalination*

Adviser: Jenna Jambeck

**Matthew Borowski****Michael DeGaetano****David Garneau**

Electrical Engineering

**Carin Campbell****Benjamin Lewis****Philippe Lord****Keith Matthews****Eric McKenzie****Kurt Raisanen****Brendan Rickard****Jeremy Seiferth****Derek Smith****Joshua Spaulding****Kyle Tierney**

Mechanical Engineering

*UNH Formula SAE—Car 86*

Advisers: Francis Hludik, May-Win Thein

## Deana Aulisio, URC 2001

ENVIRONMENTAL ENGINEERING,

COLLEGE OF ENGINEERING AND PHYSICAL SCIENCES

DEANA AULISIO took part in the URC's second year, in 2001, exploring how iron dissolved in the waters of the North Pacific affects a food-chain that supports huge salmon populations.

### Where is she now?

"My URC experience certainly was the starting point to my career in scientific research," says Aulisio, who is studying for a Ph.D. at UNH in the Natural Resources and Earth Systems Science program.

After working closely with Professor Cameron Wake as an undergraduate, Aulisio completed her master's degree in sediment remediation with Kevin Gardner and the Environmental Research Group at UNH.

She worked with Wake again last summer, helping the state Department of Environmental Services to develop a Climate Change Action Plan for Gov. John Lynch.

She is active in the community as an advisory board member of the Green Alliance, a cooperative of sustainable businesses on the Seacoast. In September, she began her doctoral research in algae biofuels, leveraging an alliance with a local biofuel company. Her research will focus primarily on the energetic, environmental, and economic sustainability of this advanced feedstock.



**Christopher Bourque****Matthew Bruton****Jeffrey Clifton****Adam Davenport****Courtney Goldstein****Jared O'Donnell****Caroline Robinson**

Civil Engineering

*Zero Energy Residence Building*

Adviser: Kevin Gardner

**Michael Brassard****Kevin Daigle****Matthew Drohan****Stephan Kjellander****Galina Logunova****Dennis Moran****Stephen Moraski****Julie Muldoon****Tyler Reisdorf**

Civil Engineering

*Proposed Gables Pedestrian Bridge*

Adviser: Kevin Gardner

**Justin Bray**

Mechanical Engineering

*Micro, Macro, and Nano-scale Sheet Metal Forming*

Adviser: Brad Kinsey

**James Browne****Kevin Buruchian****David Dreyer****Thomas Ducharme**

Civil Engineering

**Kevin Dutile****Michele Pelletier**

Mechanical Engineering

*Tidal Infrastructure*

Advisers: Kenneth Baldwin, M.R. Swift

**Jake Carmody**

Civil Engineering

*Gunstock Pedestrian Bridge*

Adviser: Kevin Gardner

**Rachel Carpenter**

English/Journalism and Spanish

**Julie Loosigian**

English

**Catherine Perrella**

Economics

*Heaven Forbid, Loss on the Grid!**Increasing Efficiency of the Electric Grid*

Adviser: John Aber

**Daniel Castelli****Benjamin Jenkins****Michele Pelletier**

Mechanical Engineering

*TableSat for NASA Magnetospheric Multi-scale Mission*

Adviser: May-Win Thein

**Benjamin Chiang****Thaddaeus Webster**

Chemical Engineering

*Design Of Algae Photobioreactor and Experiments With Salt Water Algae*

Adviser: Ihab Farag

**Paul Chisholm****Richard Czerw****Ryan Flynn****Andrew Langsner****Alex Normandin****Patrick Paul****Paul Regis****Anthony Weatherbee****Brian Wilmot**

Civil Engineering

*Manchester Airport Multimodal**Commuter Station Study*

Adviser: Kevin Gardner

**George Clark**

Physics

*Analysis of the Diffuse Background**Components Towards Efficient Use of the**IBEX-lo Star Sensor for the Interstellar**Flow Direction Determination*

Advisers: Harald Kucharek, Eberhard

Moebius

**Meaghan Coleman**

Music

**Ann Emmerling**

Spanish

**Kyle Libby**

Communication

*Home Sweet Home: Reducing Residential**Energy Use in New Hampshire*

Adviser: John Aber

**Christopher Cox**

Computer Engineering

**John McLaughlin**

Mechanical Engineering

*Intelligent Infrastructure Monitoring*

Adviser: Andrzej Rucinski

**Corinne Disenhof**

Geology

*Chemical Analysis of 450 Million Year Old Subduction Zone Rocks from Tillotson**Peak, Vermont*

Adviser: Jo Laird

**Uyen-Mai Doan (UNH McNair Scholar)**

Biochemistry

*The Charge on Beta-Lactoglobulin A and B Under Self-associating Conditions*

Adviser: Thomas Laue

**Alexander Evangelou**

Electrical Engineering and Art Studio

**Kyle Maroney**

Electrical Engineering

*Developing Training Modules for the 2009**FIRST Robotics Control System*

Adviser: Brad Kinsey

**Stacy Farina**

Marine and Freshwater Biology

*Winter Flounder Stock Enhancement:**Examining the Onset of Wild Weaning in**Pellet-Reared Fish*

Advisers: William Howell, Michelle Walsh

**Mathieu Feraud**

Mechanical Engineering

**Daniel Fournier****Marc Ouellette**

Electrical Engineering

**Wyatt O'Day**

Computer Engineering

*A Half-Mile/Two Mile Nautical Fog**Warning Signal*

Advisers: Kenneth Baldwin, Allen Drake

**Mary Ferguson**

Civil Engineering

*Seismic Acceleration Demands on Non-**Structural Components Attached to Elastic**and Inelastic Structures in Near-field and**Far-field Conditions*

Adviser: Ricardo Medina

**Jacob Finch**

Mechanical Engineering

**Kevin Pflanz**

Computer Engineering

**Christopher Thompson**

Mechanical Engineering

*UNH Tidal Turbine Performance Analysis*

Advisers: Kenneth Baldwin, M.R. Swift



**Michael Giovinazzo**

Mechanical Engineering  
*Wave Energy Converter Research*  
 Adviser: Christopher White

**Travis Glines**

Physics  
*Visualizing the Open GGCM MHD Model*  
 Adviser: Joachim Raeder

**Jonathan Grohs**

Chemical Engineering  
*Microalgae Growth and Biodiesel Production*  
 Adviser: Ihab Farag

**BobbieJean Harriman**

Electrical Engineering  
*Tune Trainer*  
 Adviser: Kuan Zhou

**Jaclyn Hulbert****Joshua Hulbert****Chad Hummel****Garrett Krapf****Max Pilsmaker****Frank Wetenkamp**

**Kyle Zorawowicz**  
 Civil Engineering  
*UNH Crew Team Dover Boat House and Dock Design*  
 Adviser: Kevin Gardner

**Jonathan Hutchings**

Social Work and Psychology

**Hannah Varney**

Nursing  
*Fuel Cells and Grid Electricity: Alternative Fuel Sources for Automobiles*  
 Adviser: John Aber

**Patrick Jardin**

Mathematics  
*An Investigation Into the Use of Statistics in Hydrology*  
 Adviser: Linyuan Li

**Matthew Jones**

Earth Sciences  
*High-Resolution Magnetostratigraphic Analysis of the Denver Basin's Kiowa Core; Testing Paleocene Astrochronologies*  
 Adviser: William Clyde

**Kyle Kalutkiewicz**

Physics and Mathematics  
*Axionic Inflation In Large Volume String Compactifications*  
 Adviser: Per Berglund

**Shawn Kenney**

Civil Engineering  
*Submerged Oil Transportation Modeling*  
 Advisers: Diane Foster, Nancy Kinner

**Stephen Kolacz III**

Computer Engineering  
*MPG Efficiency*  
 Adviser: Francis Hludik

**Paul Kyriacopoulos**

**Jillian Tombarelli**  
 Chemical Engineering

**Joshua Smith**

General Biology  
*Growing Lipid Rich Microalgae in Ultraviolet Light Treated Waste Water Solutions for Biodiesel Production*  
 Adviser: Ihab Farag

**Mark LaFrance**

**Jeffrey Morin**  
 Mechanical Engineering  
*Ultra Low NOx Coal Burner Design*  
 Adviser: Christopher White

**Stephen Lafaille**

Mechanical Engineering  
*Efficient Engine Solutions-Project: Miller Cycle*  
 Adviser: Christopher White

**Matthew Lape**

Electrical Engineering

**Mark Taipan**

Computer Engineering  
*Kingsbury Location Awareness System (KLAS)*  
 Adviser: Andrew Kun

**Lauren Lazarus**

Physics and Classics  
*The Dark Side of String Theory: Using Strings to Describe Dark Matter*  
 Adviser: Per Berglund

**Rebecca Lehr**

Environmental Science: Ecosystems  
*Analysis of the UNH Climate Action Plan*  
 Adviser: Cameron Wake

**Eric Leo**

Mechanical Engineering  
*UNH SAE Aero*  
 Adviser: Christopher White

**Jason Lewis****Matthew Minuti****Tyler Rideout**

Electrical Engineering  
*Adaptive Sound Compression*  
 Adviser: Kent Chamberlin

**Scott Littman**

Undeclared

**Cathleen Turner**

Environmental and Resource Economics and Environmental Science: Hydrology  
*Assessing the Potential Impacts of Climate Change on Water Resources in New Hampshire Seacoast Area*  
 Adviser: John Davis

**Daniel Mannarino****Kyle Snavely**

Physics  
*Simulation of the Electronics Toolchain of the SVT*  
 Adviser: Maurik Holtrop

**Kevin Maurer**

Mechanical Engineering  
*UNH ROV*  
 Adviser: Dale Delisle

**William Meagher III****Angela O'Donnell****Alexander Vadney**

Civil Engineering  
*Evaluation of Warm Mix Asphalt Technologies*  
 Adviser: Jo Daniel

**Samuel Meehan**

Physics  
*Study of Interstrip Charge Sharing in Silicon Vertex Tracker Design for CLAS12 Collaboration*  
 Adviser: Maurik Holtrop

**James Melfi Jr.**

Mechanical Engineering  
*Nanoscale Forming of Bulk Metallic Glass*  
 Adviser: Brad Kinsey

**Andrew Middleton**

Environmental Conservation Studies

**Daniel Perrinez**

Marine and Freshwater Biology

*Biochemical Analysis of Selected Algal Harvests*

Adviser: Ihab Farag

**Andrew Morehouse**

Environmental Science: Ecosystems

*Understanding Three Major Categories of Influence on Wildfire Dynamics: A Modelling Approach*

Adviser: George Hurtt

**Stephen Morgan (UNH McNair Scholar)**

Civil Engineering

*Soil Consistency Limits: The Portable Liquid Limit Device*

Adviser: Jean Benoit

**Caleb Morrill-Winter**

Mechanical Engineering

*Wind Tunnel Surface Features*

Adviser: Joseph Klewicki

**Ashley Morse**

Russian and German

**Megan Murray**

Undeclared

**Amanda Richelo**

Animal Sciences: Pre-veterinary Medicine

**Rachel Shanahan**

Undeclared

*Here Comes the Sun*

Adviser: John Aber

**Danielle Morse**

Microbiology

*Side Effects of Antibiotic Resistance in Evolved Burkholderia cenocepacia**HI2424 Populations*

Adviser: Vaughn Cooper

**Jared Murray**

Statistics

*Median Polish Algorithm for Automated Anomaly Detection in Sensor Networks*

Adviser: Ernst Linder

**Madison Myers**

Earth Sciences

*Water-rock Interactions in Bedrock-hosted Aquifers: Implications for the Water Resources in the Seacoast of New Hampshire*

Adviser: Julia Bryce

**Tuyen Nguyen (UNH McNair Scholar)**

Physics

*Ambient Scanning Tunneling Microscopy of Graphite and Au Surfaces*

Adviser: Karsten Pohl

**Tuyen Nguyen (UNH McNair Scholar)**

Physics

*Parallel Electric Fields in Downward Field-Aligned Currents in the Auroral Region*

Adviser: Eric Lund

**Genevieve Noyce**

Earth Sciences

*The Role of Sedges in Methane Emission From a Temperate Fen*

Advisers: Jill Bubier, Ruth Varner

**Morgan O'Neill**

Physics

*Precision Pointing in the Sky for IBEX Interstellar Flow Observations—Use of the Moon With the IBEX-Lo Star Sensor*

Adviser: Eberhard Moebius

**Morgan O'Neill**

Physics

**Virginia Sawyer (graduate student)***Air-Sea Carbon Flux During Hurricanes*

Adviser: Cameron Wake

**Matthew Oliver**

Computer Engineering

*WildCatSat*

Advisers: Francis Hludik, May-Win Thein

**Brian Patenaude**

Physics and Mathematics

*Custom STM Control Electronics in Conjunction with the GXSM Project*

Adviser: Karsten Pohl

**Michele Pelletier**

Mechanical Engineering

*Orbital Dynamics Analysis for NASA mission*

Adviser: May-Win Thein

**Lee Petersen**

Physics

*IBEX: Sputtering and Knock-Off in Direct Events*

Adviser: Eberhard Moebius

**Austin Purves**

Physics

*Slow-Roll Constraints in Multi-Field Inflation from String Theory*

Adviser: Per Berglund

**Shannon Rogers (graduate student)****Kaitlyn Steele**

Environmental Science: Ecosystems

*Urbanization and Carbon Dioxide**Emissions from Transportation*

Advisers: George Hurtt, Cameron Wake

**Yuliya Salata**

International Affairs and European

Cultural Studies

*The Exploration of the North Atlantic Ocean: Climate Change Awareness in French Society*

Adviser: Barrett Rock

**Carolyn Schmitz**

Ecology, Evolution and Behavior

*Factors Influencing the Nesting Success of Saltmarsh Sharp-tailed Sparrows in New England*

Advisers: Adrienne Kovach

**Carolyn Schmitz**

Ecology, Evolution and Behavior

*The Effects of Winter Weather on Foraging Behaviors of New England Passerines*

Adviser: Michelle Scott

**Valerie Schoepfer**

Environmental Science: Soil and

Watershed Management

*Leaf Leaching as a Source of Carbon and Nutrients in Tropical Streams*

Adviser: William McDowell

**Rose Smith**

Environmental Science: Ecosystems and General Biology

*Effects of Nitrogen, Phosphorous, and Potassium (NPK) Fertilization on Leaf Morphology and Photosynthesis Processes for Evergreen and Deciduous Shrubs in a Boreal Peatland*

Advisers: Jill Bubier, Ruth Varner

**Andrew Sparaco**

Electrical Engineering

*SWRDS—Project DED-FRED: Detection Enhanced Deployment—Forced Room Evacuation Device*

Advisers: Andrzej Rucinski, Glenn Shwaery

**Albert St Aubin**

Computer Engineering  
*FPGA Design Verification*  
 Adviser: Francis Hludik

**Joshua Stawarz**

Physics  
*The Turbulent Cascade and Proton Heating in the Solar Wind at 1 AU*  
 Adviser: Charles Smith

**Kaitlyn Steele**

Environmental Science: Ecosystems  
*Using Stable Isotope Methods to Determine Controls on Methane Production in Coastal Sediments*  
 Adviser: Ruth Varner

**Jesse Taylor**

Computer Engineering  
*Home Power Monitoring*  
 Adviser: Michael Carter

**Jonathan Tefft**

Electrical Engineering  
*Power Spectral Density Measurement of VDSL2 Modems*  
 Advisers: Michael Carter

**Jeffrey Tessein**

Physics  
*Corotating Interaction Regions at 1 AU*  
 Adviser: Charles Smith

**Charlotte Todd**

International Affairs and Spanish  
*S.T.A.R.S. Sustainability Tracking Assessment and Rating System*  
 Adviser: Sara Cleaves

**Reid VanBenthysen**

Mechanical Engineering  
*Development of Electrical-Assisted and Electromagnetic Microforming Processes*  
 Adviser: Brad Kinsey

**Vassili Vorotnikov**

Chemical Engineering  
*Enzymatic Transformation of a Natural Antioxidant*  
 Adviser: Palligarnai Vasudevan

**Amanda Waite**

Mathematics  
*Students' Algebraic Thinking in Geometry Problem Solving*  
 Adviser: Sharon McCrone

**David Waterhouse**

Mechanical Engineering  
*Accelerometer Modeling and Thruster Optimization for NASA's Magnetospheric MultiScale (MMS) Mission*  
 Adviser: May-Win Thein

**Justin Wilcox**

Geography  
*GIS and Campus Development*  
 Adviser: Joel Hartter

**Kerin Willard**

Chemical Engineering  
*Polymeric Pixels for High Definition Digital Printing*  
 Advisers: Donald Sundberg, John Tsavalas

**Lindsey Wright**

Undeclared  
*Detecting Evidence of Shifting Peak Migration Dates of Broad-Winged Hawks*  
 Adviser: Stephen Hale

## UNH Manchester Undergraduate Research Conference

### Poster Presentations

**Wednesday, April 22  
 4–6 p.m.  
 UNHM Auditorium**

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.

**Joshua Albair**

**Joshua Quigley**  
**Craig Tekverk**  
 Computer Information Systems  
*Way Home Outcome Tracking System: Helping Low-Income Housing Streamline Report Generation*  
 Adviser: Mihaela Sabin

**Daniel Arnold**

**Stephen Bates**  
**Tyler Williams**  
 Computer Information Systems  
*Mapping Movies: A Geographical Information System Tracking Cinema History in New Hampshire*  
 Adviser: Mihaela Sabin

**Kevin Bickford**

**Jeffrey Lavoie**  
**Sergei Perreault**  
 Computer Information Systems  
*Database Modeling and Design to Improve the Use of a Legacy System for the NH Division of Juvenile Justice Services*  
 Adviser: Mihaela Sabin

**Shannon Boudreau**

Psychology  
*The Importance of Building Social Relationships*  
 Adviser: Alison Paglia

**Brianna Brothers**

**Steven Cole**  
**Harry Dodson**  
 Computer Information Systems  
*Building a Database Application System to Manage Donations for the YWCA of Manchester*  
 Adviser: Mihaela Sabin

**Dominic DeSando**

**Zachary Gadway**  
**David Rice**  
**Matthew Wright**  
 Computer Information Systems  
*Accessibility, Security and Usability: Revising the Division for Juvenile Justice Services' Log-Entry System for the Digital Age*  
 Adviser: Mihaela Sabin

**Melissa DiNoto**

Psychology  
*Creativity and Aging*  
 Adviser: Alison Paglia

**Glenn Ellis**

Business

**Brian Landry**

**Justin Tullgren**  
 Computer Information Systems  
*Program and Membership Management System for the YWCA of Manchester*  
 Adviser: Mihaela Sabin

## Cathy Overson, URC 2005/2006

PSYCHOLOGY, UNH/MANCHESTER

CATHY OVERSON was already plenty busy when she decided to take part in the URC in 2005. And again in 2006, when she made two presentations.

