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University's Division of Student Affairs restructured

By Susan B. Felker

The Division of Student Affairs has been reorganized into three main program areas, each headed by an associate or assistant vice president. Landrum L. Cross, vice president of the division, announced the change. The goal of the new structure is to support strategic priorities for Student Affairs more effectively while accommodating budget cuts.

"The reorganization will create opportunities for cross training and shared planning between departments with similar missions," Cross said.

Associate Vice President David Ostroth is responsible for programs and services for graduate students; the Cranwell International Center, which is directed by Kim Beisecker; Recreational Sports, directed by Bill Campion; and three new departments formed from University Unions and Student Activities: University Unions under Clarresa Morton; Student Activities under Nicki Cantrell; and Administrative and Business Services under Melinda Vann.

The new Student Life and Advocacy department, which includes multicultural programs, new-student orientation, family programs, student advocacy, and off-campus crisis management, also reports to Ostroth. Tom Brown is interim director of this department, which provides services formerly handled by the Dean of Students Office.

Assistant Vice President Edward Spencer provides leadership for the division's strategic emphasis on learning communities; Judicial Affairs, directed by Jennifer Calhoun; Fraternity and Sorority Life, directed by Eric Norman; and Residential and Dining Programs (RDP). RDP's three divisions were consolidated into two after the retirement of Pamela Winfrey as director of facilities and services. Richard Johnson is in charge of Housing and Dining Services and Gerard Kowalski directs Residence Life. Spencer is also responsible for on-campus crisis management, previously coordinated through the Dean of Students Office, and for the division's town/gown community-relations activities.

Assistant Vice President Brian Warren is responsible for the Cook Counseling Center under Robert Miller, the Schiffert Health Center under Paul Farrier, and Career Services under Donna Cassell Ratcliffe. Susan Angle, who also reports to Warren, directs Services for Students with Disabilities, part of the Dean of Students Office until the recent retirement of Barbara Pendergrass.

Dynamic-systems study may have practical applications

By Liz Crumbley

Harry Dankowicz's development of methods to predict changes in stability and design against instability in dynamic systems is based in the abstractions of differential equations, but aimed toward practical applications—such as improved ride comfort in automotive suspension systems or wearable devices that could reduce the number of fall-related injuries.

Dankowicz, who joined the Virginia Tech faculty as an assistant professor of engineering science and mechanics in 1999, has received a National Science Foundation Faculty (NSF) Early Career Development Program (CAREER) Award worth $400,000 to support his research.

As a Fulbright scholar working on his Ph.D. in theoretical and applied mechanics at Cornell University, Dankowicz studied nonlinear dynamics and chaos theory. In 1996, as a research associate at the Royal Institute of Technology (KTH) in Stockholm, Sweden, he turned his attention to models of human gait.

Nonlinear dynamics is the study of the behavior of physical systems—such as weather, biological organisms or complex mechanical systems—and their sensitivity to even small changes in initial conditions or parameters.

"A characteristic of such systems is their limited horizon of predictability," Dankowicz said. "Even minor errors in initial conditions can lead to significant deviation between predicted actions and reality." Particularly dramatic effects occur in systems with "abrupt and discontinuous changes in system properties," he said. "In an automobile, for example, small impacts in the suspension system can result in large-amplitude vertical motion and an uncomfortable

(See DYNAMIC-SYSTEMS on 2)

This year's Farm and Family Showcase will offer information and entertainment for all ages. (*J. McCormick*)

Farm, Family Showcase set for September 4-6

By Mary Ann Johnson

Virginia Tech's Farm and Family Showcase will offer a convenient one-stop shop for information about agriculture, landscaping, forestry, and a variety of topics that involve families from Thursday, September 4 to Saturday, September 6 at Kentland Farm.

Featured information will include agricultural production, business, and technology; poultry, environmental stewardship and natural resources; livestock; pasture management; food quality and safety; chemistry; insects; plant diseases; home landscaping, horticulture and vegetable gardening; lawn care; value-added food products; birds; and bats. There will be displays, demonstrations, and seminars.

