The University of Vermont

College of Engineering and Mathematical Sciences

HONORS DAY

Friday, April 20, 2007
Ira Allen Chapel
3:30 p.m.
College of Engineering and
Mathematical Sciences

HONORS DAY

2007
College of Engineering and Mathematical Sciences

Domenico Grasso, Ph.D., P.E., DEE
Dean

School of Engineering
Director
Jeffrey Marshall, Ph.D.

Department Chairpersons

Xindong Wu, Ph.D.
Computer Science

James Burgmeier, Ph.D.
Mathematics and Statistics
Following the award presentations there will be a reception in the Great Hall and Apse of Billings Student Center.
Honors Day Guest Speaker

Catherine P. Koshland

We are pleased to welcome Catherine P. Koshland as the 2007 College of Engineering and Mathematical Sciences Honors Day guest speaker. Professor Koshland is the Wood-Calvert Professor in Engineering at the University of California, Berkeley, and Professor in Energy and Resources and in Public Health (Environmental Health Sciences). In 2004 she became the Vice-Provost for Academic Planning and Facilities. She recently completed her full year term as a director and Secretary of the Combustion Institute. She serves on the editorial board of Combustion, Science and Technology. She has been a member of the Integrated Human Exposure Committee of the EPA's Science Advisory Board since 2001. Professor Koshland graduated with a B.A. in Fine Arts from Haverford College, studied painting at the New York School of Drawing, Painting and Sculpture, and received her M.S. in 1978 and her Ph.D. in 1985 in Mechanical Engineering from Stanford University. She joined the U.C. Berkeley faculty in 1984. She teaches engineering, energy and environmental health, emphasizing mechanistic approaches as well as a systems perspective.

Professor Koshland's research is at the intersection of energy, air pollution and environmental (human) health. It is conducted at multiple scales, from mechanistic analyses of combustion products in flow reactors to control strategies in urban airsheds. Her combustion research has focused on pollutant formation, particularly involving chlorinated hydrocarbons and particulates, and the development of advanced diagnostic tools for non-intrusive monitoring of combustion species including chlorinated hydrocarbons, metals and particles. She has worked in green manufacturing and industrial ecology, addressing the conception and assessment of environmental and health dimensions to improve energy and manufacturing technologies. Her work includes critical assessments of regulatory policy.

Professor Koshland embraces the complexity of the issues she studies. “I think environment issues benefit from many types of disciplines, ranging from ecology and environmental studies to physics, chemistry, health sciences and, of course, engineering,” she explains. “We shouldn't limit our possibilities or create artificial barriers that impede dialogue and communication. For some environmental issues, we're at critical points where we need communication the most.”
Civil Engineering and Environmental Engineering Awards

Presented by Jeffrey Marshall, Director, School of Engineering
assisted by Adel Sadek, Undergraduate Coordinator
and George Pinder, Graduate Coordinator

Reginald Milbank (Sophomore) Award
Joseph S. Krupa
In honor of Professor Reginald V. Milbank, who served the department for 23 years, this award was established in 1970 and is awarded annually to an outstanding sophomore enrolled in civil or environmental engineering at the University of Vermont

Junior Award
Kasi B. Walker
Given each year to a junior who best displays outstanding scholarship and commitment to civil or environmental engineering

Douglas P. Fay Award
Jesse S. Dunham-Friel
The Douglas P. Fay award was established in 1973 in honor of a former faculty member and is made to the student who has made the greatest contribution to civil or environmental engineering during the past year

Edward H. Phelps (Senior) Prize
Marcy E. Brownell
Alaina S. Dickason
The Edward Haight Phelps Award was established in 1884 by his father, the Honorable E.J. Phelps of Burlington. It is awarded to a student “who shall have exhibited conspicuous merit in professional studies, and high and noble traits of character, if such can be found”

American Society of Civil Engineers Award
Ryan S. Foster
For meritorious work in the student chapter of the American Society of Civil Engineers

Graduate Award
Lindsay A. George
Awarded to a graduate student for outstanding contributions to civil or environmental engineering
Computer Science Awards

Presented by Xindong Wu, Chair
Department of Computer Science

Sophomore Award
In recognition of academic performance, level of interest, commitment to the computing profession, and overall character

Halen A. Earle

Junior Award
For excellence in performance and greatest promise of success

Jonathan A. Parker
Charles P. Robinson

Senior Award
For excellence of judgement and understanding of the principles of computer science.

