

these 'errors' and thereby exposing the so-called weaknesses of evolutionary theory. I grant that biologists do debate some of the mechanisms of evolution. However, none of the current debates . . . involve any of the alleged errors presented by the Discovery Institute."

"By focusing on a few alleged errors and then correctly pointing out that biologists debate about evolution," Dennison continued, "the [critics] are using a 'bait and switch' tactic in an attempt to discredit all of evolutionary theory."

Quarles, head of the Texas section of the American Physical Society, led an effort supported by APS, the American Institute of Physics, and the American Geophysical Union to alert other Texas scientists about the controversy. On 1 November, that effort resulted in a letter signed by about 550 Texas scientists and sent to the board of education. In addition to Quarles and Nobel laureate Weinberg, signatories included former presidential science adviser Neal Lane of Rice University and Nobel laureates Michael Brown and Johann Deisenhofer, both of the University of Texas Southwestern Medical Center in Dallas.

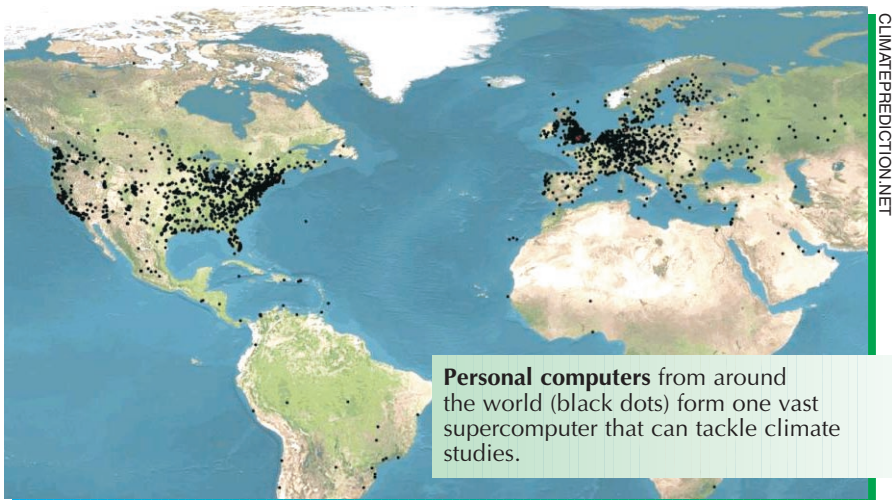
Following the board's decision, Discovery Institute President Bruce Chapman said that the Texas Education Agency commissioner's statement that all factual errors in the textbooks will be corrected was "real progress in the cause for science education reform. We were already happy that a number of embarrassing errors that overstate the evidence for evolutionary theory were being fixed."

"A few of the publishers put in qualifiers that are perfectly fine and don't weaken evolution," said Steven Schaefersman, president of Texas Citizens for Science, an organization that has for years fought attempts to dilute the teaching of evolution. "The Discovery Institute people didn't accomplish what they wanted, which was to have the books include their bogus weaknesses. The biology books are as good now as they have ever been, and we're keeping them that way. This was a victory for us."

Jim Dawson

Climate@home

Although personal computers use more than 8% of the US electricity market, most of the time they have nothing to do. Now a UK research consortium has launched the Web site climateprediction.net to improve the accuracy of climate simulations by



Personal computers from around the world (black dots) form one vast supercomputer that can tackle climate studies.

harnessing that idle computer power.

The new site originated when Myles Allen of Oxford University wrote a commentary in *Nature* (volume 401, p. 642, 1999) calling on the science community to exploit home computers for research. Allen's article was inspired by the SETI@home project, which now harnesses nearly 5 million home computers to process radio signals in the search for extraterrestrial life (see *PHYSICS TODAY*, October 1997, page 96). Eventually, the UK's main weather forecaster, the Exeter-based Met Office, worked on the project with the Rutherford Appleton Laboratory, Tessella Support Services, Oxford and Reading universities, and the Open University. So far, more than 50 000 individuals have registered on the Web site.

Visitors to climateprediction.net who run the Microsoft Windows operating system are invited to install a small program, nicknamed *climate@home*, onto their computers. The program contains a highly regarded climate model produced by the Met Office. Every version of *climate@home* that is downloaded has slightly different conditions in the climate model, which runs quietly in the background when the computer is not being used. Once the program has finished running—which can take between 10 and 22 days, depending on the speed of the machine and the length of time the computer is left on—the results are automatically sent back to the Web site for analysis and displayed on the user's screen.

By running the model thousands of times with slightly different variables, the consortium hopes to find out how sensitive the Met Office model is to temperature and to atmospheric and biological processes such as the carbon cycle. "In the past, estimates of climate change have had

to be made using one or, at best, a very small ensemble—tens rather than thousands—of model runs," says Mat Collins, a Met Office climate scientist. "This experiment will give us the most comprehensive assessment of future climate change."

