

SPECTRUM

Virginia Tech
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

<http://www.spectrum.vt.edu>

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TODAY'S EDITION
See page 2 for
information on
faculty-development
workshops.

McNamee and Flanagan spearhead needs assessment for coming campaign

By Amy Boyce

In preparation for the launch of Virginia Tech's next major comprehensive fund-raising campaign, Provost Mark McNamee and Vice President for Development and University Relations Elizabeth Flanagan have asked university leaders to begin identifying needs and priorities that will help President Charles Steger shape the fund-raising objectives for the campaign.

The campaign, which will be guided by the university's strategic plan, will be critical in the university's quest for top-30 research status. The "silent phase" of the cam-

paigned is scheduled to be launched in July, 2003.

Before it is launched, the university must identify its highest priorities, which will shape the overall fund-raising priorities for the campaign. Recently, McNamee and Flanagan worked with a campaign consultant from Marts & Lundy, Inc., to define a "needs-assessment" process for identifying and prioritizing these needs.

The first step in the process is to create a needs list for every unit throughout the university. According to McNamee, "The needs statements should reflect the most important and critical needs of each unit and should be de-

signed to bring Virginia Tech to new heights of academic achievement. When the campaign is completed, we should be able to clearly show that this institution has improved in measurable ways."

Much of the groundwork for the needs assessment was completed as the university considered budget cuts, restructuring plans, and strategic plans. The strategic-planning process defined the direction and future of the entire university. The needs assessment will identify the fundamentals of how Virginia Tech will reach its goals.

The next step will be to review the needs

lists provided by all units and combine them into one prioritized university-wide needs list. To assure a comprehensive university needs assessment, McNamee and Flanagan have proposed a dual committee structure. McNamee will chair both committees.

The primary focus of the first committee will be to assess the relative merits of the needs lists provided by each unit and develop a prioritized list of needs for the entire university. The second committee will assess these priorities in terms of potential for success in raising money from private sources.
(See *CAMPAIGN* on 4)

'Empowering' tiny reconnaissance robots is goal of Tech/NSF project

By Liz Crumbley

Imagine tiny robots snaking their way through collapsed buildings or coal mines on search and rescue missions, receiving instructions and transmitting vital image data about the location of humans trapped in rubble or mine shafts.

The National Science Foundation (NSF) has awarded a \$300,000 Information Technology Research (ITR) grant to Amy Bell, an assistant professor of electrical and computer engineering, for development of technology that could make such scenarios a reality.

Robots that use wireless communications devices to receive and transmit data already exist. "In fact," Bell said, "Robin Murphy, a University of South Florida professor, used reconnaissance robots in confined, hazardous locations at the World Trade Center site after September 11 to transmit data to rescue workers."

However, size is a problem for mobile agents on reconnaissance missions because the transmission of images requires a hefty power source. "Small robots that can make their way into cramped spaces have to be tethered to power sources to receive and send data transmissions, and the tethers limit their range," she said. "Larger robots can carry their own battery packs, but they can't maneuver in small spaces."

An expert in signal processing, Bell began working on ways to compress images when she received a NSF Faculty Early Career Development Program grant in 1999. "For example, downloading an Internet site that contains several photographs can take a good deal of time," she explained. "But suppose, instead of sending the graphics in their original form—let's say 300 megabytes that might take 10 minutes to

(See *ROBOTS* on 4)

Virginia Tech 3rd Annual Faculty/Staff Awards Ceremony and President's Annual Address

All Faculty, Staff and Students are invited to attend
Friday, September 20, 2002
5:00 p.m.

in the Donaldson Brown Hotel and
Conference Center Auditorium

Award Recipients

E. Scott Geller	John D. Boyer
Timothy W. Luke	Jason S. Thweatt
Eric M. Mills	Megan M. Boler
Holly S. Bender	John R. Seiler
Jared A. Danielson	William E. Snizek
Pamela J. Vermeer	Catherine L. Barker
Patricia G. Amateis	Billie R. Cline
W. Michael Aust	Eric R. Day
Rachel L. Holloway	Carolyn L. Furrow
D. Michael Moore	Terry T. Rakestraw
Richard L. Shryock	Josiah S. Tlou
Janet S. Francis	John G. Casali
Richard D. Fell	Malcolm Potts
Robert E. Benoit	James A. Myers
Christopher P. Neck	Charles C. Stallings

University receives high marks in national academic rankings

By Liz Crumbley and Sookhan Ho

Virginia Tech's undergraduate program has fared well in national rankings released recently by *U.S. News & World Report* and *Kiplinger's Personal Finance*. The colleges of Engineering and Business also received high marks.

