# SPECTRUM

Virginia Tech
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY *http://www.unirel.vt.edu/spectrum/* VOLUME 24 NUMBER 24 FRIDAY, MARCH 1, 2002


***Spectrum* will resume publication on March 15.**

## University receives state-of-the-art design software

*By Lynn Nystrom*

Virginia Tech has been tapped to join a prestigious group of engineering schools with a donation of state-of-the-art design-software suites. An educational consortium of General Motors Corp., Sun Microsystems and EDS, known as PACE, donated computer stations and software to accommodate hundreds of students in advanced design.

This corporate partnership, titled Partners for the Advancement of CAD/CAM/CAE Education (PACE), was formed in 1999 to help provide future engineers from key institutions with the education and experience desired by each of the participants. Their donation to Tech was their largest gift to date of computer-aided design, manufacturing, and engineering (CAD/CAM/CAE) software, hardware and training.

"This significant contribution of computer hardware and software, as well as the training and technical support to operate those systems, will help ensure Virginia Tech's long tradition of preparing top technical and managerial leaders of the future," said President Charles W. Steger.

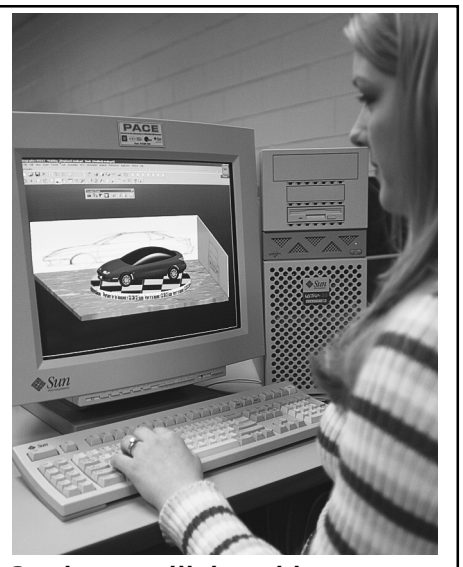
Students at Virginia Tech will now be using the same advanced math-based engineering and design tools in the classroom that GM engineers used in the lab to design the Chevrolet and GMC automobiles. Using Unigraphics software from EDS' PLM Solutions, students will learn to design, engineer and validate products in a virtual world to prepare them to address real-world challenges such as accelerated product-development cycles and increased productivity demands.

Virginia Tech is the seventeenth university to receive a PACE donation. Strategically selected universities are invited to participate in the program based on their ability to meet specific criteria, including: a long-term relationship with GM as a primary educational partner; a strong product-development and manufacturing curriculum; an adequate infrastructure of facilities, maintenance systems and personnel to support the donated hardware and software; and a willingness to integrate Unigraphics software into the engineering curriculum.

"The technology that PACE has donated represents the future of engineering and design," said John Middlebrook, GM vice president and general manager of vehicle brand marketing/advertising. "By the time these students graduate, they will be among the most experienced and highly skilled graduates to enter the work force."

PACE creates networks for research,

*(See UNIVERSITY on 4)*




**Students will be able to use advanced design software.**
**(*R. Griffiths*)**

## *Pamplin College considers Northern Virginia EMBA program*

*By Sookhan Ho*

The Pamplin College of Business is considering creating an executive MBA program in Northern Virginia, based on encouraging results from a marketing study.

Pamplin Dean Richard E. Sorensen said he had been asked by university officials to examine the possibility of offering an EMBA as part of Virginia Tech's outreach services to the business community. The college contracted with market research firm Martin Research Inc. last year to investigate the feasibility of such a program. The findings, Sorensen said, suggest "a good opportunity for the college to position itself in executive education in Northern Virginia at little or no cost to the university."

An EMBA program would not only serve a new constituency of top-level managers, he said, it would also enhance the visibility and image of Virginia Tech and the Pamplin College, strengthen ties with Northern Virginia businesses, and generate surplus revenue for the college.

If approved by the university, the program, once under way, would be self-funded through student fees—"a model," Sorensen said "that has been successfully used in other top-ranked business schools I have visited."

Bob Sumichrast, associate dean for graduate and international programs, said, "despite strong competition in Northern Virginia, a well-designed Pamplin EMBA would be successful in attracting many qualified applicants." More than 50 percent of prospective students surveyed by Martin Research, he said, indicated that they were very interested in an EMBA from the college.

