

## North American Women Sweep Top Honors at Intel Competition

For the first time in the history of the Intel International Science and Engineering Fair, the top three award winners were women. Each of the three high-school students won an Intel Foundation Young Scientist Award at the fair, held last May in Cleveland, Ohio.

**Elena Glassman** from Doylestown, Pennsylvania, **Lisa Glukhovsky** from New Milford, Connecticut, and **Anila Madiraju** from Montreal each won a \$50 000 scholarship and a personal computer.

For her project, Glukhovsky, a junior, used simultaneous images of near-Earth objects (asteroids) from two observatory sites and a computer spreadsheet she created to determine the distance from Earth to asteroids. Her results closely agreed with NASA predictions.

Glassman, a junior, designed a computer science project that used electrical signals from the brain to detect whether a person intends to make a left-handed or right-handed movement. A potential application is to enable handicapped individuals to operate a computer. Madiraju, a senior, showed that a method involving the use of a type of RNA to target and kill cancerous cells is effective without the toxic side effects typically associated with anticancer drugs.

This year, students from 36 countries competed for \$3 million in scholarships and awards. Next year's competition will be held in Portland, Oregon, in May.



BOB GOLDBERG

**Intel trio.** Anila Madiraju, Elena Glassman, and Lisa Glukhovsky (left to right), all 17, each won an Intel Foundation Young Scientist Award.

**Anthony Tweed**

## News Notes

**Turner goes to Washington.** University of Chicago astrophysicist Michael Turner has been named to a two-year term as NSF's assistant director for

mathematical and physical sciences (MPS). Turner, who recently chaired the National Research Council's committee on physics of the universe, will take over as head of the \$1 billion di-

rectorate on 1 October. The directorate supports research in physics, chemistry, astronomy, materials science, mathematics, and several interdisciplinary fields.

"I believe there is a special opportunity to give the physical sciences a boost and realize some great opportunities for discovery, and I think I can make a difference," Turner said after his appointment was announced in late June. "NSF is in a unique position to articulate the importance of research in the physical sciences to the nation and to lead the effort to ensure that they are properly supported."

Turner will take a leave of absence from the University of Chicago, where

he chairs the department of astronomy and astrophysics. He is also a senior scientist at Fermilab. Turner succeeds Robert Eisenstein, who headed the directorate from 1997 to 2002. Acting assistant director John Hunt will remain in the job until Turner arrives.

**JLD**

**Weapons labs security review.** In response to Energy Secretary Spencer Abraham's June directive, Linton Brooks, administrator of the National Nuclear Security Administration, has ordered a significant tightening of security procedures at the three national weapons laboratories. The order is part of a five-part initiative intended to "reinforce current safeguards and security oversight." The labs, Sandia, Los Alamos, and Lawrence Livermore, have all been plagued with security problems for the past few years (see PHYSICS TODAY, February 2003, page 22).

"There have been a wealth of studies of security in the weapons complex over the years, including outside commissions, internal review teams, and investigative reports . . . but it is clear that not all the good ideas have been implemented," Brooks said. "I have directed a team to review the many recommendations and devise a plan for implementing any sound ideas that we have not yet undertaken."

In addition to ordering more surveillance and making changes in how

security is managed, Brooks established two review groups to look at longer-range security issues. One panel will review physical security and materials control at the labs, and the other will develop recommendations for recruiting security personnel. **JLD**

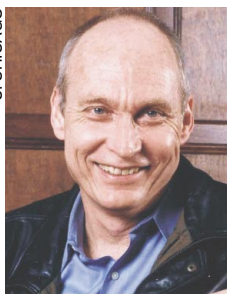
**CERN outreach globe.** For its 50th birthday, CERN, the European particle physics laboratory near Geneva, is receiving a 27-meter globe from

CERN AND HERVÉ DESSIMOZ, ARCHITECT



Switzerland. The lab's proposal for the globe—created as the Palais de l'Equilibre for the country's national exhibition last year in Neuchâtel—won a competition. At CERN it will be rechristened as the Globe of Innovation and will house a visitors' center and quarters for networking with industry and promoting technology transfer. As part of the expanded visitor facilities, a new neighboring building will offer views of the Large

U. CHICAGO



**Turner**

**Boost intercept study completed.** After more than two and a half years of work, the American Physical Society's study group on boost-phase intercept systems for national missile defense has released a 396-page report on the scientific and technical aspects of intercepting an intercontinental ballistic missile (ICBM) during the first few minutes of the missile's flight. The study reaches six conclusions based on 17 findings about a boost-phase intercept system but, based on an APS mandate to take "no position with regard to the wisdom of deployment," makes no recommendations. Overall, the report says that developing an effective boost-phase interceptor system would be extremely difficult.

