



WISP Newsletter

Feb. 9, 2004

http://www.dartmouth.edu/~wisp/archive_intro.html

Volume 13, Issue 11

From the WISP Office

Dear Readers,

My thanks to Career Services Science Advisor Ursula Olender and our WISP student panelists for providing important insight and advice during last week's internship information session. Evelyn Mervine '06, Irene Onyeneho '04, Kate McManus '05 and Katie Farmer BE all shared wonderful stories and advice based on their own personal internship experiences. I encourage

readers interested in finding an internship to learn about the resources available at both Dartmouth and Thayer School Career Services and to continue monitoring the [WISP Summer Opportunities Bulletin posted on the WISP website](#). There are many opportunities available but deadlines are approaching so do get started on those applications.

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Each summer the National Science Foundation provides opportunities for undergraduates all over the country to conduct research through the Research Experience for Undergraduates Program (REU). The program allows students to work closely with faculty members, post-docs, and graduate students at participating institutions on a research project in a field of science, math, or engineering. It is also an opportunity to meet other undergraduates with similar interests. Program participants are granted stipends and, in some cases, housing and travel accommodations. Most of the applications are due in March.

To learn more, visit the NSF/REU website at <http://www.nsf.gov/home/crssprgm/reu/start.htm> and go to "Search for an REU Site" for a complete listing of REU projects and host colleges and universities, as well as contact persons and program requirements. You can search by keywords to identify sites by particular research area or geographic location. Students must contact the individual sites for information and application materials. Although most of these opportunities state that they are available for sophomores or juniors, it's never too early to check out possibilities for the future and there's no harm applying even if you don't think you meet all the criteria. Take a chance!

There's a lot happening in February! To honor Black History month, check out "Black Women Scientists in the United States" by Wini Warren to gain a greater appreciation and knowledge of American black women scientists' successes and struggles. National Engineers Week will be held February 22-28, 2004 and there's something for everyone from K-12 students, undergraduate and graduate students, teachers and engineering professionals. Check out the activities and meet some engineers on the web site at www.eweek.org.

Stay warm,

Kathy

Kathy Scott Weaver, Assistant Director of WISP

 **WISP Programs & Events** 

Dinner with WISP Physicist Feb. 12

WISP is especially thrilled to announce the February 12-13 visit of the first WISP intern to return to Dartmouth to give a science colloquium!

WHAT: Student Dinner with Dr. Karen Daniels '94, former WISP Intern

WHEN: Thursday, February 12

WHERE: Collis 218

TIME: 5:30-7:00 PM

Open to all undergraduates and graduates
RSVP needed by February 11.



Karen Daniels, Dartmouth Class of 1994 and former WISP intern, now Karen Daniels Ph.D., a postdoctoral research associate in the department of physics at Duke University, is looking forward to meeting undergraduate and graduate women involved with WISP. During her Dartmouth years, Karen started her research career as a WISP intern in the engineering school with Professor Al Henning, then participated in the Presidential Scholars Program and completed a senior honors thesis with Physics Professor Mary Hudson entitled, "Atmospheric Electroglow in the Equatorial Region of Jupiter". As an undergrad, Karen was active in the DOC, lived in Foley House, and played in the orchestra. Following several years of teaching at a private school, Karen entered Cornell University, receiving a masters of science degree in 2000 and a doctoral degree in 2002.

Karen was interviewed last summer by Jane Viner '05 for the WISP newsletter. That article is now posted on the WISP Alumnae Voices: On & Off the Beaten Path column. You can read the interview at http://www.dartmouth.edu/~wisp/alumnae_voice_081103.html.

If you are interested in attending Karen's physics colloquium, details are included in the Colloquium section of this newsletter.

Heads Up!

Make sure to mark these upcoming WISP events on your calendar

FAST talk buffet lunch

Join us for WISP's **February 19** FAST talk buffet lunch with faculty from Dartmouth College Psychology and Brain Science Dept. and DHMC Psychiatry Dept. Details TBA.

"Science is Like Popcorn"

**February 25
12:30-2PM
212 Collis**

Lunch with science writer **Nancy Serrell**

Nancy Serrell has led a varied life as a science journalist. From science reporter to feature writer to Senior Science Writer for Dartmouth College's Office of Public Affairs , Nancy is currently Outreach Coordinator/Legislative Liaison for Dartmouth's Toxic Metals Research Program and Associate Director for Outreach for the Center for Environmental Health Sciences. Nancy is interested in the relationship between scientists and culture and believes that science journalists benefit from a broad education that includes social sciences and the humanities. Please join us to learn how Nancy combined her science interests and writing skills into a science writing career, and how "science is like popcorn"-full of surprises!

