



NanoDays educational activities were performed in the Rayburn House Office Building by Tim Miller, education associate at the Museum of Science, Boston.

NISE Net was funded by NSF in 2005 and has grown from three founding partner museums to more than a dozen partner museums and universities. The White House Office of Science and Technology Policy advocated "continued support for efforts such as NISE Net" in the 2007 National Nanotechnology Initiative Strategic Plan, the document that will guide reauthorization hearings for NNI this year.

"One of the reasons that faculty have been hesitant to get involved in outreach is because of the huge time commitment involved to do it right, but interest goes way up once people have prepared tools that can make an impact," says Ellen Williams, director of the materials research science and engineering center at the University of Maryland, College Park, which hosted a NanoDays open house for local elementary- and middle-school students. "The NanoDays kits are wonderful," she adds, referring to the supplies and instructions put together by NISE Net staff for six nanoscale hands-on activities.

Some NISE Net partners put on original shows. The Museum of Science, Boston, presented *The Amazing Nano Brothers Juggling Show*—an original script by NISE Net principal investigator Carol Lynn Alpert in which two comic performers act out the behavior of matter at the nanoscale by jointly juggling macroscopic objects, sometimes while riding 2-meter unicycles.

"When I came to the Museum of Science 37 years ago from MIT, all I could do was draw formulas on a blackboard, so I had to learn how to explain things by using analogies, similar objects, and common experiences," says physicist and lead NISE Net principal investiga-

tor Larry Bell. "I'm now a bit surprised that we can actually gather a small group of people and keep them for 15 to 20 minutes while we talk about nanotechnology, which they can't see and which has a level of complexity that makes it hard to understand."

Jermey N. A. Matthews

Polish cosmologist wins religion prize

Catholic priest and cosmologist Michael Heller is this year's winner of the Templeton Prize. According to the Templeton Foundation, which bestows it, the prize is intended to "serve as a philanthropic catalyst for discovery in areas engaging life's biggest questions, ranging from explorations into the laws of nature and the universe to questions on love, gratitude, forgiveness, and creativity." The Templeton Prize is the largest annual award to an individual and was designed to have a bigger purse than the Nobel Prize. This year it is worth about \$1.6 million.

Heller, a member of the philosophy faculty at the Pontifical Academy of Theology in Krakow, Poland, first became a priest and then studied physics. Although he served in a parish at one time, he now pursues both interests as a scholar. He began his scientific career looking at dissipative processes in cosmic evolution. Today his focus is on using noncommutative geometry to construct a theoretical model to unify gravity and quantum mechanics. On the religious side, he says, "My idea is not so much philosophy of science, but philosophy *in* science." Time, space, causality,

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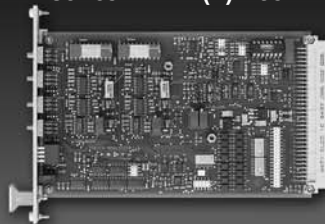
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Heller

and determinism, he says, were traditionally in the realm of philosophy and are now a part of physics. "It is my passion to investigate these problems as they are present in physical theories." For Heller, science and religion inhabit "two nonintersecting planes. They are methodically different, they require conceptually different equipment. But they interact with each other—they

did that in history very often."

Under communism, the Polish authorities were officially antipathetic to both religion and intellectualism. But, Heller says, "to be in such a system is in a sense enriching because you can better know human nature and human stupidity." Both professions, he adds, "require an entire human life. But it was easy, for me at least: I just followed my passions."

Heller says his Templeton money will go toward founding the Copernicus Center "to further research and education in science and theology as an academic discipline." The center traces back to an interdisciplinary discussion group originally formed in the 1960s by Karol Wojtyła, the future Pope John Paul II.

Toni Feder

news notes

CERN-ITER cooperation. Officials for the ITER international fusion energy prototype reactor and CERN have signed an agreement to cooperate on technological and administrative matters. The five-year pact will allow the €5 billion fledgling fusion project to tap the managerial expertise of the 54-year-old European center for particle physics as ITER prepares to increase its workforce from its current 260 full-time staff to as many as 700 permanent employees when experimental operations get under way about 10 years from now in Cadarache, France. Finance, human resources, and purchasing are potential areas of cooperation. Representing 20 nations, CERN is an obvious prototype for the 7-party ITER, although the partner nations of ITER are drawn from across the globe. The agreement also facilitates collaborations on technologies that are common to both projects, such as superconducting magnets, cryogenics, controls, data acquisition, and civil engineering.

CERN director general Robert Aymar, who hosted the signing ceremony in March, knows both projects well, having served as the ITER director general until moving to CERN in 2004. An ITER spokesman described the pact as an umbrella legal agreement with no spending levels specified. If funds change hands between the two organizations, it will be in the form of consulting fees. **DK**

Luring excellence to Canada. Canada's 2008 budget includes two programs to recruit top scientists from around the world. In one, 20 awards each totaling Can\$10 million (US\$9.8 million) over seven years will go to universities that attract premier researchers. These Canada Global Excellence Research Chairs will be in the areas of health, environment, natural resources and energy, and information and communication technologies. In the other, 500 graduate students a year will win Vanier scholarships, each worth Can\$50 000 a year for three years. Industry Canada, the ministry that oversees most physical sciences research, compares the intended prestige of these new internationally competitive scholarships to Rhodes and Fulbright grants in the UK and US, respectively.

"The government wants to up the ante on world-class excellence. They don't want to simply spread the money

around," says Indira Samarasekera, president of the University of Alberta in Edmonton. "We will immediately get our faculty to identify people around the world, Canadians living abroad and others," to sponsor for global chairs, she says, "and we will look at committing resources of our own." Thanks to oil, Alberta is a prosperous province, she adds. "We have a Can\$400 million science building under construction, and a lot of other new buildings. We will use that as a hook in competing against other universities."

The global chairs and the Vanier graduate grants are aligned with Canada's science and technology strategy, which was outlined in a May 2007 report, *Mobilizing Science and Technology to Canada's Advantage*. **TF ■**

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<http://www.vuw.ac.nz/scps-demos>

Like their colleagues around the world, physics teachers in New Zealand struggle to engage their pupils in a tough but rewarding science. The **New Zealand Physics Teachers' Resource Bank** offers nearly 100 demonstrations, both online and offline, to meet that challenge.

<http://www-outreach.phy.cam.ac.uk/camphy>

Since 1874, students and researchers at the University of Cambridge have done experiments at the **Cavendish Laboratory**. The lab's outreach website offers a tour of the lab's museum and information about current research and future plans.



<http://www.funderstanding.com/k12/coaster>



The testing services company Funderstanding has created an online **Roller Coaster** simulator. The Java applet lets you adjust the heights of the hills, the mass of the vehicle, and other quantities to make the ride more or less thrilling or even dangerous. Children can use the simulator to learn about concepts in classical mechanics. Adult physicists can use it to test their intuition.