

SPECTRUM

Virginia
Tech
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

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

VOLUME 25 NUMBER 13 FRIDAY, NOVEMBER 22, 2002

See the HokieBird on Animal Planet's Turkey Secrets, airing November 23-30, including 10 p.m. on Thanksgiving Day. Check local listings for other air times and dates.

Cancer research center created in Veterinary College

By Jeffrey S. Douglas

Virginia Tech's march into life-sciences research has taken a major step forward with the establishment of a new cancer-research center in the Virginia-Maryland Regional College of Veterinary Medicine.

Led by Veterinary Pathologist John Robertson, the Center for Comparative Oncology (CeCO) will serve as a unifying resource for the 40 Virginia Tech professors currently engaged in some form of cancer research.

Animals, like people, are living longer these days as a result of advancements in health care, Robertson said, and cancer more commonly affects elderly populations. He said significant improvements in cancer diagnostics have increased the oncology caseload in many community veterinary practices.

"We are now beginning to appreciate just how common cancer is in our pets," Robertson said, noting that studies indicate about half of animals older than 10 will develop a tumor and have clinical problems associated with it. "Looking at all diseases that affect dogs and cats, about 25 percent of all pets will die from cancer."

Comparative oncology is a promising foray into organized cancer research at Tech because of similarities in the way tumors occur and develop in both people and animals,

Robertson said. Information developed through cancer research in one species is often useful in diagnosing and treating the disease in another.

"We now understand that cancer is fundamentally caused by the mutation of critical genes that control cell growth, division and differentiation," said Robertson, director of CeCO and a professor in the Department of Biomedical Sciences and Pathobiology. "When cells express these mutations, they begin to proliferate in an uncontrolled manner, which is the hallmark of cancer."

A number of researchers on campus already are investigating novel methods for the detection of cancer using lasers, quantifying fundamental genetic changes in normal and neoplastic cells, studying effects of diet on the development of breast cancer, and seeking an understanding of how tumors grow new blood vessels, Robertson said.

Several VMRCVM investigators have recently begun a study of malignant lymphoma in dogs, which may develop insights for the human form of the disease, he said.

For the past several years, Robertson has been working to establish working partnerships with the Carilion Cancer Center of Western Virginia, the Carilion Biomedical Institute, the American Cancer Society and cancer centers at Wake Forest, the University of Virginia, the Medical College of Virginia and Georgetown University.

"The major goal we have right now is the

identification of new resources to build this program," said Robertson. While funding to support major initiatives in the short term remains unidentified, he said, future goals include expanding clinical facilities and recruiting a team of clinical oncologists to accommodate an expected increase in companion animal-cancer patients.

"We know that it will take five to 10 years for us to realize the full potential of the Center for Comparative Oncology," said Robertson, who spent 13 years in corporate pharmaceutical research before joining the faculty in 1989. "We need to identify new financial resources to fund the center, and attract the people who are dedicated to fighting this horrendous disease. I'm very committed to making this happen."

VMRCVM Dean Peter Eyre said that the creation of the center is a natural step for the college to take in light of Virginia Tech's new goal of achieving research-30 status by the year 2010 and its emerging initiatives in the biomedical sciences.

"Science has made a lot of progress in understanding the molecular foundations of disease, and cancer remains one of our most vexing disease threats," Eyre said. "We believe this center will help us leverage our existing strengths in a way that will accelerate our activities in this critical area of human and animal health."

Benoit wins Carnegie Foundation teaching award

By Sally Harris

Lessons learned from driving horse-drawn sleds filled with maple sap tapped from Vermont trees helped Robert Benoit develop his philosophy of teaching that led to his winning the 2002 Carnegie Foundation for the Advancement of Teaching Virginia Professor of the Year Award.