Interns Share Experiences and Advice at the Annual Checkpoint Dinner

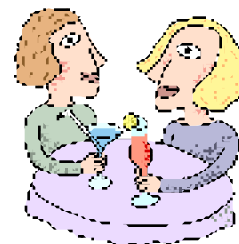
Despite midterms and busy schedules, most interns were able to meet last Thursday for the annual Internship Checkpoint Dinner held in Brace Commons. Fortified by plenty of Panda House food, they gathered in small groups to share what they were learning in their internships as well as get better acquainted with each other. In no time, everyone was swapping stories and getting acquainted. Past WISP interns helped facilitate these discussions, adding their own wisdom and assurances about navigating an introductory research experience. We want to thank Jill Ladegard '04, Meryl Richards '05, Sonia Simmons '06, and Sumintra Wood '06 for facilitating the first session and Merrick Johnston '05, Kate McManus '06, Maaza Mehzun '04, Irene Onyeneho '04, Maya Srikanth '04, Jane Viner, '05, and Chelsea Wood '06 for facilitating the second session. After the small group conversations, everyone was asked to share one statement about their internship with the entire group--perhaps a bit of advice or an insight about the internship experience.

Peer Mentor Program Update!

A message from WISP Peer Mentor Program Coordinator, Hyon Jae Lee '05...

Winter term is going by in a flash, and the term is already halfway over! Hopefully, mentors and mentees have had a chance to meet up and reconnect again by now. If not, there's still time! Blitz your mentor or mentee and check up on how she's doing!

The Peer Mentor Program held an Internship/Summer Opportunities Information Session on Thursday, Jan 29th. The event fostered the exchange of valuable information on finding and applying to internships for the summer or off terms, with Ursula Oleander from Career Services and several student panelists speaking for the night. If you were unable to make an event and would like to pick up the handouts from the event, please drop by Kathy Weaver's office in the WISP Office (the Parker House).



**Mentoring this month....
Student-faculty dinner**

As its last program of winter term, the Peer Mentor Program is planning a student-faculty dinner with a limited number of students and several excellent women science

professors suggested by Peer Mentor Program Participants. The purpose of this event is to encourage casual and personal interaction between a small group of students and several professors to talk about anything from what working in the world of scientific academia is like to what the professors' interests are and how they incorporate into their work and their lives. Keep your eyes open for more information about that event! It is tentatively schedule for the end of February.

Enjoy the rest of winter term, and have a fun winter carnival!

Hyon Jae Lee '05
WISP PMP Coordinator

MentorNet Update

There is still time to sign up for the benefits of having an industry e-mentor this year through MentorNet, the electronic mentoring network for women in science and engineering. Students are still signing up, and selecting One-on-One mentors, on a daily basis.



There are currently 23 Dartmouth students participating in the MentorNet community. Nine of these students are matched with scientific mentors from companies like Ford, Intel, IBM and Los Alamos National Laboratory. There is still a good pool of wonderful mentor volunteers available particularly, but not exclusively, in the computer science/engineering fields.

Here is an opportunity for women studying science, mathematics or engineering to get "real world" information, encouragement, advice, and access to professional networks from professionals working in your field.

MentorNet's One-on-One Mentoring Programs pair women undergraduate and graduate students and postdocs as protégés with female or male professionals from all sectors as mentors for one-on-one, email-based mentoring (e-mentoring) relationships.

MentorNet's flagship Industry E-Mentoring Program is for protégés interested in working in industry or at a government laboratory or agency, while the Academic Career E-Mentoring Program (new for 2003) is for graduate students and postdocs interested in a faculty career.

The program has proven effective by providing "real world" information, encouragement, advice, and access to networks that are otherwise often unavailable to women students in the male dominated fields of engineering and science. This is why over 90% of participants would recommend MentorNet's e-mentoring programs to a friend or colleague.

How can you find a mentor?

- 1) Join the MentorNet Community.
- 2) Sign in to the Community and follow the One-on-One Mentoring Programs links to create a protege profile.