U.S. News & World Report's "America's Best Colleges 2003" survey, released September 13, placed Virginia Tech 28th among the nation's public universities. The College of Engineering's undergraduate program moved up to a ranking of fifteenth among all accredited engineering schools and tenth among those at public universities. Last year, the college was ranked 20th among all engineering schools.

The college shares the ranking of fifteenth with Johns Hopkins University, Pennsylvania State University, Rensselaer Polytechnic Institute and Texas A&M University. The individual college rankings are based on assessments submitted by deans and senior faculty members at peer institutions.

"The rise of the College of Engineering in the undergraduate rankings can be credited to the excellence of our faculty and to the professional reputation of our graduates," said Malcolm McPherson, interim dean of the college. "It's gratifying to know that our peer schools regard our program with great respect."

"The hands-on experience, teamwork approach and integration of theory and practice commence for our undergraduates in freshman classes and continue through their time at Virginia Tech," McPherson said. "This allows them to more easily hit the ground running when they move on to their professional lives."

The Pamplin College of Business retains its ranking of

(See *UNIVERSITY* on 4)

Students win national recognition for new aircraft design

By Liz Crumbley

Imagine an airplane that could be towed down the highway behind a family's sports-utility vehicle. Imagine that this plane could take off on a runway shorter than the length of a football field and then travel 600 miles in about three-and-a-half hours.

A team of 26 engineering students from Virginia Tech and Loughborough University in England imagined such an aircraft, and their design won second place for technology innovation in the 2002 NASA/FAA Student Aviation-Design Competition held in July in Oshkosh, Wisconsin. The design also will be featured in an upcoming issue of *Popular Science*.

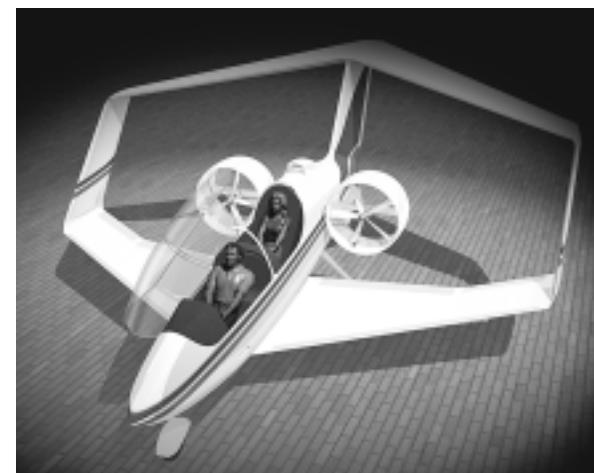
Named "Ikelos" by the Virginia Tech/Loughborough team in honor of the Greek god of dreams, the airplane is designed to handle super-short takeoffs and landings as well as steep approaches and rapid climb-outs, said Jim Marchman,

professor of aerospace and ocean engineering and an adviser for the student team.

"The average take-off and landing for small general-aviation planes is about 2,000 feet," Marchman said. "Ikelos is designed to take off or land in about half the distance of a football field. A powerful, lightweight engine and a unique wing design make this possible."

The goal set for the universities entering the 2002 competition was to design aircraft that would function well as part of the Small Aircraft Transportation System (SATS) research program sponsored by NASA and FAA. More than 98 percent of people in the U.S. live within 30 minutes of the nation's 5,000 or more small airports. The idea behind SATS is to develop a system for safer, faster and less expensive small planes to take off and land at these airports, enabling passengers to fly directly from one

(See *STUDENTS* on 4)



ACTIVITIES

EVENTS

Friday, 13

Internet2 Virtual Briefing, (<http://www.internet2.edu/activities/html/briefings.html>), 1 to 2:30 p.m.

International Club Program, 5 to 6:30 p.m., Cranwell Center.

Saturday, 14

VT Open House.

YMCA Hike, 9 a.m., YMCA parking lot.

Sunday, 15

Yom Kippur Begins (Sundown).

VT Open House.

Hispanic Heritage Month Begins (through 10-15).

Monday, 16

Pay Date for Faculty and Staff Members.

Yom Kippur.

Einstein's Dreams Week Begins.

University Council meets, 3 to 5 p.m., 1045 Pamplin.

Tuesday, 17

Faculty Senate, 7 p.m., 1060 Torgersen.

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

Family, Work/Life Resources Program, noon to 1 p.m., DBHCC room A.

Wednesday, 18

YMCA International Program, 9:30 to 11:30 a.m., Luther Memorial Church.

Family, Work/Life Resources Program, noon to 1 p.m., DBHCC room F.

