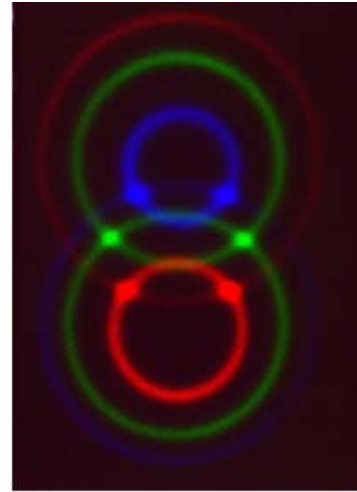




2006

Einstein

Lecture



The Quantum Information Revolution: Einstein's Legacy

Paul G. Kwiat

Bardeen Professor of Physics, Computer & Electrical Engineering
University of Illinois at Urbana-Champaign

In 1905 Einstein proposed that light is really made of particles, arguably starting the quantum revolution, even though his suggestion was not accepted for over 15 years, and even though he himself later had trouble accepting the bizarre consequences of quantum mechanics. Now a century later, the quantum information revolution seeks to use the almost magical quantum properties of superposition, entanglement, and the wave-particle duality, to enable new feats in information processing, such as quantum interrogation ("seeing" an object with no light hitting it) and quantum computing. I will describe some of these "miracles", with demonstrations.

Time: 4:00 PM, Sunday, November 12, 2006

3:30 PM refreshments

Place: Campbell Hall, Rm 405, UAB

1300 University Blvd, Birmingham, AL

More information: Tom Nordlund, (205) 934-4736, -0340

Attendance cards
available for high
schools offering
credit

Open to the public