For more information, please go to www.MentorNet.net.

Don't forget to monitor the WISP bulletin for up-to-date information on events and opportunities of interest to women in science.

Feature Article

Why Janie Can't Engineer: Raising Girls to Succeed

In this excerpt from an article by Pat McNeese, we get a glimpse of the influence current women in science have on the next generation of female scientists. Introduction by WISP Feature Writer Jane Viner '05.

I recently decided to do a little online shopping for my wonderful, bright, sensitive eight-year-old goddaughter. As her 'fairy godmother,' I had high hopes for finding her something spectacularly cool while educational at the same time. I started searching the Internet and bumped into my old friend, Barbie™. I explore Barbie™'s website: <http://barbie.everythinggirl.com/>.¹ While the pink sparkly graphics gave me a sugar high just looking at them, I was not sold on anything. Disappointed, I gave up for the time being and resolved to look again later.

My faith in Barbie was renewed when I read a selection from Pat McNeese's National Science Foundation best selling book, *New Formulas for America's Workforce: Girls in Science and Engineering!*² where I read about a new way to play with Barbie! "Tools and Technology (TNT)" camp for Midwestern seventh grade girls to engage them in hands on physics activities. One of the projects was building a siege engine — a medieval invention to launch objects. Using their own models, "they catapulted the head of a Barbie doll, to mimic the practice of launching diseased corpses over castle walls, to introduce disease among the besieged. Nestling Barbie's head in a sling, they tugged a rope, released a lever, and launched the doll's head in an arc across the college lawn. Her head was too light. By stuffing it with lead sinkers they made it heavy enough to launch."³ This hands-on physics experiment demonstrates how inquiry, teamwork, physics principles, and the use of tools can coalesce into an awesome experience.

In the National Science Foundation book, *New Formulas for America's Workforce: Girls in Science and Engineering*, Pat McNeese summarizes what investigators on 224 projects have learned about how to get more girls and women to study for careers in science, technology and engineering.⁴ Access the bestseller at: www.patmcneese.com.

Pat McNeese also wrote the article, *Why Janie Can't Engineer: Raising Girls to Succeed*,⁵ that highlights ways we can all encourage girls' interests in the sciences. The following excerpt is reprinted by permission of the author:

Parents and teachers expect different things from girls and boys, for example, which affects how they perform and often limits what they learn -- and what they expect from themselves. Some of the best guidelines for working with young girls came from a Girls Inc. project called Teaching Smart:

- **Help girls get past the "yuck" factor.** Science is messy, so put aside your desire for clean girls and surfaces. Girls who are afraid of getting dirty aren't born that way -- they're made. In after-school science programs, girls all over the nation are being encouraged to get messy, explore, analyze, dissect, hypothesize and make mistakes. (In middle school, when girls begin disappearing from the science track, single-sex science activities help them embrace the messiness and uncertainty of science, away from boys who tease them and hog computers.) As an adult, you can help girls resist the pressure to behave in "feminine" ways. Encourage them to get good and grubby: to dig in a riverbed, change a tire or explore

¹Mattel, Inc. *Barbie.com* (2003) Available at <http://barbie.everythinggirl.com/> (8, Feb. 2004).

² Pat McNeese, *New Formulas for America's Workforce: Girls in Science and Engineering* (2004). Available at <http://www.patmcneese.com/work1.htm> (7, Feb. 2004).

³ *New Formulas for America's Workforce*

⁴ *New Formulas for America's Workforce*

⁵ Pat McNeese, *Why Janie Can't Engineer Raising Girls to Succeed*. Washington Post, Tuesday, January 6, 2004; Page C09. Available at <http://www.patmcneese.com/work2.htm> (8 Feb. 2004).

an engine. Let them learn they have a right to be themselves.

• **Let girls make big, interesting mistakes.** Girls who are overly protected in the lab or on the playground have few chances to assess risks and solve problems on their own. If teachers are doing things right, once-dreaded mistakes become hypotheses. Girls are urged to go back to the drawing board to figure out why their newly assembled electric door alarm doesn't work or why their water filter gets clogged. (Teachers tend to push boys, but not girls, past their initial frustration on such projects.) Supported by adults instead of rescued, girls learn to embrace their curiosity, face their fear and trust their own judgment.