Families may enjoy the special events which include a cornfield maze, an aquaculture exhibit, a display of award-winning 4-H projects, egg incubation, butterfly gardens, and a variety of other exhibits.

Youngsters can enjoy the children's activity center. At the activity center children will learn about agriculture and foods originating in America while playing games, making and using puppets, and participating in interactive storytelling sessions. They can have their faces painted and use the toddler playground as well.

Walking as well as bus tours of Kentland Farm will give participants a chance to learn about the farm and its use for teaching, research and Extension. Virginia Cooperative Extension will have a variety of displays to give visitors a chance to learn about the many educational programs offered throughout the state.

Kentland Farm is located along the New River several miles west of the Blacksburg campus. The 1,700-acre farm is the university's newest and largest agricultural research and teaching center.

The showcase is sponsored by the colleges of Agriculture and Life Sciences, Liberal Arts

(See FARM on 4)

Steger named to IDHS Executive Committee

By Ada Hatzios

President Charles Steger was appointed to the Executive Committee of the Virginia Institute for Defense and Homeland Security (IDHS) last week. The Executive Committee is responsible for the overall policy and direction of IDHS, a university-and-industry research consortium dedicated to delivering solutions that support homeland security and defense.

Steger also serves as chair of the Virginia Council of Presidents and sat on Governor Mark Warner's Steering Committee on Research Capabilities and Centers for Excellence. A report by the committee, which was also chaired by Steger, was presented to Warner's Higher Education Research Summit in early May, prompting Warner to challenge Virginia's public and private universities to aim for a target of $1 billion in annual research and development expenditures by the end of the decade.

George C. Newstrom, Virginia's secretary of technology, and John O. Marsh Jr., former secretary of the Army, will serve as co-chairs of the IDHS Executive Committee. Additional members of the panel include current and formal federal officials from defense or homeland-security agencies, and cabinet and university officials, as well as industry representatives from research and technology intensive companies from Virginia.

IDHS conducts research, education, and technology transfer at member institutions and firms, with an emphasis in the fields of telecommunications, biodefense, sensor systems, and risk management.

Recommendations for IDHS emerged from the Secure Virginia Initiative Panel in

(See STEGER on 4)

An Update on Restructuring from Provost Mark McNamee

Dear Colleagues,

Today (July 1) marks the first official day of our new college structures. I am impressed by the energy and enthusiasm the deans, faculty members, students, and staff members have brought to the challenging task of forging many new relationships under very difficult financial circumstances. We have been encouraged to be more entrepreneurial in our approach to higher education, and we are pursuing many strategies. Both President Steger and Executive Vice President Ridenour are aggressively pursuing new sources of revenue, both public and private, to support our academic programs. We are especially attentive to the need for competitive salaries, operating support, and infrastructure so that

(See RESTRUCTURING on 2)

ACTIVITIES

EVENTS

Friday, 11

Friday Night Out Concert Series, 6 p.m., Henderson lawn: Double Take.

Monday, 14

Last Day to Drop.

Wednesday, 16

Pay Date for Faculty and Staff Members.

SOTA Event, 7 p.m., Squires Studio Theatre: *What I Did Last Summer* (through 7-19).

Thursday, 17

Staff Senate, noon, 1810 Litton Reaves.

Library System Demonstrations, 8:30 a.m., Torgersen Hall Museum: Sirsi Corporation.

Friday, 18

Last Day to Resign.

Friday Night Out Concert Series, 6 p.m., Henderson lawn: Barbara Martin, Mac Walters.

Friday, 25

Friday Night Out Concert Series, 6 p.m., Henderson lawn: Summer Musical Enterprises, excerpts of *The King and I.*

Virginia Bioinformatics Institute to host first SBML 'Hackathon'

By Neysa Call

Virginia Bioinformatics Institute (VBI) will hold the first Systems Biology Markup Language (SBML) "Hackathon" on July 29 and 30.

