Tech’s Equine Medical Center dedicates new treadmill facility

By Jeremy Douglas

The James P. Mills Diagnostic Treadmill Building was dedicated last Friday at the Marion duPont Scott Equine Medical Center (EMC) in Leesburg.

In unveiling the 2,800-square-foot facility, the EMC took a major step forward in its life as a biomedical research institution and formally introduced new diagnostic capabilities to the regional horse community it serves.

“This is a magnificent facility,” said Peter Eyre, dean of the Virginia-Maryland Regional College of Veterinary Medicine during his keynote address. “Many people have been responsible for getting us to this point.”

Money used to construct the new facility was donated by the private sector. The building is named in honor of founding council member James P. Mills, a horseman and breeder, who was a leader in achieving early diagnostic advances at the center. Several fund-raising initiatives have been undertaken over the past several years to support the treadmill project.

“I know that as horse owners you know how fortunate we are to have this in our area,” said Shelly Duke, chair of the Equine Medical Center Council. Duke thanked all of the donors who had helped in the cause to develop “this fabulous new state-of-the-art treadmill.”

Similar in concept if not in scale to a human treadmill, the high-speed equine diagnostic unit, capable of operating at speeds up to 60 miles per hour, will be used to evaluate a horse’s cardiopulmonary and musculoskeletal functions under vigorous exercise in a controlled environment.

A video endoscope will be used to visually examine a horse’s upper airways to diagnose respiratory problems not evident at rest. One of the distinctive features of the treadmill building will be the five video cameras positioned on each side, front, back and overhead. The cameras will be used to document and analyze subtle gait problems. Information related to heart, respiration, and gait also will provide useful data for clinical research projects.

“All of people have worked very hard to make this new facility a reality, and I think they are going to be very pleased with the opportunities it will create,” said G. Frederick Fregin, the Jeane Ellen duPont Shehan professor and director of the EMC in comments made after the event. “Opening this facility represents a major step forward for the EMC, the college of veterinary medicine, Virginia Tech, and of course the entire industry we serve.”

During his keynote remarks, Eyre praised Fregin as a great “champion” of the EMC whose special style of leadership has made the partnership between a land-grant university and the private sector so successful.

“That partnership is going to be even more important in the future than it has been in the past,” Eyre said, adding that the addition of the treadmill facility will help the EMC emerge as an even more important biomedical research facility during the decade ahead.

Founded in 1984 with $4 million donated by the late Marion duPont Scott on 200 acres of land donated by the Westmoreland Davis Memorial Foundation, the Equine Medical Center is one of three campuses operated by the Virginia-Maryland Regional College of Veterinary Medicine.

Local entrepreneurs to profit from ‘CapTech 2002’

By Jeanne M. Garon

Fledgling Southwest Virginia technology companies can access millions of venture-capital dollars, helpful educational programs, and the opportunity to enter their business plans in a competition for cash and other awards during the upcoming CapTech 2002, a program offered collaboratively by Virginia Tech and the New Century Technology Council.

“We’re building on the successful momentum we created during the Capital Access Forum,” said CapTech 2002 Program Chair and Virginia Tech Director of Economic Development John Phillips. Last year’s Capital Access Forum, CapTech 2002’s predecessor program, brought more than 19 venture-capital organizations together with more than 300 participants and resulted in numerous local companies, most notably Luna Technologies, receiving funding.

“Entrepreneurs in the New Century Region don’t necessarily need to travel to larger cities to get their companies funded,” said Leon Harris, president of the New Century Technology Council (NCTC). “Virginia Tech and NCTC are teaming to bring the funders here,” he said, “meaning that CapTech not only benefits direct participants but also helps this entire region tell the story of how it is an emerging foothold for technology-led economic growth.”

The educational component of CapTech 2002, which is Virginia’s only technology-entrepreneurship series, will be held at the Roanoke Higher Education Center beginning January 8, when the educational session “Business Plans—Why Bother?” kicks off the series. This session, together with “Develop a Marketing Plan for High-Tech Companies” (February 5) and “Create a Successful Financial Plan and Managing Cash Flow” (March 5), each available for a $50 fee, will be offered from 7:30 to 11:30 a.m.

