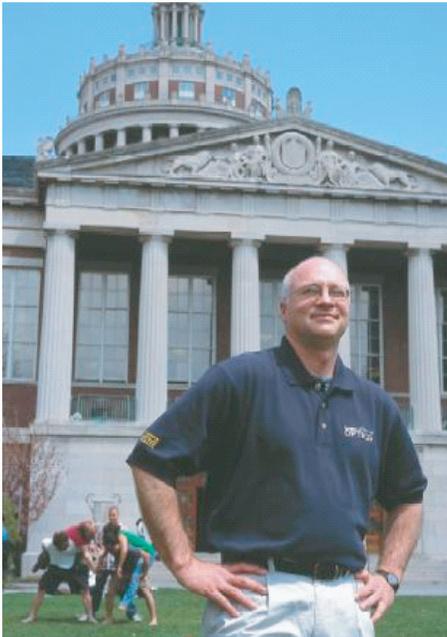


# Optics from 3000 BC to 3000 AD

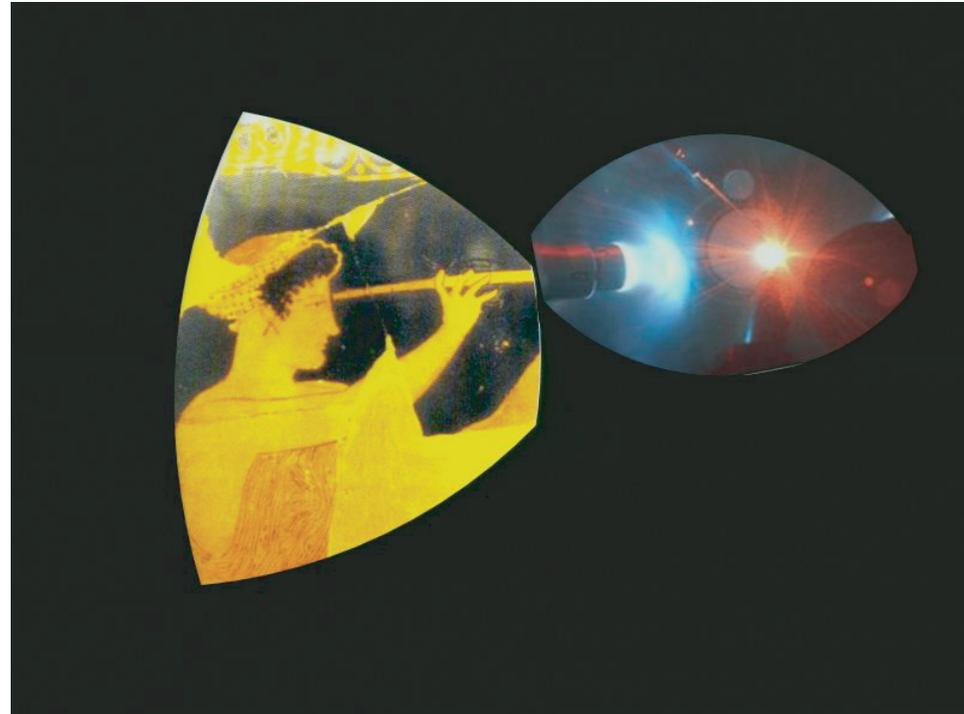


## **Wayne H. Knox**

Director  
Institute of Optics  
University of Rochester

PhD in Optics, Rochester 1983  
Bell Labs 1984 - 2001  
U. of Rochester 2001 -

Optical technology is traced from its ancient roots and earliest known applications through to present-day examples.



**3:00 pm, Monday, September 21, 2009**  
Sloan Auditorium, Goergen 101  
Refreshments provided

# Optics from 3000 BC to 3000 AD

Wayne H. Knox

Director and Professor of Optics

Professor of Physics, and

Senior Scientist at the Laboratory for Laser Energetics

## Abstract

We spend a lot of time keeping up with the very latest developments in optical science and technology, but we don't really spend very much time thinking about the opposite: "How old is optics?" In this talk, we explore how ancient discoveries in optics were made, and how many of these important discoveries made their way to modern things that we use every day. For instance, we find out how old glass is (old!), which experiment led to fiber optics that revolutionized communications, and that physicians were using optical devices to cauterize wounds as early as the 5th century BC.

## Biography

Wayne H. Knox obtained BS (1979) and PhD degrees (1983) at The Institute of Optics, University of Rochester in Rochester, NY. He went to Bell Labs in Holmdel NJ in 1984 and worked as a Postdoctoral Fellow, was promoted to Member of Technical Staff in 1985 and to Distinguished Member of Technical Staff in 1990. In 1997, he was promoted to Director of the Advanced Photonics Research Department where he was responsible for forward-looking research in a number of areas related to advanced technologies in telecommunications in long-haul, access and Metro networks. He is a Fellow of the Optical Society of America and a Fellow and Life member of the American Physical Society, in 1990 won the National Academy of Sciences W.O. Baker Award for Initiatives in Research. In 1999 he won the Richtmyer Award for Physics teaching from the American Association of Physics Teachers. He has authored or co-authored over 150 publications and 39 patents, and has chaired many international professional society meetings such as Ultrafast Phenomena, CLEO, Quantum Optoelectronics, Ultrafast Electronics and Optoelectronics, the OSA Annual Meeting, and Nonlinear Optics. He has served on OSA and APS Fellows committees, and was Chair of the 2002 Tyndall Award Committee. In April 2001 he returned to The Institute of Optics as Director and Professor of Optics where he currently carries out a research program in ultrafast science and technology, nonlinear fiber optics and biomedical optics. He was elected to a 2002-2005 term as Director-at large on the OSA Board of Directors, and served on the Finance Committee. He serves on several Scientific Advisory Boards. He was appointed to the Board of Directors of the Rochester Regional Photonics Cluster in 2002. In 2004, he won the University of Rochester's Robert B. Goergen award for undergraduate teaching excellence.