Honored Continued from page 1

comprising first-year physical sciences majors. Senior double-majors (Physics, Chemistry) James (Jimmy) Utterback and Lindsay Wills were recognized by the Goldwater Foundation. Jimmy was one of 278 recipients nationwide to win a monetary prize in recognition of his undergraduate research in the Andy Marcus lab. Lindsay won Honorable Mention, placing her in the top 500 nationally. Senior Alice Tasker was recognized for her leadership of the Society of Physics Students (SPS) with an award from the UO Holden Leadership Center. Alice is doing research with the Steck Group under NSF sponsorship. Senior Tamela Maciel, an undergraduate SPS leader, spent last year studying physics abroad at Bristol University with the help of a Study Abroad scholarship. Tamela is a past recipient of an APS Minority Scholarship and an Hispanic Scholarship Fund award.

Message from the Department Head

The Department is embarking on an extended and energizing period of hiring, with at least a dozen new hires anticipated over the next decade. Last spring we developed a major update of our long-range plan that will guide efforts to optimize our research, teaching, and service activities. We would be happy to provide copies of this plan upon request and to have your feedback. The University will work very hard to provide salary and startup funds for these new hires. An enduring difficulty for the Department, which will become increasingly serious as energetic young faculty populate their research groups, is support for graduate students. In the past 5-10 years we have developed an increasingly diverse portfolio for graduate student support that combines funds from traditional sources (university support, single investigator grants), funds from newer sources (group grants, for example, combining research and outreach activities), and a small but increasing quantity of funds from private sources. The Department is working hard to help faculty create innovative programs that will be targets for funds from all of these sources.

- Steve Kevan
kevan@uoregon.edu

2009 Incoming Physics Graduate Students

Eighteen new students started graduate school in the Oregon Physics Department this fall. The department welcomed this new group of students, who come to Eugene from all over the US (see below), and from Germany, Thailand, and India, as well.

Oregon Physics Undergrads Honored

2009 was a very good year for Oregon physics undergraduates as several were honored with significant awards. Sophomore Courtney Klos- terman was awarded an Intel Fellowship providing substantial support for her studies over four years. Courtney also serves as the student leader of Dean Livelybrooks’ Freshman Interest Group

Through individual physics faculty initiatives, the department conducts several educational outreach programs. Previous newsletters have reported some of these. (eg: “Quarknet”, Fall, 2008, and “GK/12 Education”, Spring, 2009) In this issue we describe another two of the department efforts, UCORE and OSDP.

UCORE brings 22-25 students annually from Oregon community colleges to the UO for summer research projects in the physical sciences. Participants in this NSF sponsored program, led by UO faculty Dean Livelybrooks, include first-generation college students, women, and people of color, who start their college careers in higher percentages on two year college campuses. After a ten week research experience, UCORE ‘Fellows’ return to their home campuses to tutor other students, do science demonstration shows, and re-invigorate science clubs. These activities ‘catalyze’ other students to enroll in and complete four year science and engineering degree programs. The program is coordinated by UO physics alum Kate Hulpke. A workshop for eleven similar programs was recently held at UO to discuss and plan future programs.

Optical Science Discovery Program (OSDP)

The OSDP, organized by Miriam Deutsch, is a week summer camp aimed at exploring optical sciences which takes place at UO every June. Twenty girls from Lane County middle and high school were awarded a $2,500 stipend to attend the camp. The program is coordinated by UO physics alum Kate Hulpke. A workshop for eleven similar programs was recently held at UO to discuss and plan future programs.

OSDP Summer Camp

Continued from back page

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Large Hadron Collider Workshops

Can Ducks and Huskies work together? In physics, yes. The UO and UW high energy physics groups have organized a series of small meetings to study physics issues for the Large Hadron Collider, soon starting up in Geneva, Switzerland.

The first workshop in Seattle investigated how best to determine, at the LHC, the properties of the Higgs boson, the last, so far undiscovered, particle in the so-called Standard Model.

Camp participants will remain in contact through a moderated Facebook page and return to campus regularly to participate in Spectrum Club during the school year. Club activities include monthly mailers depicting topics in physical sciences (e.g., forms of energy, sound waves, light and vision,) and suggested home experiments. On campus meetings are planned once a term.

