

# Los Alamos research and leadership prizes awarded

November 20, 2012



## Garzon, Batista and Beyerlein noted for exemplary research

LOS ALAMOS, N.M., November 20, 2012—Commendations for exemplary scientific research and leadership have been bestowed upon three Los Alamos National Laboratory researchers, Fernando Garzon, Cristian Batista and Irene Beyerlein, by the Laboratory Fellows organization.

Leadership Prize – Fernando Garzon

Over the course of a 20-year career at LANL, Fernando Garzon's efforts in the development of electrochemical sensors have become recognized world-wide, and have received sustained support through a multi-million dollar program from DOE's Energy Efficiency and Renewable Energy program office.

This work has led to an R&D 100 award and a DOE Fuel Cells Technology award, as well as forming the basis for Garzon's recognition as a Fellow of the Electrochemical Society. Key to Garzon's success was his ability to create and lead technical teams engaging students, technicians, postdocs, and staff within the Laboratory and inspire them toward common goals.

#### Research Prize – Cristian Batista

Cristian Batista is a theoretical condensed matter physicist who has made seminal contributions to the understanding of quantum magnetism. Batista has pioneered the discovery and explanation of remarkable, often counterintuitive, quantum states of matter.

In addition to making foundational analytical and numerical contributions to basic theory, a hallmark of Batista's theoretical work is his close involvement with experimentalists, with more than half of his publications in the last eight years being written jointly with experimental colleagues. The combination of fundamental theoretical insights and phenomenological explanations that he has provided have resulted in significant impact on the field. Batista has published 148 papers, including 46 – fully one third of his publications – in *Physical Review Letters*, *Science*, or *Nature*. These papers have already been cited by other researchers some 1,900 times.

#### Research Prize – Irene Beyerlein

Irene Beyerlein works at the forefront of several areas of materials science research that are relevant to Los Alamos programs. She has done significant research on multi-scale modeling for dislocation physics and dynamics, providing insights into how materials yield under stress loading. Her work in the area of nanoscale materials and microstructural evolution during severe plastic deformation has led to advances in our understanding of this class of materials. She has also made considerable progress in the ability to make macroscale predictions of stress-strain response. This research has led to many important research publications.

"This year's prizes again show the depth and breadth of the scientific talent at Los Alamos," said Laboratory Director Charlie McMillan. "I'm proud that Los Alamos continues to be a home for such creative and innovative work. Congratulations to Fernando, Cristian, Irene, and their collaborators."

#### About the Los Alamos National Laboratory Fellows

The Laboratory Fellows organization was established in 1981 and is made up of technical staff members who have been appointed by the Lab director to the rank of Fellow in recognition of sustained outstanding contributions and exceptional promise for continued professional achievement. The Fellows are limited to 2 percent of the technical staff, who, by charter, may not be members of Laboratory management.

The Fellows advise LANL management on technical issues of importance to the Laboratory.

To promote technical achievements, the Fellows organize symposia and public lectures and administer the Fellows Prize for Outstanding Research in Science or Engineering and the Fellows Prize for Outstanding Leadership in Science or Engineering.