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CAREER PROFILES Options and Insights

DAN GOLDNER | Math Teacher, Boston Public Schools (goldner@alum.mit.edu)

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

I earned my PhD in physical oceanography in 1998 from the Massachusetts Institute of Technology/Woods Hole Oceanographic Institution Joint Program.

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

Nope.

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

I would get curious about something and try to find someone in that field to write to. I talked to anyone and everyone, asking what they did, if they liked it, how to get involved. If they recommended other people to call, I called. If they recommended a book, I read it, then tried to get an appointment with the author.

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

Right after graduate school, I joined Ventana Systems Inc., a consulting firm that does simulation modeling and data assimilation (they don't call it that) for businesses and government agencies. I got to learn a ton about dozens of industries and government services.

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

I teach high school mathematics in a public school in Dorchester, MA. After 10 years with Ventana, I started

to miss working with students. I had taught high school prior to getting my PhD and decided to return. I did a year of training with the Boston Teacher Residency and am now in my fourth year as a classroom teacher.

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

My oceanographic training was directly useful in my consulting career, as I was using the simulation and inference techniques that I had learned in graduate school daily. Now that I'm teaching, the links are less clear. It's difficult to translate scientific applications to students who are just learning algebra or even introductory calculus. I did find that the graduate school experience of managing my own research, getting papers written, and presenting my work concisely and thoroughly were also directly useful while consulting, and in my teaching I am trying to give high school students some experience in learning those skills.

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

Consulting was great fun: occasionally stressful, but always fascinating, and I was lucky to be in a situation that gave me a lot of autonomy. Now that I am teaching, the opportunities to accompany students as they discover themselves are magical. I find the most difficult part to be physical, as the daily schedule is relentless.



Photo credit: Don Orth

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

Postpone filtering as long as possible. I was given so many suggestions regarding people to write to and talk with that I felt overwhelmed, so I organized the leads into groups by priority, and then pursued one group at a time. That was an error. I had so little information about each lead that I misjudged which ones should be high priorities. Consequently, I wasted a lot of time before starting to talk with the groups that turned out to be the best prospects. So don't be afraid to start a million conversations at once. The responses you get (and don't get) will provide a solid basis for setting effective priorities.

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

I received a BS in marine science–geology from Eckerd College (St. Petersburg, FL) in 2000. I began studying marine biology, but quickly fell in love with geology after my undergraduate advisor took me on my first vibracoring outing. After continuing with the sedimentology lab for a year after graduating, I journeyed across the country to the School of Oceanography at the University of Washington (Seattle, WA). In 2004, I completed my MS in geological oceanography, examining sedimentation in submarine canyons. After a short excursion as a physical scientist with NOAA, I returned to the University of Washington to earn my PhD in 2008, investigating modern source-to-sink sediment transport dynamics and sedimentation patterns on continental margins.

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

For as long as I can remember, I aspired to earn a PhD. How I eventually got there was a little circuitous. I took time off to work—and think—after my BS and MS degrees. My graduate advisor was encouraging, supportive (and patient), so returning to complete my PhD was an optimistic decision (with no regrets). Life always throws curve balls, and luckily for me, there was a postdoc position in my graduate advisor’s research group on tidal flats. My year-long postdoc was a tremendous learning experience in logistics, research coordination, and collaboration.

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

Honestly, I still saw myself in the role of a research professor when starting my postdoc. I mused about becoming a staff researcher at a university or institute. I applied to several announced

university positions, but many were withdrawn due to the economic crisis. Serendipitously, my graduate advisor optimistically encouraged me to interview with an ExxonMobil recruiter who was visiting the School of Oceanography around that time. I thought the interview both professional and endearing. I was invited to a company recruiting trip, but ended up going directly to Houston for a more extensive interview instead. Shortly thereafter, I began my career at ExxonMobil Exploration Company (March 2009).

Is this the only job (post-academia) that you’ve had? If not, what else did you do?
This is the career path I have chosen post-academia.

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

I am currently a Geoscience Associate at ExxonMobil Upstream Research in Houston, TX. I contribute to various research projects, ranging from tectonics to sedimentary dynamics. This is an ideal assignment to engage and leverage data and technology while ensuring business applicability.

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

Above all else, my oceanographic education instilled in me a strong sense of integrity and inquisitiveness. Not only did I gain knowledge, but patience and adaptability as well. I also developed the adeptness to efficiently and effectively acquire and evaluate large quantities and variable forms of data. A particularly useful skill ingrained from years of working onboard ships and in laboratory settings is the ability to be a team player and nurture a broad network.



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

Each assignment in this corporation is quite distinctive. For me, the best parts of each assignment are the people I meet, the experts I learn from, and the individuals who become part of my network—the basis for a healthy and happy career. At times, the pace can be exhausting. In both research and business, there is fit-for-purpose necessity to completing tasks. This means I am often not able to delve into the geology of a particular place or a certain topic as much as my inner scientist may want.

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

Be very open-minded when entering the next stages of your life. At every turn there is a new way to learn and experience living. If you have an idea of what makes you truly happy, ensure you work that into your career decision. If you are not adaptable by nature, find a way to practice this character trait. That way, when life has a way of interrupting, you are prepared to change course, if necessary. And most of all, choose a path you enjoy.