As a boy, Benoit learned that, over time, rapport develops between horses and driver. "The ability to interact begins as a one-way street, but, in time, the team is equal to the driver." Developing trust enabled him and the team to work together. The same principle applies to students and teachers. "Lack of inspiration and dedication to the driving and teaching challenge can bring crushing failure," he said. However, when all learn to trust each other, teaching and learning—as well as driving—can take place.

Benoit, professor emeritus of biology and microbiology, still teaches at Virginia Tech. "Teaching keeps me mentally and physically active. The chemistry in a classroom keeps you alive," he said.

The Virginia Professor of the Year Award is part of the U.S. Professors of the Year program, which "salutes the most outstanding undergraduate instructors in the country—those who excel as teachers and influence the lives and careers of their students." The Council for Advancement and Support of Education (CASE) began the program and renamed the award after the Carnegie Foundation for its involvement with teaching and its financial support of the award.

The award is based on "extraordinary dedication to undergraduate teaching." Areas considered include impact on and involvement with students, scholarly approach to teaching and learning, contributions to undergraduate education, and support from colleagues and current and former undergraduate students. In supporting Benoit's nomination, President Charles Steger wrote that Benoit "is a truly talented educator whose performance in the classroom reflects deep caring and respect for his students."

Benoit is committed to teaching ethics in science classes. His course in biomedical ethics is one of the most popular honors courses. "Given the multiple ethical problems facing our society, I think it is important that ethics should receive greater stress in the undergraduate science curriculum," he said. Benoit sees the classroom as a place to face controversies, to debate issues, not to indoctrinate students to the professor's beliefs. In fact, he said, he admires students who are not afraid to disagree with him. "In ethics, everything is debatable," he said. "Tension stays high. We're talking about everything from birth to death to raising children."

Benoit recently won Virginia Tech's Wine Award for Teaching Excellence. He has received the Alumni Award for Excellence in Teaching and the Certificate of Teaching Excellence numerous times.

Foundation to acquire golf course

By Larry Hincker

The Virginia Tech Foundation will become owners of The River Course, an 18-hole award-winning golf course along the New River in Pulaski County.

"This is a magnificent property that will provide hours of enjoyment for Virginia Tech students and the university community. I am thankful to the Virginia Tech Foundation for acquiring the course in a way that will not cost the university a penny," President Charles W. Steger said.

The foundation will own the golf course through a no-cost acquisition where all the assets and liabilities are transferred from the owners, William and Jennie Allman of Forest. The foundation will assume the outstanding debt of \$3.6 million and refinance at current rates. The facility will be self supporting with operating costs supported through golf-fee revenues and debt retirement through private gifts from golf supporters. Ultimately, the foundation plans to build a clubhouse and expand the driving range and practice facilities with the use of private gifts.

Gene James, chairman of the Virginia Tech Foundation said, "We extend our

(See GOLF COURSE on 3)



HELICOPTER HOMECOMING

Tech alumnus Dave Britton piloted the Navy's newest helicopter, the Knighthawk, into the Virginia Tech—Montgomery Executive Airport on Tuesday. Britton is a graduate of the class of 1999 and a former member of the Virginia Tech Corps of Cadets. He and accompanying aircrew members were here to expose the Navy Battalion of the Naval ROTC Unit at the university to naval aviation. (R. Griffiths)

Researchers designing ultimate fabrics

By Liz Crumbley

Mark Jones and Tom Martin are engineering researchers, not fashion designers, but they may be creating the ultimate fabrics of the future.

The researchers are designing e-textiles—cloth interwoven with electronic components—

for use as personal "wearable computers" and as large sensing and communications fabrics.

Jones and Martin, both faculty members in the Bradley Department of Electrical and Computer Engineering, are principal investigators on two federally funded e-textiles projects.

(See FABRICS on 4)

ACTIVITIES

EVENTS

Friday, 22

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

Monday, 25

Information Meeting, Virginia Tech Alumni Trip to Cuba (2-28 through 3-8), 5 p.m., Montgomery Floyd Regional Library (Blacksburg).