• **Assume girls are interested in math, science and technology.** Too many girls -- and children of color -- still get the message that math and science aren't for them. Given encouragement and the right setting, girls jump at the chance to dismantle machines, build rockets, care for and study insects and small animals, and solve logic puzzles.

Encouraging girls to learn and experiment -- to take risks and learn by doing -- helps them feel empowered and self-confident enough to try things they otherwise would not try. But many of the adults who help them must first overcome their own acquired resistance to, or dread of, science and technology.

Girls -- indeed, most students -- respond best to hands-on science. A great way to squelch their interest in science is to "demonstrate" it while they watch. Another is to play "guess the right answer," as if all they can do is master a completed body of knowledge (a useless quest as scientific knowledge routinely becomes outdated). In most schools, teachers need a chance to experience hands-on science education before they can figure out how to engage students in it. Hands-on workshops can give them, too, the chance to experiment, be messy, make mistakes and capture the spirit of scientific inquiry. And getting parents involved in hands-on activities (such as making two batches of ice cream, using different amounts of salt, and comparing the rate at which the batches freeze) helps them understand that engaging in science is much more than avoiding wrong answers on a test. Getting caught up in their children's science activities sometimes lights fires and opens doors for the mothers, too.

Girls of all ages like math and science to be useful and relevant to their everyday lives. A college course on how to take apart a computer and put it back together attracted 300 male students and no young women -- until the announcement describing the course changed, to say that the computers they worked on would later be given to needy schools. Then the women signed up.

Similarly, math problems on a computer program called Animal Watch engaged girls' interest because calculations involved saving endangered animal species from extinction. Most girls -- and minority students -- want to know how what they're learning can be applied in real life. Engineering takes on meaning when students have to navigate a campus in a wheelchair (or wearing spectacles smeared with Vaseline, to get a sense of navigating nearly blind) before being asked to design handicapped-accessible facilities.

Not all girls are alike. Some already know they like math and science and just need connections made and barriers reduced. Some have yet to discover that math, science, and technology are for girls. For them, it's important to arrange for exposure to role models they can look up to (the younger, the better), who convey how "cool" it is to do science -- and show them a possible future, in which there is more than one way to use a Barbie doll.

News & Events of Interest

EVENTS EVENTS

On-Campus EVENTS!

EVENTS EVENTS

18th Annual Neuroscience Day

The 18th Annual Neuroscience Day at Dartmouth will be held on **Friday, February 13, 2004** at the Dartmouth-Hitchcock Medical Center campus. This is a wonderful opportunity to learn of the scope of neuroscience-related studies at Dartmouth. All those with an interest in neuroscience are encouraged to attend.

Dartmouth faculty, postdoctoral fellows, graduate and undergraduate students with neuroscience related research presentations are encouraged to submit an abstract and present a poster at the event. Submissions from 1st author undergraduate/graduate students, postdoctoral researchers, residents and house staff will be considered for a 15 minute oral presentation during the morning session.

To register (free), obtain further information, the event's schedule, and poster submission instructions, visit: <http://www.dartmouth.edu/dms/ncdday/> or contact **Barbara Atherton** at the Neuroscience Center (650-8561).

Women and Race: A Retreat

When: February 20-22, 2004

Where: The Boat House

What: A retreat focusing on gender and race in the context our hopes, fears, images and assumptions about segregation/congregation/integration/friendship/coalition.

Our conversations will range from the local -- campus experiences/environment, to the global -- economic realities for women around the world.

We are committed to also attending to the ways spirituality, money and class, and sex(uality/ies) shape our perspectives and lives. We will employ a variety of teaching and learning modes -- from individual reflection and creativity to group activities, and from intellectual speculation to emotional/interpersonal exploration. Our hope is that this time away from everyday responsibilities and distractions will allow women of different races and ethnicities to develop shared understandings of both common concerns and differing experiences and/or priorities.

Due to limitations of space and budget, participation will be determined through an application process, which is available by blitzing "**CWG**" and must be submitted by **February 10, 2004**. We hope to have room for up to 30 participants.

The retreat is sponsored by the Women of Color Collective and Becoming an Ally: White Women and Race, with support from the Office of Pluralism and Leadership (OPAL), the Center for Women and Gender, the Bildner Foundation, the Office of Institutional Diversity and Equity, and the Dartmouth Outing Club.

Did you miss “Just for Juniors”?

