



CLOSE WINDOW

Who Chooses Smith?



FATIMA TOOR '04
Princeton, New Jersey

Why I Chose Smith

Growing up in Pakistan, I developed an interest in math and science while watching my father, a chemical engineer, and my mother, a mathematician, solving problems. My parents always stressed getting the best possible education. Knowing the reputation of colleges in the United States, I decided to apply to American schools. I heard about Smith from a friend in high school so I decided to apply.

When I was accepted to the Picker Engineering Program, it seemed really exciting to learn engineering and science in an all women's college. As my father says, I am a born feminist, so a women's college seemed to be the most appropriate place for me and I believe I definitely made the right choice.

What I Did At Smith

I was a double major in physics and engineering. My first summer internship, at the department of electrical and computer engineering at UMass- Amherst, involved research in ultrawideband wireless technology. Before I could begin to develop computer simulations of technology, I had to teach myself C-programming, the language that is used to develop the UNIX operating system.

A second summer internship at Smith with Assistant Professor of Engineering Susan Voss offered a new challenge. The project, funded by a grant from Ford Motor Company, developed a graphic user interface (GUI) for audiological testing. Typically, hearing is tested by presenting a patient with different tones at varying sound-pressure levels and asking the patient to raise a hand when the tone is heard. Our goal was to design a GUI that could be coupled to a digital-signal-processing (DSP) board functioning as an audiometer. The new GUI allows an audiologist to perform an entire hearing test using one program.

In 2003, I worked as a preprofessional engineer in the Electronics Optical Packaging division at IBM's Thomas J. Watson Research Laboratory.

The Great Things About Studying At Smith

Studying at Smith definitely transformed me as a person. Smith helped me gain self confidence in my abilities and provided me the freedom to explore my interests. There were so many great opportunities available to me for not only scientific research but also for character building like the Lewis Leadership Program, which I really valued. Smith challenged me and increased my knowledge not only about engineering's technical aspects but also the potential societal impacts of science and engineering. I also gained interest in multidisciplinary aspects of education and have continued that interest in graduate school.

I also really cherish my friendships at Smith; I met students from almost every part of the US and the world, and from different age groups. Some of my best friends were Adas or from countries I did not even know existed before I came to Smith. I am proud that Smith is my alma mater and consider my experiences at Smith life changing.

What I'm Doing Now

I am a graduate student in the electrical engineering department at Princeton University, researching in the field of optical electronics, specifically, high performance quantum cascade lasers (qcls). QCLs have the potential to significantly impact trace gas sensing

that can be useful for environmental pollutant sensing and medical diagnostics. QCLs can also be used as optical interconnects in computer chips if developed in silicon based material systems. The research work is exciting for me since it combines quantum mechanics, one of my favorite areas in physics, and optical electronics which is where future electronic devices are headed due to the power and speed limits reached in conventional electronics. Moreover, I am taking courses at Princeton's Woodrow Wilson School of Public and International Affairs on topics related to science technology and policy due to my interest in learning the impact of science and engineering on the society.