Wednesday, 27

Pay Date for Faculty and Staff Members.
"With Good Reason," 7:30 p.m., WVTF.

Thursday, 28

Thanksgiving Holiday for Faculty and Staff Members.

Friday, 29

Thanksgiving Holiday for Faculty and Staff Members.

Saturday, 30

Football, TBA, Lane Stadium: UVA.

Sunday, 1

YMCA Hike, 1:30 p.m., YMCA parking lot.

Monday, 2

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

Tuesday, 3

On-campus Bloodmobile (through 12-5).

Wednesday, 4

Women Faculty Research Series Event, 4 to 5:30 p.m., DBHCC Executive Conference Room.
"With Good Reason," 7:30 p.m., WVTF.

Thursday, 5

Leadership Development Workshop, 9 a.m. to noon, DBHCC room C.

Friday, 6

Virginia Bioinformatics Institute Open House, 1 to 4 p.m., 1880 Pratt Drive, Building XV, CRC: Open to all faculty and staff members and students.

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

SEMINARS

Friday, 22

MCBB, 12:20 to 1:10 p.m., Fralin auditorium: Sue Wessler,

University of Georgia.

Geological Sciences, 3:30 p.m., 4069 Derring: Bruce Watson, Rensselaer Polytechnic Institute.

MSE, 3:30 p.m., 100 Hancock: D. Lynn Johnson, Northwestern.

Monday, 2

Biochemistry, 4 p.m., 223 Engel: Glenda Gillaspay .
Horticulture, 4 p.m., 409 Saunders: Greg Welbaum.

Thursday, 5

STEM, 3:30 p.m., 300 Whittemore: Joel Hagan, Radford University.

Friday, 6

MCBB, 12:20 to 1:10 p.m., Fralin auditorium: Ron Mittler, Iowa State.

Biomedical Sciences, Engineering, 3 p.m., 110 Holden: Zoubeida Ounaies, VCU.

MSE, 3:30 p.m., 100 Hancock: Adam Goff, Morsi Mahmoud.

STS, 4 p.m., 132 Lane Hall: Lindley Darden, University of Maryland.

BULLETINS

Limited submission funding available

Many funding agencies place limits on the number of proposals or applications that a university may submit in response to a particular announcement. To prevent any potential disqualification of submissions coming from Virginia Tech, the Office of the Vice Provost for Research reviews submissions from Tech.

Three limited-submission opportunities have internal deadlines in December:

December 2: NSF/ONR Partnership in Electric Power Networks Efficiency and Security (EPNES) NSF-02-188;

December 3: NSF Computer Science, Engineering, and Mathematics Scholarships (CSEMS) NSF 03-501;

December 19: Gender Diversity in Science, Technology, Engineering and Mathematics Education (GDSE) NSF 03-502.

See <http://www.research.vt.edu/research/limitsubs/index.html> for details.

To receive e-mail reminders of funding opportunities and related information, send a note to lizacker@vt.edu; or

visit <http://www.research.vt.edu/funding/>.

Women Faculty Research Series event set

The December Women Faculty Research Series event on Wednesday, Dec. 4 at 4 p.m. will be "A Family is a Circle of Friends Who Love You": Circles and Cycles of Close Relationships in Old Age.

The program will be presented in Donaldson Brown Executive Conference Room by Rosemary Blieszner, alumni distinguished professor of human development, who will present material from her research on social networks.

The series is sponsored by the Women's Center and the Organization of Women Faculty.

For more information, contact Rachel Christensen, program coordinator at the Women's Center (1-7806) or e-mail rachrist@vt.edu.

EHSS distributing electronic SafeTalk

Environmental, Health and Safety Services has begun electronic distribution of its quarterly newsletter, *SafeTalk*,

starting with its fall, 2002 issue. No printed copies will be distributed except to areas where e-mail and web access are limited.