Pamplin's EMBA, Sumichrast said, would focus on leadership of global business and information technology from the perspective of upper management. It would also require students to participate in a study-abroad program that would include a stay at the university's Center for European Studies and Architecture in Lugano, Switzerland. "Simultaneously focusing on these three areas would set us apart from our competition in Northern Virginia."

The college currently offers a full-time MBA program in Blacksburg and a part-time program at the university's Northern Virginia Center in Falls Church and eight other sites across the state. However, Sumichrast said, the part-time program does not perfectly meet the needs of senior–level professionals who typically want a shorter, more intense program.

"They demand small classes with peers from a range of industries as fellow students, and they expect a higher level of facilities. They

*(See PAMPLIN on 4)*

## Di Ventra's molecular electronics work earns NSF award

*By Sally Harris*

Massimiliano Di Ventra of the Department of Physics has received a Faculty Early Career Development Program (CAREER) Award from the National Science Foundation (NSF) to develop and use novel atomic-scale first-principles approaches to enhance scientists' understanding of the nonlinear transport properties of molecular wires.

CAREER awards are presented annually to a select roster of young faculty members nation-wide who have the potential to make significant contributions to engineering and scientific research and instruction. Di Ventra's award is for $300,000 over five years.

At the nanoscale level (one-billionth of a meter) scientists potentially can develop revolutionary ways of making materials and products that will greatly increase the speed of electrical processes and reduce the power needed to run electronics devices. Di Ventra does computer simulations in the area of molecular electronics, which could change the practice of science. "A fundamental understanding of the electron-transport properties of molecular structures at the atomic level is vital for the development of molecular electronics," Di Ventra said.

Molecular electronics involves developing immensely fast and powerful computing circuits based on trillions of individual building blocks, each no larger than a single molecule, Di Ventra said. These molecules have to perform functions identical or analogous to those of transistors, diodes, conductors, and other key components of today's solid-state micro-electronics.

"Chemists, physicists, and engineers have actually shown that individual molecules and molecular wires can conduct, switch electric current, and store information," Di Ventra said. "However, to further advance this new technology, we need to understand how molecular devices work both singularly and when connected together. This in turn requires understanding how electrons behave when traveling into regions as small as a few atoms."

Last year, Di Ventra and experimentalist Randy Heflin received Nanoscale Exploratory Research grants from the NSF as seed money to begin to explore the nanoscale world through computer simulations and a combination of optics, thin-film technology, and analytical biochemistry. With the CAREER award, Di Ventra will use newly developed atomic-scale first-principles approaches to study some of the most fundamental issues of transport in molecular wires that can have a major impact in developing molecular electronics. These include current-induced forces, local heating and heating dissipation, fluctuations of current, and interference effects at the molecule-leads contacts.

In addition to conducting his work in concert with experimental studies, Di Ventra will integrate his research program into undergraduate and graduate education by developing a new course on career opportunities in nanotechnology. To compare theoretical predictions and experimental results, Di Ventra will collaborate with Heflin of physics and Harry Dorn of chemistry, all in the College of

*(See DI VENTRA'S on 4)*

## VT center to develop IT program for Malawi

*By Jean Elliott*

The Center for Instructional Technology Solutions in Industry and Education (CITSIE) received a $1.1-million grant from the United States Agency for International Development (USAID) to assist the African nation of Malawi to develop the use of technology in their educational system. John Burton, director of CITSIE, is the principal investigator with co-principal investigators Barbara Lockee, Mike Moore, and Josiah Tlou.

The five-year project began this semester with the arrival of five Malawian students, all of whom are enrolled at the master's level in the Instructional Technology Program within the Department of Teaching and Learning. According to Burton, these "cadre leaders" have a special charge: "to develop the capacity to deliver educational workshops, courses, and programs as instructional technology (IT) specialists with the skills to not only design and implement on-line programming regarding IT, but also to serve as technology trainers for other Malawi teachers."

Virginia Tech has positioned itself in the forefront of the movement to integrate technology into teaching practice with its web-based, distance-delivered, masters degree in instructional technology (ITMA) for practicing teachers. The first group of 60 students finished in the spring of 2001. A second group of over 100 teachers will finish in the spring of 2003. A third, "virtual campus" group began last fall and has enrolled students across Virginia and nine other states. Fully tested and modified according to information gathered through formative evaluation, the program is a 30-hour degree and is completely on line. The experience and knowledge gained from the development and implementation of this distance-delivered program has prepared the instructional-technology faculty members to train Malawi educators how

*(See VT CENTER on 4)*

# ACTIVITIES

## EVENTS

**Friday, 1**
**Pay Date for Faculty and Staff Members.**
**Women's History Month Begins.**

**Saturday, 2**
**Spring Break Begins.**
**YMCA Hike,** 10 a.m., YMCA Parking Lot.
**Men's Basketball,** 2 p.m.: At Miami.
**Women's Basketball Big East Tournament, TBA:** At Piscataway, N.J. (Through 3-5).