At the time, she was studying for her bachelor's in psychology at UNH/Manchester, and also working as a nurse at Elliot Hospital's delivery and labor unit. But the URC, Overson says, offered an irresistible chance to team up with professors to study the psychological stresses that nurses face day-to-day.

"One of the most valuable aspects of the URC was the ability to be more collegiate with my advisers," Overson says. "It really helped me explore the research and interact with professors in a more in-depth way."

### Where is she now?

Inspired to continue her studies, Overson hasn't slowed down.

She earned her master's degree in psychology from UNH last year, and is on her way to earning a Ph.D.

The URC, she says, was perfect preparation for researching, and presenting, her work at the highest levels of academia.

"The experience I had with the URC was directly related to the work I did on my master's project, and it also ties in with the research I'm doing on my Ph.D.," Overson says.

In her master's work, Overson researched how sexually abused women relate to their pregnancies. Before long, her work could find its way back into hospitals, helping nurses and their patients face some of life's biggest challenges.



### Marina Ilyuk

History

*Perception of Rights in the USSR*

Adviser: John Cerullo

### Nathan Jensen

History

*Vietnam Policy in Crisis: The 1963*

*Assination of Diem*

Adviser: John Resch

### Elizabeth Johnstone

Humanities and Humanities

*Gender, Democracy, and America's Role in the World: The Woman's Peace Party, 1915-1920*

Adviser: John Resch

### Kristen LeGeyt

History

*America and the Cold War: Containment, Rollback and the 1956 Hungarian Revolution*

Adviser: John Resch

### James Maccabe

Humanities

*The Bush Doctrine: Democracy and Empire in a Unipolar World*

Adviser: John Resch

### John-Paul Padfield

History

*Old St. Peter's Basilica*

Adviser: John Resch

### Daniel Pepin

Brian Smith

Computer Information Systems

*Developing Donors Database Tools to Improve a Management System for the Big Brothers and Big Sisters of Greater Manchester*

Adviser: Mihaela Sabin

### Patrick Perkins

Biological Sciences

*The Effects of a Dirt Road on the Movement of the White Footed Mouse, Peromyscus leucopus*

Adviser: Stephen Pugh

### Alex Scarelli

English

*Cultural Learnings in Ascoli Piceno, Italy*

Adviser: Joanne Conrad

**Joseph Vaskelionis**

History

*Indian Removal Act of 1830: A Case Study of Continental Imperialism*

Adviser: John Resch

**Wendy Vattes**

Humanities

*Woodrow Wilson and the League of Nations: Making the World Safe for Democracy*

Adviser: John Resch

**Adrianna Wolfe**

Psychology

*Adult Development and Aging: Service Learning with Seniors Count*

Adviser: Alison Paglia

## UNH Manchester Undergraduate Research Conference

### Cinema Day

**Thursday, April 23****11 a.m.–1 p.m.****University Center, Manchester**

The UNH Manchester 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.

**Andrew D'Agostino**

English

*Interviewing Cupid*

Adviser: Dana Myskowski

**Evan Gomes**

Communication Arts

*Mike's First Marathon*

Advisers: Jeffrey Klenotic, Anthony Tenczar

**Timothy Huffman**

Communication Arts

*What Took You So Long?*

Adviser: Anthony Tenczar

**David Klein**

Communication Arts

*The Identity Project*

Adviser: Jeffrey Klenotic

**Kevin Mason**

Undeclared

*Space Exercise*

Adviser: Anthony Tenczar

**Kevin Mason**

Undeclared

*An Interview with Alfred Catalfo*

Adviser: Anthony Tenczar

**Adam Meran**

Communication Arts

*Joy*

Adviser: Anthony Tenczar

**Raymond Murphy**

Communication Arts

*Working Class Stiffs*

Adviser: Anthony Tenczar

**Erroll James Ponio**

Communication Arts

*My Grandfather In the Marcos' Administration*

Adviser: Anthony Tenczar

**Ian Reddick**

Communication Arts

*Up Hill: The Life and Times of Larry Hill*

Adviser: Anthony Tenczar

**Alex Scarelli**

English

*Art Show*

Adviser: Dana Myskowski

## The Naked Arts—Creativity Exposed (Act II)

**Thursday, April 23****12:30–2 p.m.****Hennessey Theatre,  
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.

**Matthew Frazier****Sasha Kraichnan**

Theatre

**Adrienne Lesser**

Theatre and Animal Sciences: Equine Sciences

*The Dissolution of the American Family as Reflected by Contemporary American Drama and Musical Theatre*

Advisers: David Kaye, David Richman

**Zachary Onett**

Music Theory

*Microtonal Experimentation*

Adviser: Christopher Kies

**Joshua Torbick**

Art Studio

*Coming and Going: Furniture for the Hall*

Adviser: Leah Woods

**Samantha Withers**

Art Studio and Education

*Flying Solo—The Impact Companionless Travel Plays in Photographic Artwork*

Advisers: Julee Holcombe, Jennifer Moses

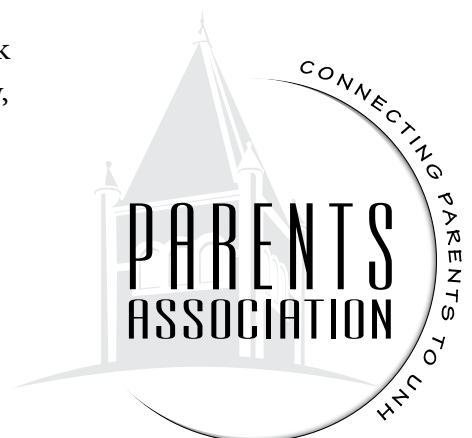


**UNH Parents Association  
Undergraduate Research Symposium  
Friday, April 24, 2009**

**9:30 a.m.–3 p.m.**

**H**igh-quality undergraduate research is the hallmark of a University of New Hampshire education. Now, with funds provided by the **Parents Association**, the University can increase its support to students during the **UNH Undergraduate Research Conference (URC)**. Funding student innovation: it's one of the many ways the **Parents Association** enhances the University's academic mission.

**Be informed. Join the community. Make a difference.**



## History Department Undergraduate Presentations

**Thursday, April 23**  
**12:40–2 p.m.**  
**Memorial Union Building,**  
**Rooms 338/340**

The History Department hosts a panel of undergraduate history majors who present research projects from their academic classes, research seminars, and honors theses.

**Duncan Edgar**

History

*Historic Preservation in Depression-Era Portsmouth*

Adviser: Lucy Salyer

**Matthew Fleury**

History

*Sufi and State: Success and Failure of Political Sufism in Modern Afghanistan and Libya*

Advisers: Funso Afolayan, Jeffrey Diefendorf, Sara Wolper

**Jeffrey Kaste**

**Mallory Murrell**

History

*Modern Student Movements: The Success and Failure of Leftist Student Thought and Action in the Hungarian Revolution and American, French and Italian Student Movements (1968–1969)*

Adviser: Janet Polasky

**Seth Macomber**

History

*Barry Goldwater and the Conservative Capture of the Republican Party*

Adviser: Kurk Dorsey

## ***Revolutionaries, Radicals, and Whores: Irish Feminism at the Turn of the Twentieth Century***

Elizabeth Close

Kathryn Dulla

Allison Lary

History

**Thea Dickerman**

History and Women's Studies

Adviser: Nicoletta Gullace

## UNH Manchester Undergraduate Research Conference

### Engineering Technology Senior Project Presentations

**Friday, April 24**  
**8 a.m.–3 p.m.**  
**UNHM Auditorium**

**Michael Broek**

Mechanical Engineering Technology  
*Fiber Optic Ferrule Assembly Project*

Adviser: Ralph Draper

**David English**

**Chadwick Shea**

Electrical Engineering Technology  
*Durability Test Card*

Adviser: David Forest

**Maurice Howland**

Mechanical Engineering Technology  
*Excimer Laser RandD Packaging (Designing an Outer Case)*

Adviser: Ralph Draper

**Joshua Huggins**

Electrical Engineering Technology  
*Autonomous Robot With Manual Network Control Override*

Adviser: David Forest

**Tabitha Jason**

Mechanical Engineering Technology  
*Somersworth School District-Energy Audit*

Adviser: Ralph Draper

**Neil Jones**

Electrical Engineering Technology  
*Machine to ERP Interface*

Adviser: David Forest

**Neil Kendall**

Electrical Engineering Technology  
*Enhanced Multi-MR Search Functionality*

Adviser: David Forest

**Shaun Stevenson**

Mechanical Engineering Technology  
*Hydro Test Tank Modification*

Adviser: Ralph Draper

**Paul Strieby**

Electrical Engineering Technology  
*Common Power Filter and Supply Analysis*

Advisers: David Forest

**Matthew Welch**

Mechanical Engineering Technology  
*ICA Product Design and Optimization*

Adviser: Ralph Draper

## Welcome with Associate Vice President for Research and Outreach Scholarship Julie E. Williams and Parents Association Council President Mark Loopley

**Friday, April 24**  
**9–9:30 a.m.**  
**Memorial Union Building,**  
**Granite State Room**

This informal gathering gives students and attendees an opportunity to visit with Associate Vice President for Research and Outreach Scholarship Julie E. Williams and Parents Association Council President Mark Loopley. Both speakers will provide a preview of the large university-wide event that follows—the Parents Association Undergraduate Research Symposium.



## Parents Association Undergraduate Research Symposium

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 presentations sessions. University-wide participants come from a variety of disciplines.

### Poster Presentations, Session A

**Friday, April 24**  
**9:30–10:40 a.m.**  
**Memorial Union Building,**  
**Granite State Room**

**Heather Beaudette**  
 Social Work  
*Community Partners*  
 Adviser: Brian Miller

**Alyssa Birt**  
 Animal Sciences: Bioscience and Technology

**Rajtilak Majumdar** (*graduate student*)  
*Regulation of Gene Expression of the Polyamine Pathway Genes: What Does a Promoter Look Like?*  
 Adviser: Subhash Minocha

**Jennifer Boudreau**  
 Social Work  
*Division For Children, Youth and Families*  
 Adviser: Brian Miller

**Kristina Breton**  
 Psychology  
*Dating Patterns at UNH: Hooking Up versus Dating or Committed Relationships*  
 Adviser: Rebecca Warner

**Emily Briand**  
 Social Work  
*United Campus Ministries: The Waysmeet Center*  
 Adviser: L. Rene Bergeron

**Crystal Cobb**  
 Political Science  
*The Role of 64-slice CT Angiography in the Diagnosis of Post-Traumatic Pseudoaneurysms of the Extremities*  
 Advisers: Susan Siggelakis, Irwin Feuerstein M.D., US Army

**Kayla Davis**  
 Social Work  
*Division For Children, Youth and Families*  
 Adviser: Brian Miller

**Danae Deveau**  
 Social Work  
*Homemakers Health Services Adult Day Care Program*  
 Adviser: Brian Miller

**Dean Elder** (*graduate student*)  
**Robert Gibson**  
**Amanda Ramos**  
 Microbiology  
**Sarah Kinsman**  
 Animal Sciences: Pre-veterinary Medicine  
**Amanda Rivers** (*graduate student*)  
*Effect of Postpartum Uterine Pathogens on Ovarian Activity in the Dairy Cow*  
 Adviser: David Townson

**Steven Falk**  
 Psychology  
*The Effects of Parenting Style on Adolescent Substance Use*  
 Adviser: Ellen Cohn

**Samantha Fredette**  
 Social Work  
*The Feminist Health Center of Portsmouth*  
 Adviser: Brian Miller

**Jaime Gallagher**  
 Psychology  
*Attributions of Responsibility for Unplanned Pregnancy: The Effects of Consent and Reputation*  
 Adviser: Ellen Cohn

**Allison Greene**  
 Social Work  
*Seymour Osman Community Center: Youth Safe Haven*  
 Adviser: L. Rene Bergeron

**Lauren Gurschick**  
 Nursing  
*A Descriptive Study of Team-Based Well-Child Care in The Netherlands*  
 Adviser: Gene Harkless

**Nina Harris** (*graduate student*)  
 Business Administration  
*Sustainability: Webinars at Clean Air Cool Planet*  
 Adviser: Sara Cleaves

**Casey Hill**  
 Nursing  
*Neonatal Nurses Perceptions of Neonatal Pain Scales*  
 Adviser: Carol Williams-Barnard

**Sara Hourihan**  
 Kinesiology  
*Can an Altered Stride Frequency Be Maintained After the Training Stimulus Has Been Removed?*  
 Adviser: Tim Quinn

**Lauren Howard**  
 Social Work  
*Division For Children, Youth and Families*  
 Adviser: Brian Miller

**Caroline Ivy**  
 International Affairs and Social Work  
*The Waysmeet Center*  
 Adviser: L. Rene Bergeron

**Colleen Kelley**  
 Social Work  
*Where is the Outrage?*  
 Adviser: L. Rene Bergeron

**Jack Lepine**  
 Plant Biology  
*Characterization of Transcript Production in Arabidopsis Palmitoyltransferase Mutants*  
 Adviser: Estelle Hrabak

**Heather Macomber**  
 Psychology  
*Does Desipramine Reverse Intermittent Swim Stress-induced Behavioral Depression?*  
 Adviser: Robert Drugan

**Carly Marquis**

Nursing

*Caring for a Febrile Child at Risk for Malaria: Describing Caretaker Actions*

Adviser: Carol Williams-Barnard

**Jordan McAllister**

Social Work

*Interfaith Refugee Resettlement Program*

Adviser: L. Rene Bergeron

**Aimee Milliken**

Nursing

*The Experience of Nurses Using Rapid Response Teams*

Advisers: Susan Fetzer,

Carol Williams-Barnard

**Kara Morin**

Social Work

*Families: Correction's Greatest Asset*

Adviser: L. Rene Bergeron

**Lauren Musacchio**

Nursing

*The Nurse's Perception of Caring for the Refugee Population in the United States*

Advisers: Christine Saltzberg,

Carol Williams-Barnard

**Carly Nichols**

Social Work

*Families in Transition*

Adviser: L. Rene Bergeron

**Timothy O'Connor**

Political Science

*Sustainability: The Effects of an Affluent Asia on the Global Ecosystem*

Adviser: Alynna Lyon

**Michael O'Hara Jr**

Microbiology

**Benjamin Seiler**

Microbiology

*Assessing Methods to Inactivate Recombinant DNA*

Adviser: Stephen Torosian

**Danielle Oliveri**

General Biology

*Daily Patterns of Salivary  $\alpha$ -Amylase and Salivary Cortisol in Children with Autism Spectrum Disorder (ASD)*

Advisers: David Townson, Barbara White

## Emily Lagana, URC 2005

NURSING, COLLEGE OF HEALTH AND HUMAN SERVICES

EMILY LAGANA spent the summer of 2004 researching hospice care in a pediatric hospice house in the United Kingdom.

Backed by a grant from the International Research Opportunities Program (IROP), Lagana's research found her working side-by-side with a team of doctors and nurses helping seriously ill children and their families.

She returned to UNH ready to share her findings, and her insights for potential improvements in the American health care system, at the 2005 URC.

### Where is she now?

After graduation, Lagana became a registered nurse at the University of San Francisco Children's Hospital, working in the Pediatric Hematology/Oncology/ Bone Marrow Transplant Unit.

"I absolutely loved it there! I learned so much working on that kind of unit," she says. "It was kind of a crash course in pediatrics...high intensity, very sick kids."

After a year there, she became a traveling nurse, working in a pediatrics unit at the University of New Mexico Children's Hospital in Albuquerque, as a burn nurse at Shriners' Hospital for Children in Boston, and as a neuroscience nurse at Children's Hospital in Boston.

Lagana then took graduate courses at the University of Pennsylvania, focusing on pediatric oncology care. She was finally lured back to New Hampshire and a job in the pediatrics ward at Children's Hospital at Dartmouth.

She now divides her time between the hospital and Colby-Sawyer College in New London, where she is an adjunct professor. Lagana says she especially enjoys teaching students how to care for children using a hands-on approach.

"I just recently completed an application to UNH for a master's in child development!" says Lagana, who hopes to be back in Durham next fall.