To continue receiving *SafeTalk*, send an e-mail to listserv@listserv.vt.edu and type subscribe safetalk in the body of the note (not on the subject line). Other copies of *SafeTalk* may be viewed on line at <http://www.ehss.vt.edu/Resources/SafeTalk/safetalk.htm>. For more information, contact Charlotte Waggoner at ren@vt.edu or 1-5864.

'Cuba's Built Heritage' trip offered

Alumni and friends of Virginia Tech are invited to learn about an alumni trip to Cuba February 28 through March 8, 2003 to study the island's architecture, plazas, castles, and culture.

An information session will be held Monday, Nov. 25 at the Montgomery Floyd Regional Library, Blacksburg location at 5 p.m.

For more information, contact Jodi Vandervort at 1-7660 or e-mail jodilynn@vt.edu or Joseph Scarpaci (1-7504, scarp@vt.edu).

Space Shuttle astronaut to speak

By Liz Crumbley

Bonnie Dunbar, a NASA Space Shuttle astronaut and the first woman to train in Russia for a mission to the Space Station Mir, will speak December 5 at 7 p.m. in Burruss auditorium.

Dunbar, who became a NASA astronaut in 1981, is a veteran of five Space Shuttle flights and has logged more than 1,200 hours in space. She was a member of the 1995 Atlantis crew, the first U.S. mission to dock with the Space Station Mir.

Before flying shuttle missions, Dunbar worked as a research engineer for Rockwell International Space Division in California and helped develop the Space Shuttle thermal-protection system.

Dunbar holds a Ph.D. in mechanical/biomedical engineering from the University of Houston and was inducted into the Women in Technology International Hall of Fame in 2000.

Her numerous honors include the NASA Superior Accomplishment Award. Dunbar is assistant director to the NASA Johnson Space Center with a focus on university research.

Her appearance at Virginia Tech is part of the College of Engineering lecture series.

This event is free and open to the public.

Cranberry-juice researchers seek research volunteers

By Sally Harris

David Harrison, associate professor of psychology, and W. David Crews Jr., adjunct professor, will look at whether cranberry juice can enhance memory or mitigate the decline of memory in older adults and are recruiting subjects for the study.

Harrison and Crews, who is also president and licensed clinical neuropsychologist at Virginia Neuropsychology Associates Inc. in Lynchburg, recently received an unrestricted grant from the Cranberry Institute to conduct a six-week clinical trial of the efficacy of cranberry juice on the neuropsychological functioning of cognitively intact adults 60 years of age and older.

A number of recent studies have

demonstrated the beneficial effects of fruit and vegetable products on the neurocognitive processes of laboratory animals; however, Crews said, there seems to be an absence of clinical trials that have examined the potential neuroprotective/neuroenhancing benefits of such products in older adults whose cognitive functioning is unimpaired. The purpose of his and Harrison's research is to conduct the first known clinical trial of the effects of cranberry juice on older adults' cognitive processes.

"It is theorized that, since cranberries are rich in antioxidants and phytochemicals, they may mitigate or reverse the age-related neurodegenerative and neurocognitive declines that have been associated with free-radical activity and oxidative stress," Crews said.

The researchers are recruiting volunteers 60 years of age and older from the Central and Southwest Virginia regions to participate in the double-blind, placebo-controlled research. Participants will be administered a series of neuropsychological tests before and again after six weeks of either cranberry juice or placebo treatment to assess treatment-related changes in their neuropsychological performances.

Each participant will be paid \$50 for his or her participation in the six-week trial and will be provided with a supply of either low-calorie cranberry juice or matching placebo.

For information about participating in the study, call toll-free 1-866-264-6488.

Spectrum will not be published next week because of the Thanksgiving holiday. Publication will resume on December 6.

CAMPUS UPDATE**Tech professors present works at Miami book fair**

By Sarah Newbill and Sally Harris

University Distinguished Professor of English Nikki Giovanni and Urban Affairs and Planning Professor Joe Scarpaci received the honor of presenting their latest books and enjoying the festivities at the 19th annual Miami Book Fair International, which author Tom Wolfe called "the literary Mecca of the Western World."

