



Dr. Eric G. Johnson

Associate Director
Center for Optoelectronics and Optical Communications
University of North Carolina at Charlotte
9201 University City Blvd. Charlotte NC 28223
Phone: (704) 687-8123
Email: egjohnso@uncc.edu



Abstract

Title: *Spectral and spatial filters for passive and active devices*

Micro and nano-fabrication methods have revolutionized the area of photonics over the last decade, largely based on the evolution in the integrated circuit industry in wafer based methods of fabrication. Some of the areas that have benefited in this are in the spatial and spectral beam control of passive and active photonic devices. Some of the examples that will be presented in this talk include the introduction of a dual grating resonator concept for high power surface emitting lasers, guided mode resonance filters for fiber lasers, space varying spectral filters for imaging and novel approaches for 3D modal engineering. Theoretical and experimental results will be presented with additional areas for future consideration for passive and active device applications.

Biography

DR JOHNSON is a Professor of Optics/Physics and ECE at the University of North Carolina at Charlotte. Prior to this, he was an Associate Professor with the College of Optics and Photonics at UCF and has been a leading innovator in the field of micro-optics and nano-optics for over a decade. Dr. Johnson was also a recipient of a NSF CAREER award for Three Dimensional Nano-Optical Elements. These research efforts have stimulated over 100 publications, 9 issued patents with an additional 4 pending. Dr. Johnson is the current Chair for the Optics in Information Science Division of OSA and the former OSA Technical Group Chair for Holography and Diffractive Optics in the Information Systems Division. Dr. Johnson also serves as a Topical Editor for Applied Optics and an Associate Editor for SPIE's Journal of MEMS. He also serves on the Board of Directors for SPIE and is a member of OSA, IEEE, and a Fellow of SPIE.