Organized by VBI's Biochemical Networks Modeling Group and sponsored by Sun Microsystems, the event will provide a forum for software developers to exchange SBML ideas and codes.

SBML, an XML format standard, allows life scientists to exchange developed research models, as well as applications useful for studying the models. The Hackathon will assist in rapid resolution of SBML-related coding problems. The resulting higher-quality SBML-enabled software will allow life scientists to create sophisticated research models.

The Biochemical Networks Modeling Group at VBI researches how cells work at the biochemical level using computer programs that simulate the dynamics of biochemical systems. Through programs such as the Hackathon, this group is working to integrate knowledge obtained at different levels and produce predictive life sciences models.

VBI was deemed a "Sun Center of Excellence" (COE) by Sun Microsystems in March, 2001. During the three-year partnership, VBI will receive over $1 million in computational resources and support for post-doctoral research. In addition, the institute will continue using these resources to further the development of computer-aided research tools.

Hackathon registration information is available at *http://calvin.bioinformatics.vt.edu/smbl-hackathon.*

For more information, visit the VBI web site at *www.vbi.vt.edu* or contact Senior Research Associate Stefan Hoops at 1-1799 (*shoops@vt.edu*).

EHSS releases new edition of *SafeTalk*

Environmental, Health and Safety Services (EHSS) has released the spring/summer edition of *SafeTalk*, the departmental newsletter.

The issue contains information regarding university environmental, health and safety programs, services, and resources. The newsletter can be found on the EHSS web site at *http://www.ehss.vt.edu/resources/safetalk/webversion/sprsum03.htm*.

Printed copies will only be distributed to areas where individuals may not have electronic access. To discuss receiving printed copies, contact EHSS at 1-2981.

Warner appoints four members to Board of Visitors

Governor Mark Warner has appointed four new members to the Virginia Tech Board of Visitors.

The new members of the governing board are:

Michael Anzilotti of Chantilly, president and chief executive officer of First Virginia Bank. Anzilotti is a Tech 1971 graduate and is a former board member of the George Mason University Foundation.

Hemant Kanakia of Washington, D.C., Kanakia is chairman of Photuris Inc.

Sandra Stiner Lowe of Oak Hill, the director of Fairfax County's Office of Partnerships. Lowe earned a master's degree from Tech.

James Severt of Martinsville, a 1958 Tech graduate and former member of the board of the Virginia Tech Athletic Fund. Severt is a retired president and CEO of Nationwide Homes.

Warner did not reappoint vice rector William Latham of Haymarket, and replaced board members Beverly Sgro, Don Johnson, and Bruce Smith.

Tech professor presents research at homeland-security summit

A Virginia Tech professor was invited to present infrastructure research at the Virginia Institute for Defense and Homeland Security Research Summit, in Washington, DC on June 25.

Saifur Rahman, director of the Alexandria Research Institute and professor of electrical and computer engineering presented the project "The Critical Infrastructure Modeling and Assessment Program (CIMAP)" at the research summit.

"We are conducting research to secure the nation's critical infrastructure for improving public safety," Rahman said. "For example, we are improving traffic flow by providing reliable communications so signaling can be adequately programmed and supported."

The CIMAP thesis is to provide state and federal policymakers and legislators with long-term perspectives and guidance on the issues that affect the planning, commissioning and operation of critical infrastructures, such as the region's traffic-light system.

To achieve its goal of providing long-term perspective, CIMAP analyzes the changing demands on individual infrastructures, examines how these changes are leading to greater infrastructure interdependencies, and determines how the growing interdependencies will affect the capability and availability of individual infrastructures.

"For example, a gas pipeline may affect traffic lights. If the natural gas for the pipeline is blocked, then the power plant that relies on natural gas will fail, which will cause the electricity that supports the traffic-control center to be lost, which will in turn, make the traffic lights malfunction. CIMAP works to anticipate how infrastructures such as these influence each other," Rahman said.