Thousands of writers across the globe compete for an invitation to this fair each year. The event attracts more than 500,000 literature lovers and some of the most respected and best-selling authors from around the globe. Giovanni and Scarpaci are among the 250 nationally and internationally recognized writers invited to take part in readings, lecture panels, and discussions throughout the eight days of the event.

The fair is one of the biggest cultural events in Miami and one of the largest book fairs on the East coast.

Giovanni, whose latest book is *Quilting the Black-Eyed Pea*, presented a program, "An Evening with Nikki Giovanni," on Wednesday. Scarpaci will show off his new book, *Havana: Two Faces of the Antillean Metropolis*, tomorrow.

Giovanni, described on the fair's web site as "a national treasure," recently received the first Rosa Parks Woman of Courage Award "for her words, vision, courage, voice, her artistry, commitment to change, inspiration to others, and her distinguished career as a writer, teacher, and leader." Her most recent book, according to the fair's web site, "focuses on nature, family relationships, her battles with illness, and observations on life."

Scarpaci's book assesses 500 years of architectural development in the Cuban capital and offers an insightful look into the country's social and economic fabric, diverse population, and contemporary challenges. He is the coordinator of the research/study abroad program entitled "Urban Design and Planning in Cuba," and serves as coordinator of "Cuba's Built Heritage," an annual alumni trip.



VIRGINIA POLYTECHNIC INSTITUTE
AND STATE UNIVERSITY

Spectrum, a faculty-staff tabloid, is published each Friday during the academic year, with the exception of certain holidays, exam weeks, and the summer. Copy deadline is noon Friday. No advertising is accepted.

Spectrum is a non-profit publication of the Office of University Relations: Lawrence G. Hincker, associate vice president for University Relations; Jean Elliott, director of news and information.

Editor
John Ashby, 1-6961

News Bureau Manager
Sherri Box, 1-8508

Production Manager
Melinda Shaver, 1-8524

Business Manager
Paula Vaught, 1-8819

Web/Editorial Assistant
Sherri Songer, 1-2522

Letters to the editor and questions for "Ask *Spectrum*" should be addressed to the editor, 102 Media Building, Virginia Tech, Blacksburg, VA 24061.

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

Virginia Tech does not discriminate against employees, students, or applicants on the basis of race, color, gender, sexual orientation, disability, age, veteran status, national origin, religion, or political affiliation. Anyone having questions concerning discrimination or accessibility regarding the programs described in this newspaper should contact the Equal Opportunity Affirmative Action Office: 540-231-7500 (v), 540-231-9460 (TTY).

VIRGINIA TECH RECYCLING**Recycling Offered for Phonebooks and Campus Directories**

By Larry Bechtell, Virginia Tech Recycling director

Phonebooks and campus directories can be recycled at the recycling station located in the overflow parking lot, immediately west of the Duck Pond. The collection bin for these books and directories has been clearly labeled; do not use the bin for other books or papers. In keeping with the extended deadline provided by the recycling center, the bin will remain in place until the end of January.

To reach the overflow lot, take Washington Street west until it ends at the cage (student parking lot). Take a right down the hill on Duck Pond Drive. Pass Smithfield Road on the left, and then as Duck Pond Drive begins to veer to the right around the Duck Pond, take a left on Oak Lane. Turn into the overflow lot from Oak Lane. Drive to the southwest corner of the lot and look for a big bin for paper (sorted office paper/newspaper, glossy magazines and catalogs), and smaller bins for corrugated cardboard, phonebooks and campus directories, and commingled containers.

For more information, contact the Virginia Tech Recycling Office at 1-9915.

University announces first collegiate-licensed vehicles

The Virginia Tech Licensing and Trademark Department has collaborated with Sheehy Ford of Richmond to introduce the first collegiate-licensed vehicles.