Permanent Residency and H1B Visa seminar, 4:30 to 6:30 p.m., 409 Saunders.

Thursday, 19

Staff Senate, noon, 1810 Litton Reaves.

Women's Faculty Club Welcome Reception, noon to 1:30 p.m., The Grove.

Diggs Roundtable, 3:30 to 6 p.m., Owens.

Friday, 20

Faculty/Staff Awards Ceremony, 5 p.m., DBHCC auditorium.

SEMINARS

Friday, 13

MCBB, 12:20 to 1:10 p.m., Fralin Auditorium: Eran Pichersky, University of Michigan.

MSE, 3:15 p.m., Hancock auditorium: Pirouz Pirouz, Case Western Reserve.

Geology, 3:30 p.m., 4069 Derring: Ken Eriksson.

Monday, 16

Horticulture, 4 p.m., 409 Saunders: Vladimir Shulaev.

Tuesday, 17

VMRCVM, noon to 1 p.m., graduate conference room, VMRCVM: Al Pheley and Sally Paulson.

Thursday, 19

Career Services, noon to 1 p.m., 219 Squires.

Friday, 20

MCBB, 12:20 to 1:10 p.m., Fralin auditorium: Eric Green, NHGRI/NIH.

Geology, 3:30 p.m., 4069 Derring: Jonathan Stebbins, Stanford.

BULLETINS

Diggs Roundtable scheduled

The Diggs Roundtable is scheduled for 3:30 to 6 p.m. on Thursday, Sept. 19 in Owens Hall. The program features Megan Boler from teaching and learning, John Seiler from forestry; Bill Snizek from sociology. Presentations begin at 4 p.m. Register at www.ceut.edu, or call 1-6995

Green card/H1B visa information offered

The Cranwell International Center will sponsor a seminar on Wednesday, Sept. 18 to provide information related to permanent residency and H1B visas. The seminar will be at

409 Saunders from 4:30 to 6 p.m. and will allow time for questions after the presentation.

Faculty Women's Club to host reception

The Faculty Women's Club will host a welcome reception Thursday, Sept. 19, from noon until 1:30 p.m., at The Grove.

The purpose of the VTFWC is to provide social and intellectual activities to its members, to promote Virginia Tech, and to offer scholarship opportunities to deserving students.

Child care will not be provided for the event. For more information, call Carol Sorensen at 951-1247.

Provost issues WMAS call for proposals

The Office of the Provost has issued the annual call for proposals for the Women and Minority Artists and Scholars Series for 2002-2003. The deadline for applications is September 20. The fund, as in past years, provides up to \$500 to supplement departmental or college funds in support of guest lectures and performances from women and minority members.

Application forms are available on line at <http://www.provost.vt.edu/WMASLS/overview.htm>.

Faculty Development Institute workshops offered this semester

The Faculty Development Institute has announced its fall workshop schedule starting Monday, Sept. 23 and continuing through Thursday, Oct. 31. Over 50 workshops will be offered ranging from basic desktop-computing techniques to using streaming video and QuickTime virtual reality for teaching and learning. Although the presentations are designed for instructional faculty members, all workshops are open to staff members and graduate students. Seating is limited per workshop and on-line registration is now open at <http://spyro.cc.vt.edu/fdi-public/>. Most workshops feature hands-on activities.

Included in this semester's workshops are mini-series on basic tips for Desktop computing and Digital Media content creation, designed specifically for faculty members who are new to web authoring. Several other workshops will feature updated versions of familiar computer software, such as Microsoft Powerpoint, Microsoft Word, Macromedia Dreamweaver, Adobe PhotoShop, Adobe Premier, Adobe PageMaker, Apple QuickTime VR, and Blackboard. There will also be a weekly Open Lab in October for one-on-one assistance.

The timetable below lists dates, times and locations of the workshops. For more information, contact Ed Schwartz at 1-4975; ed.schwartz@vt.edu or visit the fall workshop site.

Open Lab Sessions

Oct. 3, 10 a.m. to noon: Macintosh/Windows (M/W), 1140 Torgersen.

Oct. 10, 10 a.m. to noon: M/W, 1140 Torgersen.

Oct. 17, 10 a.m. to noon: M/W, 1140 Torgersen.

Oct. 24, 10 a.m. to noon: M/W, 1140 Torgersen.

BASIC SKILLS

Introduction to Microsoft PowerPoint

Sept. 30, 3 to 5 p.m.: Windows, 3060 Torgersen.

Oct. 1, 3 to 5 p.m.: Macintosh, 1120 Torgersen.

Using Microsoft Word

Sept. 23, 3 to 5 p.m.: Windows, 3060 Torgersen.

