



EOP/ECE/Physics Seminar
Friday, March 15, 2013
3:00 PM CPC 568
All are invited

“Retrocommunications in presence of Atmospheric Turbulence”

by

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In this talk we discuss the niche area of free-space laser communications and data links which use modulating retro-reflectors. This is a growing area of interest since technology can now support “shutters” that can achieve usable communications links. Different modulating retro-reflector technology types and their applications will be discussed. Free-space optical (FSO) communication system models for establishing modulated retro-reflector based communication link in presence of atmospheric turbulence and scattering will be analyzed. The talk will attempt to focus also in some applications.

BIO: Dr. Majumdar has demonstrated leadership skills in Research and Development for the last 29 years from Industry, University and National Laboratory settings in the areas of atmospheric turbulence effects on free-space laser communications, propagation and imaging. He is currently the P.I. and Director of the Beam Control program at the Naval Air Warfare Center Weapons Division at China Lake. His previous significant professional experience includes: University of Colorado (Full Professor, Electrical Engineering and Computer Science Dept.), Senior Research Scientist at Lockheed-California Company, NIST (Visiting Professor), Caltech’s Jet Propulsion Laboratory, MIT Lincoln Laboratory (Staff Member), Brno University of Technology, Brno, Czech Republic (Visiting Professor), and Editor-in-Chief of JOFCR (Journal of Optical and Fiber Communications Research, Springer, New York (2009-2011)). He has published over 60 refereed journal and Conference papers and technical reports, and serves as reviewer for IEEE, OSA, SPIE, Springer and Elsevier Journals. He is the co-chair of the SPIE’s conference on Free-Space Laser Communications, 2013. He has recently published a book : "Free-Space laser Communications: Principles and Advances", Arun K. Majumdar and Jennifer C. Ricklin, Springer, New York, 2008.

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