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CITATION

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CAREER PROFILES Options and Insights

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Degree: When, where, what, and what in?

I received a bachelor of science degree in chemistry from Yale University in 1991, but decided I wanted to spend more time outdoors and not just in a laboratory. I entered the MIT/WHOI Joint Program in Oceanography/Applied Ocean Science and Engineering straight out of college, and received my doctorate in chemical oceanography in 1997.

Did you stay in academia at all, and if so, for how long?

I followed a pretty traditional academic path all along, until taking this position at the National Science Foundation (NSF) two years ago. First, I did a couple of postdocs, one at the University of Rhode Island and, through an NSF-NATO fellowship, a second at the Southampton Oceanography Centre (now the National Oceanography Centre, UK). I took a faculty position at the University of Texas at Austin's Marine Science Institute in 1999, and received tenure in 2005.

How did you go about searching for a job outside of the university setting?

I thought about some sort of change for a while, but I did not pursue new opportunities very actively. I was at UT longer than I had been anywhere in my life (not just my career), and while there was a lot to enjoy about the job, I found that there were also some real limitations to being in a very small

department, 200 miles from our main campus. I wasn't necessarily or exclusively looking outside of academia, but when one of my NSF program managers said she was retiring, I thought "Hmmm, I wonder if that job will open up?" It did, I applied, and here I am. The big leap was that I applied for the position as a "permanent" program director, rather than as an Intergovernmental Personnel Act assignee (commonly known as a "rotator").

Is this the only job (post-academia) that you've had? If not, what else did you do?

Yes, I came straight here from UT.

What is your current job? What path did you take to get there?

I am a program director in the Division of Arctic Sciences at NSF. As described above, I followed a traditional academic path until moving here in 2009. In the end, it was an interesting decision to make. Not long before I was offered the NSF job, I also received word that a new proposal of mine was being recommended for funding. I wrestled a bit with staying in academia and following the new path that this research would have taken me on, or leaving that world behind. Now that I'm at NSF, I'm very happy with the decision that I made.

What did your oceanographic education (or academic career) give you that is useful in your current job?

An oceanographic education is inherently interdisciplinary, and I believe that chemical oceanography is particularly so. My advisor was really a geochemist, with interests well outside of the ocean, and I spent most of my graduate years in the Earth, Atmospheric and Planetary Sciences department at MIT. At UT, I collaborated a lot with people in the Jackson School of Geosciences, as well as in my own department, which was mostly biology focused. I served on some thesis committees that were incredibly far out of my comfort zone. All of these experiences were very helpful to me in my current job. Arctic oceanography is just one piece of the funding portfolio of the Arctic programs at NSF; we also cover glaciology, soil microbiology, ecology, limnology, atmospheric science, geology—you name it. My formal training doesn't cover anywhere near all of these scientific areas, but the broad exposure to a variety of subjects that I gained

through my oceanographic education and faculty experience set me up well to handle them.

Is the job satisfying? What aspects of the job do you like best/least?

My job at NSF is very satisfying. My favorite part is the breadth of what we cover—I am constantly learning new things—and the fact that we are constantly exposed to people's new ideas. It's great fun to tell scientists you are recommending their proposal for an award. I also enjoy the opportunity to encourage new researchers. Of course, the flip side is hard. We receive many more proposals than we can fund given our budgets. I think that having been on the other end of those conversations helps me to be better at being the bearer of bad news, though. Sometimes I miss doing my own research, and especially getting out to do fieldwork. In my NSF job, I've had to learn to step back and take pleasure in the fact that I am helping other people do their research. The work at NSF is much faster paced than academia and you have much less control over your own time. It also involves interacting with people a lot more, or at least in very different ways. I've enjoyed exercising different sorts of skills than I did as a practicing scientist.

Do you have any recommendations for new grads looking for jobs?

Keep your eyes open, and don't think that choosing one working environment now has set you on a particular path forever or limited your options. Your education can take you to places you've never even considered.

