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Information Technology in the News

NSF FUNDS NANOTECHNOLOGY CENTER AT UMASS

■ The National Science Foundation (NSF) has awarded the University of Massachusetts at Amherst $16 million to fund nanotechnology research. UMass, beating out a number of higher-profile institutions for the prestigious grant, already has more than fifty faculty working in the field of nanotechnology and has received $54 million in funding for nanotechnology research since 1997. With the NSF grant, the Center for Hierarchical Manufacturing at UMass will embark on research in the areas of nanotechnology-scale manufacturing, bionanotechnology, and nanotechnology materials. A condition of the award is that the state must provide $5 million. Governor Mitt Romney noted: "I'm hopeful that nanotechnology will offer the same kinds of benefits and economic potential for the Commonwealth that we saw with biotech." (*Boston.comNews,* ⟨http://www.boston.com/news/local/articles/2006/04/25/umass_is_given_16m_for_high_tech_project/⟩)

RPI TO DEVELOP SUPERCOMPUTING CENTER

■ Rensselaer Polytechnic Institute in Troy, New York, is working with several companies to develop a supercomputing center that will be the largest at a university and one of the ten largest worldwide. The Computational Center for Nanotechnology Innovations will be used to study nanotechnology and its application in semiconductors. Researchers will try to shrink the size of some components from 65 nanometers today to 22 nanometers by 2015. The center represents the latest move in a series of efforts by New York Governor George Pataki to make the state a magnet for the high-tech sector. Companies participating in the development of the new center, which has a budget of about $100 million, include IBM, Advanced Micro Devices (AMD), and Cadence, a maker of semiconductor design tools. IBM and AMD are also participating in an effort to establish a lithography research center in Albany. (*ZDNet,* ⟨http://news.zdnet.com/2100-9584_22-6071268.html⟩)

PROGRAMMING CONTEST CROWNS RUSSIAN STUDENTS

■ A team of students from Saratov State University in Russia won the 2006 Association for Computing Machinery's International Collegiate Programming Contest. Working in teams of three, contestants had five hours to answer as many of ten complex problems as possible. The winning team, which correctly answered six of the problems, won a $10,000 scholarship and computer equipment from IBM, the main sponsor of the event. Runners-up were from the University of Twente in the Netherlands, Altai State Technical University in Russia, and Jagiellonian University of Krakow, Poland. Doug Heintzman, the director of IBM's Lotus division, noted that over the years, IBM has hired eighty winners of the contest. The questions in the contest were similar to problems that programmers would typically take months to solve. Bill Poucher, the executive director of the contest, described the difficulty of the contest by asking, "When was the last time you heard someone say, 'I need a piece of software in 10 minutes'?" (*MSNBC.com,* ⟨http://www.msnbc.msn.com/id/12290688/⟩)

SOLVING THE PROBLEM OF DISTANCE EXAMS

■ Troy University is looking to technology to solve a problem created by technology. Working with Software Secure Inc., officials at Troy are directing the development of an electronic proctor

IT DOLLARS

CARNEGIE MELLON OPENS DATA CENTER OBSERVATORY

Carnegie Mellon University has launched a new facility that researchers hope will shed light on questions of power consumption in data centers. The Data Center Observatory, which is itself a functioning data center, will let researchers study ways to improve the efficiency of computers in data centers, helping institutions cut costs for energy consumption. Greg Ganger, professor of electrical and computer engineering, said, "These large clusters of power-hungry machines, along with rising energy prices, are generating huge energy bills." The new facility can support 40 racks of computers, which could consume more energy than 750 average-sized homes. The Data Center Observatory, which is a joint project of the College of Engineering and the School of Computer Science, will also address questions of lowering administrative costs at data centers. (*Pittsburgh Tribune-Review,* ⟨http://www.pittsburghlive.com/x/pittsburghtrib/news/s_455099.html⟩)

to oversee distance-learning students when they take exams. The device, called Securexam Remote Proctor, sits next to a student's computer and connects through the Internet to the host campus. Students verify themselves by using a fingerprint reader in the device, which also includes a camera and a microphone that let instructors watch and hear students remotely as they take tests. Sallie Johnson, director of instructional design and education technologies for Troy's eCampus, said the device "allows faculty members to have total control over their exams." The device is expected to cost about $200, and

multiple students would be able to use the same device for different exams. But some academic officials think the device is unnecessary. Brian Douglas, chief technology officer for UMass Online, called it "an intrusion into a student's life." Noting that the incidence of cheating among distance-learning students is overstated, he said that his institution relies on the honor code and on test structures that make online cheating difficult. (*Inside Higher Ed*, ⟨http://www.insidehighered. com/news/2006/06/02/proctor⟩)

LOOKING FOR COMPUTER SCIENCE STUDENTS

■ By encouraging a broader range of students to pursue degrees and careers in computer science, a new initiative aims to change the perception of computer professionals as a bunch of guys who lack social skills. The Stars Alliance is an organization currently representing ten colleges and universities, though officials said they hope to attract more institutions. The organization will send undergraduate and graduate students in computer science into middle and high schools to talk to students. These visits not only will expose younger students to the idea of studying computer science but also will give college students an opportunity to talk about technology with people who are probably not as computer-savvy, a skill that employers say is lacking among many technical staff. Other efforts of the alliance will include exposing students to Web-development and multimedia courses earlier in the college curricula, giving them a taste of what lies ahead rather than bogging them down in "weed-out" math classes. Larry Dennis, dean of the College of Information at Florida State University and a coprincipal investigator of the alliance, said: "We're looking at curricular and infrastructure changes to make these courses more attractive to everybody. Not just women and minori-

ties, but everybody." The alliance has been given a three-year, $2 million grant from the National Science Foundation. (*Chronicle of Higher Education*, ⟨http://chronicle. com/weekly/v52/i40/40a02902.htm⟩ [subscription required])

TWO UNIVERSITIES JOIN BOOK-SCANNING PROJECT

■ Microsoft has announced that the libraries of the University of California and the University of Toronto will participate in its book-scanning project, known as Windows Live Book Search. The two libraries joining Microsoft's program, which is being run together with the Open Content Alliance, will allow the project to scan their public-domain materials. Unlike Google's similar project, Microsoft's project is scanning only books in the public domain or for which the copyright owners have granted explicit permission. To that end, Microsoft has set up a Web site where copyright owners can volunteer their materials for being scanned and made available online. By contrast, Google's approach has been to scan books, including those still covered by copyright, unless a copyright owner specifically objects. (*CNET*, ⟨http://news. com.com/2100-1025_3-6082258.html⟩)

DUKE'S IPOD PROGRAM EVOLVES

■ Duke University's iPod program continues to evolve since its introduction in 2004, when all incoming freshmen were given iPods. The Duke Digital Initiative was started to investigate the pedagogical uses for the devices and, despite skepticism from some corners, has proven successful. In the second year of the program, instead of giving every freshman an iPod, the university handed out iPods to any student enrolled in a course designated by the school's Center for Instructional Technology as having a legitimate use for the device. The goal was to encourage faculty

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to design curricula that incorporated the technology. Indeed, the number of courses approved for iPod use rose from nineteen in the spring of 2005 to forty-seven in the spring of 2006. New changes to the program reflect budgetary constraints. Students in iPod-approved courses can now borrow the devices for the duration of the term. Students who want to own an iPod can buy one from the university for $99, about one-third of the retail cost. (*Inside Higher Ed*, ⟨http://www.insidehighered. com/news/2006/04/28/ipod⟩)