The sessions, which are open to the public, will also help prepare competitors for the business-plan contest. Competitors are expected to attend two or more of the workshops to get assistance in crafting and fine-tuning their business plans before they are submitted to a panel of judges. Phillips said participants in the business-plan competition stand to receive substantive cash and in-kind awards.

“The New Century Technology Council has more than 130 member firms, representing more than 10,000 total employees in the region. Its objective is to initiate and support programs that improve the ability of the region to foster and sustain business growth in the technology industry.”

NSF grant to investigate collaborative work

By Sally Harris

Researchers at Virginia Tech’s Center for Human-Computer Interaction have been awarded a $449,998 grant from the National Science Foundation (NSF) to investigate techniques for coordinating computer-supported collaborative work.

People working collaboratively must establish and maintain awareness of one another’s intentions, actions, and results, said John Carroll, professor of computer science. “Understanding the role of awareness in computer-supported collaborative work (CSCW) and developing effective software tools to support awareness are keys to the future success of CSCW systems,” Carroll said.

The project will develop and evaluate a suite of awareness tools to support coordinated planning, action, and outcome analysis in collaborative science learning. The researchers will coordinate classroom-based field studies with a series of laboratory investigations to benefit from both the scope and ecological validity of a field study and the analytical focus and control of laboratory studies. Laboratory studies will adapt task-simulation methods, including the use of...
DOD funding homeland-security research

By Susan Trulove

Some $20 billion in funding to address homeland security needs, presently being appropriated, will include support of university initiatives, broad-area announcements (BAAs), and specific solicitations.

A recently issued Department of Defense BAA (02-Q-4655) is asking for one-page proposals due December 23 for a broad array of new technologies to assist in homeland security. Learn more at www.bids.tswg.gov/bids/wbids.nsf/DownloadBAAs/02-Q-4655/$FILE or link from the Opportunity Update site: www.research.vt.edu/update.html.

“BAAs represent many of the DOD’s agencies, rather than just one, as is usually the case,” said David Sebring, director of government and corporate relations for the Virginia Bioinformatics Institute. “Although the department’s mission is overseas security, such technologies as biological and chemical weapon sensors that protect soldiers also protect mail carriers, for instance.”

Sebring said faculty members should be broadminded in their proposals for this BAA. “They are looking for technologies in such areas as cyber-security, to protect the network infrastructure; bioinformatics, for pathogen detection, attribution, and mitigation; biometrics, such as facial recognition that could be used on scanning TV cameras at airports and other facilities; and technologies to mitigate threats in transportation, commerce, mail, pretty much every aspect of our lives.”

Sebring said researchers in animal and plant sciences should seek DOD funding. “The USDA is spending its money on physical security of buildings and very little on research. The technologies that agriculture uses to address its problems will come from the DOD. The technology to fight bio-terrorism is the same, whether the host is animal, plant, or human,” he said. “And, in fact, with agriculture being a critical component of our quality of life and economic well-being, as one-sixth of the GDP, the threat to agriculture is more real than the threat to humans. But our researchers have to address this through the DOD.”

There will be more about the DOD BAA, and other BAA’s due from other agencies in the weeks ahead, on the Opportunity Update site: www.research.vt.edu/update.html.

Construction to affect parking lots

A large section of Pamplin/Derring parking lot will be lost for two years to support the project staging area for the chemistry/physics construction begins on January 2. The only vehicles that will be allowed access to the area between Derring and Pamplin halls will be handicapped, service and vendors. There will only be parking spaces for these three types of vehicles.

B-lot (the large commuter lot off Price’s Fork Road) parking spaces will change designation over winter break to begin addressing the significant loss of spaces. The center section (behind Cowgill Hall and across Perry Street), which is currently designated for faculty/staff parking will be converted to commuter/graduate parking on December 31. The section of B-lot to the west (behind Derring Hall and across Perry Street), which is currently designated for commuter/graduate parking will be converted to faculty/staff parking on December 31. This change will replace all the faculty/staff spaces lost to the construction project.

Several projects are being scheduled for summer 2002 to increase the number of commuter/graduate spaces in this region to replace those lost spaces.

Next week’s Spectrums will include a detailed article on the Chemistry/Physics Building and other construction projects.

‘Crazy’ contest winners announced

By Paul Smartschan

University Relations intern

The winners of the first-ever Virginia Tech “Crazy for the Hokies” logo contest were announced at Lane Stadium Saturday.