**Christine Preble**

Nursing

*Understanding the Nutritional Status of Children with Acute Malaria in Ghana*

Adviser: Gene Harkless

**Callee Richards**

Sociology and Communication

*Know Your Power Product Pilot Study*

Adviser: Sharyn Potter

**Rebecca Richmond**

Social Work

*New Outlook Teen Center*

Adviser: L. Rene Bergeron

**Zoe Rogers**

Health Management and Policy

*Provision of Translational Services to Refugee Populations in NH Public Health Facilities*

Adviser: John Seavey

**Laura Shanteler**

General Biology and Psychology

*Do Documentation and Worksheets Enhance Children's Learning?*

Adviser: Michelle Leichtman

**Gina Sheehan**

Social Work

*Families First Health and Support Center*

Adviser: Brian Miller

**Nicholas Sherman**

Animal Sciences: Pre-veterinary Medicine

*Expression of Cellular FLICE Inhibitory Protein (cFLIP) in the Bovine Corpus Luteum.*

Adviser: David Townson

**Nicole Spampinato**

Social Work

*Prevention and Treatment of Juvenile Offenses: The Perspective of Adults on Probation and Parole.*

Adviser: Melissa Wells

**Megan Thompson (graduate student)****Rechab Towne**

Biochemistry

*Comparison of Root Growth of Arabidopsis thaliana Wildtype and Mutant Plants*

Adviser: Estelle Hrabak

**Samantha Withers**

Art Studio and Education

*Flying Solo—The Impact Companionless Travel Plays in Photographic Artwork*

Advisers: Julee Holcombe, Jennifer Moses

**Alexandra Yoeli**

Social Work

*Rochester Elementary Schools*

Adviser: Brian Miller

---

## Parents Association Undergraduate Research Symposium

---

### Oral Presentations, Session A

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

---

**MUB, Room 330**

### ***International Affairs—Searching for the Self: National Identity in Comparative Perspective***

Moderator: Mary Rhiel

**Andrew Bedell**

International Affairs and History and German

*Integration vs. Isolation: The Problems of Assimilation in the Turkish-German Community*

Adviser: Lawrence Reardon

**David Bornstein**

International Affairs and History

*The Loss of the Breton Language*

Adviser: Lawrence Reardon

**Alyssa DePaula**

International Affairs and Political Science

*Without a Shared Identity: The Individual in Moroccan Society*

Adviser: Lawrence Reardon

**Corey Fong**

International Affairs and Russian Nationalism and Race Relations in Contemporary Russia

Adviser: Lawrence Reardon

**Panagiotis Hondros**

International Affairs and Political Science and Greek

*The Assassination of the Greek National Identity*

Adviser: Lawrence Reardon

---

**MUB, Room 332**

### ***International Affairs—Xenophobia, Race Relations, and the Immigration Dilemma***

Moderator: Claire Malarte-Feldman

**Nathalie Bishop**

International Affairs and Business Administration

*The Marginalization of Muslim-Arab Immigrants in Paris*

Adviser: Benjamin Cole

**Andrew Lavine**

International Affairs and International Business and Economics

*Immigration in Japan: Racial Selectivity and Maintaining the Status Quo*

Adviser: Lawrence Reardon

**Amanda Lawrence**

International Affairs and Psychology

*Italy's Reaction to Recent Immigration*

Adviser: Benjamin Cole

**Maxwell Marquart**

International Affairs and Communication

*Migrant Populations Following German Reunification*

Adviser: Lawrence Reardon

**Kathryn Shriver**

International Affairs and Political Science

*Xenophobia and the Plight of Spain's Immigrants*

Adviser: Lawrence Reardon

---

**MUB, Room 334****International Affairs—Security, International Conflict, and US Foreign Relations****Moderator:** Greg McMahon**Sarah Gormady** (UNH McNair Scholar)  
International Affairs and Political Science  
*Blame It on the West: Why the Russian Georgian Crisis is Our Fault*  
Adviser: Benjamin Cole**Elizabeth Lefavour**  
International Affairs and Political Science  
*Woes of a Junior Ally: A Closer Look at the US-Japan Security Treaty*  
Adviser: Lawrence Reardon**Cem Savoglu**  
International Affairs and Economics  
*The Cyprus Problem and Turkey's Accession to the European Union*  
Adviser: Benjamin Cole**Ana Tirado** (UNH McNair Scholar)  
International Affairs and Political Science  
*Strategic Reasoning behind US Military Aid*  
Adviser: Benjamin Cole**Charlotte Todd**  
International Affairs and Spanish  
*The Era of Trujillo: Exploring US Relations with the Dominican Republic Dictatorship*  
Adviser: Benjamin Cole

---

**MUB, Room 336****International Affairs—From Innocence to Industrialization: Tourism, Migration, and Development****Moderator:** Robert Mohr**Alexander Atkind**  
International Affairs and History  
*Managing the Disenfranchised: China and Its Rural Migrant Population*  
Adviser: Benjamin Cole**Jessica Dennis**  
International Affairs and Spanish  
*How Tourism Changed Spain's Economy*  
Adviser: Benjamin Cole**Nathan Janssen**  
International Affairs and Spanish  
*The Effect of Festivals on Spanish Tourism Using Panel Data*  
Adviser: Benjamin Cole**Andrea Vinyard**  
International Affairs and Spanish  
*Child Sex Trade in Costa Rica: Will Innocence Be Preserved?*  
Adviser: Lawrence Reardon

---

**MUB, Room 338****International Affairs—Wings of Wax? Crisis in the Advanced Industrialized Economies****Moderator:** Richard England**Evie Athanasi**  
International Affairs and Chemical Engineering  
*Where Has All the Dough Gone?: An Exploration of the French National Debt*  
Adviser: Benjamin Cole**Marisa Baptiste**  
International Affairs and Environmental Conservation Studies  
*Environmental Degradation of the Austrian Alps*  
Adviser: Lawrence Reardon**Sean Coughlin**  
International Affairs and Political Science  
*Japan's Stagnating Economy*  
Adviser: Lawrence Reardon**Brittany Rittenberry**  
International Affairs and Political Science  
*Human Trafficking: A Thriving Black Market Service*  
Adviser: Lawrence Reardon

---

**MUB, Room 340****Political Science—The Economics of War and Peace****Moderator:** Michael Smith**Colleen Flaherty**  
Political Science and Spanish  
*Problems with Regulation: Illegal Trade of Southeast Asian Wildlife*  
Adviser: Lawrence Reardon**Johanna Murphy**  
Political Science  
*Holy Oil and Water: The Economics of a Theocratic Nation*  
Adviser: Lawrence Reardon**Daniel Salem**  
Political Science  
*From Cold War to Frozen War?*  
Adviser: Lawrence Reardon**Justin Troiano**  
Political Science  
*The Cost of Security: Economic Repercussion of Military Occupation*  
Adviser: Lawrence Reardon**Christopher Wasileski**  
Political Science  
*From Russia With Love: The Caspian Sea Oil Pipeline*  
Adviser: Lawrence Reardon

---

**MUB, Rockingham Lounge****Political Science—Agents for Change in the International System****Moderator:** Ted Howard**Diana Chiang**  
Sociology and Justice Studies  
*Successful Measures of Peacekeeping*  
Adviser: Alynna Lyon**Sarah Graffam**  
Political Science and Justice Studies  
*Global Climate Change and its Implications for Global Politics*  
Adviser: Alynna Lyon**Jacqueline Lewis**  
Political Science and Philosophy  
*Peace vs. Justice: Sudan and the International Criminal Court*  
Adviser: Alynna Lyon**Sasa Tang**  
International Affairs and Political Science  
*Filling the Gap: NGO-State Relationships in Comparative Perspective*  
Adviser: Benjamin Cole

## Nick Perros, URC 2007

BIOCHEMISTRY, COLLEGE OF LIFE SCIENCES AND AGRICULTURE

WHILE STUDYING FOR HIS UNDERGRADUATE DEGREE in biochemistry and molecular biology, Nick Perros became fascinated in the molecular basics of vision, and presented a paper on his research at the 2007 URC.

### **Where is he now?**

Two years later, Perros is finishing his second year at the New England Center for Children in Boston, where he works with children diagnosed with autism. He also has his sights set on medical school, and is in the thick of the application process.

“The URC gave me the opportunity to present the results of my project to fellow students and faculty,” Perros says, “and to see the progression of my research all the way from my Summer Undergraduate Research Fellowship (SURF) award junior year to the culmination of the project in my senior honors thesis.”



### **MUB, Room 203**

#### **Political Science— Thinking About Congress**

**Moderator:** Andrew Smith

**Victoria Adewumi**  
Political Science  
*Thinking About Congress, A*  
Adviser: Dante Scala

**Sarah Callender**  
Political Science  
*Thinking About Congress B*  
Adviser: Dante Scala

**Adam Kelly**  
Political Science  
*Thinking About Congress, C*  
Adviser: Dante Scala

**Kim Kerley**  
Political Science  
*Thinking About Congress, D*  
Adviser: Dante Scala

**Joshua Plante**  
Political Science  
*Thinking About Congress E*  
Adviser: Dante Scala

**Eric Wind**  
Political Science  
*Thinking About Congress, F*  
Adviser: Dante Scala

### **MUB, Room 302**

#### **Is Feminism Spoken Here? Inquiry and Praxis in Women's Studies Internships**

**Moderator:** Carina Self

**Hannah Colestock**  
Sociology and Women's Studies  
*Girls on the Run—NH*  
Adviser: Carina Self

**Samantha Costa**  
Women's Studies and English  
*Sexual Harassment and Sexual Assault  
Protocol Project*  
Adviser: Carina Self

**Laura Fay**

English and Women's Studies  
*Office of Multicultural Student Affairs- LG-BTQ+ Programs*  
 Adviser: Carina Self

**Emily Lusenhop**

Women's Studies  
*New Outlook Teen Center*  
 Adviser: Carina Self

**Laura Tretter**

Sociology and Women's Studies  
*The Feminist Health Center—Portsmouth*  
 Adviser: Carina Self

**MUB, Room 321**

**Communication Honors Projects:  
 Understanding Identities and  
 Cultures**

Moderator: Danielle Pillet-Shore

**Anna Bruning**

Communication  
*Euskal Herria: A Filmic Exploration of Basque Identity and Culture*  
 Adviser: Danielle Pillet-Shore

**Elizabeth Reny**

Communication  
*Recessionista: Rehabilitating Feminine Consumption in the Age of Recession*  
 Adviser: Melissa Deem

**Jennifer Roy**

Communication  
*Body Image and the Media: How Mainstream Magazines Have Depicted Women's Bodies Over Time*  
 Adviser: Danielle Pillet-Shore

**MUB, Room 207**

**The Growing Divide: A University  
 Dialogue on Poverty and  
 Opportunity**

Moderator: Stacey VanDeveer

**Devin Bates**

Economics  
*Is There an Upside to Poverty?*  
 Adviser: Michelle Holt-Shannon

**Alyssa Mixon**

General Biology  
*The Haves vs. Have Nots of Healthcare: Living in a Land of Uninsured Opportunity*  
 Adviser: Michelle Holt-Shannon

**Ian Tanafon**

Political Science  
*The Quiet Threat of Inequality*  
 Adviser: Michelle Holt-Shannon

**MUB, Room 304**

**Sustainability/ Sustainability  
 Internship Program (SIP) I**

Moderators: Sara Cleaves,  
 Jason Whitney

**Juliet Bluemling**

Hospitality Management  
*Sustainability—Hospitality Food Purchasing*  
 Adviser: Sara Cleaves

**Travis Elfreth**

Marketing  
**Kimberly Rogers**  
 Communication

**Meaghan Sousa**

Communication  
*Sustainability and the New Hampshire Carbon Challenge*  
 Adviser: Tara Pierce

**Ross Seavey**

Political Science and Justice Studies  
*Sustainability—North American Forestry: A Comparative Analysis of Factors in Canada and the United States*  
 Adviser: Stacy VanDeveer

**MUB, Room 233**

**French Studies—Presentations**

Moderator: Juliette Rogers

**Claire Churchill**

International Affairs and Political Science  
*Jules Simon: Sans colère et sans amertume*  
 Adviser: Barbara Cooper

**Carolyn Dempster**

International Affairs and French Studies  
*Marry Me? An Examination of Same-Sex Unions in France and the United States*  
 Adviser: Juliette Rogers

**Yuliya Salata**

International Affairs and European Cultural Studies  
*Prejudice and Violence against Place of Worship in France*  
 Adviser: Barbara Cooper

**MUB, Strafford Room**

**Multidisciplinary Session I**

Moderator: TBD

**Cade Harstedt**

English  
*The Political Aesthetic: Social Realism in European Cinema*  
 Adviser: Delia Konzett

**Julie Langevin**

Communication Sciences and Disorders  
*A Study of Speech Perception: The Psychological Reality of the Obligatory Contour Principle*  
 Adviser: Timothy Bryant

**Justin Rondeau**

Philosophy  
*An Exploration of the Contemporary Debate of Moral Responsibility's Compatibility with Free Will and Determinism*  
 Adviser: Paul McNamara

**Megan Schulz**

Environmental and Resource Economics  
*Law and Economics Case Study: Calif. Native Plant v. El Dorado*  
 Adviser: James Wible

**Laura Zepko**

Psychology  
*Perceptions of College Students*  
 Adviser: Brent Bell

## Parents Association Undergraduate Research Symposium

### Poster Presentation, Session B

**Friday, April 24**  
**10:50 a.m.–Noon**  
**Memorial Union Building,**  
**Granite State Room**

**Janet Barber**  
Social Work  
*Dover Teen Center*  
Adviser: Brian Miller

**Amanda Bellerose**  
Communication Sciences and Disorders  
*Mentoring Program for Youth Survivors of TBI*  
Adviser: Michael Fraas

**Nicholas Bencivenga**  
Chemistry  
*Preparation of Novel Bifunctional Polymerizable Copper(II) Ligands*  
Advisers: Roy Planalp, Rudolph Seitz

**Aaron Brown**  
**Brittany Friend**  
Undeclared  
**Emily Ramlow**  
Environmental Conservation Studies

**John Rolfe**  
Business Administration  
*Water Productivity in Swains Lake*  
Advisers: Stephen Hale, Jeffrey Schloss

**Robert Carroll**  
**Megan Creighton**  
**Nicholas Deveau**  
**Daniel Milano**

Chemical Engineering  
*Fundamental Studies in Fuel Cells*  
Adviser: Virendra Mathur

**Jillian Clark**  
Social Work  
*Seacoast Youth Services*  
Adviser: Brian Miller

**Erica Clemens**  
Social Work  
*SASS in the School System*  
Adviser: L. Rene Bergeron

**Sabrina Cote**  
Occupational Therapy  
*Occupational Therapy and Physician Assistant Students' Attitudes Towards Adults Who Are Obese*  
Adviser: Kerryellen Vroman

**Ananda DeMaio**  
Social Work  
*Community Partners*  
Adviser: Brian Miller

**Rachel Diosi**  
Social Work  
*Chances*  
Adviser: L. Rene Bergeron

**Benjamin Dudek**  
Environmental Conservation Studies  
*13C and 15N Isotope Analysis of National and Local Meat and Food Samples to Determine the Percentage of Corn in the New Hampshire Seacoast Area Diet*  
Adviser: Erik Hobbie

**Hilary Eslinger**  
Social Work and Women's Studies  
*Seacoast Hospice Bereavement: What is Grief?*  
Adviser: L. Rene Bergeron

**Nikkia Gardner**  
Social Work  
*Chances*  
Adviser: Brian Miller

**Brittney Gilman**  
**Tasha Staples**  
Psychology  
*Motivating Community Members to Prevent Sexual Assault*  
Adviser: Victoria Banyard

**Ryan Goslin**  
Physics  
*Measuring Energetic Ion Composition with the High Energy Telescope on the Ulysses Spacecraft*  
Adviser: James Connell

**Nick Guidice** (UNH McNair Scholar)  
Nutritional Sciences  
*Investigating Dietary Habits of Division I Collegiate Male Athletes: Implications for Training and Performance*  
Adviser: Tim Quinn

**Adam Harrington**  
Communication  
*Nation of Equality Votes 'Yes' on Proposition 8; Mass Communication and Public Awareness*  
Adviser: Josh Lauer

**Elsa Horne**  
Occupational Therapy  
*An Analysis of Scores on the Perceived Stress Scale for Children between Children Diagnosed with Psychiatric Disorders and Healthy Peers*  
Adviser: Barbara White

**Sauwai Hung**  
Zoology  
*Somatic Growth of Juvenile Green Sea Urchins (Strongylocentrotus droebachiensis) Fed Artificial Feeds of Varying Nutritional Composition*  
Adviser: Larry Harris

**Katherine Hutchins**  
**Amanda Ramos**  
Microbiology  
**Lia Jeffrey** (graduate student)  
*Shiga Toxin-induced Apoptosis in Blood Neutrophils*  
Adviser: Frank Rodgers

**Kelsey Janowicz**  
Psychology  
*School-based Occupational Therapy in Northern New England*  
Adviser: Lou Ann Griswold

**Meaghan Johns**  
Social Work  
*Early Supports and Services*  
Adviser: Brian Miller

**Olivia Karpinski**  
Health Management and Policy  
*Pre-participation Athletic Screening Forms in New England Colleges*  
Adviser: John Seavey



**Julie Langevin**

Communication Sciences and Disorders  
*A Study of Speech Perception: The Psychological Reality of the Obligatory Contour Principle*  
 Adviser: Timothy Bryant

**Monique Lee**

Social Work  
*Strafford County Head Start*  
 Adviser: L. Rene Bergeron

**Rebecca Lehr**

Environmental Science: Ecosystems  
*Sustainability: Are Anthropogenic Emissions Changing the Glacial-interglacial Cycle?*  
 Adviser: Cameron Wake

**Lauren McDonough**

Anthropology  
*Exploring Our Relation to Neandertal Using the Dental Record*  
 Adviser: Meghan Howey

**Max Mehlman**

Zoology and Psychology  
*The Effects of Hippocampal Lesions upon the Contextual Cueing Paradigm in Pigeons*  
 Adviser: Brett Gibson

**Emma Morin**

Psychology  
*Designing an Intensive English for Academic Purposes Course for German L1 Students*  
 Adviser: Federica Barbieri

**Christina Nagel**

Nursing

**Julianne St. Onge**

Nursing

*The Influence of Cultural Context on Management of Pain in End-of-Life Care*  
 Adviser: Catherine Bernosky de Flores

**Derek Price**

Social Work  
*Somersworth Youth Connection*  
 Adviser: L. Rene Bergeron

**Melissa Schilke**

Psychology  
*Procrastination Study on Stress Levels*  
 Adviser: Barbara White

**Robin Sherman**

History  
*Ceramic Analysis, Social Groups, and Late Prehistory in Northern Michigan (AD 1200-1600)*  
 Adviser: Meghan Howey

**Krystal Simmons**

Social Work  
*Schizophrenia*  
 Adviser: L. Rene Bergeron

**Nicole Spampinato**

Social Work  
*Prevention and Treatment of Juvenile Offenses: The Perspective of Adults on Probation and Parole*  
 Adviser: Melissa Wells

**Nicole Spampinato**

Social Work  
*Odyssey House*  
 Adviser: Brian Miller

**Rebekah Taylor**

Social Work  
*Dover Teen Center*  
 Adviser: Brian Miller

**Lindsay Trapp**

Social Work  
*Anger Management for the Teenage Mind*  
 Adviser: L. Rene Bergeron

**Adrienne Westcott**

Psychology and Social Work  
*Support in Young Adult Chronic Illness*  
 Adviser: Robert Eckstein

## Parents Association Undergraduate Research Symposium

### Oral Presentations, Session B

**Friday, April 24**  
**10:50 a.m.–Noon**  
**Memorial Union Building**

### MUB, Room 330

#### **International Affairs— Managing Economic Development: People, the Environment, and Modernization**

Moderator: Mary Malone

**Katie Conrad**

International Affairs and General Biology  
*Modernization at the Expense of Ecuador's Environment*  
 Adviser: Lawrence Reardon

**Agnieszka Gloskowski**

International Affairs and German and Spanish  
*Argentina: A Struggling Economy*  
 Adviser: Benjamin Cole

**Heather Ridge**

International Affairs and Family Studies  
*Fair Trade: Small-Scale Coffee Farmers in Costa Rica*  
 Adviser: Benjamin Cole

**Grant Zezula**

International Affairs and English  
*The Inca: The Empire without Money*  
 Adviser: Benjamin Cole

**Shi Bin Zheng**

International Affairs and Finance  
*Yantai Kaifang: Opening China's Coastal Regions*  
 Adviser: Lawrence Reardon

**MUB, Room 332*****International Affairs—The Heart of Democracy: Party, Faction, and Participation in Comparative Perspective***

Moderator: Lu Yan

**Claire Churchill**International Affairs and Political Science  
*The Rise of the Radical Right in France*  
Adviser: Benjamin Cole**Julia Faller**International Affairs and Business Administration  
*Italian Politics: Challenges and Reform in the 20th Century*  
Adviser: Benjamin Cole**Caroline Ivy**International Affairs and Social Work  
*The Election of the First Indigenous President of Bolivia*  
Adviser: Benjamin Cole**Allison Krause**International Affairs and Spanish  
*Political Balance: Partisan Politics in the Spanish and Italian Transition to Democracy*  
Adviser: Benjamin Cole**Wegene Wells-Bogue**International Affairs and Political Science  
*Exploring Pathways to Ethnically-integrated Democracy in Ethiopia*  
Adviser: Benjamin Cole**MUB, Room 334*****International Affairs—Violence, Protest, and Genocide***

