

## University of Miami, Physics Department Colloquium

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**Date:** Wednesday, Mar 27, 2024  
**Time:** 4:00 pm – 5:00 pm  
**Location:** Wilder Auditorium – Rm 112, Knight Physics Building

### Ubiquitous Optics and Photonics

**Dr. Eric Van Stryland**

The College of Optics and Photonics, University of Central Florida

#### Abstract

Optics and photonics have changed the way you live in important ways that are often overlooked and undervalued. For example, advances in optical lithography enabled the past century of electronics with the integrated chip/computer and your smartphone (otherwise you wouldn't be able to lift either!). It also allows you to talk anywhere in the world over optical fibers without the satellite delays of yesteryear. Just looking at the past many years of Nobel prizes shows how scientific advances are being led by optics, including major research facilities such as the Laser Interferometer Gravitational Wave Observatory, LIGO. Until recently ALL information we have had about our universe came from electromagnetic radiation – now we have an entirely new source. I will give multiple examples of optics/photonics in everyday life and in research. I will also give some specifics of the research I do on the interaction of intense light with matter, i.e. nonlinear optics.

#### Biography



Eric received his physics PhD working at the Optical Sciences Center, University of Arizona, 1976 and joined the University of North Texas after his post-doc at the University of Southern California. He joined the start of CREOL at the University of Central Florida in 1987, becoming director in 1999, and upon becoming CREOL, The College of Optics and Photonics, its founding Dean. He is past President of Optica (formerly OSA) 2006, Fellow of Optica, SPIE, IEEE, and APS and a past Board member of LIA. He was awarded Optica's R.W. Wood Prize in 2008. He has graduated 42 Ph.D.'s, has been on ISI's 'highly cited' list, and is Pegasus Emeritus Professor and past Trustee Chair.