Sept. 30, 10 a.m. to noon: Macintosh, 1120 Torgersen.

Introduction to Acrobat 5, Creating PDF files

Sept. 24, 3 to 5 p.m.: Windows, 3060 Torgersen.

Oct. 2, 10 a.m. to noon: Macintosh, 1120 Torgersen.

Introduction to Desktop Computing: Tips and Techniques-Part 1

Oct. 7, 3 to 5 p.m.: Macintosh, 1120 Torgersen.

Oct. 7, 3 to 5 p.m.: Windows, 3060 Torgersen.

Introduction to Desktop Computing: Tips and Techniques-Part 2

Oct. 14, 3 to 5 p.m.: Macintosh, 1120 Torgersen.

Oct. 14, 3 to 5 p.m.: Windows, 3060 Torgersen.

Introduction Mac OS X

Sept. 23, 10 a.m. to noon: Macintosh, 1120 Torgersen.

Sept. 24, 2:30 to 4:30 p.m.: Macintosh, 1120 Torgersen.

Mac OS X: Advanced Topics

Oct. 29, 2:30 to 4:30 p.m.: Macintosh, 1120 Torgersen.

Oct. 30, 10 a.m. to noon: Macintosh, 1120 Torgersen.

Introduction to Digital Media: Audio, Images and Video-Part 1

Oct. 9, 10 a.m. to noon: Macintosh, 1120 Torgersen.

Oct. 15, 10 a.m. to noon: Windows, 3060 Torgersen.

(See WORKSHOPS on 3)

Globalization, cultural-diversity conference set

By Sally Harris

A discussion at Virginia Tech on the impact of globalization on local cultures, from Appalachia to Africa, is open to the public.

Art critics, heritage-site curators, media professionals, and scholars will present a variety of views on global cultures during a two-day international conference to be held at the Hotel Roanoke September 20-21. The theme will be "Cultural Diversity for Sale? Global Economies of Art and Entertainment." All sessions are free and open to the public.

The conference speakers will address a number of issues related to the status of cultural difference in today's world media markets. "While globalization might seem to promote cultural difference by bringing people into closer contact, it also threatens local cultures by exporting a mass-market culture often associated with U.S. dominance," according to Janell Watson, conference coordinator and a faculty member in the Department of Foreign Languages and Literatures. "Must a local culture sell itself on the global market to survive?"

Four public-forum sessions address topics of general interest to the community at large: filmmaking, Virginia and Appalachian culture, artistic creation, and public radio and television. On Friday evening, award-winning African filmmaker Jean-Pierre Bekolo (writer and director of *Aristotle's Plot* and *Quartier Mozart*) will discuss the difficulties of making movies on multiple continents, showing video clips from his recent work in his native Cameroon. On Saturday afternoon, a panel of experts involved in Virginia and Appalachian culture

(See GLOBALIZATION on 3)

Wireless Opportunities Workshop scheduled

By Liz Crumbley

Timely telecommunications issues including disaster response, public-safety wireless networks, telemedicine, ultra wideband spectrum policy and the future of wireless technology will be addressed during the Wireless Opportunities Workshop, presented September 22 and 23 at Virginia Tech by the Center for Wireless Telecommunications (CWT).

"Meeting New Challenges" is the theme for this year's conference. Paul Kolodzy, chairman of the Federal Communications Commission's Spectrum Technology Task Force, will be the keynote speaker during lunch on September 23.

Other speakers for the day will represent Lockheed Martin, Tyco, Science Applications International Corporation (SAIC), Xtreme Spectrum, U.S. Department of Justice, University of Maryland, and Digital Government Research Center.

A pre-conference seminar on two emerging technologies—ultra wideband and Bluetooth—will be offered on September 22. Seating will be limited for this seminar, so early registration is recommended.

The conference will be held at the Donaldson Brown Hotel and Conference Center.

For more information and to register, call Judy Hood at 1-8651, e-mail jhood@vt.edu, or go to web site www.cwt.vt.edu/conferences/WOW.

CAMPUS UPDATE

Farm and Family Showcase attracts producers, consumers from seven states

By Netta Benton

Nearly 38,000 people from seven states attended Virginia Tech's Second Annual Farm and Family Showcase last week. The three-day event drew people from Virginia, West Virginia, Maryland, North Carolina, Tennessee, Kentucky, Ohio, and the District of Columbia.