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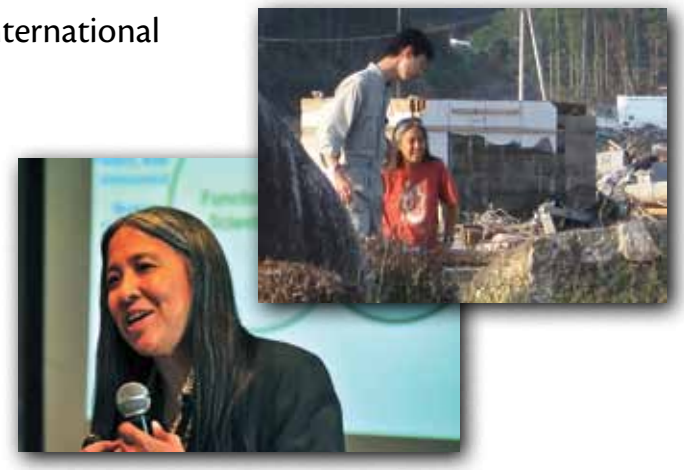

Degree: When, where, what, and what in?

I received my bachelor of science degree in physics and mathematics from Brown University in 1983 and then worked at the Lamont-Doherty Geological Observatory for one year in the multichannel marine seismology group. I earned my PhD in marine seismology in 1990 from the Massachusetts Institute of Technology/Woods Hole Oceanographic Institution Joint Program in Oceanography.

Did you stay in academia at all, and if so, for how long?

I was involved in research for a total of about eight to nine years before taking my current position.

How did you go about searching for a job outside of the university setting?

I found that talking to co-workers in my field of interest, visiting and talking to universities and government agencies involved in disciplines I was interested in, and simply looking at job openings posted online were the most effective way to see what was available.

Is this the only job (post-academia) that you've had? If not, what else did you do?

After completing my PhD, I did a one-year postdoc at the Earthquake Research Institute, University of Tokyo, in their marine seismology group. I then took a position for two years with the Pacific Tsunami Warning Center as a geophysicist, followed by two years at the US Geological Survey Hawaiian Volcano Observatory where I did research in volcano seismology. I then decided to go back to mainstream academia and so took a research position at the University of Hawaii, Hawaii Institute of Geophysics, where I continued my work in marine seismology. As a change of pace, I next took a job as an environmental specialist in Hawaii with the Federal Highway Administration, US Department of Transportation, where I worked on and mitigated impacts on the environment where highways were to be built. In 2001, I took a job with the International Tsunami Information Center job and have been there ever since.

What is your current job? What path did you take to get there?

I am the Director of the International Tsunami Information Center. Prior to taking the position, I held a number of different jobs, almost all related to earthquakes or tsunamis, in which I built up a lot of different skills, experience, and knowledge that I use in my job today.

What did your oceanographic education (or academic career) give you that is useful in your current job?

My academic experience provided me with skills on how to investigate questions; where and how to collect, access, analyze, and interpret data; and how to present these results in scientific and public meetings in oral and written formats. In addition, I also was able to make professional contacts that are valuable for my current work.

Is the job satisfying? What aspects of the job do you like best/least?

The job is satisfying because it provides opportunities to develop new programs and activities that are directly guiding and helping countries to improve and start their tsunami warning and mitigation systems. The job allows me to travel to many countries because the center provides assistance not only to Pacific countries, but globally. We are often immediately involved after destructive tsunamis and work with the affected countries to help improve their warning systems. Unfortunately, my office staff is small, and budgets to provide assistance are very modest, so it can be frustrating because we are only able to provide a minimum of assistance.

Do you have any recommendations for new grads looking for jobs?

Permanent jobs in the US government can be difficult to obtain in Earth science fields, and in general they may be underpaid compared to academia or to the private sector. However, the job is usually secure and can be very satisfying as it does offer opportunities for leading important programs that have national and international impact.

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