Thomas McLeod

Graduate Award
For outstanding performance and greatest promise of success

Peter C. Chapin

Association of Computing Machinery Faculty Award
For great professional interest, immense spirit and outstanding leadership

Joshua L. Payne
Electrical Engineering Awards

Presented by Jeffrey Marshall, Director, School of Engineering
assisted by Steve Titcomb, Undergraduate Coordinator
and Gagan Mirchandani, Graduate Coordinator

Sophomore Award
Jacob M. Flanigan
For excellence in performance
and greatest promise of success

Junior Award
Greggory P. Carpenter
For excellence in performance and greatest
promise of success in electrical engineering

Atwater-Kent (Senior) Award
Christopher L. Palombini
For excellence of judgement and
understanding of the principles
of electrical engineering

Cyril G. Veinott (Graduate) Award
Mohamed Elfataoui
For excellence in performance and
greatest promise of success
Engineering Management Award

Presented by Jeffrey Marshall
Director, School of Engineering

Engineering Management (Senior) Award
In recognition of academic excellence in the field of engineering management

Justin S. Baillargeon
Mathematics Awards

Presented by James W. Burgmeier, Chairperson
Department of Mathematics and Statistics

Sophomore Award
Chelsea A. Stevenson
For outstanding academic performance in mathematics

Junior Award
Barbara J. Dewey
John M. Wiechecki
For achievement of the highest level of excellence in mathematics

Senior Award
Benjamin D. Johnson
For achievement of the highest level of excellence in mathematics

John F. Kenney (Graduate) Award
Hy Ginsberg
For excellence in mathematics
Established by John F. Kenney, Class of 1920,
in memory of his parents, Mary Ryan Kenney
and Patrick J. Kenney

Nam Sang Kil Scholarship in Mathematics
Hania Mahassen
Laura B. Balzer
In recognition of the value of education as a path toward the betterment of mankind, the Nam Sang Kil Scholarship is presented to an outstanding student in honor of Chairman Nam
Mechanical Engineering Awards

Presented by Jeffrey Marshall, Director, School of Engineering
assisted by Douglas Fletcher, Undergraduate Coordinator
and Yves Dubief, Graduate Coordinator

Sophomore Award
Shawn L. Bonneau
For outstanding scholarship and
commitment to mechanical engineering

Sean O'Flaherty Fahey Commemorative
(Junior) Award
Travis M. Gang
For a junior mechanical engineering student
who reflects the engineering achievements
and spirit of Sean O'Flaherty Fahey.

Presented by Eric Anderson

Edmund F. Little (Senior) Award
Patrick R. Larcom
For meritorious work in
the mechanic arts

Outstanding Senior Awards
For excellence in the fields of

- Biomedical Engineering
  Charles W. Morin
- Energy Engineering
  Jennifer N. Thompson

American Society of Mechanical Engineers
(ASME) Award
Ezra Kahn
For meritorious work in the student chapter
of the American Society of Mechanical Engineers

Graduate Award
Virginie C. Dupont
For excellence in performance
and greatest promise of success
Sean O’Flaherty Fahey Commemorative Award

Established by CSA Engineering, Inc. for the purpose of recognizing a junior mechanical engineering undergraduate student who reflects the engineering achievements and spirit of Sean O’Flaherty Fahey.