More than 250 exhibitors, ranging from farm equipment and supply dealers to government and state agencies, banks, nursery and landscaping companies, lawn and garden, outdoors/hunting/fishing supplies, home supplies and services, and many other home-, health-, and farm-related companies, participated. Private companies and state and federal agencies, along with student

organizations, joined faculty members and Virginia Cooperative Extension (VCE) agents to present educational programs, demonstrations, and exhibits. The showcase was held at the university's Kentland Farm in McCoy, about eight miles west of campus.

"I think the crowds we saw at the showcase are a response to the educational opportunities that this event represents," said Andy Swiger, dean of the College of Agriculture and Life Sciences. "I know there were a lot of enjoyable activities, and hope that everyone had fun, but even those events were designed to have an educational impact."

Swiger said the essence of Virginia Tech's agricultural program is knowledge.

"Our faculty members are among the best in the world in developing new knowledge and in making scientific discoveries," Swiger said. "They are among the best in teaching our young people about emerging knowledge. They also are among the best in passing that knowledge on to producers and processors. It is truly wonderful that we had the opportunity to showcase to 38,000 people what we do so well."

The event was sponsored by the university's colleges of Agriculture and Life Sciences, Human Resources and Education, and Natural Resources, the Virginia-Maryland Regional College of Veterinary Medicine, Virginia Cooperative Extension, and the Virginia Agricultural Experiment Station.

Agricultural producers viewed farm equipment in action, and were able to talk about their personal challenges and concerns with university faculty members and VCE agents. Homeowners could learn about gardening, food preparation and safety, and home repairs, among many other subjects.

"Thousands of people had a chance to get a better understanding of where their food comes

(See FARM on 4)

GLOBALIZATION

Continued from 2

will discuss the impact of globalization on the region. They will address local heritage sites, storytelling traditions, novels, music, and stereotypes of mountain life. This session will be followed by a presentation about the work of internationally known artists who have worked at Mountain Lake and on the idea of a community spirit in the creation of art.

The final public forum will take place Saturday evening and will feature Rick Mattioni, news director at WVTF Public Radio, and Frederick Thomas, consultant to the U.S. State Department and executive vice president and general manager of MHz Networks in Washington, DC, which produces public-television programming.

A series of special focus sessions Friday and Saturday will address globalization issues of a more scholarly nature. For example, film studies scholars will explore various aspects of the international movie market, social scientists will study the impact of media technologies on various cultural groups, and feminist scholars will examine gender issues around the world. The sessions are also open to the general public.

Conference sponsors include the Virginia Tech College of Arts and Sciences Humanities Symposium Award and the Virginia Foundation for the Humanities and Public Policy.

More information is available at www.fll.vt.edu/watson/symposium, or by calling 1-9009. Advance registration is encouraged and is free of charge.

WORKSHOPS

Continued from 1

Introduction to Digital Media: Audio, Images and Video-Part 2

Oct. 22, 10 a.m. to noon: Windows, 3060 Torgersen.

Oct. 16, 10 a.m. to noon: Macintosh, 1120 Torgersen.

DIGITAL CONTENT

Creating Web Graphics with Adobe Photoshop 7.0

Oct. 7, 10 a.m. to noon: M/W, 1120 Torgersen.

Introduction to Streaming Audio and Video

Oct. 15, 3 to 5 p.m.: M/W, 1120 Torgersen.

Using Macromedia Flash to create Web Interactions

Oct. 21, 10 a.m. to noon: M/W, 1120 Torgersen.

Creating Graphics with FreeHand 9

Oct. 28, 10 a.m. to noon: M/W, 1120 Torgersen.

Introduction to QuickTime Virtual Reality

Oct. 23, 10 a.m. to noon: M/W, 1120 Torgersen.

Using Adobe Premier 6 and Apple QuickTime 6

Oct. 31, 3 to 5 p.m.: M/W, 1120 Torgersen.

Using Adobe PageMaker 6.5 (Part 1)

Sept. 26, 10 a.m. to noon: M/W, 1120 Torgersen.

Using Adobe PageMaker 6.5 (Part 2)

Oct. 3, 10 a.m. to noon: M/W, 1120 Torgersen.

Basic Imaging techniques with Adobe PhotoShop 7.0

Sept. 25, 3 to 5 p.m.: Macintosh, 1120 Torgersen.

Sept. 26, 10 a.m. to noon: Windows, 3060

Torgersen.

Creating Digital Video for Instruction: Part 1

Oct. 10, 3 to 5 p.m.: M/W, 1120 Torgersen.

Creating Digital Video for Instruction: Part 2

Oct. 17, 3 to 5 p.m.: M/W, 3060 Torgersen.

Creating Digital Video for Instruction: Part 3

Oct. 24, 3 to 5 p.m.: M/W, 1120 Torgersen.

