LSST lays first stone

A new ground-based telescope promises unprecedented information about distant galaxies, nearby asteroids and even the mysterious dark energy that is accelerating the expansion of our universe. Today, collaborators from the U.S. National Science Foundation (NSF), U.S. Department of Energy (DOE), Chile's Ministry of Foreign Affairs and Comisión Nacional de Investigación Científica y Technológica (CONICYT) and several other international public-private ...

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Teaching tykes to program robots

Playgrounds are popular spaces for young children to play and learn. They promote exploration of the physical environment and motor and social skill development, allowing young children to be autonomous while developing core competencies. Playpens, by contrast, corral children into safe, confined spaces. Although they are mostly riskfree, there is little opportunity for exploration and imaginative play. From a developmental perspective, the playground promotes.....

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Research space at academic institutions increased by 4.7 percent in fiscal 2013

Research-performing colleges and universities increased their science and engineering research space 4.7 percent between fiscal 2011 and fiscal 2013, according to a new report from the NSF National Center for Science and Engineering Statistics. The report details that total research space increased 9.6 million net assignable square feet over this period, from 202.2 million to 211.8 million. The biological and biomedical ...

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US, Chile to 'officially' kick off LSST construction

From distant exploding supernovae and nearby asteroids to the mysteries of dark matter, the Large Synoptic Survey Telescope (LSST) promises to survey the night skies and provide data to solve the universe's biggest mysteries. On April 14, news media are invited to join the U.S. National Science Foundation (NSF), the U.S. Department of Energy (DoE) and other public-private partners as they gather outside La Serena, Chile, to "officially" launch LSST's...

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R&D expenditures recognized as investment in U.S. GDP statistics

The Bureau of Economic Analysis (BEA) now treats expenditures in research and development (R&D) as investment when estimating U.S. gross domestic product (GDP) and other national income and product accounts statistics. BEA and the National Science Foundation's National Center for Science and Engineering Statistics (NCSES) collaborated in developing methodology to use NCSES R&D expenditure statistics for the purpose of estimating U.S. GDP. Changes in GDP methodology, including...

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Six million graduates employed in science and engineering in 2013

The number of college graduates in the United States nearly doubled between 1993 and 2013, according to a new report from the National Science Foundation’s National Center for Science and Engineering Statistics. The report details that the number of graduates with degrees in science and engineering (S&E) fields grew faster than the number of those with other types of degrees. ...

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How robots can help build better doctors

A young doctor leans over a patient who has been in a serious car accident and invariably must be experiencing pain. The doctor's trauma team examines the patient's pelvis and rolls her onto her side to check her spine. They scan the patient's abdomen with a rapid ultrasound machine, finding fluid. They insert a tube in her nose. Throughout the procedure, the patient's face remains rigid, showing no signs of pain. The patient's facial demeanor isn't a result of stoicism--it's a ...

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NSF announces first NSF Research Traineeship awards

The National Science Foundation (NSF) is pleased to announce the first awardees for the recently launched NSF Research Traineeship (NRT) program. All of the NRT projects address an interdisciplinary topic of national importance, and six of the eight NRT projects strongly emphasize Data Enabled Science and Engineering, including analytics and Big Data. Innovative approaches to graduate training used across these projects include industry internships, international experiences, citizen ...

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Giving robots and prostheses the human touch

The UCLA Biomechatronics Lab develops a language of touch that can be "felt" by computers and humans alike...

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Researchers improve efficiency of human walking

Humans have evolved to be incredibly efficient at walking. In fact, simulations of human locomotion show that walking on level ground and at a steady speed should theoretically require no power input at all. But anyone who works on their feet or has taken an arduous hike knows otherwise. In fact, people expend more energy during walking than any other activity in daily life, and for the elderly and those with mobility issues, that energy can be precious.
For decades, ...

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Born during a drought: Bad news for baboons

The saying "what doesn't kill you makes you stronger" may not hold up to scientific scrutiny. After the plains of southern Kenya experienced a severe drought in 2009 that took a terrible toll on wildlife, researchers looked at how 50 wild baboons coped with the drought, and whether the conditions they faced in infancy played a role. The semi-arid savanna of southern Kenya usually receives an average of 14 inches of rain a year--akin to much of Nebraska or Kansas....

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NSF awards 2015 Graduate Research Fellowships

The National Science Foundation (NSF) has announced this year’s recipients of Graduate Research Fellowships (GRF). NSF awarded the GRF to 2,000 individuals from among 16,500 applicants in 2015. Awardees represent a diverse group of scientific disciplines and come from all states, as well as the District of Columbia, and commonwealths and territories of the United States. They are also a diverse group of individuals. Among the 2,000 awardees, 1,053 are women, 494 are from ...

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Springtime night lights: Finding the aurora

This is the seventh part in a series on NSF’s geosciences risk and resilience interest area. See parts one, two, three, four, five and ...

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Advancing physics frontiers

Whether they are describing the physics of how multicellular groups form from individual living cells, assembling the building blocks for quantum computing and quantum engineering, or investigating how massive elements came into being after our universe’s beginning, the National Science Foundation's (NSF) newest Physics Frontiers Center awardees represent the leading edge of physics research. Today, the agency’s physics division announced awards for five Physics Frontiers Centers--four of ...

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