

Newsletter

College of Physical and Mathematical Sciences

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The inaugural Joseph K. Nicholes University Citizenship Award in the Department of Chemistry and Biochemistry was presented to Steven Goates at the Department's annual award banquet, held on April 12, 2007. The award consists of \$10,000 placed in an unrestricted account to support the recipient's activities on campus.

The Joseph K. Nicholes award was established by an emeritus faculty member who wished to promote university citizenship in the broadest sense among the faculty in the Department of Chemistry and Biochemistry. The document establishing the award reads in part:



Goates Family

The recipient of the Chemistry & Biochemistry Joseph K. Nicholes University Citizenship Award is to be a faculty member in the Department with clear understanding of and dedication to the highest purposes of Brigham Young University. This faculty member will see a balance between the intensive, rigorous, and specific study in the major and the need for comparable attention and effort in religious and general education.

Joseph Nicholes, for whom the award is named, was chair of the Chemistry Department from 1946 through 1955. Nicholes told new faculty: "Remember that for your student, you are the university." The enthusiastic applause from both students and faculty that followed the announcement of Steven Goates, name served as a resounding endorsement of his selection as the first recipient of the award. For Goates' students, the university is a challenging, yet nurturing place. Students in his classes are presented with rigorous, well designed experiences that emphasize critical thinking over rote memorization. Goates' interest in his students extends far beyond chemistry. He patiently counsels students on all aspects of university education and consistently encourages them to challenge themselves beyond the limits of their majors. He has also been active at the university level in promoting and fostering general education.

Congratulations to Steven Goates on this well-deserved recognition.

BYU Professor receives national acoustic education award

William J. Strong, Brigham Young University emeritus professor of physics, was recently awarded the Rossing Prize in Acoustics Education from the Acoustical Society of America. The award will be presented June 6 at a society meeting in Salt Lake City.

The Rossing Prize in Acoustics Education was established in 2003 to recognize individuals who have made significant contributions to furthering acoustics education through outstanding teaching, development of educational materials and other activities. The award consists of a \$3,000 prize and a silver medal.

Strong received a doctoral degree in physics from the Massachusetts Institute of Technology in 1964. As a BYU professor, he studied the acoustics of musical instruments and the human voice, specializing in the behavior of vocal folds in the production of speech. His other teaching credentials include visiting professor appointments at

Gallaudet University in Washington, D.C. and the IRCAM Institute in Paris.

Strong has been honored with the BYU Alcuin Fellowship Award recognizing his teaching contributions, as well as a fellowship with the Fulbright Program. He is also a fellow of the Acoustical Society of America.

The Acoustical Society of America is devoted to the study of the science and technology of sound. The society publishes the "Journal of the Acoustical Society of America," a leading journal on acoustics, as well as Acoustics Today magazine and several books with new research.

BYU computer science students receive top honors

By Kiersten Nielsen

Heather Chan and Neha Rungta, two students from BYU's Computer Science Department, have been recognized as some of the top scholars in the nation and have been awarded two of the most prestigious scholarships in science and technology: the Goldwater Scholarship and the Google Anita Borg Memorial Scholarship, respectively.

Heather, a junior at BYU double-majoring in computer science and violin performance, has been named a 2007 recipient of the Goldwater Scholarship, the premier undergraduate award in the fields of mathematics, natural sciences, and engineering.

The Barry M. Goldwater Scholarship and Excellence in Education Foundation awarded 316 scholarships on the basis of academic merit for the 2007-2008 academic year. Over 1,100 students were nominated. Heather was one of only 12 computer science majors to be honored.

Heather works in Dan Ventura's Neural Networks and Machine Learning lab; her current research involves machine learning and signal processing applications to music identification and clustering. After graduation, she plans to pursue a Ph.D. in computer science and

hopes to eventually obtain a research position where she can focus on improving the efficiency and safety of today's technology.

Her scholarship will cover the cost of tuition, fees, book, and room and board.

Representing the graduate students in the department, Neha Rungta, a doctoral candidate in computer science, was named a 2007 Google Anita Borg Memorial Scholar.

Neha graduated Magna Cum Laude with a Bachelor's degree in Computer Science in December 2004 and received her Masters degree in Computer Science from BYU in December 2006. She is currently working in the Formal Verification Lab in the Computer Science Department under her advisor, Dr. Eric Mercer. Her research focuses on freeing software systems from critical errors before they are implemented in the real world. She recently published a paper in *FMCAD*, a top-tier venue for formal methods bringing together top researchers in academia and industry from all over the world.