Moderator: Lori Hopkins

**Richard Barney**International Affairs and Political Science  
*Pots, Pans, and Protest: The 2008 Agricultural Protests in Buenos Aires*  
Adviser: Lawrence Reardon**Carolyn Dempster**International Affairs and French Studies  
*Who Put Out the Fire?: Protests in the US and France, During the 1960s and Today*  
Adviser: Benjamin Cole**Holly Eaton**International Affairs and Political Science  
*Your Land Is My Land: The Treatment of the Ainu and Native Americans*  
Adviser: Lawrence Reardon**Marie Assumpta Gakuba**International Affairs and Political Science  
*Never Again: A Promise Yet To Be Fulfilled*  
Adviser: Benjamin Cole**Yuliya Salata**International Affairs and European Cultural Studies  
*Prejudice and Violence against Place of Worship in France*  
Adviser: Lawrence Reardon**MUB, Room 336*****International Affairs—How the “Other” Lives***

Moderator: Monica Chiu

**Michelle Bower**International Affairs and Spanish  
*How Study Abroad Benefits Students*  
Adviser: Benjamin Cole**Katrina Ingraham**International Affairs and Communication  
*A Life Between: Reflections of Immigrant Culture in Modern German Cinema*  
Adviser: Lawrence Reardon**Corey Malone**International Affairs and History  
*Living a Long Life: Japanese Lifestyle and Diet*  
Adviser: Lawrence Reardon**Melissa Tarbell**International Affairs and Spanish  
*The Virgin of Guadalupe: Female Empowerment and Self-Image in a Traditionally Machista Society*  
Adviser: Benjamin Cole**Britta Yost**International Affairs and Political Science  
*La Apertura*  
Adviser: Benjamin Cole**MUB, Room 338*****International Affairs/Political Science—Power and Sex in the International Economy***

Moderator: Michael Smith

**Michelle Blundell**Political Science  
*Economic Interdependence, War, and Conflict*  
Adviser: Lawrence Reardon**Sarah Gormady (UNH McNair Scholar)**International Affairs and Political Science  
*The Carnal Economy: Sex for Sale on the Global Marketplace*  
Adviser: Lawrence Reardon**Brian Hough**International Affairs and European Cultural Studies  
*A New World Order: The Rise of Multinational Markets Amidst the Globalizing Economy*  
Adviser: Lawrence Reardon**Patrick O’Keefe**Political Science  
*How to Become an Economic Hegemon: The United States Rise after World War II*  
Adviser: Lawrence Reardon**MUB, Room 340*****Political Science—Problems of the Developing State: Poverty, Urbanization, and Ethnic Tension***

Moderator: Trevor Mauck

**Craig Gallot**Political Science  
*From Clothes to Computers: How Labor Costs Affected Production in China*  
Adviser: Lawrence Reardon

**Katherine Levesque**

International Affairs and Medical  
Laboratory Science  
*HIV/AIDS Prevention Methods:  
A Comparative Analysis of Uganda  
and Nigeria*  
Adviser: Benjamin Cole

**Jacqueline Lewis**

Political Science and Philosophy  
*Anticipating Genocide: The Case of  
Rwanda*  
Adviser: Alynna Lyon

**Radar Onguetou Essiene**

Political Science  
*In Between Poverty and Development:  
Agriculture and Industrial Reforms in  
China*  
Adviser: Lawrence Reardon

**Sasa Tang**

International Affairs and Political Science  
*Urbanization of Hong Kong*  
Adviser: Lawrence Reardon

**MUB, Room 302****Sociology Session I**

**Moderator: Sharyn Potter**

**Karin Hakala**

Sociology and Spanish

**Chelsey Johnson**

Sociology

**Eileen Johnson**

Sociology and Justice Studies  
*Warning: Exposure to Media Can  
Negatively Affect Women's Body Image*  
Adviser: Sharyn Potter

**Sheila Jarnes**

Environmental Conservation Studies  
*The Secret Lives of Roses*  
Adviser: Thomas Safford

**Joshua Lamkin**

Sociology  
*The Social Psychological Effects of Modern  
Warfare on Returning Soldiers*  
Adviser: Michele Dillon

## Emily Roberts, URC 2008

NURSING AND INTERNATIONAL AFFAIRS,  
COLLEGE OF HEALTH AND HUMAN SERVICES,  
COLLEGE OF LIBERAL ARTS

AT THE 2008 URC, Emily Roberts explored the role of nurses in rural Uganda, where she worked at a small public health clinic for ten weeks in 2007.

Supported with a grant from the UNH International Research Opportunities Program (IROP), Roberts's work inspired her to present a second URC paper, on the impact of U.S. support on HIV/AIDS awareness, prevention, and treatment in Uganda.

**Where is she now?**

Roberts graduated in May 2008, passed her nursing board exams in July, and has been a licensed registered nurse in New Hampshire and her home state of California. Last summer, she was the residential nurse in a Child and Family Services camp in Concord, and then went backpacking for a few weeks in Eastern Europe with college friends.

She returned to the same outpatient clinic in Uganda last fall, this time as a full-time staff nurse. There, she saw cases of malaria, TB, various skin diseases, and HIV/AIDS; and assisted in surgeries, acute care, HIV testing, and community outreach.

She returned from Uganda last winter to California, and is working as a registered nurse and taking courses in community health. She plans to go back to Uganda in the fall for four months.

Finally, she is applying to graduate school to earn a Ph.D. in nursing research, starting in fall 2010.

"My experiences with IROP and URC have completely molded my professional goals," Roberts says. "I want to be part of the team that makes discoveries, conclusions, suggestions, and proposals for improvement. My experience with URC showed me that small projects can yield substantial results."



**Simon Spadaro-Bliss**

Sociology

*The Coos County Youth Panel Study: Working with the Carsey Institute in the North Country*

Adviser: Thomas Safford

**Carly Veiga**

Sociology

*University Campus Parking Availability and Its Correlation to Public Transportation*

Adviser: Sharyn Potter

---

**MUB, Room 321****Communication—Articulations of Gender in U.S. Popular Culture**

Moderator: Melissa Deem

**Anna Bruning**

Communication

*The Gold Diggers: An Ephemeral Film*

Adviser: Melissa Deem

**Leslie Dow**

Communication

*Political Parody and Tina Fey: An Unforgettable Political Season*

Adviser: Melissa Deem

**Elizabeth Reny**

Communication

*The Rhetoric of Retail: Understanding the Function of Retail Therapy*

Adviser: Danielle Pillet-Shore

**Juliana Tondorf**

Communication

*Beyond the Housewife: The Construction of Feminism in Prime-time Television*

Adviser: Melissa Deem

---

**MUB, Room 304****Sustainability/Sustainability Internship Program (SIP) II**

Moderators: Sara Cleaves, Jason Whitney

**Marcus Doucet**

Management

*Sustainability—Investing for the Future*

Adviser: Tara Pierce

**Laura Hanna***Environmental Conservation Studies Sustainability—Creating a Sustainable Landscape Design and Implementing a Compost System at the USDA Forest Service*

Adviser: Sherri Wormstead

**Corey Johnson**

Business Administration

*Sustainability—Small Town Carbon Calculator*

Adviser: Cameron Wake

**Charlotte Todd**

International Affairs and Spanish

*UNH- S.T.A.R.S. Sustainability Tracking Assessment and Rating System*

Adviser: Sara Cleaves

---

**MUB, Rockingham Lounge****Multidisciplinary Session II**

Moderator: Molly Doyle

**Laura Hedges**

English/Journalism

*Eco Blogavism: How a North American Indigenous Community Is Using Digital Media in the ANWR Debates*

Adviser: Siobhan Senior

**Isabel Klein**

Women's Studies

*Daughters of Earth: Parallels in Gender, Race and Class as Represented during the Great Depression in Women's Literature and Photography of the Farm Security Administration*

Adviser: Lisa MacFarlane

**Andrew McKernan**

Russian and Linguistics

*Christ or Lenin: To Whom Should One Construct a Monument?*

Advisers: Cathy Frierson, Ronald LeBlanc

**Laureen Ouellet**

Spanish

*A Comparison of Spanish Newspapers' Portrayals of the Madrid Train Bombings*

Adviser: Jaume Marti-Olivella

**John Parker**

History

*General John Brown Gordon at Gettysburg*  
Adviser: Gregory McMahon**Samantha Zoller (UNH McNair Scholar)***Anthropology and Women's Studies Health Care Practitioners' Perspectives of their Lower-income Female Clients' Accessibility to STI/STD Health Care*

Adviser: Jean Elson

---

**MUB, Room 203****Multidisciplinary Session III**

Moderator: Brent Bell

**Jocelyn Bissonnette**

Economics

*The Competing Roles of Government between Education and Aid for the Elderly*

Adviser: Karen Conway

**Maria Crossman**

Psychology

*Social Support: A Preventative Tool for a Negative Explanatory Style*

Adviser: Victoria Banyard

**Francesca Devaney**

Family Studies

*Parenting Challenges of Rural Low-Income Mothers: Differences Between Adolescent Mothers and Mothers Over 35*

Adviser: Elizabeth Dolan

**Jared Murray**

Statistics

*Median Polish Algorithm for Automated Anomaly Detection in Sensor Networks*

Adviser: Ernst Linder

**Holly Robertson**

Linguistics

*Phonological Development*

Adviser: John Limber

**Samantha Withers**

Art Studio and Education

*Flying Solo—The Impact Companionless Travel Plays in Photographic Artwork*

Advisers: Julee Holcombe, Jennifer Moses

## Parents Association Undergraduate Research Symposium

### Oral Presentations, Session C

**Friday, April 24  
1:40–2:50 p.m.  
Memorial Union Building**

#### MUB, Room 330

### **International Affairs/Political Science—The Trials and Tribulations of Developing Democracies**

**Moderator:** Trevor Mauck

**Charles Alford**  
Political Science  
*Chile's Ailing Electoral System: Diagnosis  
and Remedy*  
Adviser: Mary Malone

**Colleen Flaherty**  
Political Science and Spanish  
*Poverty and Democracy: Peru Revisited*  
Adviser: Mary Malone

**Teri Hatch**  
Political Science  
*Divorced from the Past? An Analysis of  
Chilean Divorce Law*  
Adviser: Mary Malone

**Rachel Kelly-Martin**  
International Affairs and Recreation  
Management and Policy  
*A Comparative Analysis of the Democratic  
Transitions of Spain and Morocco*  
Adviser: Benjamin Cole

**Elizabeth Marcotte**  
International Affairs and Political Science  
*Non-Violent Civic Movements in  
Democratic Transitions of Benin,  
Czechoslovakia, and Uzbekistan*  
Adviser: Benjamin Cole

#### MUB, Room 332

### **Political Science—The Use of Force**

**Moderator:** Alynna Lyon

**Zachary Delcambre**  
International Affairs and Spanish and  
Psychology  
*Investigating Divergent Outcomes in 19th-  
Century Revolutions in Cuba and Mexico*  
Adviser: Benjamin Cole

**Andrew Fuller**  
Political Science  
*Ethnic Warfare: The Caucasian Powder  
Keg*  
Adviser: Lawrence Reardon

**Jennifer McArdle**  
Political Science and Justice Studies  
*Why Do Militant Movements Renounce  
Their Paramilitary Wings?*  
Adviser: Lionel Ingram

**Andrew Pratt**  
Political Science  
*NSC-68: Justified Reaction to Communist  
Expansion*  
Adviser: Lawrence Reardon

**Madeline Sadowski**  
Political Science  
*A Theoretical Examination of Israel's Gaza  
Offensive, January 2009*  
Adviser: Alynna Lyon

#### MUB, Room 334

### **Communication—Case Studies in Persuasion and the Politics of Local Problems**

**Moderator:** James Farrell

**Jamie Blumenthal**  
**Ashley Bournival**  
**Cody Kelley**  
**Correy McMahon**  
Communication  
*How to Beat the Tax Cappers: Politics and  
Persuasion in Somersworth*  
Adviser: Lawrence Prelli

**Daniel Dostoler**  
**Kelly Hamilton**  
**Michael Howard**  
**Brian McKenney**  
Communication  
*Corporate Image Making through Pseudo-  
Communication: The Case of the New  
Hampshire Beer Distributors and Dover's  
Youth-to-Youth Student Advocacy Group*  
Adviser: Lawrence Prelli

**Michael Juozokas**  
**Ashley Lavoie**  
**Stephen Messa**  
**Caitlin Randall**  
Communication  
*The Politics of Mutual Blame: The Issue of  
Affordable Student Housing in Durham*  
Advisers: Josh Lauer, Lawrence Prelli

#### MUB, Room 336

### **Communication Honors Projects: Performance, Narratives and Constructed Realities**

**Moderator:** Michael Jackson

**Haley Dunn**  
Communication  
*Performing Jewish Identity through  
Narration, as Seen on YouTube and  
Story Corps*  
Adviser: John Lannamann

**Andrew Long**  
Communication  
*Feeble-Minded: The Social Reality of  
the Marked*  
Adviser: Josh Lauer

**Kristin McKenna**  
Communication  
*The Nature and Force of Narrative in  
Forensic Argument: The Story of Clark  
Rockefeller*  
Adviser: Michael Jackson

**Liana Moskowitz**  
Communication  
*The Global Image of America as Dictated  
by Hollywood*  
Adviser: Jennifer Borda

## Estelle Hrabak, Ph.D.

ASSOCIATE PROFESSOR, DEPARTMENT OF MOLECULAR,  
CELLULAR, AND BIOMEDICAL SCIENCES  
CO-CHAIR, GENETICS GRADUATE PROGRAM,  
COLLEGE OF LIFE SCIENCES AND AGRICULTURE

ESTELLE HRABAK has been at the forefront of undergraduate research programs at UNH since 1996, when she first attended the conference for students in the College of Life Sciences and Agriculture (COLSA).

Hrabak got involved in the COLSA conference the following year. And in 2000, she helped build URC participation among students and faculty when it became a university-wide event. Today, the URC features more than 800 students, representing every major on campus.

"It can be one of the most valuable experiences in an undergraduate's time here," says Hrabak, who chaired the COLSA section of the URC in 2002, 2003, and this year. She also serves on the University-wide planning committee this year.

She still finds inspiration in watching students who take on URC projects immerse themselves in research and collaborations they couldn't experience otherwise.

"The ability to work in a lab alongside a faculty mentor, and then to present your work, is very much a confidence-building experience on many levels," Hrabak says.

In her own work, Hrabak directs a lab that uses molecular, genetic, and biochemical approaches to study enzymes involved in signal transduction processes in plants. Sounds complex? It is. So, imagine Hrabak's delight when a student's URC project teaches her something about an aspect of plant biology she hasn't studied before.

"I'm constantly learning new things from the students, and that's great," Hrabak says. "It shows them that they can become expert at something, too. And just the fact that they're willing to take something like this on, and stick with it, is what really makes them stand out."



## MUB, Room 302

### ***Sociology Session II***

**Moderator:** Catherine Morian

**Caitlin Bannon**

**Julie Sauchuk**

Sociology

**Cara Brown**

**Melissa Curtin**

Sociology and Justice Studies

*Exclusive Relationships and the Resulting Impact on Collegiate Achievement*

Adviser: Sharyn Potter

**James Blauvelt**

Sociology

*Deep in Guyland—College-age Men with ADHD Speak on Facebook*

Adviser: Linda Blum

**Abby Farrand**

Sociology

*Good Samaritan Policy*

Adviser: Sharyn Potter

**Hannah Fleahman**

**Amber France**

Sociology and Justice Studies

**Mirielle Rouillard**

Sociology

*Family as Portrayed on Television: A Content Analysis*

Adviser: Sharyn Potter

**Katharine Mooney**

Sociology

*That's What He Said: Expanding Education around Men's Sexual Decision Making*

Adviser: Catherine Moran

**Lyssa Wilson**

Sociology

*Acceptability of Lying*

Adviser: Catherine Moran

---

**MUB, Theatre I*****Dramatic Innovations:  
Students Present Drama Based  
on Pre-1800 Classics***

Moderator: Cord Whitaker

Adam Wells  
Communication

Amanda Beland  
Kara Buckley  
Michael Crossman  
Kathryn Kalil  
Rachael Kreckmann  
Stephen Loftus  
Alia Ponte  
Michael Raven  
Lisa Santilli  
Alexandra Spannaus  
English

Michaela Christensen  
Jay Coorey  
Kerrie Dodson  
Justine Elliott  
Chad Guarino  
Alec Heilmann  
Catherine Hodgdon  
Emily Langsam  
Alexis Macarchuk  
Michael Riley  
English/Journalism

Amanda Bourgoine  
Abigail Rugg  
Sara Tatnall  
English Literature

Daniel Varga  
Alyssa Wojcicki  
English Literature

Andrew Savoy  
Music

Hannah Brown  
Psychology  
Adviser: Cord Whitaker

---

**MUB, Theatre II*****The Roots of Fiction: Flash  
Fiction and the Mysteries of the  
Creative Process***

Moderator: Thomas Payne

Samuel Bennett  
Communication

Christopher Baril  
Jeremy Boniface  
Alex Kotce  
Brian Leahy  
Ryan Neelon  
Joseph O'Connell  
Jacob Quarrell  
Garrett Quinn  
Peter Tonelli  
Mary Zelig  
Allison Zorawowicz  
English

Jesse Cordaro  
English/Journalism

Timothy King  
Julie Raymond  
English Literature

Danielle Foley  
Monica Hackett  
Kristyn Lattanzi  
Kelly Sennott  
Amanda Sousa  
English Teaching

Matthew DiPirro  
Philosophy

Emma Duffy-Comparone  
Political Science  
Adviser: Thomas Payne

---

**MUB, Room 338*****Multidisciplinary Session IV***

Moderator: TBD

Juliet Bluemling  
Hospitality Management  
*The Future of Food*  
Adviser: Joanne Burke

Benjamin Chiang  
Thaddaeus Webster  
Chemical Engineering  
*Design of Algae Photobioreactor and  
Experiments with Salt Water Algae*  
Adviser: Ihab Farag

**Stacy Farina**

Marine and Freshwater Biology  
*Winter Flounder Stock Enhancement:  
Examining the Onset of Wild Weaning in  
Pellet-Reared Fish*  
Advisers: William Howell, Michelle Walsh

**Sarah Gormady** (UNH McNair Scholar)  
International Affairs and Political Science  
*Bolshevik Intention to Soviet Oppression*  
Adviser: Cathy Frierson

**Paul Kyriacopoulos**  
**Jillian Tombarelli**  
Chemical Engineering

**Joshua Smith**  
General Biology  
*Growing Lipid-rich Microalgae in  
Ultraviolet-light-treated Waste Water  
Solutions for Biodiesel Production*  
Adviser: Ihab Farag

**Andrew Middleton**  
Environmental Conservation Studies

**Daniel Perrinez**  
Marine and Freshwater Biology  
*Biochemical Analysis of Selected Algal  
Harvests*  
Adviser: Ihab Farag

---

**MUB, Room 340*****Multidisciplinary Session V***

Moderator: TBD

Danielle Blais  
Sarah Humphreys  
Jeffrey Vanasse  
Kinesiology

**Christina Coleman**  
Kinesiology and English/Journalism  
*Evaluating Burn-Out and Work-Related  
Stress in Intercollegiate Sports Information  
Personnel*  
Adviser: Heather Barber

**Jeffrey Kaste**  
**Mallory Murrell**  
History  
*Modern Student Movements: The Success  
and Failure of Leftist Student Thought and  
Action in the Hungarian Revolution and  
American, French and Italian Student  
Movements (1968-1969)*  
Adviser: Janet Polasky



**John Lacroix**

Kinesiology

*Human Potential—Changing The Way We Think*

Adviser: Brent Bell

**Christina Nagel****Julianne St. Onge**

Nursing

*The Influence of Cultural Context on Management of Pain in End-of-Life Care*

Adviser: Catherine Bernosky de Flores

**Calvin Vaillancourt***(UNH McNair Scholar)*

Psychology and Kinesiology

*College Outdoor Orientation Program**Sustainability*

Adviser: Brent Bell

**Zachary Swick**

Anthropology

*Meditations on Cultural Relativism and**Anthropology*

Adviser: Meghan Howey

---

**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. In Act III, students perform and discuss a collaborative piece made as a result of interdisciplinary creativity within the artistic disciplines—Art, Music, and Theatre/Dance.