**Monday, 4**
**CommonHealth Program,** 12:10 to 12:55 p.m., Southgate Personnel classroom.

**Tuesday, 5**
**CommonHealth Program,** 12:10 to 12:55 p.m., DBHCC conference room G.

**Wednesday, 6**
**Leadership Development Workshop,** 9 a.m. to 4 p.m., DBHCC rooms D, E.
**CommonHealth Program,** 12:15 to 12:30 p.m., DBHCC conference room G.
**Men's Basketball Big East Tournament,** times TBA: Madison Square Garden. (Through 3-9)

**Thursday, 7**
**Leadership Development Workshop,** 9 a.m. to 4 p.m., DBHCC rooms D, E.

**Friday, 8**
**International Dinner (potluck)**, 6:30 p.m., Cranwell Center, 231-6527.

**Saturday, 9**
**Hort Gardens Class,** 10:30 a.m. to noon, Greenhouse classroom: "Prune and Train Home Fruit Trees."

**Sunday, 10**
**Spring Break Ends.**

**Monday, 11**
**Family, Work/Life Resources Program,** noon to 1 p.m., DBHCC conference room G.
**CommonHealth Program,** 5:30 to 8 p.m., 135 War Memorial Hall.
**Hort Gardens Class,** 6 to 7:30 p.m., Greenhouse classroom: "Orchids are Easy."

**Tuesday, 12**
**Art Gallery Exhibit Opening (Through 4-5).**
**CommonHealth Program,** 12:10 to 12:55 p.m., DBHCC conference room G.

**Wednesday, 13**
**Family, Work/Life Resources Program,** noon to 1 p.m., DBHCC conference room G.
**Luncheon**, 11:30 a.m. to 1:30 p.m., DBHCC: Asian Buffet.

**Thursday, 14**
**Art Gallery Exhibit Opening (Through 4-12).**

**Friday, 15**
**Pay Date for Faculty and Staff Members.**
**Last Day to Resign.**

## SEMINARS

**Friday, 1**
**Highlands in Chemistry,** 11:15 a.m., 3 Davidson: Jon R. Parquette, Ohio State.
**MCBB,** 12:20 to 1:10 p.m., Fralin auditorium: Timothy C. Hall, Texas A&M.

**Wednesday, 13**
**ESM,** 4 p.m., 136 Norris: Laszlo Kollar, Texas—Dallas.

**Thursday, 14**
**CSES,** 4 p.m., 246 Smyth: Gabar Hassan.

**Friday, 15**
**Highlands in Chemistry,** 11:15 a.m., 3 Davidson: Troy D. Wood, SUNY—Buffalo.
**PCOB,** 11:15 a.m., 1045 Pamplin: John Mathis, Thunderbird.
**MCBB,** 12:20 to 1:10 p.m., Fralin auditorium: Stuart Newfield, Arizona State.
**Statistics,** 3:45 p.m., 409 Hutcheson: Sastry Pantula.
**STS**, 4 p.m., 132 Lane Hall: Jenny Reardon, Harvard.

# BULLETINS

### Professor of Year program seeks nominations

The 2002 U.S. Professors of the Year program is under way and accepting nominations for outstanding undergraduate teachers.

The program offers an opportunity to celebrate and publicize the contributions made by extraordinary undergraduate educators at campuses throughout the United States. The Carnegie Foundation will select a winner from each of four categories: baccalaureate colleagues; community colleges; master's universities and colleges; and doctoral and research universities.

The four national winners receive a $5,000 cash prize and an invitation to the awards luncheon at the National Press Club in Washington, DC in November.

Entries are due by Friday, April 26. Visit *www.rgs.vt.edu/funding/ou/update.html* for more information.

### Girls' technology camp offered

Virginia sophomore and junior-high school girls who want to explore engineering, math and science and learn about campus life are invited to attend C-Tech$^2$, a summer camp being held at Virginia Tech July 7-20.

A major focus of the camp is computers—how they work and how to use them. Participants also learn basic engineering principles. Activities include computer classes and hands-on projects such as building robots and constructing telephones.