Paul Guinnessy

Nuclear Industry Creates World University

A worldwide shortage of nuclear engineers, workers, scientists, and students has led the World Nuclear Association, an international trade group with headquarters in London, to launch a new global body: the World Nuclear University. Supported by both the WNA and the International Atomic Energy Agency (IAEA), the WNU plans to offer summer courses, strengthen links among academic and research institutions, and eventually establish an international standard for graduate degrees, says John Ritch, the WNA's director general.

The university was officially inaugurated in September to celebrate the 50th anniversary of President Dwight D. Eisenhower's "Atoms for Peace" initiative. The idea for creating an international university had been around for several years, but was taken up only last year by the WNA and IAEA. Former IAEA director general Hans Blix, who led the UN search for weapons of mass destruction in Iraq, will be the WNU's first chancellor.

The WNU will operate out of a small office in London, and its staff will initially consist of volunteer experts from research institutes, industry, and government agencies. The first summer courses are scheduled for 2004, and the WNU is working on what it hopes will

be the first in a series of reference books, a manual called *English Language Skills for the Global Nuclear Industry*. Other planned programs will look to preserve the knowledge of the existing generation of nuclear workers before they retire. "There will be no actual campus, as we can make use of existing academic infrastructure," says Ritch.

By 2011, the supply of nuclear engineers in the US will fall short of demand by 50%, says Melanie Lyons, spokesperson for the Washington, DC-based Nuclear Energy Institute. Similar shortages are predicted to occur in many countries that use nuclear reactors. "Germany needs an additional 6000 skilled nuclear staff and so does France," says Helmuth Böck, a professor of reactor physics at the Atomic Institute in Vienna, Austria.

The projected worldwide shortages would arise even if the nuclear industry did not expand much beyond the 440 existing power plants (see the story on page 34). However, the WNA anticipates a high rate of reactor construction as energy-generation costs and environmental concerns increasingly favor nuclear over fossil fuels, says Ritch. An increased demand for new workers, he adds, will underscore the need for setting international education standards.

Another WNU role arises from the recent call by IAEA Director General Mohamed ElBaradei for a fundamental review of the entire fuel cycle of the nuclear industry worldwide. Instead of national facilities for uranium fuel enrichment and spent fuel reprocessing, he suggests studies directed toward placing a limited number of facilities under full multinational control. The aim would be to eliminate any opportunity for nuclear weapons proliferation. He also suggests that countries collaborate more on waste disposal. Already these ideas are topics of WNU working groups. "In the future," says Ritch, "we hope the WNU will become a vibrant symbol of a nuclear technology that is green and indispensable."

Paul Guinnessy

Physics in the Life Sciences Is Focus of Industrial Physics Forum

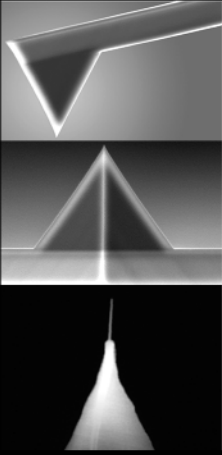
Nanoscale photosynthesis, molecule cascades, and the ribosome as a protein-producing nanomachine, were just some of the life sciences-oriented topics presented at the 2003 Industrial Physics Forum and its academic-industrial workshop, held

26–28 October in San Jose, California.

Hosted by the Palo Alto-based Agilent Technologies, the annual meeting was sponsored by the Corporate Associates of the American Institute of Physics, the *Industrial Physicist*, and the American Physical Society's Forum on Industrial and Applied Physics. Participants in the pre-conference workshop focused on the roles of industry, government, and academia in cultivating new scientists through undergraduate research.

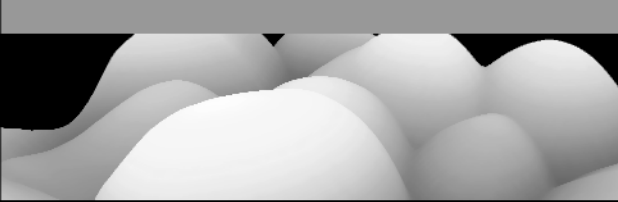
The workshop opened with an overview of why some undergraduate physics departments thrive. The discussions, which included case studies from Rutgers University in New Jersey and Bryn Mawr College in Pennsylvania, focused on the importance of involving undergraduates in research. The National Task Force on Undergraduate Physics, which conducted site visits at 21 "thriving" physics departments, provided data for the workshop (see PHYSICS TODAY, September 2003, page 38).

The forum's theme, "Physics in the Life Sciences," underscored the increasingly intertwined nature of physics and biology. The tour of Agilent Technologies included visits to labs for research in such areas as proteomics, nanopore detection, and DNA micro-



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