WEB-BASED INSTRUCTION

Designing Instructional Activities for the Web

Oct. 8, 3 to 5 p.m.: M/W, 3060 Torgersen.

Orientation for Online Instructors

Oct. 10, 10 a.m. to noon: M/W, 3060 Torgersen.

Creating Interaction at a Distance

Oct. 17, 10 a.m. to noon: M/W, 3060 Torgersen.

Electronic Library Resources for Teaching and Research

Oct. 29, 3 to 5 p.m.: M/W, Torgersen. 3310

Oct. 30, 10 a.m. to noon: M/W, Torgersen. 3310

Synchronous Online Communication

Oct. 24, 10 a.m. to noon: M/W, 3060 Torgersen.

Creating Streaming Media for Distance Courses

Oct. 31, 10 a.m. to noon: M/W, 3060 Torgersen.

Creating a Web-based Course Using

Blackboard

Oct. 16, 3 to 5 p.m.: M/W, 1120 Torgersen.

Oct. 24, 9:30 a.m. to noon: M/W, 1120 Torgersen.

WEB DEVELOPMENT

Web Design Tips and Techniques

Oct. 8, 3 to 5 p.m.: M/W, 1120 Torgersen.

Web Interface Design Principles

Oct. 16, 3 to 5 p.m.: M/W, 3060 Torgersen.

Using Macromedia Dreamweaver to Create a Web Site, Part 1

Oct. 1, 10 a.m. to noon: Macintosh, 1120 Torgersen.

Sept. 25, 10 a.m. to noon: Windows, 3060 Torgersen.

Using Macromedia Dreamweaver to Create a Web Site, Part 2

Oct. 8, 10 a.m. to noon: Macintosh, 1120 Torgersen.

Oct. 2, 10 a.m. to noon: Windows, 3060 Torgersen.

Using Macromedia Dreamweaver to Create a Web Site, Part 3

Oct. 22, 10 a.m. to noon: Macintosh, 1120 Torgersen.

Oct. 16, 10 a.m. to noon: Windows, 3060 Torgersen.

EMPLOYMENT

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

Two full-time food-service positions available..

Academic Advising Specialist, 001016B, PB 3, Biology.

Accountant, 007468B, PB 4, CPES.

Administrative Lead Support, 001585B, PB 3, Geography.

Budget Analyst, 006927F, PB 4, BFP.

Business Practices Specialist, 007952F, PB 5, Controller's Office.

Computer Systems Engineer, 000180B, PB 5, Computer Science.

Division Head, Construction Services, 007597F, PB 6, CDC.

Employee Relations Program Coordinator, 001073D, PB 5, Personnel Services.

Field/Laboratory Research Technician, 008016B, PB 3, Biology.

Financial Analyst, 006676Y, PB 4, OPS.

Housekeeping Worker, 007776C, PB 1, DBHCC.

Hvac Technician, 008001H, PB 3, RDP.

Pastry Sous Chef, 002712H, PB 3, RDP.

Program Support Technician, 002024M, PB 3, CVM.

Scientific Glassblower, 001267B, PB 5, Chemistry.

Service Leader, 007960H, PB 1, RDP.

Service Leader, 000608H, PB 1, RDP.

Service Leader/Cashier, 000750H, PB 1, RDP.

Telefund Administrative Supervisor, 001421S, PB 3, University Development.

PART TIME

Animal Care Technician, W022675M, PB 1, VTH.

Animal Care Technician Large Animal, W020066M, PB 2, VTH.

Application Processor, W022876G, PB 3, Undergraduate Admissions.

Assistant Student Life Coordinator, W023478J, PB 3, Athletics.

Departmental Receptionist, W023331J, PB 2, Athletics.

Fiscal Technician, W023475M, PB 3, CALS—AEE.

One full-time food-service position available.

ICU Veterinary Technologist Large Animal, W022218M, PB 2, VTH.

Large Animal Husbandry, W022155M, PB 1, VTH.

Office Specialist, W023473H, PB 2, RDP.

Pmm Support Technician, W022979M, PB 2, VTH.

Program Support Technician, W023477J, PB 3, CEUT.

Switchboard Operator, W020821M, PB 2, VTH.

OFF CAMPUS

4-h Efnep Program Assistant, 006379M, PB 2, VCE—City of Virginia Beach.

4-h Scnep Program Assistant, 007816M, PB 2, VCE—Suffolk County.

Administrative Program Support, 007411B, PB 3, Engineering/Northern Virginia Center.

Adult Scnep Program Assistant, 006820M, PB 2, VCE—Norfolk City.

Biologist, 007999J, PB 4, CMI.