The CIMAP project involves four elements. The first element strives to examine the infrastructure security in the Washington metropolitan region. As researchers become familiar with the area, they are able to assess regional vulnerabilities, and identify, as well as prioritize, infrastructure interdependencies for protection and damage control.

The second element, electric-power-transmission-line monitoring, analyzes data to determine the risk of cascading failures that lead to blackouts. The element also includes monitoring for early detection and warning signs of relay failures.

Enhancing power quality and security of supply is the third element. The concept refers to identifying alternative energy sources for reliability in emergencies.

The fourth and final element is data visualization. CIMAP creates graphical representations of large amounts of data to help the viewer understand and interpret the big picture for a given area.

For more information about CIMAP, visit *http://www.cimap.vt.edu* or contact Rahman at (703) 518-8080 or *srahman@vt.edu*.

DYNAMIC-SYSTEMS

Continued from 1

ride."

The human gait—another mechanical system—is similarly subject to "discontinuity-driven instabilities," Dankowicz said. "You're walking smoothly and your heel suddenly catches—that's a discontinuous change."

If Dankowicz can develop a method to predict the effects of discontinuities on the stability of motion of a complex mechanical system, then he plans to develop design criteria that can reduce or prevent "the detrimental effects of unintentional collisions between a mechanical system and its surrounding environment."

In particular, Dankowicz is interested in the prevention of fall-related injuries, and one innovation he plans as part of his project is a model of scuffing contact between the human foot and the ground during gait. "There are a number of low-impact conditions that can cause enough instability to result in a fall," he said. In determining the role of friction in falling, for example, Dankowicz could use his computer model of the foot to analyze the effects of the composition of shoe soles or the roughness of floors.

This research could lead to the design of orthotic or prosthetic devices that would help reduce instability for people who are at risk of injuries from falls.

Investigating the human gait is just one aspect of his CAREER project, however, and Dankowicz hopes to create a predictive methodology that can be applied to a range of mechanical systems, such as automotive systems and industrial machinery.

An associate of the Virginia Tech Center for Biomedical Engineering, Dankowicz also has worked with researchers in the Virginia-Maryland Regional College of Veterinary Medicine on an exoskeletal device for equine-limb disorders and injuries.

In addition, Dankowicz is working in the area of scoliosis treatment, developing computer-based tools to assist in corrective surgery for the spinal disorder.

Dankowicz will design a new course at Virginia Tech as part of his CAREER project. The junior-level course will give undergraduates experience in the design of experiments for measuring mechanical quantities with a focus on the behavior of complex mechanical systems.

RESTRUCTURING

Continued from 1

the quality of life here at Virginia Tech matches the quality of our people. It is heartening to note that the recent feasibility study designed to gauge support for our upcoming comprehensive fund-raising campaign identified academic quality as the highest priority, by far. Our supporters strongly endorse efforts to generate funds for endowed chairs and professorships and for graduate fellowships. Our goals require us to enhance all aspects of graduate education and student support, especially at the Ph.D. level, and we expect to place substantial effort in the quest for new support. We are now well positioned to focus attention on the growth and development of our academic programs. Some additional reshaping is still taking place within the colleges, but the major realignments and departmental mergers have been approved. On August 1, we will have a full complement of deans at Virginia Tech (a rare situation in any major research university these days), and I look forward to working closely with all the senior leaders in advancing our academic agenda.

Dr. Joseph Merola has admirably fulfilled his special administrative role in guiding the restructuring process. I wish to thank Joe for his sustained and creative attention to the many complex issues that are being addressed. Joe will be returning to his academic home in Chemistry at the start of the academic year.

I would like to take this opportunity to outline some of the steps we are taking university-wide to advance our missions in teaching, research, and outreach. We should not underestimate the drastic impact of the large budget reductions on our programs, but we can recover faster by maintaining our focus on a future we will help to create with our own resolve and resources.

