

LIVERMORE LAB REPORT

A weekly review of scientific and technological achievements from Lawrence Livermore National Laboratory, July 30-Aug. 3, 2012



PECASE IS THE PLACE TO BE



Heather Whitley and Jeffrey Banks

Two young Lawrence Livermore researchers earlier this week received Presidential Early Career Awards for Scientists and Engineers (PECASE) for work in computational science and physics.

This is the highest honor bestowed by the U.S. government on outstanding scientists and engineers, who are early in their independent research careers. The LLNL winners are Heather Whitley, a design physicist, and Jeffrey Banks, a computational scientist.

Whitley is working on research related to the transport processes in dense plasmas, such as those found in the National Ignition Facility (NIF) where fusion energy experiments are conducted.

Banks was chosen for his research in using computers to simulate problems from the physical sciences; and the basic mathematics needed to continue expanding the Lab's simulation capabilities.

To read more, go to [The White House](#).



Robert Muller, the founder of the Berkeley Earth Surface Temperature project, has had a change of heart. Once a climate change skeptic, believing that previous climate studies threw doubt on the very existence of global warming, Muller has done a turnaround and now believes that global warming is real and that the prior estimates of the rate of warming were correct.

And one last statement: Humans are almost entirely the cause.

Muller based his change of views on studies conducted as part of the Berkeley Earth Surface Temperature project but also on the conclusions of the most recent report of the Intergovernmental Panel on Climate Change for which Lawrence Livermore contributed heavily.

To read more, go to [The New York Times](#).



Germany has just inaugurated the SuperMUC, Europe's most powerful supercomputer, which ranked fourth in the June TOP500 supercomputing listing

While it contains 147,456 cores using Intel Xeon 2.7-GHz, 8-core E5-2680 chips, it has nothing on the Laboratory's Sequoia, the world's most powerful supercomputer.

According to the TOP500 list, the SuperMUC is the world's most powerful X86-based supercomputer. But Sequoia relies on 16-core, 1.6-GHz POWER BQC chips. Those are the same chips that power the DOE's Mira Supercomputer at the Argonne National Laboratory, which ranks third.

To read more, go to [Slashdot](#).

**THE
INDEPENDENT
MAGAZINE** FITNESS WITH FINESSE



Jean Shuler

Exercising in a group really does work better than doing it alone, because it is just plain more fun.

That motto has worked well for Jean Shuler for the past 40 years.

At 70, Shuler still keeps running and climbing mountains with co-workers from the Laboratory. She returned from Mount Whitney a few weeks ago, after her fourth climb of the mountain with three friends.

"We started at 9 p.m. with headlights, and hiked all night. Our goal was to get to the top by sunrise. We missed it by a little bit," Schuler said.

To read more, go to [The Independent](#).

LLNL applies and advances science and technology to help ensure national security and global stability. Through multi-disciplinary research and development, with particular expertise in high-energy-density physics, laser science, high-performance computing and science/engineering at the nanometer/subpicosecond scale, LLNL innovations improve security, meet energy and environmental needs and strengthen U.S. economic competitiveness. The Laboratory also

partners with other research institutions, universities and industry to bring the full weight of the nation's science and technology community to bear on solving problems of national importance.

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