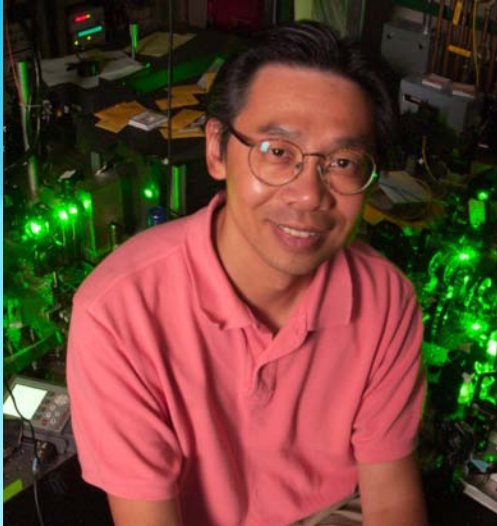


Physics Colloquium

Michigan Technological University

Thursday, December 1, 2011 at 4:00 pm

Room 139 Fisher Hall



Photonic Entanglement: From Polarization to Time-Energy

Franco Wong

**Research Laboratory of Electronics
Massachusetts Institute of Technology**

Abstract: Entanglement is a purely quantum feature that is at the heart of many exciting applications from quantum computation to quantum communications. Photons can be entangled in many different flavors, such as polarization, frequency, and time-bin. I will describe several types of entangled photons and the challenges in their generation and detection.

Bio: Dr. Franco N. C. Wong received his bachelor degrees from the University of Rochester and his Ph.D. degree from Stanford University. He is a Senior Research Scientist at the Massachusetts Institute of Technology and his research interests focus on applications of nonlinear and quantum optics to precision measurements, quantum and optical communications. His current research efforts center on the generation of nonclassical entangled states of light for applications in the areas of quantum imaging, high-rate quantum key distribution, and novel quantum techniques in enhancing measurement capabilities.