(For details of the steps the university is taking to advance the missions in teaching, research, and outreach, go to the Provost's Home Page at *http://www.provost.vt.edu. Click on "Announcements," then "Restructuring.")*

CAMPUS UPDATE

Changes Noted in Social Security Numbers, Identification Numbers

Identity theft has become a growing problem in Virginia and around the nation. On July 1, 2003, several bills regarding an agency's use of an individual's Social Security number became part of Virginia code. Beginning July 1, agencies may no longer issue an agency-related identification card that displays an individual's entire Social Security number. In addition, any agency-issued identification card issued before July 1, 2003, and that displays an individual's entire Social Security number shall be replaced no later than July 1, 2006.

As a result, several changes will take place over the next several years:

First-time students enrolling second summer session and this fall will receive a generated identification number. New employees hired on, or after June 23, 2003, will receive a generated identification number. This is the number that will be displayed on the Hokie Passport.

Over the next several years, existing individual's records will be transitioned to a generated identification number. Planning for this transition is under way and will be announced when completed.

Banner users are accustomed to seeing Social Security numbers displayed when they perform data inquiries and entries. Modifications are being made to the Banner system to eliminate the Social Security number as the primary access to an individual's record. The modifications will continue to allow access by the Social Security number, but it will not be displayed when the individual's record is returned.

The Hokie Passport identification card for employees and students will continue to provide the same access to facilities and services.

The practice of using the Social Security number as the primary access identifier will be difficult to change. Even before the university began using computer systems, the university used the Social Security number as the primary identifier to access an individual's record. The new laws will require modifications in how offices, departments and individuals use the Social Security number. For example, departments may have individual systems established to secure access to laboratories or computer systems keying off of the social security number. Administrative users should begin to ask for student or employee identification numbers as they conduct business with their customers. Offices should not ask an individual for their Social Security number, except for processes where it is required, such as payroll and financial aid.

In June, the Office of the University Registrar conducted Family Educational Rights and Privacy Act (FERPA) sessions. In the sessions, information was shared regarding the use of Social Security numbers at Virginia Tech. Make-up sessions will be announced in August for those who were unable to attend. Also, there is information on the Office of the University Registrar web site at *http://www.registrar.vt.edu/*.

Personnel Services has informed departmental users and Banner HR training has incorporated these changes. For more information, visit the Personnel Services web site at *http://www.ps.vt.edu*.

Questions about student identification numbers should be directed to the Robin Lucas in the Office of the University Registrar at 1-9579. Questions about employee identification numbers or Banner HR processes should be directed to HRIS help desk at *hrisuser@vt.edu* or 1-7763. System concerns should be directed to Mike Naff at *naffm@vt.edu* or 1-6652.

Cassell Ratcliffe named to head Career Services

By Susan B. Felker

Assistant Vice President for Student Affairs Brian E. Warren has named Donna Cassell Ratcliffe as the new director of Career Services. She has been associate director of the department since 1988.

"What an honor and a thrill it is to assume my new role as the director of Career Services, where I will continue to work with a devoted and talented staff," Cassell Ratcliffe said. "During the coming year, we will be working hard to establish a greater awareness of our services, resources, and our value to the Virginia Tech community. We are particularly enthusiastic about the opening of the new Career Services building in late spring 2004. This will foster the Career Services mission on campus and with the employing organizations who use our services to recruit Virginia Tech students."

Career Services helps Virginia Tech graduate and undergraduate students investigate careers and majors, explore internships, conduct job searches, and/or plan for additional career-related education. The office also arranges job and career fairs and assists employers interested in recruiting Virginia Tech student co-ops and interns, as well as graduates. On average, 18 percent of graduates have found their first job through Career Services.

"Dr. Cassell Ratcliffe brings strong leadership, energy and a depth of understanding of issues and challenges for Career Services to her new role," Warren said. "She is an excellent planner with proven enthusiasm and dedication to the missions of the Career Services and the university."