Sean Fahey grew up in South Burlington and was a graduate of UVM, receiving Bachelor’s and Master’s degrees in 1994 and 1996. He later went on to earn a Ph.D. in Engineering Mechanics from Virginia Tech. Sean’s formal education was only one stage in a lifelong and insatiable pursuit to learn new things, from engineering and electronics, to accounting and foreign languages. Sean died in January 2006 in a surfing accident off Ocean Beach in San Francisco, engaged in one of many passions outside of engineering.

While he remained a student, Sean also became a teacher. He displayed an excitement in mentoring younger engineers, and his technical rigor and enthusiasm carry on through the lives and careers of dozens of people at his place of work in California, and elsewhere. Sean’s attitude as a mentor is summed up by the response he would offer when someone stopped by his office and asked if he had time to discuss something. Sean would say “For you, I have all day.”

We at CSA Engineering, along with Sean’s family, have established this fund in the hope and expectation that outstanding engineering students will grow into outstanding engineers who embrace career and life in the spirit of Sean.

The Donors
Statistics Awards

Presented by James Burgmeier, Chair
Department of Mathematics and Statistics
assisted by Ruth Mickey, Statistics Director

Undergraduate Achievement Award
Trevor R. Brooks
For outstanding scholarship and commitment to statistical science

Graduate Award in Statistics
Yu Hao
Lulu Huang
For the achievement of excellence in statistics

Graduate Award in Biostatistics
Sujit K. Paul
For the achievement of excellence in biostatistics

Nam Sang Kil Scholarship in Statistics
Rajani Rajbhandari
In recognition of the value of education as a path toward the betterment of mankind, the Nam Sang Kil Scholarship is presented to an outstanding student in honor of Chairman Nam
Honorary and Professional Society Awards

Mortar Board Sophomore Award
For scholarship and leadership
Halen A. Earle
Presented by Patrick R. Larcom

June Veinott Award
To the female student who, at the end of her first year of study, shows the greatest promise of being successful in the engineering profession.
Chelsea A. Stevenson
Presented by Domenico Grasso

Tau Beta Pi
For outstanding academic achievement and extracurricular participation
Presented by Patrick R. Larcom

-FIRST-YEAR STUDENT AWARD
-Michal Ursiny

-SOPHOMORE AWARD
-Joseph R. Krupa

Tau Beta Pi/John O. Outwater Prize
To the outgoing president of Tau Beta Pi who, by virtue of the office, has demonstrated skill, tact and initiative
Patrick R. Larcom
Presented by John O. Outwater

Society of Women Engineers Award
For the greatest contribution to the activities and objectives of the student chapter of the Society of Women Engineers
A. Gabriela Garay Romero
Presented by Alaina S. Dickason
Special Recognition Awards

Presented by Domenico Grasso, Dean
College of Engineering and Mathematics

University of Vermont

Student Engineer of the Year Award
For outstanding scholastic achievement and participation in University-related activities

Presented at the Vermont Society of Professional Engineers annual banquet held on February 23, 2007.

Nominees: Alaina S. Dickason, CEE
Patrick R. Larcom, ME
Christopher L. Palombini, EE
Justin S. Baillargeon, EMGT

The Brett Vincent Gorky - Dean’s Recognition Award
For an undergraduate student who has demonstrated extraordinary qualities of integrity and commitment to others through outstanding service to the faculty, staff and students of the College of Engineering and Mathematical Sciences

Established by Paul Gorky and Donna Young-Gorky in memory of their son, Brett Vincent Gorky

Volney Giles Barbour Essay Competition Prize
Students were challenged to write a creative, thoughtful and persuasive essay on “Engineering Thought: The Greatest Enterprise of the Human Mind”.

The prize is named in honor of Volney Giles Barbour, Professor of Engineering at UVM from 1869 to 1901.
To the recipient of the Brett Vincent Gorky – Dean's Recognition Award

These words taken from Brett's college application essay offer a glimpse into the person whose life was tragically cut short on February 10, 2005. “I don't believe in using directions when my imagination can take control. There have been countless instances when I needed either something for myself or others and I just did not have the resources to purchase it. So I would set out and design one of my own, and I would boundlessly persist and gather all of the required materials until I had everything I needed. I find myself designing better projects than most I would have bought. The one thing that sets me apart from others is that I will not stop until I am satisfied with the finished project.”

