

student profiles

Warming to the Environmental Science

SARAH ROTHENBERG WAS IN WASHINGTON D.C., in the summer of 1998 when she had an experience that set her on the path she continues to follow today.

Then an undergraduate on her way to a bachelor of science in applied mathematics, Rothenberg was spending the summer working as a congressional intern. One day she attended a committee hearing on global warming. At a time when Congress was preparing for a potential vote on the Kyoto Protocol, the agreement reached by 160 nations on limiting greenhouse gas emissions, Rothenberg watched as the legislators heard testimony on the legitimacy of an issue that the vast majority of the scientific community view as settled.

“It was stunning for me to see so many conservative legislators question the hypothesis of global warming,” she says. “I had been looking for some way to use my interest in math, and at that moment I knew that applying it to environmental issues would be a great way for me to go.”

Rothenberg, who spent nine years working in the film industry as a sound editor for feature films before starting as an undergraduate at age 33, went on to earn her master’s degree in statistics before enrolling in UCLA’s interdisciplinary Environmental Science and Engineering (ESE) program, based in the School of Public Health. She is now in her third year in the doctoral program, which trains environmental scientists, engineers and policy-makers for environmental leadership positions.

For her dissertation, Rothenberg will be researching numeric targets for a total maximum daily load (TMDL) for mercury in Ventura County, Calif. As part of the Clean Water Act, TMDLs are established by the U.S. Environmental Protection Agency to specify the amount of pollutant a water body can absorb while continuing to meet state water quality standards. Mercury is a potent neuro-

toxin that can travel long distances and be deposited in otherwise pristine environments. Studies showing the potential for human health problems from consumption of mercury-containing fish have raised concerns worldwide.

Rothenberg, who recently began an internship with the U.S. Army Corps of Engineers’ Ventura County field office, spent last summer in Beijing, China conducting an investigation on terrestrial mercury contamination. Her internship was sponsored by the East Asia and Pacific Summer Institutes, a National Science Foundation program in which U.S. graduate students in the sciences and engineering spend eight weeks gaining firsthand laboratory experience working with researchers in China, Japan, Korea, Taiwan, or Australia. In 2002, Rothenberg was in Japan under the same program, researching residential water usage in eight Japanese cities, an extension of her master’s thesis on water consumption in Kobe, Japan.

As she spent last year interviewing for internship positions, Rothenberg was reminded how valuable her education will be in opening up future options. “On a wide variety of subjects that came up at these interviews, I already had some knowledge of the problems, and employers at agencies and nonprofit organizations appreciate that,” she says. “The ESE program gives you broad-based education so you are conversant in almost any environmental topic. You have a 360-degree scope of environmental problems in the world, which enables you to get in the door almost anywhere.”



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(second from left)