Cassell Ratcliffe holds a master's and a doctorate degree in education from Virginia Tech and a bachelor of science in early-childhood education from the University of Maryland, College Park.

In 1984, she came to Virginia Tech as a placement assistant in recruitment for Career Services and also served as assistant director for student advising and programming before becoming associate director. She took a year off from Tech from 1994-1995 to manage the merger of the Career Development Center and the Cooperative Education office at the University of New Mexico, Albuquerque.

The appointment is effective immediately.

CASE honors staff members

By Liz Crumbley

Jeff Snider and Beverly Williams have received 2003 Employee Recognition Awards from the College Association for Staff in Engineering (CASE) for their outstanding contributions and service to the college.

Snider, who joined the staff of the Grado Department of Industrial and Systems Engineering (ISE) in December 1988, "is exactly the type of employee for whom the CASE awards were created," said Joel Nachlas of the ISE faculty.

In his roles as an instrument maker, lab technician and instructor, Snider has worked

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Virginia Tech
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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

Ten food-service positions available.

Administrative Assistant, 002237H, PB 3, SPRL.

Administrative Assistant, 007136J, PB 3, Student Activities.

Assistant Manager Senior, 000514H, PB 3, Student Programs.

Boiler Operator, 007310F, PB 3, Power Plant.

Budget Analyst Senior, 002075S, PB 5, BFP.

Compensation Analyst, 008110S, PB 4, Personnel Services.

Development Associate, 007914S, PB 3, University Development.

Grants/Contracts Manager, 008130K, PB 5, VBI.

Grounds Worker Senior, 001983G, PB 1, PPG.

Grounds Worker Senior, 002010G, PB 1, PPG.

Housekeeping Leader Senior, 000102H, PB 1, SPFS.

Office Specialist, 007461H, PB 2, SPRL.

Plumber Steamfitter, 001606F, PB 3, Physical Plant.

Power Plant Operator Shift Supervisor, 000335F, PB 3, Power Plant.

Powerline Worker, 006524F, PB 3, Facilities.

Pre-prep Supervisor, 000394H, PB 2, Student Programs.

Program Support Specialist, 007828C, PB 3, CHPM.

Research Specialist, 008131C, PB 3, CSES.

Small Animal ICU Technician, 008095C, PB 4, VTH.

Sous Chef, 002946H, PB 3, Student Programs.

Stock Clerk, 007966H, PB 2, Student Programs.

PART TIME

Academic Captionist/Transcriber, W022898J, PB 3, SSD.

Administrative Assistant, W023527K, PB 2, VBI.

Animal Care Technician Large Animal, W020066C, PB 2, VTH.

Electrical Engineer, W023566J, PB 5, SEMIJ.

Executive Secretary/Office Manager, 008136J, PB 3, SBES.

Field Technician Assistant (Telecommunications), W023203A, PB 2, CNS.

Fiscal Assistant, 008135J, PB 2, Teaching/Learning.

Office Services Specialist, W022498B, PB 2, Computer Science.

Office Services Specialist, 001506B, PB 2, Philosophy.

Outreach Specialist, W023452F, PB 4, Personnel Services.

Radiologic Technologist, W022238M, PB 3, Schiffert Center.

OFF CAMPUS

Nursing Shift Supervisor, 002996M, PB 2, EMC.

Wildlife Worker, 006643B, PB 2, Biology.

FACULTY POSITIONS

INSTRUCTIONAL

Department of Fisheries/Wildlife Sciences. Assistant Professor of Wildlife Sciences. Contact: James A. Parkhurst, 0321.

Department of Accounting/Information Systems. Assistant Professor. Contact: Robert M. Brown, 0101.

Department of Materials Science/Engineering/Engineering Science/Mechanics. Instructor. Contact: Stephen Kampe, 0237.

