

“Integrated Imaging Seminar”

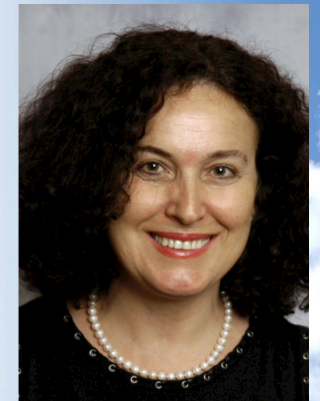
Friday, April 26th, 2013 @ 4:00pm

Burton Morgan (MRGN) ROOM 121 (Room Change)

Prof. Daniela Bortoletto

Department of Physics Purdue University

Title: The Discovery of a New Particle. Is it the Higgs?



Abstract: On July 4th 2012 physicists working at the Large Hadron Collider (LHC), the world’s highest-energy proton accelerator, at CERN in Geneva, Switzerland announced the discovery of a new particle that is about 135 times heavier than a proton. This particle seems to closely resemble the Higgs boson that was hypothesized over forty years ago to explain the masses of all elementary particles in the universe. In this talk, I will summarize the context for this discovery and present the latest studies to elucidate the properties of this Higgs-like particle. I will conclude by discussing prospects for future measurements of this particle that will be allowed by the energy and luminosity upgrade of the LHC.

Bio: Daniela Bortoletto is the E. M. Purcell Distinguished Professor of Physics at Purdue University. Her research specialization is Experimental Particle Physics, for which she received a Sloan Fellowship, the NSF Career Advancement Award, and the NSF Career award. She has a B.A. (Physics) from the Università degli studi di Pavia, Italy (1982) and a Ph.D. (Particle Physics) from Syracuse University (1989). She was a postdoctoral scientist at Purdue (1989-1992) before becoming an assistant professor in 1992. She was a member of the teams that discovered the top quark at the Tevatron and a particle that could be the long-sought Higgs boson at the Large Hadron Collider. Her principal research interests include the study of heavy quarks first at CLEO (bottom quark) and then at CDF (bottom and top) and the search for new particles and the Higgs boson at CDF and now at CMS. She has worked on the development and fabrication of the CMS silicon pixel detector. She is currently a member of the NSF MPS Advisory Committee and the FNAL PAC. She previously served on the Executive Committee of the Division of Particles and Fields (2003-2006), the FNAL User Executive Committee, HEPAP, the Particle Physics Project Prioritization Panel (P5), and on other review committees for both the DOE and NSF. She is a Fellow of the American Physical Society.