

CU senior Kris Saha will study at Cambridge as a Churchill Scholar

By Bill Steele

Krishanu "Kris" Saha, a senior majoring in chemical engineering at Cornell, has been named a Churchill Scholar by the Winston Churchill Foundation. The Churchill scholarship provides for a year of graduate study in engineering, mathematics or science at Churchill College of the University of Cambridge. Only 11 scholarships are awarded per year nationwide, and Saha is the seventh Cornellian to win since 1992.



Saha

Saha also was offered a 2001 Fulbright scholarship for study in the United Kingdom, but declined that in order to accept the Churchill award.

"It's a tremendous honor and opportunity for me," Saha said of the Churchill. "I love doing new and different things and this will be a great way to both explore different areas of research and travel to a continent where I haven't spent significant time.

"I'd like to thank the faculty and my friends and family," he added. "You can't go into any of these competitions expecting to win, but everyone was very helpful, even though it was a long shot. I'm sure I wouldn't have gotten this award if it wasn't for their help."

Saha, who also is fulfilling the requirements for an alternative major in chemistry and a minor in materials science, has been active in materials science research since his freshman year, when he helped to design an ultra-high-vacuum system to deposit copper thin films on surfaces, under the guidance of Shefford Baker, Cornell assistant professor of materials science and engineering. He continued working in that area through his sophomore year, and in his junior year he began investigating the effect of heat and mechanical stress on thin metal films, work that bears on the design of interconnections in microcircuits. He spent the summer of 1999 as a research intern with Mobil Chemical Co. in Edison, N.J., studying catalysts for the manufacture of polyethylene.

This year he has continued work on the mechanical properties of thin films and has developed an interest in the application of engineering to biological research. Under the Churchill scholarship, he plans to study at the Cambridge Institute of Biotechnology and in the Cambridge engineering and biological science departments, doing research under research fellow Electra Gizeli. He will apply his experience in thin-film research to the creation of silicon wafer devices that use acoustic waves in the identification of biological molecules. Molecules such as enzymes or antibodies are embedded on a chip. When other molecules bind to these probes, the frequency and phase of acoustic waves generated in the chip change in ways that depend on the concentration of particular substances in a sample.

Saha will seek to earn the British degree M.Phil. The following year he plans to return to the United States to study for a doctorate in chemical engineering. That study will be supported by a National Science Foundation Graduate Fellowship.

A native of Huntsville, Ala., Saha graduated from Virgil I. Grissom High School there in 1997.

"One reason I got the scholarship is that this high school had very strong math and science programs and a pretty competitive atmosphere, which helped me learn to think quickly and analytically," Saha said. His

father, Pabitra Saha, is a professor of civil engineering at Alabama A&M University, and his mother, Sikha Saha, is a software analyst for TRW Inc. They are originally from Calcutta, India.

At Cornell, Saha received the Undergraduate Materials Research Initiative Award from the Materials Research Society for 1999-2000 and the BP-Amoco Research Prize for Freshman/Sophomore Research for 1999 and for junior year research in 2000. He holds a Xerox Technical Minority scholarship and last year was the winner of a Goldwater scholarship.

For the past three years, Saha has volunteered with EYES (Educate Youth Encourage Society) at Cornell, teaching local area high school students through interactive science projects. He also is a peer adviser for Cornell freshmen, a Youth League basketball coach, a Cornell Undergraduate Research Board presenter and foreign student conversation partner for the Intensive English Program. He plays intramural basketball and tennis. "This fall, we had an undefeated regular season in intramural basketball," he said, "which I hold as one of the highlights of my extracurricular activities."

The Winston Churchill Foundation of the United States was established in 1959 as an expression of American admiration for Britain's leader during World War II. With the enthusiastic endorsement of Sir Winston Churchill, the foundation undertook to encourage the exchange of knowledge and the sharing of ideas in sciences and technology between the United States and Great Britain.

April 5, 2001

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