

**LOREN SHURE | MathWorks, Natick, Massachusetts,**  
**loren.shure@mathworks.com**

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

I received my degree in marine geophysics from Scripps Institution of Oceanography, University of California, San Diego, in 1982. My graduate work focused on understanding Earth's magnetic field, from both large- and small-scale perspectives. I developed some modeling techniques for understanding the data, which included exciting new data sets such as those from NASA's MAGSAT spacecraft. Though I mostly did theoretical and computer work, I spent several months at sea on research expeditions to see what it was like to collect all kinds of data in the marine environment, including magnetic field measurements, and to learn about the associated hardships. Plus, I love to travel!

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

After receiving my PhD, I was a postdoc and on the staff of Woods Hole Oceanographic Institution (WHOI) for three years, with an adjunct appointment at Massachusetts Institute of Technology. I thoroughly enjoyed most of the teaching aspects of the job that I took on, especially working with the students.

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

When I chose to leave WHOI, it was partly because I found out something important about myself. I am profoundly a city person for day-to-day living! I also

decided I wanted to be in the Boston area, at least for a while. I found a headhunter who helped me find a job. That was the hottest way to move in those days. I'm not sure I would proceed that way if I were looking now.

For my first job, I took a graphics programming job at a database company. Though challenging, it was not exercising the math/science part of my brain to the extent I wanted.

Through kismet, the right opportunity presented itself when I was spending time with a geophysics friend of mine. Her brother has recently moved back east to grow his company, MathWorks. Jack and I happened to meet informally, and a few weeks later he showed me MATLAB. Eventually, he made me an offer that I accepted. I knew that even if that startup didn't work out, the market was quite rich with opportunity.

One thing I figured out sort of early on is that I really like investing in making tools that help me and others to be more productive. That's why I fit in so well at MathWorks and why, almost 24 years later, I am still here.

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

In the beginning at MathWorks, I did anything that needed to be done, including such diverse activities as performing technical support, writing documentation, and presenting at meetings, in addition to designing and writing code, developing tests, and creating examples. I worked first a little bit on MATLAB, including numerical



algorithms and helping to design some new language features. I then started working on various toolboxes, add-on software for applications such as signal processing, statistics, image processing, and the like. I've been co-author of the first version of quite a few products over the years.

Eventually, I settled into my current role, which is quite diverse and makes good use of my knowledge and talents. I still participate in the design of the MATLAB language and other new features we want to add for our customers. Given my tenure at MathWorks and my historical perspective, I often get involved in projects where we want to trace the history of some development. I work closely with sales folks, particularly, but not only, those selling to academia, and help them to support large accounts. This facet of my role frequently means visiting customers (getting in some nice travel venues occasionally), hearing their issues (and helping, I hope!), and showing them how they can make better use of the products we make for their applications. Finally, one very public thing I do is write a blog with relevant technical information for our users (<http://blogs.mathworks.com/loren>).

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

I learned two main skills in academia that have served me well throughout my career. The first is nurturing general problem-solving skills, and the second is honing good communication skills. Being open to many different solutions and angles of approach has helped me broaden my viewpoint and develop my network, allowing me to draw upon ideas and people to which I might have otherwise not been exposed.

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

I enjoy lots of aspects of my job, especially all my interactions with customers. I get immense satisfaction seeing them have success, in part because of using tools I helped to build. Because I have been at MathWorks from near the beginning, it has been both satisfying, and sometimes frustrating, to experience the company's growing pains. But that is also a nice problem to have in many ways. We are still in business and still helping our customers succeed.

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

I believe most of the big problems we encounter these days require interdisciplinary input, so be sure to surround yourself with a variety of smart people. Most of us with jobs today did NOT specifically train for those jobs when we were in school. So, get a great background and be sure to set yourself up for being available and open for opportunities that may come your way. They may not look like jobs you have thought of, so

you have to be really careful to be open enough to recognize that you have a choice you hadn't imagined. ☑