



Electrical & Computer Engineering and Electro-Optics Program

Distinguished Speaker Colloquia Series Science Center Auditorium Room 114

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Optics and Photonics: Essential Technology for Our Nation



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The National Academy of Science (NAS) recently released its latest report on Optics and Photonics, as follow-on to its 1998 Harnessing Light report. The recent report finds that optical technology development and applications have substantially increased around the world since the last report. I will summarize the essential content of the new report, which emphasizes optics and photonics as critical enabling technologies for both US and world economies. I will also discuss the implications of optics to advanced manufacturing and strategic material development. I will cite selected advances in optics and photonics and the technological opportunities that have arisen since the last report, along with our recommendations for maintenance of U.S. global leadership. The grand challenges are drawn from the findings and recommendations of the report. Optics and Photonics are key enablers for high tech leadership and high paying jobs.

Dr. Paul F. McManamon is technical director of LOCI and a consultant of Exciting Technology. He was co-chair of the recent NAS “Optics and Photonics: Essential Technologies for Our Nation” study, and was a recent member of the Air Force Studies Board study on Intelligence, Surveillance, and Reconnaissance. He was also Vice Chairman of a NAS study called “Seeing Photons”. In 1998, Dr McManamon received the IEEE WRG Baker award, given for the best paper in *any* refereed IEEE journal or publication. He was president of SPIE in 2006, on the SPIE board of directors for 7 years, and on the SPIE Executive Committee for 4 years. Until 2008, he was chief scientist for the Sensors Directorate in Air Force Research Labs, WPAFB, Ohio.

:: Refreshments will be Available ::