How-to book published on laser beam-shaping applications

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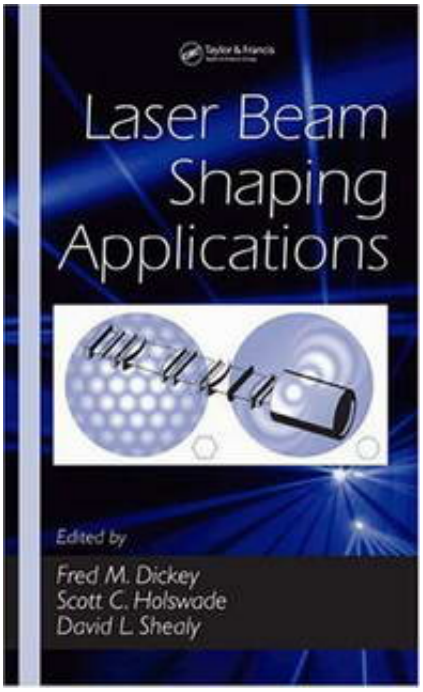

Following up on their well-received first book, *Laser Beam Shaping: Theory and Techniques*, Sandia National Laboratories researchers Fred Dickey and Scott Holswade have edited (with David Shealy of the University of Alabama at Birmingham) a compact new volume, *Laser Beam Shaping Applications*.

The attractively packaged, 357-page volume offers readers the thoughts

of 19 prominent practitioners who share their in-depth knowledge of how to shape laser beams to optimize their utility and improve their future development.

Contributors hail from sites as diverse as Moscow, Pretoria, Rochester, and Albuquerque.

In nine illustrated chapters, the authors — leaders in their respective specialties — discuss how to improve illuminators for microlithography, array-type laser printing systems, and excimer laser image systems, as well as optical data storage, isotope separation, shaping via flexible mirrors, and spectral control of spatially dispersive lasers. There is also a review of the modern field of beam-shaping.

The final chapter contains a history of beam shaping that began thousands of years ago with Assyrians in northern Iraq who had developed “a small oval, polished rock crystal in the shape of a plano-convex lens about one-quarter inch thick.” The chapter also discusses the contributions of Archimedes, who is said to have arranged parabolic mirrors that would quickly sink wooden ships by burning holes in them.

Extensive references offer opportunities for more in-depth study. The book, published by the Taylor & Francis Group, is 102nd in its optical science and engineering titles.

Recognizing the remarkable lack of acknowledgments to engineers in the modern world (despite the fact that their achievements are everywhere), the authors dedicate their second volume “to the many unrecognized researchers who developed key methods and applications of beam shaping. They innovated quietly to maintain legitimate corporate advantage, so their names are largely unknown.”

Soure: Sandia National Laboratories