The 2003 Ford Expedition comes equipped with 12 VT logos. It features a thin maroon stripe and VT's on the exterior, while the inside sports the Virginia Tech logo on the headrests of the front seats, on all four doors, and on the custom embroidered floor mats.

The tan leather seats have a maroon piping and a tailgate table fits into the rear tow receiver and comes with a special table cover to match the tan interior. A custom Ford Explorer decked out in Hokie trim will also be available in the near future.

"We are really excited about working with Sheehy Ford on these classy SUV's that should appeal to every Hokie fan," said Locke White, director of licensing. "As far as I know,

we will be the first university in the country to have a licensed car."

The Expeditions will be priced at approximately \$39,000 and will come equipped with CD players and other options. Only one Expedition is available now but Sheehy plans to keep the Hokie Expeditions and Explorers in stock and available.

For more information, contact White at 1-3748.

GOLF COURSE

Continued from 1

appreciation to Bill and Jennie Allman and to the Pulaski County Board of Supervisors in working with us to make this happen. This is an exceptional and timely opportunity. We knew that neither the university nor the foundation could afford to build or buy a new course of this quality, nor is affordable land even available near campus, at a cost close to this." The cost of the course when built in 2000 was \$5.2 million. The River Course was named among the best new public courses in the country by *Golf Magazine*.

"The River Course has outstanding potential, not only for our golf team, but for the university and the entire community as well. The opportunity to play such a challenging layout on a regular basis, coupled with the state-of-the-art practice facility that is planned for the team, should prove invaluable in helping us to keep our golf program among the best in the country," said Jay Hardwick, director of golf and head golf coach.

The course also provides an opportunity for intercollegiate play. Hardwick said, "The character of The River Course is such that we

could easily host a quality collegiate tournament and we plan on bidding for the Big East Championship in the very near future."

The course will continue to be open to the public. Existing memberships at the course will be honored. Special rates will be developed for Virginia Tech students and employees as is the practice on the campus course. The course is about 20 minutes from campus and the university will provide shuttle transport should there be sufficient demand.

"We welcome the Virginia Tech Foundation to Pulaski County. We are very pleased with the commitment of the Virginia Tech Foundation to maintain, operate and enhance the River Course as a public golf course open to Pulaski County and other New River Valley residents," said Joe Sheffey, county supervisor from the Cloyd District of Pulaski County.

The university currently operates an 18-hole course on campus, but will close the front nine holes when ground is broken for a new alumni and conference center complex in early 2003.

CVC Winner

COLE

Shelby Cole, of the music department, is the winner of last week's CVC drawing. Her prize is a Robert Tuckwiller print of Virginia Tech. Her name was drawn at random from all those returning CVC pledge cards by November 12.

Remaining prizes include lunch for two at Donaldson Brown, a pet check-up at the Vet School, basketball tickets, and a one-semester parking pass. For pledge cards and other CVC materials, contact Terri Tishman at 1-6727 or ttishman@vt.edu.

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.

CLASSIFIED POSITIONS**FULL TIME**

Executive Secretary, 004406B, PB 3, MME.

HVAC Technician, 008001H, PB 3, RDP.
In-vehicle Experimenter, 007787J, PB 4, VTTI.

Lab Technician, 008042K, PB 4, VBI.
Office Services Specialist, 003080B, PB 2, ISE.

Office Support Assistant, 008043K, PB 3, VBI.

Research Specialist, 007788J, PB 3, VTTI.

Scientific Glassblower, 001267B, PB 5, Chemistry.

Unit Manager, 007961H, PB 5, RDP.

PART TIME

Distance Learning Support Technician, W023494A, PB 4, VBS.

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

Large Animal Husbandry, W022155M, PB 1, VTH.

Program Support Tech, W023304G, PB 3, Graduate School.

Research Specialist, 008012M, PB 3, Entomology.

OFF CAMPUS

Nursing Supervisor, 006726M, PB 3, CVM.

