

Professor Nabeel Riza, CREOL, University of Central Florida, USA

Hybrid Optical Sensors for Extreme Temperature Measurement in Next Generation Higher Efficiency Greener Power Plants

Biography

Nabeel Riza holds a Bachelors degree in Electrical Engineering (EE) from the Illinois Institute of Technology (IIT) and Masters and Doctorate degrees in EE from the California Institute of Technology. In Jan. 2002, he became the first Caltech Alumnus to be awarded the International Commission for Optics (ICO) Prize and co-awarded 2001 Ernst Abbe Medal from the Carl Zeiss Foundation, Germany. Riza's other awards include the 2007 Fellow Award of the IEEE, 1998 Fellow Award of the Optical Society of America (OSA) and the 1998 Fellow Award of the International Society for Optical Engineering (SPIE), 2008 IIT Distinguished Alumni Professional Achievement Award, and 2008 Berthold Leibinger Innovation Prize Nominee Distinction-Germany. After completing his PhD in 1989, Dr. Riza joined the General Electric (GE) Corporate Research and Development Center, New York, where he initiated and led the GE Optically Controlled Radar Project. In 1995, he joined the CREOL & the ECE Dept. at the University of Central Florida where he is Full Professor and Head of the Photonic Information Processing Systems Laboratory. For 2007–2008, he was selected as European Union Erasmus Scholar Visiting Professor at the Delft University of Technology, Netherlands. He is founder of Nuonics, Inc. For further information on research, teaching, and service contributions to the field of photonics.

Summary

The lecture will describe the first wired-wireless hybrid optical sensors for temperature and pressure sensing, in particular, for the harsh environments of greener coal-fired gas turbines and combustors in power plants, gas turbines in aircraft engines, and also for ultra-cold applications.