Campers will attend seminars provided by campus offices, including Admissions, Financial Aid and Career Services. There will be a department fair where engineering department representatives will assist girls in exploring academic and career opportunities.

C-Tech2 is sponsored by the Office of Minority Engineering Programs. The cost is $250 for the three-week program. Full and partial scholarships are available.

Applications should be postmarked by March 1. For more information or to complete an application, go to *www.eng.vt.edu/ctech2*; or contact Kimberly LaBoone at 1-3973, e-mail *ctech2@vt.edu*.

### EU conference scheduled at Wilson Center

The School of Public and International Affairs and the Metropolitan Institute at Virginia Tech will co-sponsor a one-day conference on "European Union (EU) Enlargement and Environmental Quality" on March 14, at the Woodrow Wilson International Center for Scholars in Washington, D.C.

The conference is designed to foster discussion and debate on how European Union enlargement in central and eastern Europe will affect environmental policy, quality, and security in the region as well as in western Europe and beyond.

Department of Urban Affairs and Planning Professor JoAnn Carmin will co-chair the conference, and College of Architecture and Urban Studies Associate Dean Max Stephenson will chair an afternoon panel.

The conference will be held in the fifth-floor conference room of the Ronald Reagan Building from 9 a.m. to 5 p.m. RSVP via e-mail to *kneppm@wwic.si.edu* by March 8. More information is available at *http://wwics.si.edu/ees/index.htm*.

### Post Office requests correct zip code

The U.S. Post Office has requested that when ancillary statements are used on outgoing envelopes (for instance "Return Service Requested") that the corresponding zip code be 24060 instead of 24061. Printing Services will update new job requests. Envelopes that might bypass Printing Services should also carry the correct zip code to insure correct billing.

### GSA Research Symposium scheduled

The 18th Annual Research Symposium will be April 2 from 10 a.m. to 3 p.m. in Squires Commonwealth Ballroom.

Registration can be accessed at *http://gsa.uusa.vt.edu*. The deadline for abstract submission is March 15.

For more information, contact Selen Olgun at *solgun@vt.edu*, or Shireen Hafez at *shafez@vt.edu*.

### International Dinner set for March 8

Community residents are invited to join Virginia Tech international students and families for a potluck supper on Friday, March 8, at 6:30 p.m. at the Cranwell International Center. Participants should bring a dish to serve 10 to 12 people. Call 1-6527 for more information.

## E-mail-based walking program offered

*By Sally Harris*

Researchers at the Center for Research in Health Behavior in the Department of Psychology have developed an e-mail based walking program. "Many people don't want to rush to a scheduled exercise class after a long day at work," said Liza Rovniak, the program's coordinator. "With an e-mail-based walking program, people can exercise when they want and where they want and receive feedback from a walking coach in the comfort of their own homes."

A recent study at Harvard of more than 72,000 nurses indicated that 90 minutes of weekly brisk walking can reduce heart disease, the nation's leading killer, by 30 percent to 40 percent, Rovniak said. And those who worry about diabetes, obesity, stroke, cancer, osteoporosis, high cholesterol, and high blood pressure or suffer from poor sleep can benefit from walking.

The e-mail-based walking program, supported by Fonds FCAR, a Quebec government granting agency, combines the shared expertise of Rovniak, Richard Winett, and Janet Wojcik in developing Internet-based interventions, effectively using motivational

*(See E-MAIL on 3)*

## *U. S. News* columnist to speak on campus

*By Sookhan Ho*

*U.S. News & World Report* columnist and TV news analyst Gloria Borger will give a talk on Thursday, March 21, at 7:30 p.m., in Burruss auditorium. Borger is the featured speaker for the Cutchins Distinguished Lecture, presented twice a year by the Virginia Tech Corps of Cadets Center for Leader Development in the Pamplin College of Business. Her talk, "The Insider's View from Washington," is open to the public at no charge.

Borger has been a political reporter/col-

*(SeeU.S. NEWS on 3)*

## Ferris to lead funding workshop

*By Sally Harris*

William Ferris, former chairman of the National Endowment for the Humanities, will lead a humanities-funding workshop Tuesday, March 19, at Virginia Tech.