FACULTY POSITIONS

112612, 112613, F1790, F3772. Assistant/Associate Professors. Department of Urban Affairs and Planning. College of Architecture and Urban Studies. Contact: Max Stephenson, Department of Urban Affairs and Planning, 0113. Applications accepted until positions filled, but applications should be received by December 13.

IN OTHER NEWS

FABRICS

Continued from 1

With funding from the Defense Advance Research Projects Agency (DARPA), Martin and Jones are working with colleagues at the University of Southern California's Information Sciences Institute (ISI) in Arlington on a project they call STRETCH.

The aim of STRETCH (not an acronym) is to develop large e-textile fabrics that will look like typical military equipment, such as tents or camouflage nets. The electronic wires and sensors woven into the fabric will perform the complex procedure of listening for the faint sounds of distant vehicles being deployed by the enemy.

Within the fabric, the sensors and their connecting wires will communicate with one another to create patterns of information. This information can then be translated by computer software into images that will enable soldiers to determine the location of detected sounds.

"We're designing and constructing a 30-foot-long prototype for the STRETCH fabric," Jones said. "The goal of the project is to develop a low-cost, flexibly deployable e-textile system that has low power requirements and doesn't rely on radio waves." The Tech and ISI researchers plan to test the prototype in November.

The military already has sound-detection systems that rely on radio waves, but communication via radio waves can alert an adversary to a military unit's location. The e-textiles system being developed as part of STRETCH produces no detectable energy and also requires less power than radio-wave-operated systems.

Sound detection is not the only potential use for the STRETCH e-textile system. Fabrics can be woven with sensors that can detect chemicals, pick up satellite signals, and perform other feats. Jones and his colleagues also foresee numerous industrial uses.

Jones and Martin also have received a

\$400,000 National Science Foundation Information Technology Research (ITR) grant to design wearable computers made of e-textiles.

The generic concept of wearable computers is a small CPU in a fanny-pack connected to a cumbersome head gear that holds a display screen at eye-level. The Tech ITR project is something completely different.

Because the wires and sensors in e-textiles are woven into the fabric, wearable computers could be constructed much like normal-looking shirts or hats or other types of cloth apparel. These computers wouldn't connect users to the Internet or send and receive e-mail, but would perform specific functions necessary to the wearers.

"Wearable computers constructed of e-textiles offer context awareness," Martin said. "They can be designed to be aware of the user's motions and of his surroundings."

For example, sensors called

accelerometers—which are used to cue airbags to deploy—can detect changes in speed and direction. There are visual sensors that can project images to tiny displays clipped to eye glasses. An e-textile shirt for a blind user might include tiny vibrating motors that would provide cues about approaching objects.

In addition to weaving fabrics to test as wearable computers, Martin and Jones are working on reducing the size and weight of batteries used to power the electronic components. They also are developing software that will help e-textile researchers plot the electronics woven into fabrics after they are fashioned into apparel.

The potential uses for e-textile apparel range from the everyday—sportswear that could tell joggers how fast and how far they've run—to emergency services—uniforms that could enable firefighters to map their way in and back out of dark buildings that are on fire.

NEWSMAKERS

Virginia Tech faculty and staff members and students are often the subject of significant national and state-wide news coverage. To better inform the university community about these accomplishments, the Office of University Relations has compiled this report.

News-makers excludes coverage in the Roanoke news-media market.

"With Good Reason" (Virginia Public Radio) (week of May 5) Communication Studies Professor **Matt McAllister**, co-editor of *Comics and Ideology*, looked at who's reading the comics and who's drawing them.

"With Good Reason" (Virginia Public Radio) (week of May 11) Author and historian **William C. Davis**, director of programs, Virginia Center for Civil War Studies, discusses the desperate last days of the Confederate government.

KNX Business Hour (radio) (May 16) Near Environments Associate Professor **Irene Leech** discussed banking/brokerage fees.