We learned Brett was a very creative person, who showed us at a very early age that engineering would always be one of his defining characteristics. When he was nine years old, he came to us (his parents) and asked to suspend his train set from the walls, so that it encircled his room. When told that it was really too large a project to tackle at that particular time, he asked “If I figure out a way to do it myself, will you let me?” We agreed, never expecting what would follow. Several days later, after giving the matter some thought, we came home from work to find that he had built thirty or so feet of a trestle system from Popsicle sticks and hotmelt glue and suspended his HO Trains from the ceiling using cup hooks and string.

Despite Brett's creative drive and ability to build many things he put his mind to, the one characteristic that people tend to remember most is his unassuming nature and the way he always seemed to look out for either younger people around him or the “underdog” in the class. Once, after observing a soccer team mate suffering the wrath of an angry coach, he came home to tell us that this treatment was not right considering his friend's learning disability. The coach, through no fault of his own, was unaware of this and was truly thankful when due to Brett's intervention the boy's family spoke to him regarding their son.

Drawing again from Brett's college essay, Virginia Satir once said “Feelings of worth can flourish only in an atmosphere where individual differences are appreciated, mistakes are tolerated, communication is open and rules are flexible—the kind of atmosphere that is found in a nurturing family.” We, the members of the Gorky family, hope that this scholarship helps you in some small way to not only achieve your dream, but also help nurture those people around you, as you continue your studies at the University of Vermont.

Paul Gorky and Donna Gorky
Phi Beta Kappa

A national honorary society for students who are selected primarily on the basis of high scholastic standing with emphasis on a broad distribution of liberal studies

New Initiates

Greggory P. Carpenter
Alaina S. Dickason
## Tau Beta Pi

National Engineering Honor Society

### Current Members

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<th>Justin S. Baillargeon</th>
<th>Patrick R. Larcom</th>
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<td>Alyssa J. Kennett</td>
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### Initiate

Tyson J. Toleczko
Chi Epsilon

National Civil Engineering Honor Society

Lance E. Besaw
Jaron Borg
Marcy E. Brownell
Alaina S. Dickason
Jesse S. Dunham-Friel
Matthew E. Estabrooks
Ryan S. Foster
Conrad R. Gagnon
Lindsay A. George
Scott J. Lozier
Nathan J. Maille
Katelyn R. Nichols
James L. Ross
Nathan J. Shaffer
Mark C. Smith
Laura J. Stone

New Initiates

Jaclyn D. Abrams
Callie E. Ewald
Ethan C. Garceau
Peter N. Larson
Leslie Lowder
Jeremy E. Matt
Karen M. Sentoff
Jessica E. Stanley
Kasi B. Walker
Mortar Board Honor Society

A national honorary society for senior students who are selected in recognition of outstanding service, scholarship, and leadership

Current Member

Patrick R. Larcom

New Initiates

Kenneth J. Adorisio
Michael F. Parks
Mu Sigma Rho

A national honorary society for undergraduate and graduate students studying statistics

Current Members

Trevor R. Brooks
Cris A. Folley, Jr.
Yu Hao
Lulu Huang
Sujit K. Paul
Rajani Rajbhandari

New Initiates

Trevor R. Brooks
Anastasia Krymkowski
Upsilon Pi Epsilon

Computer Science Honor Society

Current Members

Peter C. Chapin       Lam T. Pham
Thomas McLeod        Charlotte E. Pratt

Invitees

Kenneth J. Adorissio     Jessa L. McCartney
Mohammed H. Al-Kateb     Jie Pan
Nagi Basha              Jonathan A. Parker
Karen M. Clark          Joshua L. Payne
Drew C. DeHaas          Daniel J. Perillo
Christopher C. Egner     Colin B. Rickert
Paul N. Haake           Wesly J. Riley
Qiang Jing              Charles P. Robinson
Ian M. Kavanagh         Ekaterina O. Simonova
Biyu Liang              Tri Tran
Ronald B. Magnuson      John H. Uckele
Hasmik Manuelyan        Lingbo Yu
Sigma Xi

The Scientific Research Society, Sigma Xi, is the global honor society of scientists and engineers that recognizes scientific achievement. Its mission is to enhance the health of the research enterprise, foster integrity in science, and promote the public’s understanding of science for the purpose of improving the human condition.