**Michael D'Errico**

Music Education

**Kelsey Keenan**

Fine Arts

*Meaningful Relationships: Chance and Structural Identity in Isomorphic Art*

Adviser: Rob Haskins

---

**College of Health and  
Human Services Grimes  
Award Competition**

---

**Friday, April 24****1–4 p.m.****Pettee Hall G-10**

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 HHS faculty after rigorous scientific review of written proposals.

Information on participants will be available at this event.

---

**Honors English  
Undergraduate Research  
Conference**

---

**Friday, April 24****1–5 p.m.****Hamilton Smith, Rooms 128/129**

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.

**Joshua Clark**

English

*Anti-Heroes in Cinema*

Adviser: Delia Konzett

**Gillian Graham**

English

*Gestures of Care: Images of Nursing in Michael Ondaatje's Novels*

Adviser: Sandhya Shetty

**Cade Harstedt**

English

*Realism in Cinema from Europe to Hollywood*

Adviser: Delia Konzett

**Jennifer Hill**

Humanities and Women's Studies

*Hale to Wilson: Critiques of the 19th Century Abolitionist Novel*

Adviser: David Watters

**Janna Jobel**

English Teaching

*An Analysis of the Critical Reception of The Awakening and The Age of Innocence*

Adviser: Sarah Sherman

**Kirsten Lindquist**

English and Environmental Conservation Studies

*Parallel Journeys: Movement of the Body and Mind in Travel Writing*

Adviser: Dawn Haines

**Alissa Marchant**

English

*The Impact of 9/11 as Reflected in the Memoir Writing of Muslim American Women*

Adviser: Monica Chiu

**Meaghan Odell**

English Teaching

*Relocation and Restructure: The Modern Relevance of Edith Wharton's Summer*

Adviser: Sarah Sherman

**Rebecca Romanoski**

English Teaching

*Societal Separation from Natural Means of Production through the Literature of F. Scott Fitzgerald*

Adviser: Sarah Sherman

**Joel Waechter**

English

*Coffee Stained Pages*

Adviser: Clark Knowles

**Belinda Woolfson**

English and Art Studio

*Boobs: The Rhetoric of Cosmetic Surgery in Modern Society*

Adviser: Sarah Sherman

## Psychology Department George M. Haslerud Undergraduate Research Conference

**Friday, April 24  
1–4 p.m.**

**Conant Hall, Room 101**

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

### **Cassandra Brennan**

Psychology  
*Temporal Dynamics of the Venetian Blind Effect*  
Adviser: William Stine

### **Kristina Breton**

Psychology  
*Dating Patterns at UNH: Hooking Up versus Dating or Committed Relationships*  
Adviser: Rebecca Warner

### **Maria Crossman**

Psychology  
*Social Support: A Preventative Tool for a Negative Explanatory Style*  
Adviser: Victoria Banyard

### **Dallas Deogburn**

Psychology  
*Reversible Inactivation of the Nucleus Reuniens/Rhomboid in a Delayed Non-Match-to-Sample Memory Task*  
Adviser: Robert Mair

### **Steven Falk**

Psychology  
*The Effects of Parenting Style on Adolescent Substance Use*  
Adviser: Ellen Cohn

### **Jaime Gallagher**

Psychology  
*Attributions of Responsibility for Unplanned Pregnancy: The Effects of Consent and Reputation*  
Adviser: Ellen Cohn

### **Maia Hazelwood**

Psychology  
*Personal Intelligence of Leaders: Ratings of Life Expressions*  
Adviser: John Mayer

### **Corey Hill**

Psychology  
*Sex Differences in Depression: Detecting Male Depressive Symptomatology*  
Adviser: Victor Benassi

### **Heather Macomber**

Psychology  
*Does Desipramine Reverse Intermittent Swim Stress-induced Behavioral Depression?*  
Adviser: Robert Drugan

### **Maria Pierobello**

Psychology  
*Moral Behavior, Contemporary Society, and Influences on Bystander Intervention in a Collegiate Setting*  
Adviser: Victoria Banyard

### **Marissa Romanovitch**

Psychology  
*Cultural Variations in the Helping Behaviors of African American and European American Middle-Class Siblings*  
Adviser: Pablo Chavajay

### **Amanda Seavey**

Psychology  
*Parents, Roommates, and TAs: Social Support and the Adjustment to College for First Year Students*  
Adviser: Victoria Banyard

### **Laura Shanteler**

General Biology and Psychology  
*Do Documentation and Worksheets Enhance Children's Learning?*  
Adviser: Michelle Leichtman

### **Erica Sheldon**

Psychology  
*Empathy in Preschool Age Children With and Without Autism and Asperger's Syndrome*  
Adviser: Pablo Chavajay

### **Margaret Wallace**

Psychology  
*Performance of Children on the Traveling Salesperson Problem in a Real-world Environment*  
Adviser: Brett Gibson

### **Richard Wilson**

Psychology and Justice Studies  
*Personal Intelligence of Leaders: Ratings of Life Expressions*  
Adviser: John Mayer

### **James Wrocklage**

Psychology  
*Reversible Inactivation of Central Thalamic Nuclei Reuniens/Rhomboid of the Rat in the Radial Arm Maze Task*  
Adviser: Robert Mair

## Philosophy Undergraduate Research Conference

**Friday, April 24  
4–8:30 p.m.  
Murkland 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.

### **Peter Anania Jr.**

Philosophy  
*Liberalism vs. Libertarianism*  
Adviser: Paul McNamara

**Nathaniel Coghlan**

Philosophy and Women's Studies  
*The Ethics of Food*  
Adviser: David Hiley

**Laura LaPlante**

Economics and Philosophy  
*What Cannot be Said—Short Comments on Wittgenstein*  
Adviser: Timm Triplett

**Jonathan Meadows**

Philosophy and Humanities  
*Searching for Words: Inner Speech Disproven?*  
Adviser: Willem De Vries

**Justin Rondeau**

Philosophy  
*An Exploration of the Contemporary Debate of Moral Responsibility's Compatibility with Free Will and Determinism*  
Adviser: Paul McNamara

**Patrick Ryan**

Philosophy  
*Renewing Social Critique Through a Pragmatic Reading of Foucault*  
Adviser: David Hiley

**Kelly Walsh**

Philosophy and English  
*Moral Absolutism*  
Adviser: Ruth Sample

## Student Composers' Concert

**Friday, April 24  
8 p.m.**

**Paul Creative Arts Center,  
Bratton Recital Hall**

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.

**George Adams IV**

Music Education  
*Music for Solo Piano*  
Advisers: Rob Haskins, Christopher Kies

**Diane Anderson**

Music  
*Prophesy for Flute and Piano Performed by Sara Ann Shea and Diane Anderson*  
Adviser: Lori Dobbins

**Eric Brown**

Music Theory  
*Piano Cycle*  
Adviser: Christopher Kies

**Andrew Cote**

Music Education  
*Stories from a Dream—For Marimba*  
Adviser: Christopher Kies

**Michael D'Errico**

Music Education  
**Kelsey Keenan**  
Fine Arts  
*Meaningful Relationships: Chance and Structural Identity in Isomorphic Art*  
Adviser: Rob Haskins

**Michael D'Errico**

Music Education  
*Dirty Dancing*  
Adviser: Christopher Kies

**Brett Gallo**

Music Education  
*Structures for Two Marimbas*  
Adviser: Robert Haskins

**Jeffrey Heim**

Music Theory  
*Reflection*  
Adviser: Christopher Kies

**Lucas Miller**

Music Education  
*Winter Moon: String Quartet in 2 Movements*  
Adviser: Christopher Kies

**Zachary Onett**

Music Theory  
*Microtonal Experimentation*  
Adviser: Christopher Kies

**David Orr**

Music Theory and Performance  
*Piano Sonata in G minor i. Allegro con fuoco*  
Adviser: Christopher Kies

**Kelsey Parrillo**

Preteaching  
*For All of the Moments—Dedicated to Robert and Kim Parrillo*  
Adviser: Christopher Kies

**Benjamin Tibbetts**

Music Theory  
*Composition 14 for Solo Clarinet and Guitar*  
Adviser: Christopher Kies

## 18th Annual COLSA Undergraduate Research Conference

Student presentations at the 18th Annual COLSA URC are based on research conducted in any of the college's departments and run the full gamut of research found in the college, from field studies to developmental to molecular biology and genomics studies. A number of studies are collaborative efforts between work here at UNH and work carried out in foreign countries.

## Oral Presentations

**Saturday, April 25  
7:45 a.m.–2 p.m.  
New England Center**

**Joshua Collins**

Microbiology  
*Development of Non-Isotopic Gene Probes to Identify the Presence of Enterohemorrhagic Escherichia coli*  
Adviser: Stephen Torosian

**Taylor Deasy**

Nutritional Sciences  
**Anne Ronan** (graduate student)  
*Oral Contraceptive Usage; Greater Insulin Resistance; and Poorer Quality of Life in College Age Women*  
Adviser: Anthony Tagliaferro

**Benjamin Field**

Biochemistry

*Insulin Has Negative Regulatory Effects on Notch Ligand Expression*

Adviser: Deena Small

**Polina Prusevich**

Biochemistry

*Irvinder Kaur (postdoctorate scientist)**Substituent Effects on Pentacene Stability*

Adviser: Glen Miller

**Lauren Longley**

Animal Sciences: Pre-veterinary Medicine

*Impacts of Tourism on People and Wildlife in Northwestern Namibia*

Adviser: Andrew Conroy

**Linden Rayton**

General Biology

*Horseshoe Crab Biological Clocks:**From the Brain to the Bay*

Adviser: Winsor Watson

**Bethany Reutemann**

Biochemistry

*Organelle Movement Patterns in *Caulerpa mexicana**

Adviser: Wayne Fagerberg

**Michael Rezaee**

General Biology

*Environmental Permitting Decisions**Perceived to Impact Human Health:**Examining the Communication between**Governmental State Agencies and the**Public in New Hampshire*

Adviser: Rosemary Caron

---

## 18th Annual COLSA Undergraduate Research Conference

---

### Poster Presentations

**Saturday, April 25****7:45 a.m.–2 p.m.****New England Center****Adam Mirando**

Biochemistry

*Erin Allgood (graduate student)**Dean Elder (graduate student)***Anne Ronan (graduate student)***Chemical Flame Retardants and Their**Possible Relationship to Insulin Secretion and Glucose Disposal*

Adviser: Anthony Tagliaferro

**Jacqueline Amante****Isabella Oleksy**

Environmental Science: Ecosystems

*Woody Biomass as a Potential Energy**Solution for the Burley-DeMerritt Farm*

Adviser: John Aber

**Kiley Anderson**

General Biology

**Megan Thompson (graduate student)***Cell File Orientation in Arabidopsis thaliana**Protein Phosphatase 2A Mutants*

Adviser: Estelle Hrabak

**William Bailey****Rory Calnan**

Environmental and Resource Economics

*Economics and the Titan Program at the**Oyster River High School*

Adviser: John Halstead

**Kevin Baldwin**

Undeclared

**Brian Biernat**

Community and Environmental Planning

*Estimating the Effects of Daily Weather**Variations on the Number of Migrating**Broad-winged Hawks during the Fall At**Pack Monadnock, New Hampshire*

Adviser: Stephen Hale

**Bryan Ballard**

Molecular, Cellular and Developmental Biology

*Generation and Identification of Transposon**Mutants with Alterations in Motility and Surface Properties for**Phototaxis in *Paramecium* and Emerging Human**Pathogen.*

Adviser: Louis Tisa

**Eileen Balz**

Animal Sciences: Bioscience and

Technology

*Changes in Brain Concentration of**Gonadotropin-Releasing Hormone-I, -II, and -III and Plasma Estradiol During the**Final Reproductive Period in Adult Male**and Female Sea Lamprey, *Petromyzon***marinus*

Adviser: Stacia Sower

**Makenzie Benander****Paul Pellissier**

Environmental Science: Ecosystems

*Application of Geothermal Energy at UNH**Organic Dairy*

Adviser: John Aber

**Bradley Best**

Molecular, Cellular and Developmental Biology

*Impact of PBDE Exposure on Insulin**Signaling in Adipocytes*

Adviser: Deena Small

**Alyssa Birt**

Animal Sciences: Bioscience and

Technology

**Rajtilak Majumdar (graduate student)***Regulation of Gene Expression of the**Polyamine Pathway Genes: What Does a**Promoter Look Like?*

Adviser: Subhash Minocha

**Juliet Bluemling**

Hospitality Management/Ecogastronomy

*The Origins of Food*

Adviser: Joanne Burke

**Kari Britt**

Biochemistry

*The Role of Jagged1/Notch and FGF2 Sig-**naling in the Production of the Angiokine**VEGFA in Murine Adipocytes*

Adviser: Deena Small

**Grace Smarsh**

Zoology

**Heidi Broadley (recent graduate)***Adaptive Intelligence of the Domestic**Cat (*Felis catus*)*

Adviser: Michelle Scott

**Amy Cornell**

Biochemistry

**Karyn Cahill (graduate student)****Suzanne Matte (graduate student)***Understanding the Molecular Basis of**Cone Photoreceptor Signaling and the**Central Importance of Cone Phosphodi-**esterase-6 (PDE6)*

Adviser: Rick Cote

**Brendan Callahan****Nicholas Emmons****Shane Prisby**

Environmental and Resource Economics

**Jessica DeLima**

Environmental Conservation Studies

*The Social and Ecological Impacts of**Renovating the Reservoir Brook Dam*

Adviser: John Halstead

**David Cocozziello**

Biochemistry

*Adipocyte and Osteoblast Cell Develop-**ment in the Presence of Polybrominated**Diphenyl Ethers (PBDEs)- a Chemical**Flame Retardant*

Adviser: Deena Small

**Katie Conrad**

International Affairs and General Biology

*Toxic Cyanobacteria: Detecting**Microcystins in Feathers*

Adviser: James Haney

**Naomi Crystal**

Biochemistry

*Comparison of Two Accepted Methods**of Glycemic Index Testing*

Adviser: Joanne Curran-Celentano

**Elizabeth DiBella**

Molecular, Cellular and Developmental

Biology

*Identification of Novel Hydroxyurea (HU)**Sensitive Mutants in Arabidopsis thaliana*

Adviser: Kevin Culligan

**Uyen-Mai Doan (UNH McNair Scholar)**

Biochemistry

*The Charge on Beta-Lactoglobulin A and B**under Self-associating Conditions*

Adviser: Thomas Laue

**Mary Katherine Dokus**

General Biology

*Smooth Muscle Cell Migration in Response**to Hyperglycemia and Dyslipidemia*

Adviser: Thomas Foxall

**Casey Doucette**

Molecular, Cellular and Developmental

Biology

*Effects of Polybrominated Diphenyl Ethers**on Bone Density*

Adviser: Deena Small

**Benjamin Dudek**

Environmental Conservation Studies

*13C and 15N Isotope Analysis of National**and Local Meat and Food Samples to De-**termine the Percentage of Corn in the New**Hampshire Seacoast Area Diet*

Adviser: Erik Hobbie

**Dean Elder (graduate student)****Robert Gibson (graduate student)****Sarah Kinsman**

Animal Sciences: Pre-veterinary Medicine

**Amanda Ramos**

Microbiology

**Amanda Rivers (graduate student)***Effect of Postpartum Uterine Pathogens on**Ovarian Activity in the Dairy Cow*

Adviser: David Townson

**Stacy Farina**

Marine and Freshwater Biology

*Winter Flounder Stock Enhancement:**Examining the Onset of Wild Weaning in**Pellet-Reared Fish*

Advisers: William Howell, Michelle Walsh

**Jonathan Gately**

Microbiology

*Identification of Photorhabdus temperata**Mutants Defective in Symbiosis*

Adviser: Louis Tisa

**Robert Gibson (graduate student)****Amanda Hurley**

Microbiology

*Specific Pathogen Free Management and**Practices: Application and Recommenda-**tions for a NH SPF Sheep Farm*

Adviser: Aaron Margolin

**Mariah Gavin**

Microbiology

*Differential Expression of a Putative**Virulence Factor of Vibrio**parahaemolyticus*

Adviser: Cheryl Whistler

**Lauren Hufnagle**

General Biology

*Ad Libitum Feeding of Rats: Effect on**Adipocyte Insulin Stimulated Glucose**Oxidation*

Adviser: Gale Carey

**Sauwai Hung**

Zoology

*Somatic Growth of Juvenile Green Sea**Urchins (Strongylocentrotus droebachien-**sis) Fed Artificial Feeds of Varying**Nutritional Composition*

Adviser: Larry Harris

**Whitney Hunter**

Biochemistry

**Megan Thompson (graduate student)***Gravity Responses of Arabidopsis thaliana**With a Mutated Protein Phosphatase 2A**Gene*

