

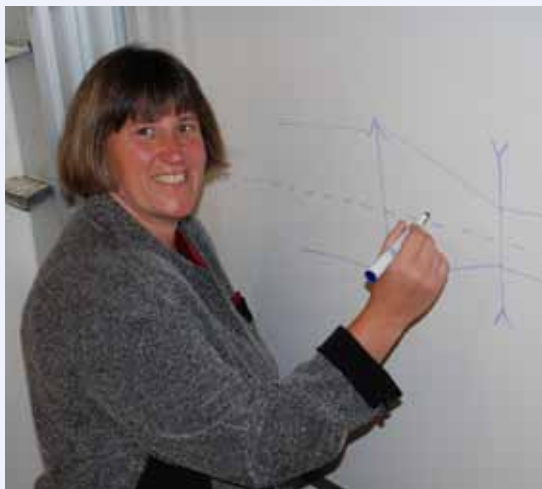
# A Passion for Teaching in the Kingslake Tradition



The future of the field of lens design at The Institute of Optics just grew brighter with the hiring of Julie Bentley as full-time Associate Professor of Optics. For the past twelve years, Julie has balanced a full time position at Corning-Tropel and her role as wife and mother while faithfully teaching classes in lens design as an adjunct professor. Starting in September, students will benefit from her passion and commitment on a full-time status. *“One of the things I love about teaching is how much I learn when teaching,”* says Julie. *“I firmly believe that the best way to understand a subject is to try to teach it to someone else.”*

And Prof. Bentley is successful in sharing her knowledge. Her classes have always been very popular with students. *“Her teaching is regarded as extremely beneficial by our graduate and undergraduate students who rank her highly and value enormously her teaching skills,”* says Prof. Govind Agrawal. Indeed, students often cite her command of the material, enthusiasm and expertise, and say her course is “a must take” for students in Optics. *“She will be a welcome addition to the faculty,”* says Amber Beckley, PhD candidate, who took Bentley’s Optics 444 course. *“She is a very good Professor and the students are excited to learn she will be here full-time.”*

Julie will start her full-time endeavors by teaching four undergraduate and graduate courses per year (two per semester), where up to one may be curriculum development



in preparation for the launching of our new BS in Optical Engineering. Her main teaching interests include geometrical optics, optical design, and tolerancing.

Julie shares, *“I spend a significant amount of time in my classes on both individual and group projects.”* This has paid off for her students, four of whom have been awarded prestigious ORA Student Optical Design Competition Awards. The titles

provide a sample of projects completed in her class each year:

*“Design of a 360 degree panoramic camera lens,”* Manuel Guizar-Sicairos. (2007). (An earlier issue of *Optics* featured this project.)

*“All-plastic Compact HMD design,”* Yijing Fu. (2006).

*“Design of a Sparse-Aperture Interferometric Telescope,”* Matthew Bolcar. (2004).

*“Design of Backwards Compatible Blu-Ray and HD-DVD Objectives for Reading High Capacity (15 GB and 23 GB) DVDs,”* Chris Supranowitz. (2004).

Receiving her BS degree in Optics, Julie earned the honor of “highest distinction,” from The Institute of Optics, University of Rochester in 1990. She continued her studies at The Institute of Optics in Rochester and completed her MS in 1992 and PhD in 1995, maintaining a 4.0 GPA. Her PhD thesis focused on the integration of the design and manufacture of gradient-index optical systems. Among her numerous awards and scholarships, Julie earned the UR’s most prestigious, the Sproull Fellowship (90-92), and was named a Sproull Distinguished Alumna in 2007.

After graduating she spent two years at Hughes Aircraft Co. in California designing optical systems for the defense industry. She then moved to Corning Tropel Corporation in Fairport, New York, and worked in the area of optical design of microlithographic inspection systems.

Holder of three patents, Julie has completed more than 20 publications and presentations and her first book, *“SPIE Field Guide to Lens Design,”* will be available early next year. Julie looks forward to increased involvement in the Hopkins Design Center to help develop undergraduate research and senior design projects that have a commercial focus. Over time, she will develop a research program independently as well as in collaboration with other Optics faculty.

Julie is particularly well qualified to continue teaching in a similar role that The Institute enjoyed under the design expertise of Rudolf Kingslake. In addition, her teaching style often mirrors much of the wonderful spirit of Robert Hopkins. And not insignificantly, as Prof. Alonso states, *“She will serve as a role model to female students interested in optics.”*

Perhaps her former PhD advisor, Prof. Duncan Moore sums it up best, *“Julie will be a great asset to the department!”*