Current Members

Alaina S. Dickason

Invitees

Ryan S. Foster
Christopher L. Palombini
Nathan J. Schaffer
Laura Balzer was one of 300 undergraduates selected from throughout the United States from more than 1500 highly qualified nominees for the 2007 Goldwater Scholarship Award, the purpose of which is to address current and future shortages of highly qualified scientists, mathematicians and engineers, and to support the education of outstanding individuals. Awardees are determined by an independent review committee appointed by the Barry M. Goldwater Foundation. The Foundation considers the nominee's field of study, career objectives, and their commitment and potential to make significant contributions to their field.

Laura Balzer, a native of Connecticut, is currently a junior majoring in applied mathematics, with a minor in chemistry and statistics. “I’ve always loved math,” Laura explains. “Mathematics is the search for the truth while other disciplines like philosophy only talk about the truth. It is solving problems and finding an answer you know is right.”

At UVM, Dr. Daniel Bentil introduced Laura to the ways in which mathematics can be used to solve healthcare problems and help others. Laura has joined Dr. Bentil to create models and computer programs that simulate mass action and Michaelis-Menten reaction kinetics. Dr. Bentil describes Laura as “an excellent researcher as well as an excellent interdisciplinary, undergraduate mathematics student …she is a gifted and dedicated student who exhibits a combination of the best attitudes of leadership and concerned care for her work.”

Laura spent five weeks this past summer volunteering in a service-learning program in Guayaquil, Ecuador, caring for children suffering from malnutrition. This new awareness of ‘how fragile life is’ changed her. She considered becoming a doctor, but working with Dr. Bentil has allowed her to combine her love for mathematics with her passion to help people. Using mathematical models, finding solutions to health care problems, and applying statistics to create preventative medicine programs are powerful ways to save the world. Laura plans to write an honors thesis with Dr. Bentil on the mathematical modeling of blood coagulation.

Laura is an active member of Tae-Kwon Do Club, and the only math major in the Society of Women Engineers (SWE) at UVM. She also participates in the Honors College Leadership Committee, volunteers at the Food Bank, and tutors students. Domenico Grasso, Dean of the College of Engineering and Mathematical Sciences, describes Laura Balzer as “a true leader able to recognize need and take appropriate action. We are proud of her accomplishments, and pleased she has received this award.”
Scholarship Awards
within the
College of Engineering and Mathematical Sciences

Nathan M. Abbott Engineering School
Michael Boudreau Scholarship Fund
Lucy & Charles W. E. Clarke Scholarship
Allan Couch Memorial Scholarship Fund for Civil Engineers
Clarence H. Drown Scholarship Fund for Civil Engineering
L. Richard Fisher Scholarship Fund
Wilfred & Sylvia Hill Scholarship Fund for the
College of Engineering & Mathematical Sciences
Robert & Cynthia Hoehl Scholarship Fund
The Stephen C. Knight, Jr. Civil & Environmental Engineering Scholarship Fund
Neal Margulis Scholarship Fund for Electrical Engineering
Robert S. Murch Scholarship for Excellence in Electrical Engineering
Edwin J. O’Connell Scholarship Fund
Lillian Bryan Proctor Memorial Award
Earl Charles Sawyer Fund
Joseph S. Smyrski Fund
Stanley-Maynes Scholarship Fund
Richard A. Swenson Scholarship Fund
Lawrence T. Sullivan Scholarship Fund
The Hundal Family Scholarship

The Hundal Family Scholarship was established in 2006 by Mahendra S. Hundal, Professor Emeritus, who joined the mechanical engineering faculty at the University of Vermont in 1967 and served with distinction until his retirement in 2001. Dr. Hundal was chair of his department, taught a broad spectrum of undergraduate and graduate courses, and played an active role in its graduate program. An internationally respected expert on mechanical design, Dr. Hundal is the author of several books, including “Mechanical Life Cycle Handbook: Good Environmental Design and Manufacturing,” which reflects his longstanding interest in the environment. He is a lifelong member of the American Society of Mechanical Engineers and member of Tau Beta Pi.