Faculty members interested in learning more about how to generate funding for humanities research and teaching are invited to the workshop from 9 to 11 a.m. in the Executive Committee room of the Donaldson Brown Hotel and Conference Center. To register for the free workshop, e-mail Betty Fine (*bfine@vt.edu*)

*(See FERRIS on 3)*

# EMPLOYMENT

## CLASSIFIED POSITIONS

The following classified positions are currently available. Position details, specific application procedures/position-closing dates may be found on Personnel Services web site *http://www.ps.vt.edu.* Positions are also listed on the Job Line, a 24-hour recorded message service. For information on all job listings, call 1-5300. Some positions include state benefits. Positions with numbers beginning with "W" are hourly and do not include state benefits. Individuals with disabilities desiring assistance or accommodation in the application process should call by the application deadline. Closing date for advertised positions is 1 p.m. Monday. An EO/AA employer committed to diversity.

**FULL TIME**

**Assistant Manager**, 001209H, PB 3, RDP.
**Construction Project Manager**, 006686F, PB 5, Physical Plant.
**Database Programmer/Administrator**, 007923J, PB 4, ELPS.
**Electrician**, 001276F, PB 3, Physical Plant.
**Graphic Designer**, 006542G, PB 4, Continuing Education.
**Housekeeping Worker**, 007340H, PB 1, RDP.
**Housekeeping Worker**, W022490H, PB 1, RDP.
**Information Technology Specialist**, 007925M, PB 4, Entomology.
**Laboratory Specialist**, 007922R, PB 4, VBI.
**Project Manager**, 007929F, PB 5, CDC.
**Radiologic Technologist**, 002394M, ***PB 3, VTH.***
**Sales And Marketing Manager, 000478H, PB 3, RDP.**
**Senior Systems Administrator, 000241G, PB 6, Mathematics.**
**Service Leader Senior, 007797H, PB 1, RDP.**
**Sous Chef, 007881H, PB 3, RDP.**
**Special Projects/Utilities Crew, 000216H, PB 1, RDP.**
**Standard Periodicals Check-in Clerk, 007928G, PB 2, ULTS.**

**PART TIME**

**Fiscal Assistant, W022541M, PB 3, Entomology.**
**Large Animal Husbandry, W022155M, PB 1, VTH.**
**Program Support Technician, 004570M, PB 3, CSES.**
**Radiologic Technologist, W022412M, PB 3, VTH.**
**Veterinary Technician, W023340M, PB 4, VTH.**

**OFF CAMPUS**

**Director of Nursing**, 002178M, PB 4, CVM—Equine Medical Center.
**Extension Assistant, Family/Youth Education**, 006969M, PB 3, VCE—Pittsylvania County.
**Geographic Data Developer**, 007913M, PB 4, BSE.
**Project Support Specialist**, 007926S, PB 3, CPAP/IPPR/FRU.
**Radio Announcer**, W020800S, PB 3, UR/WVTF Radio.

## FACULTY POSITIONS

**NON-INSTRUCTIONAL**

**VP for Budget/Financial Management. Assistant to VP for Budget/Financial Management.** Contact: Lauren Coble, 314 Burruss (0167). Review begins March 15.
**Hampton Roads Agricultural Research/ Extension Center. Postdoctoral Associate, Research Plant Pathologist.** Contact: Chuan Hong, 1444 Diamond Springs Rd., Virginia Beach, VA 23455-3363. Deadline: March 31 or until filled.
**Personnel Services. Benefits Manager.** Contact: Linda Woodard, Southgate Center (0318). Review begins March 15.

## TO THE EDITOR

President Truman had a sign on his desk—"The buck stops here." Such is not the case in Virginia. The buck passes to the sub-sub-sub-organization that is least capable of resolving a serious financial problem. Governor Warner passes the buck to university administrators, who pass the buck to university colleges, which pass the buck to university departments, where the buck stops with a thud.

To handle short-term budget cuts, most departments do not have endowments, bequests, financial buffers, bank loans, rainy-day funds, long-term debt, government bailouts, or the authority to issue stocks and bonds.

I am uninspired by the "top-30" preoccupation of our current administration. The university was number 44 in 1997, number 48 in 1998, number 50 in 1999 and number 51 in 2000. We are moving steadily towards top-200 ranking at the rate of 2.333333 positions per year.

I suggest that the administration drop its ephemeral, top-30 pursuit and instead set as its primary objective the significant restructuring of this university so that each department can become financially stable, vigorous, and innovative in both the short and long term. For example, all future "campaigns for excellence" and current telephone solicitations of alumni should focus primarily on departmental teaching, research, and Extension needs, rather than on renovations or new buildings. Faculty colleagues should communicate their department's generic financial problems to our provost.

