



## Retiring

At the end of this month I will retire from 34 years of teaching and research in the School of Physics at Georgia Tech. I have enjoyed my long career. I have worked in laser Raman and Brillouin spectroscopy, diffractive optics, optics education, and, most recently, ultrafast optics. The thread that has run through my interests has been optics. I've often said that optics is like chess or checkers: there aren't many rules, but they produce an incredible variety of challenging and satisfying problems.

I don't intend to undergo any abrupt decompression in my retirement. I am keeping my office at Tech. I've got a paper on the corner of my desk that has been sitting there waiting for me to notice it. Also, I will continue to edit *Optical Engineering* as long as it is fun and the SPIE Publications Committee sees fit to renew my editorship.

I also have it in mind to write a book on optical engineering. Nearly 20 years ago I finished *Elements of Modern Optical Design* and I have used it in my classes over the years. But the author missed some points or didn't get them right. For one thing the book was not able to take advantage of powerful lens design programs that are now available on desktop computers. It was far too linear in its exposition and did not provide sufficient practice on simple designs early in the text. So now I want to start from scratch and write a new text using my experience of the past 20 years.

There is a new area that I want to explore: graphic arts. As Merry Schnell, the editor of our diffractive optics text for SPIE Press, will tell you, we engaged in a lively conversation for over a month on the content and design of the covers for our text. Because I find the field of graphic communication fascinating, I am going to try to master one of its major tools, Adobe PhotoShop.

Over the years I have dabbled in PhotoShop, but at times it has been painful reaching for an effect that is so clear in my mind's eye, but is imperfectly rendered on the screen or page. During the process I learned something of the program, but it feels like much of the current training in optics. By that I mean: many people "pick optics up" in the course of their work. So their analysis to the current problem is based on the last system they tackled. They

lack a broad understanding of the possible approaches to designing or modifying the system at hand. And without this insight they also may not understand the limitations placed on their design by physical, mechanical, or manufacturing constraints until it is too late. So, for PhotoShop, I intend to work my way through tutorial materials and try to constrain myself from going off and designing something, just because I've learned how to achieve some neat new effect.

If PhotoShop can impart a sense of mastery, my other enthusiasm will probably demand a certain amount of risk. I will do more gardening. We have been revising and improving our gardens for more than 15 years, but the work has always been slow going. So, this past winter we bit the bullet and had major landscaping done. The result has been a wonderful transformation of the back of our property. But gardening is a demanding avocation and a humbling one, too. Plants you have tended and babied for several years just up and die on you for no particular reason. But the work and disappointment are usually more than made up for by the blooms and beauty of the gardens. If you would like to see what we have wrought, take a look at the garden pages on our homepage, <http://homepage.mac.com/donoshea/>.

In the nearly 50 years since I declared that I was going to major in physics in college, I have been lucky to take part in a wondrous enterprise. I began thesis work just as the laser changed from the subject of research to a tool to be used in research. My thesis mentor at Johns Hopkins was Herman Cummins, who got his degree under Charles Townes at Columbia. So Townes is, in effect, my scientific grandfather. From Hopkins, I did a two-year fellowship with Peter Pershan at Harvard. Having come to Georgia Tech, I have been lucky to meet a wonderful array of researchers, students, and collaborators. Certainly my involvement with SPIE, its leadership, its staff, and its members has been a great source of fellowship and joy. I am blessed.

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Editor