Quantum cryptography for security challenges to be topic of Frontiers in Science lectures

July 9, 2012

LOS ALAMOS, New Mexico, July 9, 2012—Los Alamos National Laboratory (LANL) scientist Richard Hughes discusses the basics of cryptography and quantum physics and the ways LANL researchers use them to address security challenges in an increasingly networked world at a Frontiers in Science series talk at 7 p.m., Tuesday, July 10 in the Museum of Natural History and Science, 1801 Mountain Road N.W., Albuquerque.

“Anyone who uses a credit card, computer or smartphone relies on cryptography,” said Hughes, of LANL’s Applied Modern Physics Group. “The story of cryptography is a centuries-long struggle between code makers and code breakers, but the new technology of quantum cryptography is poised to tip the scales in favor of the code makers by harnessing the quantum properties of light,” he said.

Hughes repeats his talk on:

- July 12 in the James A. Little Theater of the New Mexico School for the Deaf, 1060 Cerrillos Road, Santa Fe
- July 17, Taos Convention Center, 120 Civic Plaza Drive, Taos
- July 18, Duane Smith Auditorium, Los Alamos High School.

All the talks begin at 7 p.m. and are free and open to the public.

Hughes is a Laboratory Fellow with a doctoral degree in theoretical elementary particle physics from the University of Liverpool, England. He has received four LANL Distinguished Performance Awards for his quantum cryptography research. Hughes is a Fellow of the American Physical Society, holds a number of patents, and has authored more than 150 scientific papers on quantum field theory, the foundations of quantum mechanics, quantum cryptography and quantum computation. He has held distinguished visiting scientist positions at Oxford University and the University of Oslo, Norway.

Sponsored by the Fellows of Los Alamos National Laboratory, the Frontiers in Science lecture series is intended to increase local public awareness of the diversity of science and engineering research at the Laboratory.

For more information, contact Linda Anderman of LANL's Community Programs Office at (505) 665-9196, 888-841-8256, or anderman@lanl.gov.