*Peter Rony, Department of Chemical Engineering*

Virginia Tech
VIRGINIA POLYTECHNIC INSTITUTE AND STATE INIVERSITY

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*Electronic Spectrum*: *http://www.unirel.vt.edu/spectrum/*



## NSF offers computing funding; proposals limited

The Opportunity Update site (*www.rgs.vt.edu/funding/ou/update.html*) announces a new Limited Submission Program for NSF funding supporting "High Performance Network Connections: Growing the Next Generation Network."

The purpose is to "encourage additional U.S. institutions of higher education and institutions with significant research and education missions to establish high-performance Internet connections (at or above 45 mbits per second) to facilitate cutting-edge science and engineering research."

This announcement updates and replaces "Connections to the Internet" NSF 01-73. Cost sharing on this program is 100 percent.

Only one proposal per eligible institution and only one proposal per principal investigator may be submitted. Because this is a limited-submission program, an internal competition may be required. See the Research Division's web page on limited-submission programs for details on submitting a letter of intent and an internal pre-proposal (*www.research.vt.edu*).

Deadlines are March 20 for internal letters of intent; March 21 for notification of internal competition; March 28 for internal pre-proposals. The results of the internal competition will be announced April 4 and the NSF proposal deadline is May 22.

## *FERRIS*

*Continued from 2*

by March 11. Space is limited to 36 participants.

Ferris will open the humanities-funding workshop with a discussion of funding for the field and will offer specific suggestions about areas of support offered by the National Endowment for the Humanities. A question-and-answer session will allow Ferris to respond to the specific interests of the group. At the audience's request, he can focus on some of the major initiatives at Virginia Tech and talk generally about their funding needs and how they might be met. He also can talk about collaborations with other institutions.

Before becoming chairman of the National Endowment for the Humanities in November 1997, Ferris served for 18 years as founding director of the Center for the Study of Southern Culture at the University of Mississippi in Oxford. Under his leadership, the University of Mississippi developed the most comprehensive southern studies curriculum in the nation, and the center, with an interdisciplinary approach incorporating popular, folk, historical, and literary subjects, attained national recognition as a model for regional studies centers.

Ferris's honors include the presidentially bestowed Charles Frankel Prize in the Humanities, the American Library Association's Dartmouth Medal, the Mississippi Institute of Arts and Letters Award, and France's Chevalier and Officer in the Order of Arts and Letters.

## *E-MAIL*

*Continued from 2*

enhancement techniques, and incorporating exercise physiology principles. "The center is committed to developing effective, cost-efficient health interventions that can reach diverse groups of people," said Richard Winett, director of the Center for Research in Health Behavior.

The researchers are actively recruiting participants for two e-mail based walking programs. Both 12-week walking programs will be tailored to participants' fitness levels and offer two free physical-fitness assessments at the Weight Club, which has volunteered its walking-track facilities. Following initial fitness testing, participants will be placed randomly into one of the two groups, and the entire program will be delivered through e-mail. Participants will walk three times a week at a moderate intensity and gradually increase their speed. Once weekly, participants will e-mail a walking coach with information about their walking performance and receive prompt feedback and walking advice. The program will take only two hours a week.

The research group is looking for men between the ages of 20 and 44 and women between the ages of 20 and 54 to participate in the walking program. Participants must currently be sedentary (no regular exercise for more than one hour a week) and must have few health-related risk factors.

Anyone interested in joining the walking program should send e-mail to Rovniak at *lrovniak@vt.edu*. For more information, call the Center for Research in Health Behavior at 1-2437.

## *U.S. NEWS*

*Continued from 2*

umnist at *U.S. News* since 1986. She writes the magazine's "On Politics" column every other week. She is also currently a contributing editor at the magazine, a special correspondent with CBS News, and a regular panelist on "Washington Week in Review" on PBS.

She formerly worked at the Washington bureau of *Newsweek*, where she began as a general-assignment reporter, covering stories ranging from the Three Mile Island nuclear accident to presidential campaigns. Politics soon became her beat, and she was named *Newsweek*'s chief congressional correspondent, the title she held before moving to *U.S. News*.

Borger began her journalism career as a reporter at the now-defunct *Washington Star*, where she won a series of Front Page awards. She received an IBM-sponsored Watson Traveling Fellowship to study the British press. She co-authored *Federal Triangle*, a spoof about political life in Washington.

The Center for Leader Development aims to educate students about leadership and prepare them to be leaders of integrity and ability.

The Cutchins Distinguished Lecture series is named for Clifford A. Cutchins III, a retired bank chairman and former rector of the Virginia Tech Board of Visitors.