The College of Engineering and Mathematical Sciences is honored that Dr. Hundal has chosen to recognize the academic achievement of an undergraduate student pursuing a degree in Mechanical Engineering.

The recipients of the 2007 Hundal Family Scholarship are

Matthew D. Christensen
Michal Ursiny
Dean’s Student Ambassadors

Students are invited to be Dean’s Student Ambassadors because of their demonstrated leadership and dedication, on the recommendation of the faculty of the College. As ambassadors, they represent the college at open houses and visitation days; talk with prospective students and their parents; serve on student panels; lead tours of college facilities; and this year contributed to an email campaign to prospective students. We are pleased to recognize and thank these incredibly mature, enthusiastic, leaders of engineering thought in the 21st century.

Geoffrey K. Abbott
Jacqueline E. Bell
Melanie M. Brown
James M. Buck
Christopher B. Connor
Alaina S. Dickason
Travis M. Gang
Betsy M. George
Mamata Hegde
Alyssa J. Kennett
Patrick R. Larcom
Thomas McLeod
Phoenix Mourning-Star
Michael C. Murray
Andrew O’Brien
Michael F. Parks
Eric E. Skiba
Heather L. Taylor
Ashley R. Truax
The Honors College provides selected students from across the University with Honors courses and extracurricular activities to enrich their undergraduate experience. Students enter the Honors College in either their First Year (by invitation) or Sophomore year (by a competitive application process based upon First Year performance).

**Juniors**

Kenneth J. Adorisio  
Laura B. Balzer  
Zachary H. Burchman  
Jonathan A. Parker  
Michael F. Parks  
John Wiechecki

**Sophomores**

Barbara J. Dewey  
Lucas H. Faryniarz  
Connor P. Hayden  
Clay C. Murphy  
Eric D. Shepard  
Mark J. Suozzo  
Connor J. Tobin  
Joshua J. Wheeler

**First Years**

Rachel K. Beauregard  
Ravi Bidichandani  
Shawn L. Bonneau  
Kyle N. Booth  
Rachel B. Conrad  
Michael C. Desmarais  
Rebecca L. German  
Erica M. Hodulik  
Auston B. Maynard  
Brent M. Meunier  
Catherine N. Solsvig  
Michael T. Torchio  
Laura K. Townsend  
Zheng Jing Zheng
Dean’s List

Those full-time students who stood in the top 20 percent of their class in the College of Engineering and Mathematical Sciences during the preceding semester.

