Abstract:
The concept of space-time duality, known since the 1960s, is attracting attention in recent years in the context of temporal imaging. In this talk I review these advances and then focus on our recent work on the temporal analog of reflection and refraction of optical pulses in a medium whose refractive index changes suddenly at a temporal boundary. Analogs of total internal reflection and temporal wave-guiding will also be presented.

Biography:
Govind P. Agrawal received the M.S. and Ph.D. degrees from the Indian Institute of Technology, New Delhi in 1971 and 1974 respectively. After holding positions at the Ecole Polytechnique, France, the City University of New York, and AT&T Bell Laboratories, Dr. Agrawal joined in 1989 the faculty of the Institute of Optics at University of Rochester, where he is currently James C. Wyant Professor of Optics. His research interests focus on optical communications, nonlinear photonics, and laser physics. He is an author or coauthor of more than 400 research papers, and eight books. His books on Nonlinear Fiber Optics (Academic Press, 5th ed., 2013) and Fiber-Optic Communication Systems (Wiley, 4th ed., 2010) are used worldwide for research and teaching. Since 2014, he is serving as Editor-in-Chief of the journal Advances in Optics and Photonics.

Prof. Agrawal is a Fellow of IEEE and OSA (The Optical society) and a Life Fellow of the Optical Society of India. In 2012, IEEE Photonics Society honored him with its prestigious Quantum Electronics Award. He received in 2013 Riker University Award for Excellence in Graduate Teaching. More recently, he was awarded the 2015 Esther Hoffman Beller Medal of the Optical Society.