The federal government is currently spending about \$9 billion on missile defense; in his current budget proposal, President Bush has requested about \$626 million for development of a boost-phase intercept system. In a letter she wrote two weeks before the 15 July release of the report, APS President Myriam Sarachik told Representative Duncan Hunter (R-Calif.), chairman of the House Armed Services Committee, that the "technical analysis contained in the report should be of value to Congress, the Department of Defense, and other policy makers in shaping our nation's missile defense program. . . ."

Pre-release restrictions prevented an in-depth story about the study in this issue of PHYSICS TODAY. A full news story will appear in the September issue. **JLD**

Hadron Collider control center and of data from the accelerator.

"I am convinced that the Globe of Innovation will occupy an important place in passing the message of science," Swiss President Pascal Couchepin said when he announced the gift. An opening ceremony is planned for October 2004. **TF**

**Community college physics.** About 100 000 students a year take introductory physics at US community colleges, reports the American Institute of Physics in a five-year follow-up to its first comprehensive look at two-year colleges. Although many two-year colleges aim to serve as a training ground for technicians, applied and technical physics make up only

8% of physics classes. Instead, most two-year physics programs focus on preparing students to transfer to four-year degree programs.

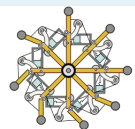
In 2001, 43% of physics programs at two-year campuses had only one instructor. Of those instructors, 64% were employed full-time and the rest were part-time. Women made up 14% of physics instructors, up from 11% five years earlier.

These and other data are presented in the report *Physics in the Two-Year Colleges: 2001–02*. Single copies may be obtained free of charge from AIP, Statistical Research Center, One Physics Ellipse, College Park, MD 20740; e-mail stats@aip.org; Web site <http://www.aip.org/statistics/trends/hstrends.htm>. **TF ■**

## WEB WATCH

<http://www.lhup.edu/~dsimanek/museum/unwork.htm>

As well as teaching physics at Lock Haven University of Pennsylvania, Donald Simanek curates the online **Museum of Unworkable Devices**. With glee and zeal, Simanek dissects the failings of perpetual motion machines past and present.



<http://www.computerhistory.org>

Based in a new Silicon Valley home, the **Computer History Museum** offers online exhibits to supplement its extensive collection of computers. Current exhibits include histories of the Internet and microprocessors.

<http://www.newtonproject.ic.ac.uk>

"Irenicum, or Ecclesiastical Polity Tending to Peace" is the title of a 40-page treatise that Isaac Newton wrote in 1710. Thanks to the **Newton Project**, which is based at Imperial College London, you can read online this and other nonscientific works by Newton.

THE NEWTON PROJECT

To suggest topics or sites for Web Watch, please phone the editor at (301) 209-3036. *Compiled and edited by Charles Day*



## AIP State Department Science Fellowship 2004 - 2005

The American Institute of Physics and the U.S. Department of State are now accepting applications for the 2004-2005 Fellowship term, commencing in the fall of 2004. If you are a scientist with an interest in foreign policy, this program offers an opportunity to spend a year using your technical expertise to directly support the foreign policy work of the U.S. Department of State.

**QUALIFICATIONS** include PhD or equivalent in physics or related field, interest or experience in S&T aspects of foreign policy, membership in one or more AIP Member Societies, and U.S. citizenship. The Fellowship is contingent upon receipt of a security clearance.

A **STIPEND** of \$49,000 and other benefits are provided by AIP.

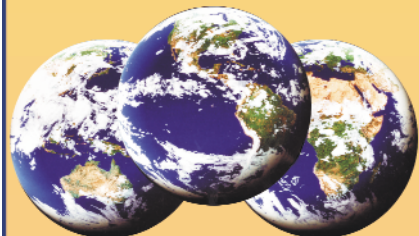
**APPLICATIONS** should consist of a letter of intent, a 2-page resume, and three letters of reference. Your letter should discuss your interest in and suitability for the position. Letters of Reference should be mailed directly to the address below.

**FOR FURTHER INFORMATION** on the program and detailed instructions on applying, please see our website at: <http://www.aip.org/mgr/sdf.html>.

**ALL APPLICATION MATERIALS MUST BE POSTMARKED BY NOVEMBER 1, 2003 and sent to:**

AIP State Department Science Fellowship  
American Institute of Physics  
One Physics Ellipse  
College Park, MD 20740-3843  
ATTN: Audrey T. Leath

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