The Anita Borg scholars were chosen on the basis of their academic performance, letters of recommendation, essays, and interviews. Each finalist went through three rounds of interviews and was then inter-

viewed by phone. Of this select group of women, Neha is one of only 20 from across the nation to receive the honor for 2007.

The scholarship she received is named in honor of Dr. Anita Borg, a computer scientist dedicated to encouraging women in their pursuit of meaningful careers in computer science and technology. After Dr. Borg's death in 2003, Google created the scholarship in her name. The women recognized with the \$10,000 award continue her tradition of exceptional research and contributions to the field. Alan Eustace, Senior Vice President of Engineering and Research at Google remarked, "Google is honored to be able to keep Anita's spirit alive by recognizing the achievements of these talented young women and helping them pursue careers in the technology sector."

In early April, Neha traveled to Mountain View, California, home of the Google "campus" to meet the other scholars, tour the Google complex, and participate in workshops on issues for women in computer science hosted by Google engineers and executives and representatives from the Anita Borg Institute for Women and Technology.

Thoughts from an Old Dean- Earl M. Woolley

During the final few weeks of my full-time BYU experience I have had occasion to reminisce about the experiences that brought me here. I first came to this campus in 1960 as a simple farm kid. I did not have to take the ACT exam to enter BYU. My small high school experience was unsophisticated. I grew up on a farm, so much of my flexible high school course work was based on that: shop classes where I learned to weld so that I could repair and build farm equipment, agriculture classes where I learned the details of nutrition for hogs and crop rotation, an FFA Chapter where I learned to judge cattle, etc. I enrolled as a high school senior in what was called "9th grade algebra." As a senior I also enrolled in my only high school science class: chemistry. My chemistry teacher would retire at the end of that year, and he was not very inspiring. I came to BYU because my family lived in Utah County, and I could afford to attend a university only if I could commute. I had wanted to attend Utah State University so that I could learn more about how to farm. Since I couldn't afford to live in Logan it seemed that the study of chemistry at BYU might allow me to be close to agronomy, and that would make me a better farmer.

At home I had learned one basic value that made it possible for me to succeed at a university: hard work. I worked hard while I was a student - and I didn't get sunburned, sweaty, and dirty while doing so. I had teachers who cared about me and who wanted me to understand chemistry, math, physics, and economics. My shy personality did not shine in those classes where I had to express opinions about people and events, but I found that it was quite enjoyable to deal with concepts and relationships that didn't depend upon opinions - in the physical and mathematical sciences.

As an undergraduate I never dreamed that my BYU experience would lead me to a faculty career, that I would become a professor, that I would be able to teach and do research, and especially that I would find myself as a department chair or dean. However, visionary professors, colleagues, and mentors seemed to see some potential in me as a teacher and researcher, so I felt encouraged to become a faculty member. I thank them for their patience with me, for not giving up on me, and for their trust in my potential. I find myself with those same hopes for you as colleagues as I near retirement. This college has a capable and dedicated faculty and a hard working staff. We have a bright and eager group of students - much more capable than I was when I came to BYU. I am confident that you will help the rising generation face a difficult world to make a difference in the world. I look forward to hearing about your and their successes from the sidelines.

BYU math students do well in contest

Deseret Morning News, Saturday, April 21, 2007

PROVO — Students in the math program at Brigham Young University scored at the top in a prestigious math contest that matched the skills of 3,640 college students. BYU had four students ranked in the top 10 percent of the Putnam Exam, which is held simultaneously on 400 campuses.

Those receiving the highest scores for BYU were Yu Yang Edison (140th), Russell Howes and Nathan Grigg (tied for 239th) and Russell Ricks (282nd) among the 3,640 participants. A BYU team composed of junior Edison and seniors Howes and Wayne Rosengren, coached by faculty adviser Darrin Doud, placed 18th in the competition.

The exam is the biggest competition in college mathematics

in the United States and has been likened to an NCAA tournament for math students. The Mathematical Association of America sponsors the exam, a test designed to pull together the best mathematical minds from universities in the United States and Canada. It consists of 12 math problems that must be solved in a six-hour period. The MAA focuses on mathematics taught to undergraduates and is the largest professional society in its category. Members include university teachers, computer scientists, statisticians and graduate and undergraduate students.

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