

## Marc David Levenson



Marc David Levenson received his BSc Degree in Physics from MIT in 1967, and his PhD degree in Physics under Arthur Schawlow at Stanford University in 1972. He was then a Post Doctoral fellow in Applied Physics at Harvard University under Nicolaas Bloembergen and he later became an Associate Professor of Physics and Electrical Engineering at the University of Southern California in Los Angeles before joining the IBM Almaden Research Center in 1979, where he worked on laser applications in science and technology. During the retrenchment at IBM in 1993, Dr. Levenson left to form “Focused Research, Inc.” (a division of New Focus, Inc.) with Dr. Milton Chang. Later he held visiting positions at JILA (University of Colorado at Boulder) and Rice University in Houston, Texas.

Dr. Levenson is best known in science for his pioneering research in saturated absorption, coherent Raman, and Doppler-free two-photon absorption laser spectroscopy which are presented in a widely used book that he co-authored (with Satoru Kano) entitled “Introduction to Nonlinear Laser Spectroscopy”. In technology, his ground breaking work on phase shifting masks for photolithography helped begin a revolution in the patterning of integrated circuits. It initiated the semiconductor industry's efforts at wavefront engineering that extended optical lithography to once unheard-of levels of resolution and enabled the cost-effective progression of Moore's law through the 1990s. Prior to his retirement in 2009, he was Editor-in-Chief of Microlithography World. He has also been the recipient of numerous honors and awards, among them a Fellow of the IEEE, OSA and APS, and a member of the SPIE, AAAS and National Academy of Engineering.