IN OTHER NEWS

Natural Resources research helps HIV/AIDS victims

By Hilary Fussell, public-relations assistant

Associate Professor A.L. "Tom" Hammett and Research Associate Marc Barany are studying the role of natural resources, specifically forests and non-timber forest products, in the strategies of rural communities and households coping with the HIV/AIDS epidemic in Africa.

Those suffering from HIV/AIDS cope with the disease through the use of natural resources as a source of nutrition, income, and medicine. Barany said, "At the household level, families afflicted by the disease have a difficult time producing the food and money necessary to meet household needs and health-care expenses. Family breadwinners become sick and die, time needed spent farming or making money by those who are healthy is instead spent caring for ill family members, and productive assets such as farmland and cattle are sold. Ultimately, HIV/AIDS leads to deeper poverty and food insecurity. In such situations, we see that forests and non-timber forest products become an important component in household coping strategies, providing alternative sources of income and food security at low cost. At the same time, HIV/AIDS increases the demand for certain forest products, such as medicinal plants, which are an important component of affordable healthcare in Africa."

Hammett and Barany's research findings will help shape responses to the AIDS crisis. "To help others rebuild their lives after disasters such as HIV/AIDS, it's necessary to first identify what building blocks are available to work with," Hammett said. For example, to improve the strength of their immune system, rural Africans may not be able to go to a convenient store and buy a jar of multivitamins, but they may have access to an array of vitamin-rich local foods such as fruits, nuts, and game. These foods need to be part of the nutritional guidelines being established for HIV/AIDS patients in Africa.

"It's a similar situation for medicine. Drugs that can drastically improve and prolong the life of HIV/AIDS patients are simply not accessible for the majority of HIV/AIDS patients in Africa. What are available are medicinal plants that are being used to treat many of the conditions and illnesses related to HIV/AIDS. These plants need to be a priority of natural-resource conservation and management efforts, so that they remain a viable response to the HIV/AIDS crisis, which is still in its early stages." Barany said.

By understanding how those in regions most heavily impacted by the HIV/AIDS crisis cope, and how natural resources play into these coping strategies, Hammett and Barany hope their research will help shape aid programs assisting people suffering from the disease. Unraveling the public-health benefits of forests will also draw attention to the social costs of global deforestation and the continued need for sustainable-use programs and policies, especially in the poorer regions of the world.

With support from the Africa Biodiversity Collaborative Group, Barany and Hammett have already worked toward these goals, presenting their preliminary findings in several government and international agency HIV/AIDS planning meetings and cooperating with aid programs in Africa to improve the lives of people affected by the disease.

While the program has attracted widespread interest, Hammett said, "the HIV/AIDS-natural-resource connection has been relatively uncharted territory up to now, and this has limited our ability to continue on with our research. Funding has been difficult along with the traditional mindset of institutional separation between health and natural-resource sectors. Despite working towards the same goals, the health and natural-resource sectors often remain separated."

Hammett and Barany hope to continue their research with the Tanga AIDS Working Group in Tanzania, East Africa.

Student's research earns trip to international conference

By Sally L. Harris

Beth Reid, a recent graduate of Virginia Tech with majors in physics and mathematics, will represent the United States at an international conference of student researchers in Denmark after receiving the Society of Physics Students (SPS) Outstanding Student Award for Undergraduate Research.

Only two students will represent this country at the International Conference of Physics Students (ICPS) in Odense, Denmark, August 7 through 13. Reid will present the research that resulted in her receiving the SPS honor.

Reid's research was done with a group working with Uwe C. Täuber, associate professor of physics. "Our group (condensed-matter theory) tries to build theoretical understanding of systems 'out of equilibrium,' Reid said.

"One example is life, which is maintained by a constant energy flux through the system. My project's focus was to use computer simulations to study anomalous diffusion (how particles move through unordinary media) and is related to the study of percolation. The computer simulations allowed us to test a specific theory of how the particles should behave and discover that theory's limits." Reid's main contributions were writing and performing the simulations, doing detailed data analysis and interpretation, and developing an intermediary model to explain the group's results.