Efnep Adult Program Assistant, 006348M, PB 2, VCE—City of Virginia Beach.

Microbiologist, 008005M, PB 4, VSAREC.

Nursing Supervisor, 006726M, PB 3, CVM.

Scnep Program Assistant, 006620M, PB 2, VCE—Northampton County.

Senior Program Administrator, 006436Y, PB 4, DCE.



VIRGINIA POLYTECHNIC INSTITUTE
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Frans Van Damme, 70

By Sally Harris

Frans Van Damme, a scientific glassblower and faculty instructor in the Department of Chemistry, died May 5 at the age of 70.

Van Damme had been at Virginia Tech 35 years. He served as supervisor of the Virginia Tech Glass Instruments Laboratory from 1967 until his death and taught Advanced and Intermediate Scientific Glassworking.

"Glass fabrication is a critical component of chemically related research," said Larry Taylor, chairman of the department, "and Frans's expertise has been a major factor in most all graduate-student research efforts in our department. ... There is absolutely no limit as to what Frans could do with glass of all types."

Van Damme won three awards for teaching excellence at Virginia Tech and also earned the departmental Alan Clifford Service Award. He published in professional journals and obtained several patents.

Besides making glassware for chemistry courses, Van Damme did decorative glass making, including a working trombone entirely of glass for the Highty Tights.

Van Damme was educated at the Kamerlingh Onnes Laboratory at the University of Leiden in The Netherlands.

In his memory, contributions may be made to the Humane Society of Montgomery County, Box 287, Blacksburg VA 24063-0287.

John Murray, 93

By Sally Harris

John Murray, who taught chemistry and glassblowing at Virginia Tech from 1942 until retiring in 1971, died August 19 at the age of 93.

Murray's specialty was physical chemistry and general chemistry. "He made many valuable contributions to the junior physical chemistry laboratory, which he taught for over 10 years," said Larry Taylor, Department of Chemistry head.

Murray held degrees from Colgate and Johns Hopkins.

In his memory, donations can be made to the Nature Conservancy at 1233A Cedars Court, Charlottesville VA 22903, or to Planned Parenthood at 2207 Peters Creek Road, Roanoke VA 24017.

CAMPAIGN

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The recommendations of the two committees will then be sent to Steger for review and approval.

The university-wide needs list will represent approximately one and one half times the capacity of Virginia Tech to raise private dollars. "According to reports from peer institutions as well as top 30-research institutions, Virginia Tech can reasonably expect to raise private dollars for around 60%-70% of the needs list," Flanagan said.

The final step in the needs-assessment process will be to test the list with external constituents. Marts & Lundy, Inc. will conduct a feasibility study among Virginia Tech alumni and friends between January and March 2003 that tests the marketability of the entire list. The results of this marketing study will then be incorporated into a final recommendation from the consultant. This final recommendation will include a suggestion for the total monetary goal for the campaign and a description of the initiatives that tested highly with potential donors.

McNamee said, "As we engage in an open and productive dialogue, we are confident that we will identify the most critical and important priorities of the institution that, when funded through a highly successful campaign, will help us continue to build an exciting and rewarding future for all."

Researcher invited to National Academy of Engineering symposium

By Liz Crumbley

Stefan Duma, an assistant professor of mechanical engineering, has been selected to participate in the National Academy of Engineering's (NAE) 2000 Frontiers of Engineering Symposium, September 19 through 21, in Irvine, California.

The NAE has invited only 84 engineers from throughout the U.S. to attend the symposium, and Duma is one of fewer than 40 chosen from academia. Attendees were nominated and

selected through a competitive process. Those selected are engineers from 30 to 45 years of age who have made recognizable contributions to advancing the frontiers of engineering and have the potential to become future leaders among U.S. engineers.

Duma, who joined the Virginia Tech faculty in 2000, is already a nationally recognized researcher in the areas of air-bag safety, eye injuries, and military restraint design. During his first year on the university's faculty he

established the Impact Biomechanics Laboratory. Another topic he is exploring in his lab is the potential effects of air bag injuries on pregnant women.

Duma and fellow symposium attendees will hear presentations from the world's leading engineers and scientists on the latest research findings in chemical engineering, human factors engineering, nuclear energy, and quantum information technology.

UNIVERSITY

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38th among all accredited business schools and 24th among public university schools. The ranking puts the college in the top 10 percent of the approximately 400 U.S. undergraduate programs accredited by the AACSB International (the Association to Advance Collegiate Schools of Business).

