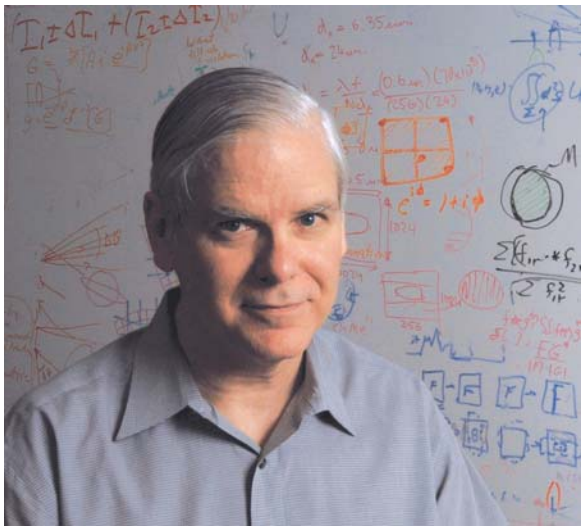
The Institute of OPTICS

Colloquium

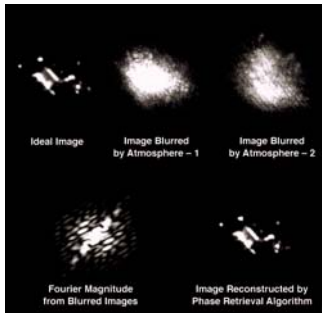
UNIVERSITY of ROCHESTER

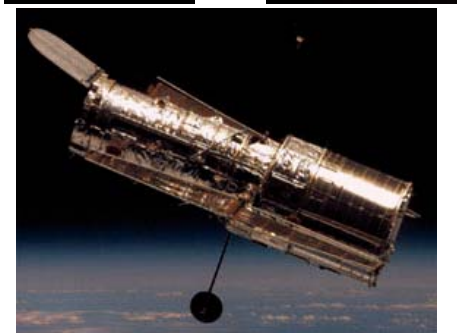
Applications of Phase Retrieval Algorithms



James R. Fienup

Robert E. Hopkins Professor of Optics
Professor, Center for Visual Science
Senior Scientist, Laboratory for Laser Energetics
Professor of Electrical and Computer Engineering
The Institute of Optics
University of Rochester





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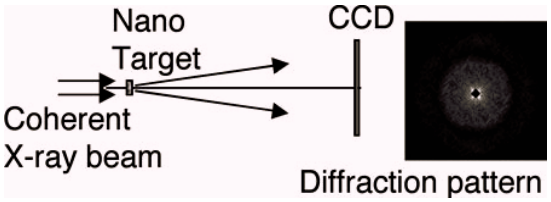

AB Physics and Mathematics, Holy Cross College
MS and PhD in Applied Physics, Stanford University

The presentation will discuss the application areas of the over-1,000 publications which have cited the paper, J.R. Fienup, "Phase Retrieval Algorithms: A Comparison," Applied Optics 21, 2758-2769 (1 August 1982).

3:00 pm, Monday, April 26 2010
Sloan Auditorium, Goergen 101
Refreshments provided.

HAJIM
SCHOOL OF ENGINEERING
& APPLIED SCIENCES

James R. Fienup

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University of Rochester

Abstract:
The presentation will discuss the application areas of the over-1,000 publications which have cited the paper, J.R. Fienup, "Phase Retrieval Algorithms: A Comparison," Applied Optics 21, 2758-2769 (1 August 1982).

Biography:
James R. Fienup received an A.B. in physics and mathematics from Holy Cross College (Worcester, MA), and M.S. and Ph.D. (1975) degrees in Applied Physics from Stanford University, where he was a National Science Foundation Graduate Fellow. He performed research for 27 years at the Environmental Research Institute of Michigan and Veridian Systems, where he was a Senior Scientist. He joined the faculty at the University of Rochester in 2002 as the Robert E. Hopkins Professor of Optics. Professor Fienup is a Fellow of the Optical Society of America and of the International Society for Optical Engineering (SPIE), and is a Senior Member of IEEE. He was awarded the Rudolf Kingslake Medal and Prize for 1979 by the SPIE and the International Prize in Optics for 1983 by the International Commission for Optics. He was Editor-in-Chief of the Journal of the Optical Society of America A, 1997-2003. He previously served as Division Editor of Applied Optics - Information Processing, and Associate Editor of Optics Letters.

Professor Fienup's research interests center around imaging science. His work includes unconventional imaging, phase retrieval, wavefront sensing, and image reconstruction and restoration. These techniques are applied to passive and active optical imaging systems, synthetic-aperture radar, and biomedical imaging modalities. His past work has also included diffractive optics and image quality assessment. He has over 200 publications and 4 patents.