Kenneth J. Adorisio
Mina Aghareza
Ian A. Anderson
Laura B. Balzar
Michael J. Barnes
Rachel K. Beauregard
Nelson N. Bernardo
Michael J. Bogue
Shawn L. Bonneau
Jaron L. Borg
Trevor R. Brooks
Marcy B. Brownell
William J. Buchanan
Zachary H. Burchman
Gregory O. Burtt
Greggory P. Carpenter
Gregory M. Chere
Matthew D. Christensen
Sabin J. Clark
Christopher B. Connor
Rachel B. Conrad
Andrew S. Cooper
Nathan B. Dagesse
Brett D. Davis
Justin E. Davis
Caeli A. Decker
Jason A. DeCoteau
Michael C. Desmarais
Barbara J. Dewey
Alaina S. Dickason
Sean R. Donovan
Rachel M. Dubuque
Jesse S. Dunham-Friel
Halen A. Earle
Christopher C. Egner
Lucas J. Faryniarz
Jacob M. Flanigan
Ryan S. Foster
Adam M. Fox
Megan R. Foy
Abby G. Frazier
Thatcher S. Friant
Travis M. Gang
Dana M. Geer
Rebecca A. Geiger
Anthony W. Gervais
William M. Harris
Connor P. Hayden
Benjamin D. Johnson
Nathaniel J. Jordan
Elizabeth S. Jorgensen
Travis N. Kale
Ian M. Kavanagh
Shanta B. Keller
Brendan R. Kerin
Joseph S. Kuppa
Anastasi Krymkowski
Leslie V. LaHaye
Jared C. Larson
Mark K. Leach
William J. Longley
Scott J. Lozier
Matthew J. Maile
Evan W. Malina
Meghann J. Manson
Auston B. Maynard
Christopher S. McGinty
Brent M. Meunier
Clay C. Murphy
Katelyn R. Nichols
Christopher D. Offensend
Benjamin J. O’Rourke
Asa P. Parker
Jacob L. Patterson
Christopher T. Peterson
Nathan A. Pion
Kelsey A. Pirie
Elizabeth A. Pruitt
Nathanael D. Rogers
Daniel I. Sawhill
Eric D. Shepard
Evan N. Speer
Chelsea A. Stevenson
Mark J. Suozzo
Corinna S. Thompson
Jennifer N. Thompson
Loren O. Thompson
Connor J. Tobin
Michael T. Torchio
Ashley R. Truax
Juergen Uhl
Michal Ursiny
David M. Valente
Justin D. Wåaag
Michael W. Walker
Justin M. White
Stephen J. Widdis
John M. Wiechecki
David Zhang
Zheng Jing Zheng
Barrett Scholarship Awards

The Barrett Scholarships are sponsored by the Barrett Foundation, which was established by Richard Barrett, a mechanical engineering alumni of the University of Vermont. This year, five undergraduate students from CEMS were selected. These competitive awards provide operating funds and a stipend to outstanding undergraduates who wish to pursue environmental engineering summer research projects under the mentorship of a faculty member.

Charles F. Farmer
(Junior)  Microbially Induced Calcite Precipitation for Civil Engineering Applications

Peter N. Larson
(Junior)  Structural Analysis of the Shelburne Farms Breeding Barn using Strain Gauge Accelerometers

Jeremy E. Matt
(Junior)  Applications of Neural Network Analysis: Pollutant Contamination

Karen M. Sentoff
(Junior)  Stream Temperature as an Indicator of Aquatic Habitat Quality for Coldwater Fish

Iliana M. Vazquez-Spickers
(Junior)  Role of Fuel Additives on Light Duty Vehicle Tailpipe Emissions
URECA PROGRAM
Undergraduate Research Endeavors Competitive Awards

URECA is administered through the Dean of the Honors College and the Faculty Senate Research, Scholarship and Graduate Education Committee, of the University of Vermont. URECA is a program designed to stimulate the undergraduate research with faculty mentoring. This student-faculty research program is designed, under the guidance of faculty mentors, to stimulate student research; to incorporate research experience more fully into undergraduate education; and to provide incentives for students and faculty who engage in meaningful research collaboration.

The following research projects were funded through URECA:

- **Charles F. Farmer**
  Civil Engineering
  Applications for Microbially Induced Calcite Precipitation

- **Stefan S. Hermannsson**
  Civil Engineering
  An Experimental Study on the Effects of Paper Pulp as an Additive to Cob for Sustainable Earthen Infrastructure

The following research projects were funded through URECA with co-funding through the NASA Space Grant Consortium:

- **Greggory P. Carpenter**
  Electrical Engineering
  Integrating RFID and Mobile Robotic Hardware in a Swarm Scheme

- **Travis M. Gang**
  Mechanical Engineering
  Determination of Atomic Force Microscopes Finite Element Modeling for Nano Mechanical Analysis
Following the award presentations there will be a reception in the Great Hall and Apse of the Billings Student Center.