Hey 05's, Planning to be OFF IN THE SPRING?? Thinking about applying to a JOB or to GRAD SCHOOL next year?

Did you miss "Just for Juniors" Monday night?

Please stop down to Career Services and pick up the booklet: "Just for Juniors: Top 10 Tasks For Your Junior Summer!" SO YOU WON'T BE LEFT BEHIND when it comes to being ready to take advantage of opportunities in the fall!

Completing these 10 steps before the end of summer will put you FAR ahead of your peers for success during your senior year!

You can also make an appointment when you stop in with one of our 5 career counselors to talk out your plans-or set one if you have no idea what you want to do! (or call 6-2215)

Questions? Blitz "**csrc**" for help!

NEWS NEWS

On-Campus NEWS!

NEWS NEWS

Interviewing SLAMs

Announcing the arrival of Interview SLAMs (Students Learning and Actively Mentoring), an interactive mock interview workshop. Developed by Tuck MBA students, faculty and the Tuck Career Development office, the Interview SLAMs program allows for students to [practice, observe, and refine interviewing skills](#).

Participants will be exposed to a variety of interview questions and answers and will receive feedback in a succinct and fast-moving format. Students benefit by taking turns as the interviewer and the interviewee and also by providing feedback and listening to the comments of other students.

Because of the interactive nature of this session, each SLAM program is limited to five participants plus one Career Services facilitator. **To reserve a spot in a program, stop by Thayer School Career Services in Cummings Room 135 to sign up.** (Note: Participants must bring five copies of their resume to the session for sharing with the group).

Currently scheduled programs are as follows:

Tuesday, February 10, 1-2 pm
Thursday, February 12, 1-2 pm

NEWS NEWS

OFF-Campus EVENTS!

NEWS NEWS

National Engineers Week 2004

National Engineers Week will be celebrated **February 22-28**.

The 2004 program is chaired by IEEE-USA and Fluor Corporation. For more information, visit www.eweek.org. (You'll find lots of good stuff to download!)

If you'd like to receive the EWeek e-newsletter, write to eweek@nspe.org.

Science Fair Judges Needed

Windsor High School is planning their annual science fair for Wednesday, March 3 from 8:15 to 12:00 and is in need of 10 judges (grad students, faculty, anyone knowledgeable about science). Each judge will evaluate 25 projects (there will be 50 projects in the science fair, so you will only see half of the projects) by talking to the student who completed the project and reading their display presentation. The winning projects will advance to the Vermont State Science Fair, so having good judges is critical in determining the best projects. If you are interested in what high school students are doing these days, available on March 3, and willing to be a judge at the Windsor Science Fair, please e-mail jennifer_townsend@windsor.k12.vt.us



Thanks in advance for your participation.

Jennifer Townsend
Windsor High School

Space Career Fair



Looking for a job that's out of this World?

The space industry is looking for you! Combine your education and talents with your interest in space. To find out more about opportunities in the space industry, make plans to attend the Space Career Fair for College Students, hosted by the Space Foundation, its Corporate Members and sponsoring companies.

Who: Undergraduate and Graduate Students with a valid Student ID

What: Space Career Fair for College Students

Where: 20th National Space Symposium at the Broadmoor Hotel, Colorado Springs, Colorado

When: Tuesday, March 30, 2004

How: Register online at www.spacesymposium.org, click on "Education" and "Student Information" OR e-mail custserv@spacefoundation.org

Cost: \$15 registration fee includes lunch (by March 26th)



HEY GRADUATE STUDENTS!!!



Research Technician Position

Smithsonian Environmental Research Center
Edgewater, Maryland 21037

Available in February 2004

The technician would work with a team of scientists, students, and technicians on a three-year NSF-funded study of the biogeochemistry of nitrogen and phosphorus in the Patuxent River estuary. Fieldwork would include collecting sediment cores from a small boat and servicing automated stream monitors. Lab work would include incubating sediment cores under a variety of experimental conditions and analyzing nitrogen, phosphorus, and other materials in water and sediment. Experience in analytical chemistry is desirable. The annual salary range is \$27,000-\$33,000, depending on qualifications, and a full benefits package is also offered. The Smithsonian Institution is an equal opportunity employer, and women and minorities are encouraged to apply.