Adviser: Estelle Hrabak

**Katherine Hutchins****Amanda Ramos**

Microbiology

**Lia Jeffrey (graduate student)***Shiga Toxin Induced Apoptosis in Blood**Neutrophils*

Adviser: Frank Rodgers

**Ashley James****Amanda Landry****Kelsey Silfvenius**

Environmental and Resource Economics

*Examining the Role and Impact of Local**Versus Non-local Businesses on the Upper**Valley Economy*

Adviser: John Halstead

**Maura Keeley**

Animal Sciences: Bioscience and

Technology

*Atherosclerotic Gene Expression**Modulated by Thiazoladinediones*

Advisers: Janet Anderson, Samuel Smith,

Robert Taylor

**Amy Keith**

Forestry: Forest Science

*Do Mycorrhizal Networks Support**Seedlings in a Forest?*

Adviser: Erik Hobbie

**Alice Kirega**

Microbiology

*Determining the Stable Microbial Flora in**Lettuce*

Adviser: Stephen Torosian

**Elise Koob**

Marine and Freshwater Biology  
*Condition Changes to the Forage Base in the Gulf of Maine and Its Influence on Top Predators.*

Adviser: Maryellen Lutcavage

**Sarah Kruzel**

General Biology  
*Effects of PBDE's on Adipocyte Lipolysis in a Rat Model After Gestational and Lactational Exposure.*

Adviser: Gale Carey

**Cammie Kwong**

Biochemistry  
*Variations in Morphological Features of Copepods Between and Within Species and Lakes in Relation to DNA Barcodes*

Adviser: James Haney

**Ryan Lariviere**

Molecular, Cellular and Developmental Biology  
*Role of a Prenyl Binding Protein (PrBP/δ) in Photoreceptor Visual Signaling*

Advisers: Rick Cote, Suzanne Matte

**Jack Lepine**

Plant Biology  
*Characterization of Transcript Production in Arabidopsis Palmitoyltransferase Mutants*

Adviser: Estelle Hrabak

**Alexandra Manakos**

Microbiology  
*Detection of Male-specific Coliphage as an Indicator of Fecal Contamination on Lettuce*

Advisers: Aaron Margolin, Stephen Torosian

**Holly Midkiff**

Animal Sciences: Pre-veterinary Medicine  
*Function of the Aggregate Duct Nodules of Black Widows*

Adviser: Edward Tillinghast

**Rachel Mixon**

General Biology and Classics  
*A Comparison of Breeding System and Fruit Production in Invasive and Native Shrubs*

Adviser: Thomas Lee

## Amanda Putnam, URC 2006

BIOCHEMISTRY AND MOLECULAR BIOLOGY,  
 COLLEGE OF LIFE SCIENCES AND AGRICULTURE

Preparing for the 2006 URC, Amanda Putnam learned there's a big difference between taking a lab course and conducting an ambitious independent project in a lab—in her case, about 40 hours a week worth of difference.

Putnam's research found her spending long hours between the UNH dairy facilities and the lab, collecting and studying cells that play a critical role in bovine fertility.

Putnam says the URC gave her a deeper understanding of the scientific process, and helped her organize, and present, her findings for audiences ranging from experienced research professionals to the general public.

### Where is she now?

Putnam's URC work helped her secure a full-time job in biotechnology two months before she graduated.

"They told me upon hiring that my lab experience was impressive," Putnam says. "Pulling together the final URC project, writing a summary, and creating a poster for the URC conference involved meeting a tight deadline, troubleshooting, and making a presentation, all of which would become part of my daily work after graduation."

Putnam is now a senior research and development associate at First Light Biosciences in Bedford, Mass., a small, early-stage biotechnology company developing ultra-sensitive detection technologies and medical diagnostics for the healthcare and bio-defense industries. She's also taken an interest in business, and is helping with the company's business development projects.

"The URC project was well worth going the extra mile, as was any extra effort I put into my lab experience while at UNH," Putnam says. "It was a key contributor to my securing a great job out of college."



**Julie Morrison**

Biochemistry

*A Novel Entomopathogenic Serratia*

Adviser: Vaughn Cooper

**Elizabeth Morrissey**

Zoology

*Bioacoustics: Interactions Between the American Lobster and Atlantic Cod*

Adviser: Winsor Watson

**Danielle Morse**

Microbiology

*Side Effects of Antibiotic Resistance in Evolved Burkholderia cenocepacia HI2424 Populations*

Adviser: Vaughn Cooper

**Michael O'Hara Jr****Benjamin Seiler**

Microbiology

*Assessing Methods to Inactivate Recombinant DNA*

Adviser: Stephen Torosian

**Danielle Oliveri**

General Biology

*Daily Patterns of Salivary  $\alpha$ -Amylase and Salivary Cortisol in Children with Autism Spectrum Disorder (ASD)*

Advisers: David Townson, Barbara White

**Danielle Oliveri**

General Biology

*Anatomical Study of Oak Apple Galls*

Adviser: Wayne Fagerberg

**Gwangli Park**

Biochemistry

*Morin and Silymarin Modulate NF- $\kappa$ B Activity via Suppressing ROS and ONOO*

Adviser: Thomas Laue

**Gabriel Perkins**

Environmental Science: Ecosystems and English

*Assessing Avenues for Sustainability: Evaluating Nitrogen Flows at UNH's Organic Research Dairy Farm*

Adviser: John Aber

**Thomas Perry**

Microbiology

*Quinolone-Resistance in Ancestral and Evolved E. Coli Lineages*

Adviser: Vaughn Cooper

**Nicolette Pocius**

Marine and Freshwater Biology

*Temperature Dependent Development of Atlantic Cod (Gadus morhua)*

Adviser: David Berlinsky

**Monica Quimby**

Molecular, Cellular and Developmental Biology

*Are Mitochondrial Genes Maternally Inherited in Strawberry Fragaria (Rosaceae)?*

Adviser: Thomas Davis

**Michael Rezaee**

General Biology

*Reads Evaluates Applies Disaster Special Needs Shelters (the READS Project)*

Adviser: Lisa Brown

**Rebecca Riding**

Ecology, Evolution and Behavior

*Megan Thompson (graduate student) Detection of Amyloplasts in Roots of Protein Phosphatase Mutant Plants*

Adviser: Estelle Hrabak

**Katie Robertson**

Zoology

*Diet Composition of Wild Juvenile Flounder Collected Near the Piscataqua River Mouth, Great Bay Estuary, New Hampshire*

Adviser: William Howell

**Valerie Schoepfer**

Environmental Science: Soil and Watershed Management

*Leaf Leaching as a Source of Carbon and Nutrients in Tropical Streams*

Adviser: William McDowell

**Melanie Schroer***Environmental Conservation Studies Genetic Variation in a Wild Strawberry (Fragaria virginiana) Along an Environmental Gradient in Relation to Glacial Recession and Future Climate Change.*

Adviser: Thomas Davis

**Erica Sennott**

Microbiology

*Kate Stefani (graduate student) The Effects of Antibiotics on Toxin Production in Escherichia coli O157:H7*

Adviser: Frank Rodgers

**Nicholas Sherman***Animal Sciences: Pre-veterinary Medicine Expression of Cellular FLICE Inhibitory Protein (cFLIP) in the Bovine Corpus Luteum.*

Adviser: David Townson

**Wesley Smith**

Wildlife Ecology

*Ecology of Nuisance, Suburban Black Bears in Southern New Hampshire*

Adviser: Peter Pekins

**Hilary Snyder**

Molecular, Cellular and Developmental Biology

*Exploring Macular Pigment: Lutein Transport and Deposition During 120-days of Lutein Supplementation*

Adviser: Joanne Curran-Celentano

**Ryan Soderquist**

Biochemistry

*The Role of RPA and ATR in the Maintenance of the DNA Damage Response in Arabidopsis Thaliana*

Adviser: Kevin Culligan

**Krista Stegemann**

Marine and Freshwater Biology

*Growth Trends of the Green Sea Urchin, Strongylocentrotus droebachiensis*

Adviser: Larry Harris

**Amy Taetzsch**

Nutritional Sciences

*Does Developmental Exposure to Flame Retardants Promote Obesity and Diabetes in Rats?*

Adviser: Gale Carey

**Rechab Towne**

Biochemistry

*Megan Thompson (graduate student) Comparison of Root Growth of Arabidopsis thaliana Wildtype and Mutant Plants*

Adviser: Estelle Hrabak

## Chemistry Department Poster Exhibition

### Poster Presentations

**Friday, May 8**  
**3–4:30 p.m.**  
**Parsons Hall, Iddles Wing**

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.

**Nicholas Bencivenga**  
Chemistry  
*Preparation of Novel Bifunctional Polymerizable Copper(II) Ligands*  
Advisers: Roy Planalp, Rudolph Seitz

**Justin Harney**  
Chemistry  
*Studies in Ternary Complexes of Zn(II) Cross-Bridged Cyclen*  
Adviser: Edward Wong

**Andrew Hart**  
Chemistry  
*Development of a System for Measurements of OVOCs*  
Advisers: Howard Mayne, Barkley Sive

**Jennifer Pollock**  
Chemistry  
*Optical Properties of Dicarboxylic Acids—Common Components of Atmospheric Aerosols*  
Adviser: Margaret Greenslade

**Morgan Stanton**  
Chemistry  
*Atmospheric Chemistry at Thompson Farm*  
Adviser: Barkley Sive

## Whittemore School of Business and Economics Paul J. Holloway Prize

### University-wide Innovation-to-Market Competition Championship Round

**Wednesday, May 13**  
**8 a.m.–2 p.m.**  
**Holloway Commons**

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.

Information on participants will be available at this event.



---

## URC 2008 Awards of Excellence

The Undergraduate Research Conference (URC) distributed awards of excellence to sixty-seven students for outstanding presentations at URC '08. Seven students received honorable mentions.

Cash and tuition waiver awards totaled \$15,500. Sponsors included the following University offices and departments: The Office of the Vice President for Student and Academic Services; the UNH Parents Association; the Institute for the Study of Earth, Oceans, and Space; the New Hampshire Space Grant Consortium; the College of Engineering and Physical Sciences, the Environmental Research Group; the College of Life Sciences and Agriculture; the College of Engineering and Physical Sciences Alumni Association; the Center for International Education; UNH Manchester; and Phi Beta Kappa.

Visit the URC Web site to view the award-winning presentations. <http://www.unh.edu/urc/index.cfm>

---

### The following presenters received awards of excellence:

**Sara Arnoudse '08**  
*Spanish Health Care*

**Emma Baillargeon '09**  
*Little People Big World: Reality Television, Hyperembodiment, and the Rhetorics of Normalization*

**Anna Brown '10**  
*The Shanghai Six: Military Threat or Economic Alliance?*

**Jeffrey Brunelle '10**  
*The Strength of the Uni-Multipolar System: The Concert of Europe*

**Jesse Burdwood '11**  
*A Day in the Life of Someone with Developmental Disabilities*

**Ryan Carney '08**  
**Christopher Famolare '08**  
**James Gealy, Graduate Student**  
**Christopher Hill '08**  
**Zachary Kelton '08**  
**Jeffrey Kite '08**  
**Patrick Lee, Graduate Student**  
**David Levine, Graduate Student**  
**Melissa Minuti '08**  
**Robert Terry '08**  
*UNH WildCatSat Senior Design Project*

**Benjamin Chiang '10**  
**Thadeaus Webster '10**  
*Sealing Green: Algae Grown in Salt Water as a Potential Source of Biodiesel*

**George Clark '08**  
*Star Sensor Flight Calibration for the Interstellar Boundary Explorer*

**Joshua Clark '09**  
*Ali: Man Behind the Myth*

**Allison Collopy '10**  
*The Effects of Organic vs. Conventional Farming on Nitrogen Levels in Soil Water Leachate*

**Shari Davis '08**  
*Malaria Prevention Efforts*

**Emily Dewey '08**  
*Panel "From Classroom to Community: Women's Studies Theory in Practice"*

**Walter Durack '08**  
**Heather Newton '08**  
**Craig Shillaber '08**  
**Matthew Valle '08**  
*One Small Bridge at a Time*

**Christopher Feeney '08**  
**Michael Soha '08**  
**Ross Tinkham '08**  
*The Rhetoric of Dover's Tax Cap Campaign*

**Jonathan Felch '08**  
*Water Resources Assessment of Appledore Island, ME*

**Sergei Fischev '08**  
**Guy Poisson '08**  
*Narrow Band Light for Alzheimer's*

**Marisha Florissant '08**  
*Critical Care Nurses Perspectives toward End-of-Life Care in the Intensive Care Unit*

**Janine Frascchetti '08**  
*Geochemical Constraints on the Origin of a Shallow Ash Occurrence in the Mahanadi Basin, offshore India*

**Cara Gadapee '08**  
*The Feminist Health Center of Portsmouth*

**Kate Gannon '08**  
*ASD Treatment Decision-Making: An Exploratory Study on the Decision-Making Process Experienced by Parents and Guardians of Children with ASD*

**Emily Gifford '08**  
*Patagonia: Trouble in Paradise*

**Lauren Hardies '08**  
*Outcome Measures for the New Hampshire Healthy Hearing Program*

**James Hart '08**  
*China and the World Bank: A Challenge of Differing Agendas*

**Adam Hernandez '08**  
*A Gender Comparison of Lower Extremity Landing Biomechanics Utilizing Different Tasks: Implications in ACL Injury Research*

**Kirsten Hildonen '08**  
*The Chinese Must Go: Debates Surrounding the Chinese Exclusion Act of 1882*

**Muhammad Islam '08**  
*Active Noise Cancellation Headset*

**Elizabeth Joseph '08**  
*In the Arms of the Community*

**Maxim King '08**  
*Reemergence of the Russian Military*

---

**Tavia Lee-Goldstein '08**

*"But Inside Doesn't Matter": Making Meaning in Murder in "American Psycho"*

**Rebecca Lehr '09**

*Developing a Climate Action Plan for UNH*

**Jacqueline Lewis '10**

*Business as Usual: China's Infatuation with the Oil of the Genocidal Regime of Sudan*

**Skye MacKay '08**

*College Students' Knowledge, Attitudes, and Testing Behaviors in Regard to HIV/AIDS*

**Jenna Madore '09**

*The Association between Chronic Disease Risk Factors and Prescription Medication Use of Young Adults*

**Margret Mansfield '08**

*Tracking the Timeline of the Progression of Verticillium Wilt Infection in Susceptible and Resistant Plants of Mentha longifolia*

**Meghan Marcus '10**

*Suggestion of Roles in Gay Advertising: A Modern Application of Erving Goffman*

**Trevor Mauck '08**

*The Dynamic between the Moroccan Legislature and Monarchy*

**Kyle McAdam '11**

*New Hampshire Sierra Club*

**Ryann Mead '08**

*Moroccan Immigration into Spain*

**Lisa Merrill '08**

*The Dred Scott Decision and Black Citizenship\**

**Jamie Morrill '08**

*A Portrait of a Broken System: Provider Perspective on Healthcare Delivery in Hospitals. Recommendations for the Facilitation of Elder Care.*

**Brenna O'Connor '08**

*Security Interests Trump Humanitarian Concerns: China's Economic Relations with Sudan*

**Caitlin O'Connor '08**

*Reviving Russia: Can a Legacy of Limited Economic Stability Be Broken?*

**Michelle Pizzillo '10**

*Alternative Break Challenge*

**Catherine Reno '08**

*Why Jihad: A Study of What Drives Individuals to Wage Jihad*

**Jarred Rego '09**

*The Candidacy of Rudy Giuliani*

**Samantha Riemer '08**

*Importance of Remittances to Senegalese*

**Emily Roberts '08**

*Nurses Performing Triage in Uganda: Decision-Making in Low Resource Settings*

**Alan Schulte '08**

*Running with Keith Shields: A Personal Profile*

**Lauren Schweizer '08**

*Case Study on the Lawyers' Environmental Action Team (LEAT) and Their Position on Two Cases of Indigenous Land Rights: The Ngorongoro Conservation Area and Usangu Basin, Tanzania*

**Emily Silfies '09**

*A Material Portrait: The Clothing of Temperance Pickering Knight*

**Laura Smetana '08**

*Real Life on the Stage: The Story of a Macedonian Immigrant*

**Heidi Soucy '08**

*The Enactment of Ritual Drama: News Coverage of the Columbine Shootings*

---

**The following presenters received honorable mentions:**

**Rick Boulanger '09**

**Edward Callahan '08**

**Steven Zarse '09**

*Volunteer Management System for Salvation Army in Manchester*

**Darlene Delano '08**

*African-American Portrayals in Musical Theatre 1920's-1930's*

**Tami Geaghan '09**

*"Out of the Field" A One Act Play*

**Hilel Gubenko '08**

*Effects of Meaningful Versus Ambiguous Targets in Motion-Induced Blindness*

**Jacob Wen '11**

*The Day*

---

# Committed to Undergraduate Research

**ENGAGEMENT IN RESEARCH:** For those students who get involved, it's the defining factor of a UNH undergraduate education. And it is exactly what you will see at this week's URC. The conference is an annual celebration of the remarkable research and learning between motivated undergraduates and active faculty researchers here at UNH.

This student-faculty collaboration is the backbone of the UNH research experience. It begins in the classroom with research-intensive coursework, but exists everywhere across campus and beyond. Look around and you'll find undergraduates in faculty labs, teaming up with their teachers to find solutions that benefit society. You'll see them in UNH's many living labs such as the greenhouses, the farms, and the New England Center; or at one of more than 40 centers and institutes dedicated to studying a wide range of issues, where undergraduates conduct research alongside experts in their fields. In UNH theatres, studios, and recital halls, our creative arts students explore the intellectual processes behind their works.

Nourishing these undergraduate-faculty relationships is UNH's **Hamel Center for Undergraduate Research**, which gives students the opportunity to make research and creative explorations a more formal part of their academic experience. Each semester, dozens of students from varied academic disciplines apply for grants and fellowships from the center's Undergraduate and International Research Opportunities Programs (UROP and IROP). The funds enable them to embark on collaborative research projects with faculty mentors, and to learn the key elements of any research project—from proposal and budget to research and presentation of results to peers. Many of the students presenting here this week conducted their research using UROP and IROP grants.

The **McNair Graduate Opportunity Program** also fosters student-faculty collaboration. As a graduate school preparation program, McNair includes an intensive research component. Students may design a research project, receive funds to implement the project, take a research methods course, participate in writing skills workshops, and have the opportunity to present their findings at the UNH McNair Program Summer Research Symposium, among other activities.