Scientific American Frontiers (PBS) (May 21) Virginia Tech's human-powered submarine competition team was featured in a documentary entitled "Games Machines Play."

AgDay (nationally syndicated TV) (June 3) Entomology Professor **Reese Voshell's** new book, *A Guide to Common Freshwater Invertebrates of North America*, was profiled.

WHRV-FM (Norfolk public radio) Teaching and learning Professor **Tom Sherman** discussed student use of cell phones in schools in a live call-in program.

"With Good Reason" (Virginia Public Radio) (week of June 15) Sociology Professor **Toni Calasanti**, co-author of *Gender, Social Inequalities and Aging*, examined how the aging experience differs by race, gender and sexual preference.

KTAR Radio (Phoenix) (June 19) History Professor **William Ochsenwald** was interviewed live regarding the continuing Palestinian-Israeli conflict. KTAR is an all-news radio station.

"With Good Reason" (Virginia Public Radio) (week of June 22) **Bruno Sobral**, director of the Virginia Bioinformatics Institute, explained the science of "bioinformatics," which relies on math and information technology to give form to complex biological processes. Sobral is one of the leading forces behind the development of the "pathogen portal," a tool that could aid in a fast response to bioterrorism.

WHRV public radio (Norfolk) (June 25) Teaching and learning Professor **Tom Sherman** discussed the problem of cell phones in schools on "HearSay," a live half-hour talk show.

Metro Radio Networks (Richmond and Norfolk) (June 29) Finance Professor **Don Chance** discussed fallout from the deceptive accounting practices of WorldCom.

CBS Radio (July 5) History Professor **William Ochsenwald** discussed the arrest of Saddam Hussein's step-son in the United States and current U.S.-Iraqi relations.

National Public Radio (June 5) **Robert Lang**, director of Virginia Tech's Institute for Metropolitan Research, and co-author of the forthcoming book *Redefining Urban and Suburban America*, discussed America's Midwest on "Talk of the Nation."

WAMU-FM (Washington, D.C.) (June 3) **Robert Lang**, director of Virginia Tech's Institute for Metropolitan Research, talked about affluence in the northern Virginia region, with people doing well in government and the high-tech sector, on the live interview program, "Public Interest."

USA Today Radio (May 28) **Melissa Chase** of the Department of Near Environments offered advice on shopping on-line.

BET Cable Network (May 24) English Professor **Nikki Giovanni** discussed the aftermath of the conviction of a white man for the bombing of a black church more than 30 years ago.

BET Cable Network (May 24) English Professor **Nikki Giovanni** discussed the proposal to let pilots carry guns on commercial flights.

National Public Radio (May 19) Agriculture and applied economics

Professor **David Orden** discussed passage of a new farm bill.

WRC-TV (Washington, D.C.) (April 30) Consumer affairs reporter **Liz Crenshaw** quoted Virginia Tech's **Department of Food Science and Technology** for advice on the shelf life of condiments in the refrigerator.

WVEC-TV (Norfolk) (April 18) Entomology Professor **Peter Schultz** discussed the new Seaside Garden at the Hampton Roads Agricultural Research and Extension Center in Virginia Beach, designed to show people how to landscape where they have a lot of sand.

WKRC-TV (Cincinnati) (February 22) English Professor **Nikki Giovanni** discussed the boycott of Cincinnati by some black organizations.

WGGB-TV (Springfield, MA) (February 15) English Professor **Nikki Giovanni** delivered the Black History Month keynote address at Mt. Holyoke College.

KXAS-TV (Dallas) (February 4) English Professor **Nikki Giovanni** discussed the contributions of poet Langston Hughes at the unveiling of a new postage stamp honoring him.

Viewpoints Radio (August, 2002) Assistant Professor of Philosophy **William Fitzpatrick** discussed the state of business ethics. "Viewpoints" is a half-hour public affairs program airing on more than 150 radio stations.