# IN OTHER NEWS

## NCTC accepting award nominations

The New Century Technology Council is accepting nominations for the following awards. The Egg Factory LLC Innovation Award highlights an innovative technology development in the New Century Region that has high potential for commercial success. Entrepreneurs, researchers, professors, and others are eligible to be nominated.

The High Tech Entrepreneur Award honors an individual who has demonstrated outstanding entrepreneurial success in the development of a technology-based, commercial enterprise. The individual shall have been instrumental in the key technology development, commercialization, and subsequent demonstrated marketing success of related products and services.

The New Century Region's High Tech Company Award recognizes outstanding commercial growth and achievement by an established company that produces and markets predominantly high-technology-based products or services.

The New Century Region's High Tech Corporation Award recognizes outstanding commercial growth and achievement by the local division of a national or multi-national company that produces and markets predominantly high technology-based products or services.

More information is available at *www.rgs.vt.edu/funding/ou/update.html*. The deadline is March 15.

## Buikema contributes to Zimbabwe education through Fulbright fellowship

*By Sally Harris*

Arthur Buikema spent fall semester teaching and developing programs in Bulawayo, Zimbabwe, under a Fulbright Teaching Fellowship and can't wait to get back this coming summer to finish the work he started.

Buikema, alumni distinguished professor of biology in the College of Arts and Sciences, fell in love with the people of the country that is troubled by skyrocketing inflation, political upheaval, starvation, and lack of education in rural areas. The visit to the hot, sub-Saharan plateau where artists produce fascinating stone sculptures, paintings, and masks, was one of the best experiences Buikema has ever had.

Buikema worked at the National University of Science and Technology, which is 10 years old and still developing degree programs. He helped develop two courses, Freshwater Biology and Principles of Environmental Education, second-year courses for the first class in the new degree program in environmental science and health. Originally, the Fulbright proposal was to develop on-line course materials, "but that was optimistic at the moment," Buikema said. The inflation rate is 104 percent per year. The country lacks the computers and facilities needed for on-line courses. Instead, he was asked to develop a course in environmental education; so he learned about the country's lakes and river and land systems and put together a course to teach people about sustainable development.

In Zimbabwe, "the students were more often than not used to having their lecture notes read to them," Buikema said. "I had a whole different idea of how to teach." He gave the students handouts because there is "virtually no library or textbooks" there. As a result, the administration asked him to do a workshop on alternative teaching strategies. He also did one for future use on integrating technology into education. Drawing on his experience at Virginia Tech, he also presented workshops to new students on living and study skills.

Besides working, Buikema traveled and experienced life in Zimbabwe. He saw the tragic side—the poverty, the lack of education and opportunities, the sickness of AIDS.

But he also saw the country's beauty. The people are "absolutely wonderful," Buikema said. "They're friendly, kind, somewhat laid back. I had to learn to appreciate the different concept of time than we have here at Tech, and I hope I never lose it."

In July, Buikema will return to Zimbabwe to work on web development. There are, he said, a number of Internet cafes with access to computers at reasonable rates. He also will conduct a workshop on alternative teaching methods for secondary schools. In addition, he will offer, at the request of the university faculty, workshops on Power Point production and an introduction to course web development.

## UPS grant to support fellowships, lab

*By Liz Crumbley*

The UPS Foundation, Inc.—the charitable arm of the United Parcel Service—has awarded a $35,000 grant to Virginia Tech's Grado Department of Industrial and Systems Engineering (ISE).

The grant is part of a three-year $105,000 commitment from the UPS Foundation to support graduate-student fellowships and the UPS Learning Laboratory in ISE's Human Factors Engineering/Ergonomics Center. The laboratory, which was established with funding from the foundation, is a state-of-the-art electronics facility for hands-on instruction.

"A major benefit of the UPS grant is that it enables our department to attract and retain graduate students of the highest caliber," said John Casali, ISE department head.

## STUDENT DEATH NOTICE

Russell James Nicholson, College of Engineering.

## *VT CENTER*

*Continued from 1*

to do the same for their own technology-related programs.

Working with the newly established University of Mzuzu, Virginia Tech will help create a sustainable effort for training teachers in the use of technology in education.

"As Malawi attempts to strengthen its infrastructure, we come as colleagues as well as students," said Joseph Uta, a professor and head librarian at Mzuzu University. Uta compared Mzuzu University with having the same "land-grant notion" as Virginia Tech as it looks to the future with respect to technology. Uta also met with library and digital library experts at Virginia Tech and explored the library facilities and resources on site with the goal of pursuing a separate proposal to upgrade library facilities and capabilities at Mzuzu University.