In addition, the **Research and Discover Program** offers a series of two summer internships to eligible students—the first summer at UNH, the second at NASA Goddard Space Flight Center. Research and Discover interns work alongside environmental scientists on the groundbreaking discoveries underway at the UNH Institute for the Study of Earth, Oceans, and Space, such as investigating the effects of human activities on the Earth, including the causes and effects of global climate change and deforestation; studying dynamic processes in the Earth, oceans, and atmosphere using remote sensing, GIS, computer models, and other state-of-the-art tools; and exploring chemical, physical, and biological oceanography.

This direct participation in meaningful research is one of the unique characteristics of a UNH education, where students, together with faculty, push back the frontiers of knowledge.

## **How to get involved in undergraduate research at UNH:**

- talk to a favorite professor, faculty adviser, or teaching assistant;
- visit the UNH Hamel Center for Undergraduate Research, which sponsors student research projects at home and abroad;
- pay attention to department bulletin boards and Web sites, which often post job openings in UNH labs or departments where students can work on actual, ongoing research projects;
- take a research-intensive course, such as INCO 590 "Student Research Experience."

## ***Inquiry* journal of undergraduate research**

THE URC is but one means for students to share their findings. Some of the works you see here today might become the basis of a University honors or master's thesis; others may find their way to national conferences and professional meetings where UNH undergraduates present their work to future colleagues and peers; still others may appear in *Inquiry*, UNH's online journal of undergraduate research. Published annually, *Inquiry* features the research articles, briefs, and commentaries of undergraduates.

Read more at  
[www.unh.edu/inquiryjournal](http://www.unh.edu/inquiryjournal)

## **Links to research opportunities**

Centers and Institutes at UNH  
[www.unh.edu/research/centers](http://www.unh.edu/research/centers)

Center for International Education  
[www.unh.edu/cie](http://www.unh.edu/cie)

Hamel Center for Undergraduate Research  
[www.unh.edu/undergrad-research](http://www.unh.edu/undergrad-research)

McNair Graduate Opportunity Program  
[www.unh.edu/mcnair](http://www.unh.edu/mcnair)

Outreach and Research Opportunities  
[www.unh.edu/outreach/opportunities.html](http://www.unh.edu/outreach/opportunities.html)

Research and Discover Summer Internship Program in Earth Sciences  
[www.eos.sr.unh.edu/ResearchAndDiscover/](http://www.eos.sr.unh.edu/ResearchAndDiscover/)

University Honors Program  
[www.unh.edu/honors-program](http://www.unh.edu/honors-program)

---

# Acknowledgements

THE UNH UNDERGRADUATE RESEARCH CONFERENCE, one of the largest and most diverse conferences of its kind in the country, has grown to become a signature event at the University and an annual highlight of the spring semester. 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 folks and thank them for helping make URC 2009 happen.

## **Special thanks to:**

**Office of the Vice President for Research**

**Office of the Vice President for Student and Academic Services**

**UNH Parents Association**

**UNH Admissions**

**All Faculty Mentors**

Center for International Education  
College of Engineering and Physical Sciences (CEPS)  
College of Engineering and Physical Sciences Alumni Association  
College of Life Sciences and Agriculture  
Editorial and Creative Services  
Environmental Research Group  
Hamel Center for Undergraduate Research  
Holloway Commons  
Institute for the Study of Earth, Oceans, and Space  
Memorial Union Building Administrative Staff  
New Hampshire Space Grant Consortium  
Phi Beta Kappa  
The University Honors Program  
The University Writing Programs  
UNH Alumni Association  
UNH Foundation  
UNH Media Relations  
UNH Photographic Services  
UNH Printing Services  
UNH Transportation Services and Dirk Timmons, Director  
UNH Video Services  
URC Program Assistants Megan Zerega '10 and Katie McCabe '12  
Web Solutions  
Wildcat Properties  
Whittemore School of Business and Economics Marketing and Advertising Club (Lindsay Thibeault '09, Team Leader)

## **2009 Conference Planning Committee:**

Martha Barker, Project Graphic Designer,  
Editorial and Creative Services  
Martha Byam, Alumni Association Board Member;  
Clinical Assistant Professor, Department of Social Work  
Janet Cass, Director, UNH Parents Association  
Pam Cilley, Associate Director, Stewardship and Special Projects  
Lynne Cooper, Program Coordinator, Office of the  
Associate Vice President for Research and Outreach Scholarship  
Molly Doyle, Program Associate, Hamel Center for  
Undergraduate Research  
Jim Graham, Writer, Editorial and Creative Services  
Lynnette Hentges, Manager, Program and Proposal Development,  
Office of Sponsored Research  
Estelle Hrabak, Chair, COLSA URC; Associate Professor,  
Department of Molecular, Cellular and Biomedical Sciences

Peter Masucci, Lecturer, Department of Marketing and Management,  
Whittemore School of Business and Economics  
Sheila McCurdy, Assistant Director, Center for International  
Education  
Robert McGann, Director, UNH Admissions Office  
Jeffrey Melton, Research Assistant Professor,  
Department of Civil Engineering  
Cari Moorhead, Associate Dean, Graduate School  
Jennifer Moses, Chair, Naked Arts Subcommittee;  
Associate Professor, Art and Art History  
Edward Mueller, Administrative Director, University Writing Center  
Sharyn Potter, Associate Professor, Department of Sociology  
Dan Reagan, Associate Dean, UNH Manchester  
Lawrence Reardon, Associate Professor, Department of  
Political Science  
Mark Rubinstein, Vice President, Student and Academic Services  
Carol Swiech, Academic Counselor, UNH Manchester  
Lisa Townson, Extension Education Specialist, Cooperative  
Extension;  
Outreach Associate, Office of the Associate Vice President for  
Research and Outreach Scholarship  
Ruth Varner, Research Assistant Professor, Climate Change  
Research Center  
Cameron Wake, Chair, URC Planning Committee;  
Research Associate  
Professor, Climate Change Research Center/EOS; Senior Faculty  
Fellow, Office of the Associate Vice President for Research and  
Outreach Scholarship  
Brittany Williams, GRC Coordinator, Graduate School  
Debra Williams, Administrative Manager, CEPS Dean's Office  
Julie Williams, Associate Vice President, Research and Outreach  
Scholarship

## **2009 URC Event Coordinators**

Tim Barretto, Thompson School Community Leadership Program  
Janet Cass and Lynne Cooper, Parents Association Undergraduate  
Research Symposium  
Janice Chadwick, Psychology Department George M. Haselrud URC  
Marianne Fortescue, UNH Office of Community Service  
Partnerships  
Estelle Hrabak, 18th Annual COLSA URC  
Christopher Kies, Student Composers' Concert  
Delia Konzett, Honors English Undergraduate Research Conference  
Peter Masucci and Cynthia Nizzari-McClain, WSBE URC  
Catherine Mazur and Jennifer Moses, Senior B.A., B.F.A. and M.F.A.  
Exhibition Preview Reception  
Jeff Melton, Ruth Varner, and Debra Williams, Interdisciplinary  
Science and Engineering Symposium (ISE)  
Jennifer Moses, Naked Arts—Creativity Exposed!  
Dan Reagan and Carol Swiech, UNH Manchester Undergraduate  
Research Conferences  
Cindi Rohwer, Chemistry Department Poster Exhibition  
Patrick Ryan, Philosophy Department URC  
Lucy Salyer, History Department URC  
Neil Vroman, College of Health and Human Services  
Grimes Award Competition  
Brittany Williams, Graduate Research Conference

# Student Index

Adams, George	38	Bissonnette, Jocelyn	32	Carter, Thomas	9	DeGeorge, Jessica	11
Adewumi, Victoria	26	Blais, Danielle	35	Casey, Kristen	11	DeGruttola, Matthew	8
Agarwal, Jay	9	Blauvelt, James	34	Castelli, Daniel	14	Delcambre, Zachary	33
Aiello, Peter	8	Bluemling, Juliet	27, 35, 39	Chiang, Benjamin	14, 35, 44	DeLima, Jessica	40
Albair, Joshua	17	Blumenthal, Jamie	33	Chiang, Diana	25	DeMaio, Ananda	28
Alford, Charles	33	Blundell, Michelle	30	Chisholm, Paul	14	Deming, Keri	11
Ali, Muazzam	9	Bogosh, Michaela	13	Christensen, Michaela	35	Dempster, Carolyn	27, 30
Allard, Samantha	7	Boire, Trevor	9	Churchill, Claire	27, 30	Dennis, Jessica	25
Allen, Todd	12	Bonenfant, Samantha	11	Clark, George	14, 44	Deogburn, Dallas	37
Allgood, Erin	39	Boniface, Jeremy	35	Clark, Jillian	28	DePaula, Alyssa	24
Amante, Jacqueline	39	Bornstein, David	24	Clark, Joshua	36, 44	DeSando, Dominic	6, 17
Anania, Peter	37	Borowski, Matthew	13	Clemens, Erica	28	Desmond, Brittney	11
Anderson, Diane	38	Boudreau, Jennifer	22	Clifton, Jeffrey	14	Devaney, Francesca	32
Anderson, Kiley	39	Boudreau, Shannon	17	Close, Elizabeth	21	Deveau, Danae	22
Andruchuk, Katherine	12	Bourgoine, Amanda	35	Cobb, Crystal	22	Deveau, Nicholas	28
Antlitz, Christopher	9	Bournival, Ashley	33	Cocozziello, David	40	Dezak, Amanda	7
April, Timothy	9	Bourque, Christopher	14	Coghlan, Nathaniel	38	Dhein, Clark	9, 10
Arnault, Daniel	9	Bower, Michelle	30	Cohen, Adam	9	DiBella, Elizabeth	40
Arnold, Daniel	17	Bragg, Katherine	13	Cohen, Matthew	9	DiBenedetto, Michael	11
Athanas, Evie	25	Brassard, Michael	14	Colburn, Patrick	12	Dickerman, Thea	21
Atkind, Alexander	25	Bray, Justin	12, 14	Cole, Steven	17	Dietz, Jennifer	9
Atwater, Katelyn	7	Breda, Joseph	8	Coleman, Christina	35	Dinardo, Kimarie	11
Bahtsevanos, Theodore	11	Brennan, Cassandra	37	Coleman, Meaghan	14	DiNoto, Melissa	17
Bailey, William	39	Breton, Kristina	22, 37	Colestock, Hannah	26	Diosi, Rachel	28
Baldwin, Kevin	39	Briand, Emily	22	Collins, Benjamin	9	DiPirro, Matthew	35
Ballard, Bryan	39	Britt, Kari	39	Collins, Joshua	38	Disenhof, Corinne	14
Balz, Eileen	39	Broadley, Heidi	39	Comstock, Jeffrey	9	Doan, Uyen-Mai	14, 40
Bamberger, Marc	12	Broek, Michael	21	Connolly, Coleman	9, 11	Dodson, Harry	17
Bannon, Caitlin	34	Brothers, Brianna	17	Conrad, Katie	29, 40	Dodson, Kerrie	35
Baptiste, Marisa	25	Brown, Aaron	28	Coorey, Jay	35	Doiron, Heidi	11
Barber, Janet	28	Brown, Cara	34	Copp, Jameson	6, 12	Dokus, Mary Katherine	40
Baril, Christopher	35	Brown, Eric	38	Cordaro, Jesse	35	Doo, Melissa	11
Barnard, Jeffrey	12	Brown, Hannah	35	Cornell, Amy	39	Doran, Katherine	10
Barney, Richard	30	Browne, James	14	Costa, Samantha	26	Dorval, Morgan	12
Barraclough, Nicholas	11	Bruning, Anna	27, 32	Cote, Andrew	38	Dostoler, Daniel	33
Batchelder, Nathan	8	Bruton, Matthew	14	Cote, Sabrina	28	Doucet, Marcus	32
Bates, Devin	9, 10, 27	Brym, Katie	7	Coughlin, Sean	25	Doucette, Casey	40
Bates, Stephen	17	Bucciarelli, Sara	7	Cox, Christopher	14	Dow, Leslie	32
Beaudette, Heather	22	Buckley, Kara	35	Cox, Ian	11	Doyen, Karen	7
Bedell, Andrew	24	Bullerwell, Robert	8	Creighton, Megan	28	Dreyer, David	14
Belaidi, Alex	11	Burdwood, Jesse	7, 44	Crepeau, Danielle	11	Drohan, Matthew	14
Beland, Amanda	35	Burnham, Tricia	11	Crossman, Maria	32, 37	Duarte, Krysten	11
Beldon, Carly	10	Buruchian, Kevin	14	Crossman, Michael	35	Ducharme, Thomas	14
Bellerose, Amanda	28	Buzzell, Andrew	11	Crystal, Naomi	40	Dudek, Benjamin	28, 40
Bemis, Jamie	12	Cahill, Karyn	39	Cugini, Alexander	9	Duffy-Comparone, Emma	35
Benander, Makenzie	39	Callaghan, Ryan	9	Curry, Michael	13	Dufresne, Mallory	11
Bencivenga, Nicholas	12, 28, 43	Callahan, Brendan	40	Curtin, Melissa	34	Duggan, John	12
Bennett, Samuel	35	Callahan, Garrett	11	Czerw, Richard	14	Dulac, Joseph	9, 11
Bergeron, Ryan	9	Callender, Sarah	26	D'Agostino, Andrew	19	Dulla, Kathryn	21
Best, Bradley	39	Calnan, Rory	39	D'Errico, Michael	36, 38	Dunn, Haley	33
Bethel, Sara	11	Campbell, Carin	13	Daftari, Neena	11	Dussault, Tina	9
Betts, Mark	12	Campion, Christopher	12	Daigle, Kevin	14	Dutile, Kevin	14
Bickford, Allison	10	Cannon, Scott	9	Damon, Benjamin	9	Eager, John	9
Bickford, Kevin	17	Cardinal, Casey	10	Davenport, Adam	14	Eaton, Holly	30
Biernat, Brian	39	Carignan, Maura	6	Davis, Kayla	22	Edgar, Duncan	21
Birk, Lindsay	13	Carmody, Jake	14	Davis, Rebekah	8	Elder, Dean	22, 39, 40
Birt, Alyssa	13, 22, 39	Carpenter, Rachel	14	Deasy, Taylor	38	Elfreth, Travis	27
Bishop, Nathalie	24	Carroll, Robert	28	DeGaetano, Michael	13	Elliott, Justine	35

Ellis, Glenn	17	Glines, Travis	15	Howard, Lauren	22	Kendall, Neil	21
Emmerling, Ann	14	Gloskowski, Agnieszka	29	Howard, Michael	33	Kenney, Shawn	15
Emmons, Nicholas	40	Goldstein, Courtney	14	Howell, Ryan	6, 12	Kerley, Kim	26
Engel, Jessica	6, 12	Gomes, Evan	19	Howland, Maurice	21	King, Timothy	35
English, David	21	Goodrich, Ryan	9	Hudson, Wade	9	King, Tyler	10
Eslinger, Hilary	28	Gormady, Sarah	25, 30, 35	Huffman, Timothy	6, 19	Kinsman, Sarah	22, 40
Estes, Meaghan	9, 11	Goslin, Ryan	28	Hufnagle, Lauren	40	Kirega, Alice	40
Etherington, Dana	12	Graffam, Sarah	25	Huggins, Joshua	21	Kjellander, Stephan	14
Evangelou, Alexander	14	Graham, Gillian	36	Hulbert, Jaclyn	11, 15	Klapprodt, Ryan	9
Falk, Steven	22, 37	Graham, Katie	9	Hummel, Chad	15	Klein, David	19
Faller, Julia	30	Greene, Allison	22	Humphreys, Sarah	35	Klein, Isabel	32
Farina, Stacy	14, 35, 40	Gregerson, Samantha	11	Hung, Sauwai	28, 40	Klein, Michael	9
Farrand, Abby	34	Griffin, Kristina	7	Hunter, Whitney	40	Knight, Joel	12
Fay, Laura	27	Grohs, Jonathan	15	Hussey, Patrick	12	Kolacz, Stephen	15
Feraud, Mathieu	14	Grube, Dan	11	Hutchings, Jonathan	15	Koob, Elise	41
Ferguson, Mary	12, 14	Guarino, Chad	35	Hutchins, Katherine	28, 40	Kostis, Nicholas	11
Field, Benjamin	39	Guidice, Nick	28	Ilyuk, Marina	18	Kotce, Alex	35
Filicicchia, Nathan	12	Guidice, Ryan	9	Ingraham, Katrina	30	Koulet, Alexander	12
Finch, Jacob	14	Gurschick, Lauren	22	Ivy, Caroline	22, 30	Kraichnan, Sasha	19
Findlay, Brian	9	Hackett, Monica	35	James, Ashley	40	Kramer, Matthew	9
Fiorilla, Nicholas	11	Hajdusek, Alysha	11	Janowicz, Kelsey	28	Krapf, Garrett	15
Fish, Jamilee	7	Hakala, Karin	31	Janssen, Nathan	25	Krates, Nicholas	9
Flaherty, Colleen	25, 33	Halama, Gregory	10	Jardin, Patrick	15	Krause, Allison	30
Fleahman, Hannah	34	Hamilton, Kelly	33	Jarnes, Sheila	31	Kreckmann, Rachael	35
Fleury, Matthew	21	Hampe, Kayla	7	Jason, Tabitha	21	Kruzel, Sarah	41
Flynn, Kyle	9	Hanna, Laura	32	Jeffrey, Lia	28, 40	Kwong, Cammie	41
Flynn, Ryan	14	Hannafin, Phillip	10	Jenkins, Benjamin	14	Kyriacopoulos, Paul	15, 35
Foley, Danielle	35	Harmuth, Elizabeth	8	Jennings, Brett	9, 11	Lacroix, John	36
Fong, Corey	24	Harney, Justin	43	Jensen, Nathan	18	Lafaille, Stephen	15
Foreman, John	9	Harriman, BobbieJean	15	Jobel, Janna	36	Laferriere, Adam	8
Fournier, Daniel	14	Harrington, Adam	28	Johns, Meaghan	28	LaFrance, Mark	15
Fournier, Kirsten	9	Harris, Nina	22	Johnson, Chelsey	31	Lafreniere, Kaitlin	7
France, Amber	34	Harris, Tor	9	Johnson, Corey	32	Lajeskie, Ashton	11
Franke, Christian	9	Harstedt, Cade	27, 36	Johnson, Eileen	31	Lajoie, Timothy	8
Fransway, Dylan	9	Hart, Andrew	43	Johnstone, Elizabeth	18	Lamkin, Joshua	31
Fraser, Stasha	11	Hart, Traquis	10	Jones, Bob	6, 12	Lamontagne, Jonathan	12
Frazier, Christine	10, 12	Harter, Arianne	10	Jones, Matthew	15	Lamson, Colby	12
Frazier, Matthew	19	Harvey, Sarah	10	Jones, Neil	21	Landry, Amanda	40
Fredette, Samantha	22	Hatch, Andrew	11	Jordan, Shane	10	Landry, Brian	17
Fricke, Allison	11	Hatch, Teri	33	Juozokas, Michael	33	Langevin, Julie	27, 29
Friend, Brittany	28	Hayes-Hand, Brent	8	Kalil, Kathryn	35	Langsam, Emily	35
Fuller, Andrew	33	Hazelwood, Maia	37	Kalutkiewicz, Kyle	15	Langsner, Andrew	14
Fyrberg, Forest	9	Healey, Drew	11	Kane, Rachael	12	Lape, Matthew	15
Gadway, Zachary	17	Hedges, Laura	32	Karpinski, Olivia	28	LaPerch, Kelli	10
Gakuba, Marie Assumpta	30	Heilmann, Alec	35	Kaste, Jeffrey	21, 35	LaPlante, Laura	8, 38
Gallagher, Jaime	22, 37	Heim, Jeffrey	38	Kaur, Irvinder	39	Lapoint, Jason	11
Galli, Jake	9, 11	Heinzman, Joy	7	Keeley, Maura	40	Lariviere, Ryan	41
Gallo, Brett	38	Henning, Heather	11	Keenan, Kelsey	6, 36, 38	Lary, Allison	21
Gallot, Craig	30	Herman, Lauren	12	Keenan, William	9	Lattanzi, Kristyn	35
Gardner, Nikkia	28	Hill, Brittany	9	Keith, Amy	40	Lavine, Andrew	24
Garneau, David	13	Hill, Casey	22	Kelley, Andrew	12	Lavoie, Ashley	33
Garvey, Kevin	13	Hill, Corey	37	Kelley, Cody	33	Lavoie, Jeffrey	17
Gately, Jonathan	40	Hill, Jennifer	36	Kelley, Colleen	22	Lawrence, Amanda	24
Gavin, Mariah	40	Hodgdon, Catherine	35	Kelley, Stephen	12	Lazarus, Lauren	15
Gibson, Robert	22, 40	Hondros, Panagiotis	24	Kelloway, Ashley	10, 12	Leach, Zachary	9
Gilman, Brittney	28	Horne, Elsa	28	Kelly, Adam	26	Leahy, Brian	35
Gingras, Samantha	9	Hough, Brian	30	Kelly-Martin, Rachel	33	LeBlanc, Michael	7
Giovinnazzo, Michael	15	Hourihan, Sara	22	Kemp, Lisa	11	Lee, Jeffrey	11

