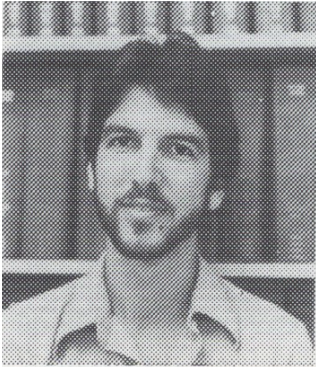


Steven Saxe, PhD, 1985



What influenced your decision to attend graduate school at OSC?

My interest in optics goes all the way back to my first job in college. I was a theater major at Santa Rosa Junior College, designing sets and helping to run the scene shop for summer repertory. There was a 'non-traditional' student in the program—a woman in her forties—who was on sabbatical from her executive position at a local optical manufacturer. She told me her company was hiring and thought I would be a good fit. I was hired and eventually became a shift lead, putting antireflection and mirror coatings on huge sheets of glass.

Fast forward five years, I was a physics major at San Diego State and got a job as a contract analyst with the Naval Ocean Systems Center in San Diego. I worked for a guy who was (still, at that time) working on his PhD dissertation that he had started at OSC seven years earlier. I learned about OSC from him, and decided I should go to either UA or the University of Rochester for graduate school. My wife was majoring in Speech Communication and UA had a program for her, so we both applied to only one school, and we both got in. A bonus for me was the presence of Angus Macleod on the faculty, and him agreeing to be my advisor. I had five years of experience running optical coating equipment, so I was up and producing pretty quickly!

What do you wish you would have known your first day of graduate school? Was there anything you wish you had done to prepare more for graduate school?

By the time I arrived at OSC, I was 28 years old and had been in college—one way or another—for 10 years. I don't think much would have surprised me, but I will always remember Jack Gaskill's presentation at orientation. He made a perfectly cogent case for not pursuing a PhD, based on a lifetime financial return analysis. I loved his humor and candor, and knew I was off on the right foot. Incidentally, Jack's analysis was based on seven years in the PhD program and, since I finished in less than three, my financial return on the doctorate was positive!

Which classes did you find most enjoyable? Which ones did you find most difficult?

Everyone in my generation of OSC students will remember Gaskill's Fourier Optics class with a groan. The material was not that difficult, but Jack felt that only by repetition could one really absorb the information. He turned out to be right—I could do Fourier transforms in my sleep by the end of the class! I loved Roland Shack's lens design class—especially the auto-stereoscopic renderings of lens aberrations—which really brought things to life. However, I was so enthusiastic that I over-used them until my eyes wobbled. Also worthy of note, I am a classical physicist and found all the quantum optics stuff very difficult to grasp in any meaningful way.

Was there an individual (professor, advisor, staff, friend, family member) who played a particularly important role in your education?

Angus Macleod was my advisor and a model professional and gentleman. He supported me in many ways, including a very generous graduate assistantship that made my life as a grad student much easier to manage. When my wife started pressing to leave Tucson after just two years, Angus supported my accelerated dissertation and help me stay married! I will always hold a very warm place in my heart for him. My classmates were also a great source of friendship and support. In fact, I work with one of them even today.

What was your research while attending OSC?

I was an early investigator of ion-assisted deposition of evaporated thin films. Ion assist has evolved dramatically since then, and is a common practice today. Unfortunately, my work did not get far enough to really show the power and promise of it, but it was a brick in the road.

What was the cost of rent in Tucson while you were in school?

I don't remember, but my wife and I had a three-bedroom, two-bath apartment with a pool on two grad student incomes, so it must have been pretty low.

If you owned a car during graduate school, what year and model was it?

I drove a yellow 1972 BMW 2002. I loved that car.

What was your favorite restaurant/student hangout near campus

I was married and not much of a party guy, so rarely hung out anywhere but home.

What did you do for fun during your time in graduate school?

I took a film-making class and did some photography and videography. I am still involved with both. I also enjoyed hiking and the natural wonders of the desert.

What was most memorable about your commencement ceremony?

I finished my dissertation in absentia and never attended a ceremony.

At the time of your graduation, what were the most sought-after jobs/most popular industries/most popular companies?

In 1985 there was a lot of defense hiring happening, and I got offers from Rockwell and Honeywell. Honeywell even had matchbooks with my name inscribed on them for my interview trip! I wasn't keen on going into defense, so held out for a commercial job at 3M Company—where I stayed for 26 years.

What was your first job after graduation?

I went to work at 3M Company in St. Paul, Minnesota. Quite a shock for a California boy who hadn't lived any farther east than Tucson! I worked in a group that did micro-structured and replicated optics, and ended up working on illumination optics for a few years.

What was the most significant world event during your time in graduate school. How were you affected by this event?

Honestly, I think I was mostly oblivious to the world outside graduate school. Reagan's 'Star Wars' initiative seemed to be creating a lot of jobs, along with a lot of eye-rolls.

Was there a campus or community event in Tucson that was especially important to you?

I really enjoyed and vividly remember touring the large optics shop.

What advice would you give to this year's graduating class?

Does advice to graduates ever change? The economy is lousy, you're going to face serious challenges to your confidence and resilience, but keep your eye on what you love and what you want to be your guiding lights. You may not have a chance at either one for years or even decades. Your loves and aspirations will probably change many times over the course of your life, but I wish you the strength and vision to keep them in front of you and to pursue them with a level of vigor that suits you.