Contact:
Thomas Jordan
Smithsonian Environmental Research Center
Edgewater, Maryland 21037
jordanth@si.edu

Microsoft Internship Opportunities

Deadline to Apply: **Feb. 15th**

Microsoft
Various Software Development INTERNSHIP Positions
Redmond, WA
www.microsoft.com/college

The following positions are available for internships:

- **Software Design Engineer**
- **Software Design Engineer in Test**
- **Software Test Engineer**
- **Program Manager**

Please specify in your cover letter, what position(s) you are interested in.

Apply through Career Services' MonsterTRAK system at www.dartmouth.edu/~csrc/ or address cover letter to:

Ms. Kristy Eide
Recruiting Coordinator
Microsoft
One Microsoft Way
Redmond, WA 98052

Oxford Bioscience Partners Analyst Position

Oxford Bioscience Partners is seeking to fill an Analyst level position in our Connecticut office to complement the existing team of investment professionals. Candidates for this position will have a scientific undergraduate or master's degree, likely in biology or chemistry and an aptitude for business and investing. This position is expected to last for approximately two years, after which time the Analyst would typically consider business school or other advanced graduate studies.

Expiration: Post until **March 15, 2004**

Job type: Venture capital

Company website: www.oxbio.com

Please submit resume and cover letter by email to: Scott Silverman, D.Phil. at ssilverman@oxbio.com

MO-STEP Graduate Fellowships

The Missouri Science Teaching and Education Partnerships (MO-STEP) Graduate Fellowships Program is seeking applications for ten NSF-funded graduate fellowships with the Department of Biology and the International Center for Tropical Ecology at the University of Missouri-St. Louis.

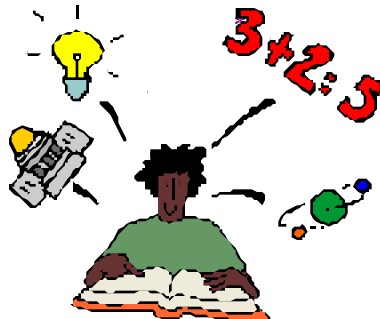
MO-STEP graduate fellows will be required to enroll in the M.S. or Ph.D. program in Ecology, Evolution and Systematics at UM-St. Louis and participate in the MO-STEP program as Teaching Assistants, working in five area high schools to enhance active learning in ecology and conservation biology.

Application materials and information packet can be obtained from:

Patricia Hinton
Department of Biology
University of Missouri-St. Louis
hintonpa@msx.umsl.edu
(314) 516-6203

Applicants must be United States citizens or US permanent resident aliens. Application review will begin on **March 31, 2004**.

Don't forget, this isn't all that's out there. Remember to monitor department bulletins for additional internship, scholarship, and grant opportunities!!



A great way to learn about new areas of science or more about your own field of interest is to attend a seminar in one of the many departments on campus that host a seminar series.

*

In each issue of the WISP Newsletter, we will post one or more of the many seminars taking place around campus. We encourage you to check department bulletins for weekly seminars and symposia.

JONES SEMINAR – THAYER SCHOOL OF ENGINEERING

"Missile Defense -- Against Whom? N. Korea and Iran or China and Russia?"

**Friday, February 13
3:30PM**

**Spanos Auditorium
100 Cummings Hall**

**Randall Forsberg
Institute for Defense and Disarmament
Studies**

COMPUTER SCIENCE

"Cell Talk"

**Tuesday, February 10
4PM
Filene Auditorium, Moore Hall**

**Bud Mishra
Professor of Computer Science & Mathematics (Courant Institute, NYU)
Professor (Watson School of Biological Sciences, Cold-Spring Harbor)**

PHYSICS

"Order and Chaos in Inclined Layer Convection"

**Friday, February 13
104 Wilder
2:00 PM**

**Dr. Karen Daniels
Dept. of Physics and Center for Nonlinear and Complex Systems
Duke University**

WOMEN IN SCIENCE PROJECT OFFICE & STAFF INFORMATION:	
We are located in: Parker House (Rooms 101, 106 and 107) HB 6243 Phone: (603) 646-3690 women.in.science.project@dartmouth.edu	
Mary Pavone	Director
Kathy Scott Weaver	Assistant Director
Christine Hoffman	Project Coordinator
Jane Viner '05	Communications Intern
Alex Do '05	Newsletter Editor
Hyon Jae Lee '05	Peer Mentor Program Coordinator
Chealsea Nather	Administrative Intern
Don Fitzpatrick	Webmaster