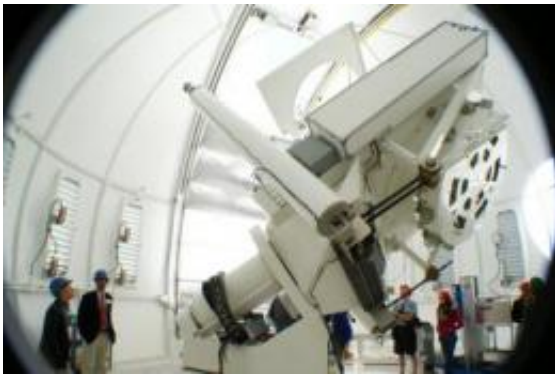


NJIT receives funding to improve Big Bear Telescope, study solar energy

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NFS Funding to NJIT's Big Bear Solar Observatory will focus on the purchase of a cryogenic infrared spectrograph. This is a substantial improvement over other solar infrared spectrographs in use at US observatories. Credit: New Jersey Institute of Technology

NJIT researchers are at work on many scientific and technological frontiers. The National Science Foundation has recently provided support that totals nearly \$4.3 million for the diverse efforts of the following investigators under the American Recovery and Reinvestment Act of 2009.

Four researchers have been awarded grants for investigation of solar phenomena. Philip R. Goode, distinguished professor of physics, will enhance the capabilities of NJIT's Big Bear Solar Observatory with a cryogenic infrared spectrograph. This is a substantial improvement over

other solar infrared spectrographs in use at U.S. observatories.

Dale Gary, distinguished professor of physics, has received a grant to upgrade instrumentation at the Owens Valley Solar Array, the only solar-dedicated radio observatory in the U.S. Andrew Gerrard, associate physics professor, will help further investigations of [solar-wind energy](#) and the Earth's [magnetic field](#) lines.

Ju Jing, a research professor in the physics department, will study the evolution of the Sun's coronal magnetic configurations and the corresponding free magnetic energy associated with solar explosive phenomena. Such phenomena include flares and coronal mass ejections that can impact terrestrial telecommunications and power systems.

Trevor Tyson, professor of physics, received funding for his research project-- Acquisition of a Properties Measurement System for Education and Research in Energy Related Materials. This work will address the critical need for better materials for energy storage, conversion and recovery.

Mechanical engineering professor Kwabena Narh will provide a joint NJIT/Rutgers six-week summer research experience for high school science teachers from local school districts.

Support for "Direct Numerical Simulations of Elastic Filament Suspensions and Multi-Scale Modeling of Soft-Particle Suspensions" will enable Yuan-Nan Young, assistant professor of mathematical sciences, to investigate new strategies for advancing micro- and nano-fluidic science and engineering.

Marino Xanthos, a professor in the department of chemical, biological and pharmaceutical engineering, has support for Fundamental Material and Processing Studies on Hot-Melt Extrusion - A Novel Pharmaceutical

Manufacturing Process, research into meeting production challenges to bring new drugs into the market.

Yanchao Zhang, assistant professor in the department of electrical and computer engineering, has a CAREER grant for Dependable Data Management in Heterogeneous Sensor Networks to study remote-sensing solutions for distant and extreme environments such as oceans, volcanos, animal habitats and battlefields.

Source: New Jersey Institute of Technology

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