Burton insists that the Malawi students maintain an intellectual exchange. "We do a lot of things well in the United States," Burton said, "but they help us pay attention to what we can do differently."

Virginia Tech's IT faculty members will explore with the Malawi student team the existing ITMA on-line program to determine a re-design approach to meet the needs of the Malawi educators. The students are currently studying needs-assessment techniques and will return to Malawi for a six-week field study to apply the newfound knowledge this summer. The program will be customized so that by next year, Virginia Tech IT faculty members will begin on-line delivery to 80 Malawi educators. The five Malawi students will serve as the instructional facilitators for the distance-delivered programming. Responsibilities will include grading assignments, corresponding with Malawi program participants, and providing general program support.

Tlou, who has been instrumental in securing several USAID grants for Virginia Tech, will serve as the on-site program coordinator in Malawi during the implementation stage.

## *PAMPLIN*

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and their companies expect to pay a premium for a program that meets their higher level of needs." He expected that the fee for the program would be about $48,000—in the $46,000-$66,000 range charged by EMBA programs at George Mason, George Washington, and Georgetown universities.

Sumichrast developed a proposal outlining the program's admission prerequisites, curriculum, course delivery and format, and faculty and budget needs.

The program would be fully accredited, he said, and graduating students would receive the existing master's of business administration degree. Prospective students must have at least eight years of professional management experience, a college degree, and working knowledge of quantitative analysis and computer applications.

EMBA courses, he said, would be taught in a "substantially different" manner from the full and part-time programs in terms of scheduling, grading, course integration, and the use of on-line materials.

Classes would meet Friday afternoons and evenings and continue all day Saturday every other weekend for 16 months. "Market research showed that prospective students particularly liked alternating weekends—scheduling that is common in other EMBA programs in Northern Virginia," Sumichrast said.

Material from across academic departments would be integrated into broad topics. Instructors would have to cooperate on timing and content, he said, but would not necessarily team-teach courses. "The Internet will be particularly important to course delivery." Some course content could be in the form of on-line interactive work, allowing class meetings to focus on live discussion.

Sumichrast said the program's faculty members would be highly qualified. In addition to being subject matter experts, they would be skilled at interacting with executive management groups and incorporating current issues and events into classes.

As with other executive-education programs, evaluation categories, such as "passing with distinction" and "unsatisfactory," would be used, instead of the traditional A-F grading system. "EMBA students," Sumichrast said, "are typically more concerned with self-improvement and their job performance as measured by supervisors rather than faculty evaluations."

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## *UNIVERSITY*

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curriculum development, textbook development and other forms of collaboration between GM, Sun Microsystems, EDS and academia. In addition to the hardware, software and training donated by the three core partners, PACE institutions receive a substantial contribution of ADAMS (Automatic Dynamic Analysis of Mechanical Systems) software from Mechanical Dynamics, Inc. of Ann Arbor, Mich.

Based on the stated market value for the hardware and various software licenses, PACE has valued this donation at $211 million. In addition to the donation of CAD/CAM/CAE software and hardware, the General Motors Foundation has pledged a cash gift of $200,000 over five years, $160,000 of which will support maintenance and operations of the system.

"Today's in-kind contribution from PACE will enable us to take this educational leadership to the next level by providing all our students with top-of-the-line CAD/CAM/CAE software systems—both Unigraphics and ADAMS—free of charge on their privately owned PC's. This has never been done before," said Jan Helge Bøhn, director of the Virginia Tech CAD Lab and associate professor of mechanical engineering.

## *DI VENTRA'S*

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Arts and Sciences, as well as with experimental groups at Yale University and IBM's J.J. Watson Research Center.

Collaborations with experimentalists will help advance the new technology and provide input for future developments in molecular electronics, Di Ventra said. By providing theoretical models, Di Ventra will help shorten the experimental time needed for selecting materials and structures with specific transport properties. "The concept of materials and devices 'by design' will be finally realized," he said.

Collaborations both within and outside the university will lead to a multidisciplinary effort in the development of molecular electronics. Di Ventra also will provide interested researchers around the world with the computational tools developed in the project, a move that will facilitate world-wide collaborations and exchange of scientific ideas and foster improved tools to develop new technologies.

Di Ventra came to Virginia Tech in the summer of 2000.

*(Editor's note: This is the second of a series of articles covering university faculty members who have received NSF funding.)*