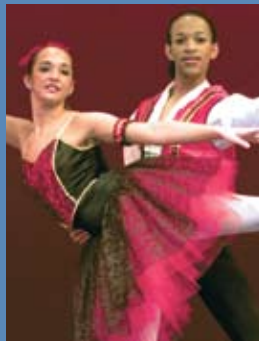
Lee, Monique	29	Maurer, Kevin	15	Murrell, Mallory	21, 35	Peters, Katelyn	10
Lefavour, Elizabeth	25	McAdam, Kyle	7, 45	Musacchio, Lauren	23	Petersen, Lee	16
LeGeyt, Kristen	18	McAllister, Jordan	23	Myers, Madison	16	Petrovic, Michelle	11
Lehr, Rebecca	15, 29, 45	McArdle, Jennifer	33	Nagel, Christina	29, 36	Pflanz, Kevin	14
Leo, Eric	15	McDonough, Lauren	29	Neelon, Ryan	35	Pierobello, Maria	37
Leonard, Kathleen	9	McGrath, John	9	Neilan, Elizabeth	6	Pilsmaker, Max	15
Lepine, Jack	22, 41	McGuigan, Patrick	6	Nelson, Melissa	11	Pirro, Michelle	9
LeRose, Mary	11	McHugh, Lauren	9, 10, 11	Nguyen, Tuyen	16	Plante, Catherine	7
Lesser, Adrienne	19	McHugh, Walter	8	Nichols, Carly	23	Plante, Joshua	26
Levesque, Katherine	31	McKenna, Brian	10	Nichols, Jeff	10	Pocius, Nicolette	7, 42
Levesque, Nathan	11	McKenna, Kristin	33	Nichols, Joseph	12	Pollock, Jennifer	43
Lewis, Benjamin	13	McKenney, Brian	33	Normandin, Alex	14	Ponio, Erroll James	19
Lewis, Jacqueline	25, 31, 45	McKenzie, Eric	13	Norris, Kellie	12	Ponte, Alia	35
Lewis, Jason	10, 15	McKernan, Andrew	32	Norton, Jason	9	Potter, Katherine	6
Libby, Kyle	14	McLaughlin, John	14	Noyce, Genevieve	16	Pratt, Andrew	33
Linares, Maria	12	McMahon, Correy	33	O'Connell, Joseph	35	Preble, Christine	24
Lindquist, Kirsten	36	Meadows, Jonathan	38	O'Connor, Timothy	23	Price, Derek	29
Little, Nathan	13	Meagher, William	15	O'Day, Wyatt	14	Prisby, Shane	40
Littman, Scott	15	Meehan, Samuel	15	O'Donnell, Angela	13, 15	Prusevich, Polina	39
Lizotte, Seth	12	Mehlman, Max	29	O'Donnell, Jared	14	Purves, Austin	16
Loftus, Stephen	35	Meisner, Kristen	13	O'Hara, Michael	23, 42	Quarrell, Jacob	34
Logunova, Galina	14	Melfi, James	15	O'Hara, Ryan	11	Quigley, Joshua	17
Long, Andrew	33	Meran, Adam	19	O'Keefe, Conor	9	Quimby, Monica	42
Longley, Lauren	39	Messa, Stephen	33	O'Keefe, Patrick	30	Quinn, Garrett	35
Loopley, Tyler	12	Messineo, Trevor	11	O'Neill, Morgan	16	Raisanen, Kurt	13
Loosigian, Julie	14	Middleton, Andrew	16, 33	O'Rourke, Jonathan	9	Rajchel, Sarah	12
Lord, Philippe	13	Midkiff, Holly	41	Odell, Meaghan	36	Ramlow, Emily	7, 28
Loughlin, Amanda	13	Milano, Daniel	28	Oleksy, Isabella	39	Ramos, Amanda	22, 28, 40
Lund, Philip	9	Miller, Lucas	38	Oliver, Matthew	16	Ramsey, Kelsey	7
Lusenhop, Emily	27	Milliken, Aimee	23	Oliveri, Danielle	23, 42	Randall, Caitlin	33
Lynch, Stephen	9	Mills, Brianna	9	Onett, Zachary	19, 38	Raven, Michael	35
Macarchuk, Alexis	35	Miner, Jonathan	8	Onguetou Essiene, Radar	31	Raymond, Julie	35
Maccabe, James	18	Minuti, Matthew	10, 15	Orr, David	38	Rayton, Linden	39
Macfarlane, Robert	9	Mirando, Adam	39	Ouellet, Laureen	32	Reddick, Ian	19
Macleod, Anthony	9	Mixon, Alyssa	27	Ouellette, Kenneth	10	Redfern, Timothy	10
Macomber, Heather	22, 37	Mixon, Rachel	41	Ouellette, Marc	14	Regis, Paul	14
Macomber, Seth	21	Mooney, Katharine	34	Padfield, John-Paul	18	Reilly, Colin	9
Madden, Joseph	11	Moore-Penaskovic, Brendan	10, 11	Pallis, Christy	11	Reisdorf, Tyler	14
Maiola, Ryan	11	Moran, Dennis	14	Palmisano, Marissa	11	Reny, Elizabeth	27, 32
Majumdar, Rajtilak	13, 22, 39	Moraski, Stephen	14	Park, Gwangli	42	Reutemann, Bethany	39
Malone, Corey	30	More, Apurva	10	Parker, John	32	Rezaee, Michael	39, 42
Manakos, Alexandra	41	Morehouse, Andrew	16	Parker, Matthew	11	Ricci, Daniel	8
Manitius-Kozlowski, Krystian	12	Morgan, Stephen	13, 16	Parrillo, Kelsey	38	Rice, David	17
Mannarino, Daniel	15	Morin, Emma	29	Parsons, Craig	11	Richards, Callee	24
Manning, Thomas	11	Morin, Jeffrey	15	Patenaude, Brian	16	Richelo, Amanda	16
Marchant, Alissa	36	Morin, Kara	23	Patterson, Victoria	11	Richmond, Rebecca	24
Marcotte, Elizabeth	33	Morrill-Winter, Caleb	16	Paul, Patrick	14	Rickard, Brendan	13
Marcus, Meghan	6, 45	Morrison, Julie	42	Paulin, Jeremy	9	Rideout, Tyler	10, 15
Maroney, Kyle	14	Morrissey, Elizabeth	42	Payeur, Stephanie	10	Ridge, Heather	29
Marquart, Maxwell	24	Morse, Ashley	16	Pelletier, Michele	14, 16	Riding, Rebecca	42
Marquis, Carly	23	Morse, Danielle	16, 42	Pellissier, Paul	39	Riley, Kelley	11
Marschok, Sarah	9	Moskowitz, Liana	33	Pepin, Daniel	18	Riley, Michael	35
Marshall, Robert	9	Mugherini, Deborah	10	Perkins, Gabriel	42	Rittenberry, Brittany	25
Martin, Christopher	11	Muldoon, Julie	14	Perkins, Patrick	18	Rivers, Amanda	22, 40
Mason, Kevin	19	Murphy, Johanna	25	Perreault, Sergei	17	Robertson, Holly	32
Matrumalo, Anthony	10	Murphy, Raymond	19	Perrella, Catherine	14	Robertson, Katie	42
Matte, Suzanne	39, 41	Murray, Jared	16, 32	Perrinez, Daniel	16, 35	Robinson, Caroline	14
Matthews, Keith	13	Murray, Megan	16	Perry, Thomas	42	Rodriguez, Cali	9, 11

Roesch, Benjamin	13	Simmons, Krystal	29	Tibbetts, Benjamin	38	Withers, Samantha	19, 24, 32
Rogers, Kimberly	27	Smarsh, Grace	39	Tierney, Kyle	13	Wojcicki, Alyssa	35
Rogers, Shannon	16	Smith, Brian	18	Tippit, Francesca	11	Wolfe, Adrianna	19
Rogers, Zoe	24	Smith, Derek	13	Tirado, Ana	25	Wood-Friend, Kevin	11
Rohlicek, Kathryn	11	Smith, Joshua	15, 35	Todd, Charlotte	17, 25, 32	Woods, Aaron	8
Rolfe, John	28	Smith, Richard	10	Tombarelli, Jillian	15, 35	Woolfson, Belinda	36
Romanoski, Rebecca	36	Smith, Rose	16	Tondorf, Juliana	32	Wright, Lindsey	17
Romanovitch, Marissa	37	Smith, Wesley	42	Tonelli, Peter	35	Wright, Matthew	17
Ronan, Anne	38, 39	Snavely, Kyle	15	Torbick, Joshua	12, 19	Wrocklage, James	37
Rondeau, Justin	27, 38	Snyder, Hilary	42	Towne, Rechab	24, 42	Yassanye, Lawrence	12
Rouillard, Mirielle	34	Soderquist, Ryan	42	Tozzie, Amber	6	Yiokarinis, Stefani	11
Roy, Devon	11	Sousa, Amanda	35	Trapp, Lindsay	29	Yoeli, Alexandra	24
Roy, Jennifer	27	Sousa, Meaghan	27	Travaglini, Danielle	11	Yost, Britta	30
Rubino, Robert	9	Spadaro-Bliss, Simon	32	Tretter, Laura	27	Young, Matthew	9
Rugg, Abigail	35	Spampinato, Nicole	24, 29	Troiano, Justin	25	Zelie, Mary	35
Rush, Christopher	11	Spannaus, Alexandra	35	Tsentalovich, Igor	10	Zepko, Laura	27
Ryan, Patrick	38, 47	Spanos, Chris	11	Tullgren, Justin	17	Zezula, Grant	29
Sadowski, Madeline	33	Sparaco, Andrew	16	Turner, Cathleen	15	Zheng, Shi Bin	29
Salata, Yuliya	16, 27, 30	Spaulding, Joshua	13	Tylec, Meghan	11	Zoller, Samantha	32
Salem, Daniel	25	Srisoonthornthai, Kittisak	8	Upton, Timothy	8	Zorawowicz, Allison	35
Sandberg, Cara	10	St Aubin, Albert	17	Urso, Kyle	12	Zorawowicz, Kyle	15
Santilli, Lisa	35	St. Onge, Julianne	29, 36	Vadney, Alexander	13, 15		
Sauchuk, Julie	34	Stanton, Morgan	43	Vaillancourt, Calvin	36		
Savoglu, Cem	25	Staples, Tasha	28	Vanasse, Jeffrey	35		
Savoy, Andrew	35	Stawarz, Joshua	17	VanBenthysen, Reid	17		
Sawyer, John	10	Steele, Kaitlyn	16, 17	Varga, Daniel	35		
Sawyer, Virginia	16	Stefani, Kate	42	Varney, Hannah	15		
Scali, Jenna	12	Stegemann, Krista	42	Vaskelionis, Joseph	6, 19		
Scarelli, Alex	18, 19	Stevens, Julie	11	Vattes, Wendy	19		
Schilke, Melissa	29	Stevenson, Shaun	21	Veiga, Carly	32		
Schmidt, Kathleen	9	Stitz, Edward	9	Vinyard, Andrea	25		
Schmitz, Carolyn	16	Strieby, Paul	21	Vorotnikov, Vassili	17		
Schoepfer, Valerie	7, 16, 42	Stuhr, Joshua	10	Waechter, Joel	36		
Schoolsky, Jocelyn	11	Sullivan, Marisa	12	Waite, Amanda	17		
Schroer, Melanie	42	Super, Josef	12	Wallace, Margaret	37		
Schulz, Megan	27	Suprock, Christopher	10	Walsh, Kelly	38		
Schwab, Andrew	6	Sweeney, Courtney	10	Wasileski, Christopher	25		
Seavey, Amanda	37	Sweetser, Branden	8	Wasson, Richard	8		
Seavey, Ross	27	Swick, Zachary	36	Waterhouse, David	17		
Segreti, Michael	11	Taetzsch, Amy	42	Weatherbee, Anthony	14		
Seiferth, Jeremy	13	Taipan, Mark	15	Webster, Thaddaeus	14, 35, 44		
Seiler, Benjamin	23, 42	Tanafon, Ian	27	Welch, Matthew	21		
Sennott, Erica	42	Tang, Sasa	25, 31	Wells, Adam	35		
Sennott, Kelly	35	Tarbell, Melissa	30	Wells-Bogue, Wegene	30		
Shanahan, Rachel	16	Tatnall, Sara	35	Westcott, Adrienne	29		
Shanteler, Laura	24, 37	Tauras, Joseph	10	Wetenkamp, Frank	15		
Shea, Chadwick	21	Taylor, Jesse	9, 17	Whelan, Jessica	9		
Sheehan, Gina	24	Taylor, Laura	11	White, Garrett	11		
Sheehan, Michelle	11	Taylor, Lori	9	Wiggin, Kiah	7		
Sheldon, Erica	37	Taylor, Rebekah	29	Wilcox, Justin	17		
Sherman, Nicholas	24, 42	Tebbetts, Ryan	12	Wilcox, Russell	10		
Sherman, Robin	29	Tefft, Jonathan	17	Willard, Kerin	17		
Shilov, Daniil	10	Tekverk, Craig	17	Williams, Tyler	17		
Shin, Min	10	Tenore, Brenna	10	Wilmot, Brian	14		
Shriver, Kathryn	24	Tessein, Jeffrey	17	Wilson, Kyle	11		
Shuster, Jason	7	Thibeault, Lindsay	11, 47	Wilson, Lyssa	34		
Shyrovok, Alexander	10	Thompson, Christopher	14	Wilson, Richard	37		
Silfvenius, Kelsey	40	Thompson, Megan	24, 39, 40, 42	Wind, Eric	26		





Presenting my research to a professional community, answering **challenging** questions, and receiving positive feedback really fostered my development as a professional marine biologist. I was also proud of my ability to communicate complicated scientific analyses in a clear and concise manner. • The most memorable aspect of the URC was making the actual presentation. I had been practicing it and I didn't think it was up-to-par, but once I got up to the podium everything flowed well. I surprised myself. After the questions were over, I was so excited that it had gone well and that I actually did it. • I felt so honored to explain my project to everyone who came to the conference, and also I gained more courage than I had before. • The most **memorable** aspect of my involvement was how **supportive** the faculty and the students were, and the caliber of presentations at the URC. • It was great talking about our projects to other people, including our families, so they could attain some understanding about what it is we have been working on. • Although I was incredibly nervous about giving an oral presentation, the environment was **positive** and calming. I felt confident and more relaxed as a result. • The most memorable and beneficial aspect of presenting was learning how to take a **complex** issue and simplify it for members of the public with less experience in the field. • The **intense** learning experience of creating a professional presentation and the pride in having created something I never had before. • The entire process was memorable for me because research is such a detailed process. I did not have the confidence to see this through at the beginning, but it was very **rewarding** at the end. • It was awesome to share my experiences with the UNH community, and it was inspiring to see other students' projects. • How easy it was for everyone to present their posters without feeling a lot of pressure to do so. It was a very relaxed learning environment. • I met many students who did great research projects that made me feel great about UNH and the advocacy for student research that the University puts forth. • It was so rewarding to present research that we've been working hard on all year to other peers and potential employers. • Several people have told me my presentation skills were very good. As a shy person, that was nice to hear. • The number of people presenting was **staggering**. It is nice to see how much the University contributes to science and learning. • This was my first year participating in the URC, and I was quite pleased with the amount of interest that the community showed in seeing the presentations. • The most memorable part of the URC for me was taking research that I had put so much effort into, and sharing it with the UNH community, friends, and family. • It was great having my parents watch me in an academic venue. It was the



first time they really heard what my two-year research project was about! • The most memorable aspect was the public speaking challenge. In any career, public speaking involving **research is essential** and I think the URC provided a great opportunity to hone those skills. • It was a very memorable occasion to speak in front of my peers and their parents. I found it challenging, but a positive experience to be pushed beyond my comfort zone. • When I was finished, I felt so **confident** about my subject that when the questions came I was not nervous at all! • The most memorable part was of course the presentation, but also just being in the **intellectually stimulating** environment, having discussions afterwards, etc. • The conference itself was the best part. I was able to see all of my hard work come to fruition, and the feedback I received from the faculty members who listened was great. I found the other presenters' speeches interesting as well. • Because I was part of the Marketing Workshop group that promoted the URC as a group project, the entire experience as a whole was something I will never forget. The hours upon hours that were put into increasing attendance and participation in the URC truly paid off when we got to see all the people who attended! • I loved **sharing the knowledge I've gained with my friends and family**.