Pamplin Dean Richard E. Sorensen said the college is pleased to maintain its ranking at a time when it is experiencing major cutbacks in resources. "Our information-technology programs continue to be very popular among students and employers. Our leadership and international programs have expanded. We will continue to strengthen our curriculum to give students an even better education than before," Sorensen said. "We hope that such improvements will allow us to move up in future rankings."

Kiplinger's Personal Finance placed Virginia Tech fifteenth among the nation's 500 public colleges and universities in a survey that rated quality and costs. The magazine assessed measures of quality, including entrance-exam scores, retention, graduation rates, student-faculty ratios, instruction expenditures per student, and library expenditures.

Work of student, professor featured on web site

By Sally Harris

An article by Philip Ball on the web site Materials Update by Nature Publishing Group, which publishes *Nature* magazine, features the work of a Virginia Tech undergraduate and professor.

"Fresh spin on DNA electronics" details work being done by Michael Zwolak, who was an undergraduate when the work was done, and Massimiliano Di Ventra of the Department of Physics. The work involves the potential use of molecular "wires" made of DNA as spintronic devices. "Spintronics [is] a supercharged form of electronics that makes use of electron spin to encode information," Ball said. The two researchers "have looked at how electrical current flows down a DNA strand hooked up to

two metal {ferromagnetic} electrodes," Ball wrote.

Zwolak, who is now a graduate student in Di Ventra's group, and Di Ventra are now studying possible sources of spin scattering and spin decoherence when electrons travel between the magnetic contacts, Di Ventra said.

The use of wires made of DNA would enable scientists to make magnetic-storage devices on the scale of molecules.

The researchers' work also was featured on physicsweb, the news web site of the Institute of Physics, the European counterpart of the American Physical Society.

The web site Materials Update can be found at <http://www.nature.com/materials/>.

STUDENTS

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town or city to another.

The Virginia Tech/Loughborough team's design includes a lightweight Rand Cam rotary diesel engine, with no spark plugs or pistons, powering two ducted fans instead of propellers.

The wings are box-shaped—and removable. "The boxed shape is a way to get more aerodynamic efficiency in a short wingspan," Marchman explained. "This wing would perform like a wing of the same area but with a 50-percent larger span. The students designed it to be removable so it would be easy to transport."

Once in the air, Ikelos would travel at a maximum cruise speed of about 160 miles per hour—"as fast as most general-aviation planes," Marchman said. "There are existing airplanes that can take off and land in short distances, but they can't fly as fast as Ikelos is designed to fly."

In the 2002 NASA/FAA design competition's 100-point scoring system, the Ikelos design finished just one point behind the first-place entry from the University of Virginia. *Popular Science* is doing an article on both designs that will appear in one of the magazine's upcoming issues (probably in October), Marchman said.

Virginia Tech and Loughborough students

have been collaborating since 1997 on aircraft designs for the NASA/FAA competition. "Loughborough has one of the best aerospace programs in England and Virginia Tech has one of the best in the U.S.," Marchman said. "The collaboration is good for the students and the schools because aerospace is a global industry. We've found that industry is typically more interested in engineering graduates who have international study and design experience."

ROBOTS

Continued from 1

download—we could compress those images into 10 megabytes that would download in only one-third of a minute and the compressed images would look the same as the originals."

Bell's goal for the NSF ITR project is to compress images in ways that will significantly reduce the power required for small, mobile agents to transmit images in wireless networks. She is working on the project with Joan Carletta, an electrical engineering professor at the University of Akron whose field is computer hardware.

"We've already developed a novel idea that represents a first step toward implementing our goal," Bell said. "It's a method of transforming images in hardware that loses very

little of the data's original quality." Bell will develop algorithms, or mathematical procedures, for perfecting the data image compression and Carletta will devise a method for making those algorithms work in hardware.

If the researchers succeed, data transmission power requirements could be reduced so that small robots outfitted with small batteries would be able to move freely where no human can—or should—go.

But the success of Bell's and Carletta's NSF project could result in technology advances beyond the use of diminutive robots for search and rescue. For example, soldiers who need to transmit and receive data during field operations could be relieved of the burden of heavy battery packs, Bell said. Another potential use of the technology would be equipping "micro-air" vehicles—small reconnaissance aircraft—with image-transmission devices.

FARM

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from and what goes into producing it," Swiger said. "We have received many, many very positive comments on the showcase and its educational aspects."

Swiger credits the success of the event to the planning that went into it. Planning for next year's showcase, scheduled for Thursday through Saturday, Sept. 4-6, has already begun.

"An event of this magnitude does not just happen," Swiger said. "A great many people put in a lot of hard work. The extraordinarily high quality of the final product is a tribute to the sustained effort and countless hours that went into it."

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