Täuber said Reid is "definitely among the very best students I have ever met during my career at the Technical University of Munich, Harvard University, the University of Oxford, and here at Virginia Tech." Her "remarkable academic achievements" led to her receipt of numerous scholarships and to being named the College of Arts and Sciences Outstanding Senior 2003. She also received the Barry M. Goldwater Scholarship and a rare National Science Foundation Graduate Research Fellowship.

CASE

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with faculty members and students in all areas of the department. He has fabricated research equipment in the manufacturing-processes lab, provided mechanical-design support for the displays and controls lab, helped construct experimental test rigs in the locomotion-research lab, and helped set up the assessment-and-cognitive ergonomics lab. Year after year, he has instructed ISE students in the safe use of lab equipment.

"He is the first to say 'Sure, I can help,' and the first to show up with the tools to complete the job," said Robert Beaton, ISE professor and director of the display and controls lab.

Williams joined the Department of Engineering Science and Mechanics (ESM) in 1998 as an administrative assistant for the Materials Response Group. This group of faculty members and graduate students conducts an active research program, and Williams makes their travel arrangements and sees to it that their research proposals are prepared and submitted in order and on time.

Williams has contributed to the success of a number of awarded proposals, noted ESM faculty members Jack Lesko and Scott Case. "Specifically, as an extraordinary contribution to the NSF IGERT proposal (a five-year grant awarded at $2.7 million), Beverly led the collection, organization and analysis of statistics that formed a critical section to the proposal," Lesko and Case wrote in their nomination of Williams for the CASE award. "We could not turn out the number and quality of proposals if it were not for her additional time, thoughtful initiatives and careful attention to details."

"In addition to being a superb employee, Beverly is a friendly, positive person who always makes time for students," wrote Ph.D. students Michael Hayes and John Bausano in support of Williams' nomination for the CASE award.

Researchers show wireless disaster response system

By Susan Trulove

Members of the Center for Wireless Telecommunications (CWT) demonstrated their newly developed broadband communications system at the Digital Government Research Conference in Boston recently. The system will provide vital connectivity in disaster response situations such as 9-ll. They also gave a similar demonstration at Science Applications International Corporation's (SAIC) Public Safety Integration Center in Herndon.

An impulse-type channel sounder based on ultra-wideband radio technology is an important feature of the project. Its operational application is to support rapid deployment of the center's broadband communications system by identifying usable radio paths (particularly non-line-of-sight paths), characterizing the paths' transmission characteristics, and adapting the transmitters and receivers for optimum performance over these paths.

CWT faculty member Bill Carstensen developed and partially validated a geographic information system (GIS) tool called GETWEBS to quickly assess deployment locations for the project's hub and remote units. The tool uses GIS data to quickly compute "view-sheds" based on radio parameters and radio frequency propagation models. In a deployment scenario, GETWEBS can be used for what-if analyses as equipment is in transit to recommend specific deployment locations.

Team members who attended the conference were Charles Bostian, CWT's engineering coordinator, Scott Midkiff, Tim Gallagher, and graduate research assistant Mary Miniuk.

Work on GETWEBS began with an award from the National Science Foundation (NSF). The current research is also sponsored by the NSF under a Digital Government Award.

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and Human Sciences, Natural Resources, and the Virginia-Maryland Regional College of Veterinary Medicine, Virginia Agricultural Experiment Station, Virginia Cooperative Extension, and the University Outreach and International Affairs Program Development office. Many businesses and government agencies are also involved.

For more information, go to web site *http://www.farmandfamily.vt.edu* or contact Dwight Paulette at 731-1289 or *kentland@vt.edu.*

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early fall 2002. Plans for the consortium were developed in September, 2002 by the Virginia Research and Technology Advisory Commission, a 29-member panel established to advise Warner on research and technology strategies for the state.

Other university partners of IDHS include the University of Virginia, the College of William and Mary, and James Madison University.

More information is available at *http://www.idhs.org.*