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## **Robert W. Boyd Elected SPIE Fellow**



BELLINGHAM, WA, USA — 3 February 2014 -- SPIE will promote 76 new Fellows of the Society this year, to recognize the significant scientific and technical contributions of each in the multidisciplinary fields of optics, photonics, and imaging. SPIE Fellows are honored for their technical achievements and for their service to the general optics community and to SPIE in particular. More than 1,000 SPIE members have become Fellows since the Society's inception in 1955.

The annual recognition of Fellows provides an opportunity for SPIE to acknowledge Members for their outstanding technical contributions and service to SPIE.

**Robert W. Boyd**, University of Ottawa, Canada, for achievements in nonlinear optics.

Boyd has made significant contributions to the fields of optics and optical physics, and especially to his own area of specialization, nonlinear optics. Since the early 1990's he has worked on the development of composite photonic materials, now often known as metamaterials, as a means of tailoring the linear and nonlinear optical properties of materials for specific tasks. He predicted that composite materials could possess a nonlinear optical response exceeding those of their constituents and demonstrated this effect in a wide range of important material systems, including photonic bandgap structures. He has developed nonlinear optical devices based on the use of micro-ring resonators. He also pioneered the use of coherent population oscillations as a mechanism for producing slow and fast light in room temperature solids.

A prolific scientific author, Boyd has published 4 books and over 370 scientific articles, has been awarded 9 patents, and has been invited to give numerous presentations on nonlinear optics at prestigious conferences nationally and internationally. He has provided leadership to the optic community by serving as chair, co-chair, and conference organizer at a variety of scientific conferences since 1999. He has also served as guest editor for special sections in peer-reviewed journals since 2007. He has received numerous awards in recognition of his technical expertise and scientific leadership.

Boyd has made wide-ranging and sustained contributions to SPIE by serving as an invited speaker, session chair, and program committee member for many SPIE conferences. Recently he was a session chair at the 2013 Photonics West symposium and member of the program committee for the 2012 SPIE conference on Quantum-Physics-Based Information Security.

**SPIE** is the international society for optics and photonics, a not-for-profit organization founded in 1955 to advance light-based technologies. The Society serves more than 235,000 constituents from approximately 155 countries, offering conferences, continuing education, books, journals, and a digital library in support of interdisciplinary information exchange, professional growth, and patent precedent. SPIE provided \$3.2 million in support of education and outreach programs in 2013.

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