Los Alamos honors three for research, leadership with Fellows Prizes

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Kevin John, Cynthia Reichhardt and Hari Viswanathan commended for their work

LOS ALAMOS, N.M., Oct. 10, 2018—Three Los Alamos National Laboratory scientists will be honored October 22 with the Laboratory's Fellows Prizes for 2018. Cynthia Reichhardt and Hari Viswanathan will receive the annual Fellows Prize for Research, and Kevin John will receive the Fellows Prize for Leadership.

"I congratulate Cynthia, Hari and Kevin for their outstanding achievements," said John Sarrao, principal associate director for Science, Technology and Engineering at Los Alamos. "The Fellows Prizes recognize both exemplary research and leadership activities in support of the Laboratory's mission and national needs. Cynthia's Fellows Prize for Research honors her computational achievements spanning from materials aging to phase transitions in non-equilibrium systems. Hari is recognized for his accomplishments in subsurface geosystems, which have applications in energy extraction technology. The Fellows Leadership Prize acknowledges Kevin's significant leadership roles nationally and internally supporting medical isotope production, research and infrastructure development."

The Fellows Prizes for Research commend individuals for outstanding research performed at the Laboratory that has been published within the last 10 years and that has had a significant impact on their discipline or program. The Fellows Prize for Leadership commends individuals for outstanding scientific and engineering leadership at the Laboratory and recognizes the value of such leadership that stimulates the interest of talented young staff members in the development of new technology.

Leadership Prize: Kevin John, leader of the Radioactive Isotope Program

John is the project manager of the Isotope Production and Distribution program in the Chemistry Division Office (C-DO). He oversaw major infrastructure upgrades on site including an accelerator improvement project. As program manager, he led a six-fold increase in production of the medical isotope strontium 82, allowing 30,000 cardiac patients to receive monthly treatments. Under his watch, a new actinium 225 project for targeted alpha therapy is being developed for cancer treatment. He has led Tri-

Lab efforts that initiated new science and engineering concepts and raised significant support funding from a variety of agencies. He works successfully with many external collaborators and mentors the students of collaborators at Los Alamos. Thanks to his efforts and those of his collaborators, Los Alamos is now a flagship isotope production and R&D center worldwide.

Research Prizes:

Cynthia Reichhardt, condensed matter theorist

Reichhardt was noted for her model of long-term aging behavior of stockpile materials and computational models to understand the role of defects, dislocations and interfaces in matter, and the role that phase transitions play in non-equilibrium systems. She is a member of the Physics and Chemistry of Materials group (T-1) of the Theoretical division, and she has had a large impact in support of the Laboratory's stockpile stewardship mission during the past 10 years. Reichhardt is an author of 215 peer reviewed papers, with 5,900 citations and H index 40 (35 Web of Science). She is a Fellow of the American Physical Society and recipient of many other awards. Her peers noted that her broad scientific impact as well as positive and unselfish mentoring of younger colleagues preserves the future of scientific endeavors at Los Alamos and elsewhere.

Hari Viswanathan, researcher in subsurface fluid flow

Viswanathan's work has led to understanding and manipulating fracture creation and fluid flow in subsurface geosystems, helping enable the nation's hydraulic fracturing shale gas energy revolution. A researcher in the Computational Earth Science group (EES-16) group of the Earth and Environmental Sciences division, he has 97 publications on subsurface flow and mechanics in the last decade and more than 65 papers on hydraulic fracturing in the last five years. Viswanathan was named a Fellow of the Geological Society of America in 2017. His nomination notes that he is an intellectual leader and team builder in subsurface science and has effectively showcased Los Alamos research to the international community. Two key capabilities that resulted from his work are *dfnWorks* and *HOSS*, which simulate fractured subsurface systems using supercomputing. *HOSS* was a 2016 R&D 100 finalist and *dfnWorks* an R&D 100 winner in 2017.