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of Great Science and Innovation in the US

National User Facilities Support Science, Jobs, and Growth in Every State

- Advanced Photon Source (APS) - Argonne National Laboratory, Argonne, Illinois
- Argonne Leadership Computing Facility (ALCF) - Argonne National Laboratory, Argonne, Illinois
- Argonne Tandem Linac Accelerator System (ATLAS) - Argonne National Laboratory, Argonne, Illinois
- Center for Nanoscale Materials (CNM) - Argonne National Laboratory, Argonne, Illinois
- Electron Microscopy Center (EMC) - Argonne National Laboratory, Argonne, Illinois
- Transportation Research Analysis Computing Center (TRACC) - Argonne National Laboratory, Argonne, Illinois
- National Superconducting Cyclotron Laboratory (NSCL) - Michigan State University, East Lansing, Michigan
- Fermi National Accelerator Laboratory - Batavia, Illinois
- Omega Laser Facility - University of Rochester, Rochester, New York
- Cornell High Energy Sychrotron Source (CHESS) - Cornell University, Ithaca, New York



Chen Po, an assistant professor of geology at the University of Wyoming, was part of a team using the OLCF to simulate a magnitude-8 earthquake in three dimensions and better understand seismic hazards.



Bruce Harmon, a scientist at Ames Laboratory and distinguished professor at Iowa State University, uses OLCF computing resources and a fast, efficient algorithm to predict crystal structures and discover advanced materials.



Kent Blaisie, biophysical chemistry professor with the University of Pennsylvania and former chair of the CSMB SRC at ORNL, uses HFIR and SNS to investigate in-situ application of electric fields on structural changes in single membranes.



Ramunas Stepanauskas, Senior Research Scientist and Director of the Single Cell Genomics Center at the Bigelow Laboratory for Ocean Sciences collaborates with the DOE Joint Genome Institute to understand how microbes that reside in the "twilight zone" 200 to 1,000 meters below the ocean surface capture carbon where insufficient sunlight penetrates for them to perform photosynthesis.



Roland K. Strong, Member of the Division of Basic Sciences at the Fred Hutchinson Cancer Research Center, has used the ALS to study molecules that mediate protective immunity against viruses and bacteria and misdirected immune responses in autoimmune diseases and bone marrow transplants.

Advanced Test Reactor (ATR)
Idaho National Laboratory
Arco, Idaho

Environmental Molecular Sciences Laboratory (EMSL)
Pacific Northwest National Laboratory
Richland, Washington



Francesca Sammaruca, Professor of Physics at the University of Idaho, is a nuclear theorist. Her research includes the development and applications of theoretical and computational models of nuclear systems and processes which are measured at NSCL.

- Advanced Light Source (ALS) - Lawrence Berkeley National Laboratory, Berkeley, California
- Energy Sciences Network (ESnet) - Lawrence Berkeley National Laboratory, Berkeley, California
- Joint Genome Institute (JGI) - Lawrence Berkeley National Laboratory, Berkeley, California
- National Center for Electron Microscopy (NCEM) - Lawrence Berkeley National Laboratory, Berkeley, California
- National Energy Research Scientific Computing Center (NERSC) - Lawrence Berkeley National Laboratory, Berkeley, California
- Molecular Foundry - Lawrence Berkeley National Laboratory, Berkeley, California

- Facility for Advanced Accelerator Experimental Tests (FACET) - SLAC National Laboratory, Stanford, California
- Linac Coherent Light Source (LCLS) - SLAC National Laboratory, Stanford, California
- Particle Physics and Astrophysics at SLAC (PPA) - SLAC National Laboratory, Stanford, California
- Stanford Synchrotron Radiation Lightsources (SSRL) - SLAC National Laboratory, Stanford, California

- Center for Accelerator Mass Spectrometry (CAMS) - Lawrence Livermore National Laboratory, Livermore, California
- Jupiter Laser Facility (JLF) - Lawrence Livermore National Laboratory, Livermore, California
- National Ignition Facility (NIF) - Lawrence Livermore National Laboratory, Livermore, California

National Optical Astronomy Observatory (NOAO)
Tucson, Arizona



Sarah Hayes, Assistant Professor at the University of Alaska Fairbanks uses SSRL to examine the bonding environment of toxic metals during extraction processes and mineral weathering.

- Lujan Neutron Scattering Center at LANSCE - Los Alamos National Laboratory, Los Alamos, New Mexico
- Proton Radiography at LANSCE (pRad) - Los Alamos National Laboratory, Los Alamos, New Mexico
- Weapons Neutron Research Facility (WNR) - Los Alamos National Laboratory, Los Alamos, New Mexico



Breese Quinn, associate professor at the University of Mississippi, has been involved in research at the Department of Energy's Fermilab for more than 20 years, since he was a graduate student at the University of Chicago. Recently, his Ole Miss group was part of the analysis team that reported the first evidence for the Higgs particle. At present, Dr. Quinn is helping to design a new Fermilab experiment that will help elucidate the matter-antimatter asymmetry of the universe.



Raquel Lieberman, Assistant Professor in the School of Chemistry & Biochemistry at Georgia Institute of Technology, has used NLS, SSRL, APS, and the ALS to characterize the structure and function of proteins that diseases in the aging population like Alzheimer's and glaucoma.

National High Magnetic Field Laboratory (MagLab)
Florida State University
Tallahassee, Florida

Center for Advanced Microstructures and Devices (CAMD)
Louisiana State University
Baton Rouge, Louisiana

Center for Integrated Nanotechnologies (CINT)
Sandia National Laboratory
Albuquerque, New Mexico

Global Facilities

- Atmospheric Radiation Measurement Climate Research (ARM) Global Network
- U.S. Large Hadron Collider Program (LHC) - CERN, Switzerland
- National Astronomy and Ionosphere Center (NAIC) - Arecibo, Puerto Rico