Support the People & Programs of the Physics Department:

Donations to the Physics Department enhance our endeavors. Specific uses of donations from contributors include the following:

- Undergraduate research
- Undergraduate prizes for outstanding performance
- Graduate Teaching Fellowships for outstanding students
- Graduate student research and travel to academic conferences
- Lectures by visiting speakers
- Symposia and conferences hosted by the Physics Department
- Outreach lectures by department faculty and distinguished visitors

Ed Outreach Continued from page 1

Faculty News

Facility news is posted on the department web page: www.physics.uoregon.edu/news.

You will find recent news referring to Professors Bothun, Frey, Matthews, and Raymer. Also, please see the contact update for Professor Crasemann on the department webpage.

Alumni Profile - Daniel Smithey

Daniel T. Smithey (PhD 1993) is currently an entrepreneur and scientist focused on the discovery and development of new medicines for human health. He received his PhD in Physics at UO, in the field of quantum optics, working with Prof. Michael Raymer. Dan demonstrated the first experiment of any kind that reconstructed from measurements the complete quantum state of a system. In his particular case, the state of light mode. Dan’s main publication from this work has become a citation classic of sorts, with close to 700 citations in the literature. The concept of quantum state tomography, first demonstrated by Dan, has become a standard tool in quantum information and quantum computing research.

After the PhD, Dan joined Bend Research in Bend, Oregon, where he assumed the role of lead physicist in a company of chemists and biotechnologists. Recently Dan founded his own company in Bend: Agere Pharmaceuticals, which specializes in the identification of novel molecules for targeted drug therapy using combined analytical and mathematical methods, and predictive mathematical modeling for discovery assays, in vivo performance, dosage form stability, and process robustness. Dan observes that there are great opportunities in the pharmaceuticals industry for physicists, who can bring their rigorous thinking, physical understanding, and modeling skills to the problems there. Dan loves living in Eastern Oregon, with its wealth of outdoors and recreation opportunities.

Alumni Profile - Bo Hammer

Philip Walker “Bo” Hammer (PhD 1991) has followed a career path through many physics related administrative positions. He was an American Physical Society (APS) Congressional Science Fellow in 1993-94, working on the staff of the Subcommittee on Science in the U.S. House of Representatives. Bo then served as Director of the Society of Physics Students and Sigma Pi Sigma, the Physics Honor Society, and as Assistant Manager of the Education Division of the American Institute of Physics (AIP). He participated in President Clinton’s Forum on Science in the Public Interest, served on the APS Panel on Public Affairs, and on the U.S. House of Representatives 1997 roundtable on Early Career Scientists. Bo is past Chair of the APS Forum on Physics and Society, currently serves on the APS Council, and is President of the Haddon Heights, NJ, Board of Education. He is well known in the physics education community for his significant contributions and relationships across the spectrum of science education and science policy. Bo joined the National Office of the American Association of Physics Teachers (AAPT) as Associate Executive Officer this year. “Excellence in science education is key to our nation’s competitive and intellectual future,” said Hammer, “and I am excited to join AAPT as it leads the science community’s efforts to improve physics teaching and advance the understanding of physics.” “Bo Hammer brings a unique skill set and knowledge about physics education to AAPT. He is familiar with our programs and AAP’s community and is a significant addition to AAPT’s National Office,” said Dr. Warren Hein, AAPT’s Executive Officer.

Recent Physics Graduates


M.S. Ali Almaqwashi, Ryan Quitzow-James, Megan Ray, and Yan Sung.

Minors Patrice Amberlee, Stephen Harris, Adam Mali, Nathan Perlmutter, and Tobin Peyton-Levine.

B.A. Kim Yabut.

Outreach Lectures by Department Faculty and Students

Outreach lectures by department faculty and students include:

- Symposia and conferences hosted by the Physics Department
- Lectures by visiting speakers
- Prominent visitors to AIP Division of the American Institute of Physics (AIP).

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It is easy to join this effort. You may donate by credit card: https://support.uofoundation.org/index.php?Design=Physics%20Dept%20Fund

or from the Physics Department web page (www.physics.uoregon.edu). Your donation in tax deductible and you will receive confirmation for tax purposes. Donation by check, please mail your check directly to the UO Foundation.

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