Jed Grice of Washington, Pa., took first place; Jamey Lee Davis of Wytheville took second place; and Amy Ankram of Christiansburg took third place. These winners reproduced one of the four Virginia Tech logos in the biggest, most-creative, most-outlandish manner possible.

Grice and his uncle, Bruce Grice, cut a giant VT into a field that is located under the final approach to Pittsburgh International Airport. He will receive $1,000 cash from the Tech Bookstore, $1,000 worth of Hokie apparel from Peebles, and $1,000 of tailgating food from Kroger.

Grice’s sisters, Heather and Meghan, both work in Virginia Tech’s Office of Undergraduate Admissions. “The Grices are ‘Crazy for the Hokies’ and now its official,” said Heather Grice. “We knew the competition for this contest was pretty tough, but we never expected to win. My entire family is really excited about it.”

Davis placed second in the competition with his unique Hokie monster truck. He wins $500 cash from Tech Bookstore, $500 worth of Hokie apparel from Peebles, and $500 of tailgating food from Kroger. Davis’ mechanical monster was tough, animated and original.

With the help of her co-workers at Comprehensive Computer Solutions, Amy Ankram used over 5,000 colored balloons to construct a hovering giant VT and American flag logo. She and her co-workers will receive $250 cash from Tech Bookstore, $250 from Peebles, and $250 of tailgate food from Kroger.

“We are really excited about the response that we received for the contest,” said Locke White, director of Licensing and Trademark Administration. “There were over 30 entries that came in from all over the country.”
EMPLOYMENT

The following classified positions are currently available. Position details, specific application procedures, position closing dates, and contact information may be found on the Virginia Tech Personnel Services website: 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 positions 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 EEO/AA employer committed to diversity.

FULL TIME

Assistant Computer Systems Administrator, 007885S, PB 4, CEE.

Assistant Director, Development Research, 007556S, PB 4, University Development.

Cgep Administrator, 007627B, PB 3, Engr.

Computer/Internet Technician, 007884J, PB 3, Athletics.

Coordinator of Administrative Affairs, 007879B, PB 4, Executive Vice President’s Office.

Customer Service Manager, 001525F, PB 1, UUSA.


Financial Planning Manager, 007567F, PB 5, BFP.

Fiscal Technician, 007882B, PB 3, CHPM.

Grounds Worker Senior, 002333F, PB 1, PBG.

Housekeeper, 001494J, PB 1, UUSA.

Housekeeping - Night Crew, 007814H, PB 1, RDP.

Housekeeping Manager, 006926H, PB 3, RDP.

Housekeeping Supervisor, 000269H, PB 2, RDP.

Housekeeping Worker, 000966H, PB 1, RDP.

Laboratory Mechanic B, 002629M, PB 3, VMES.

Laboratory Specialist, 007707B, PB 3, CE.

Laboratory Specialist, 007860M, PB 3, CVM—BSP.

Large Animal Veterinary Technician, 001996M, PB 4, VTH.

Meat Processing Facility Manager, 003273M, PB 4, FST.

Medical Technologist, 002596M, PB 4, VTH.

Multimedia Systems/Applications Specialist, 002054A, PB 4, VBS.

Operations Manager, 000780H, PB 4, RDP.

Operations Manager, 007712H, PB 4, RDP.

Project Coordinator, 006971F, PB 4, Physical Plant.

Radiologic Technologist, 002394M, PB 3, VTH.

Sous Chef, 007811H, PB 3, RDP.

Sous Chef, 009404H, PB 3, RDP.

Trades Utilities Senior Worker, 007112F, PB 3, Physical Plant.

Transportation Planner, 007498F, PB 4, OT.

Warehouse Specialist, 007142H, PB 2, RDP.

Web Designer, 002345Y, PB 3, CE.

PART TIME

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

Animal Care Technician/Small Animal, W022675M, PB 1, VTH.

Benefits Support Specialist, 007888M, PB 2, Personnel Services.

Computer Support Technician, W023342R, PB 3, VTTI.

Department Administrative Support, 007899B, PB 3, CEE.

Fiscal Technician, W020810M, PB 3, VTH.

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

Laboratory Specialist, W023305M, PB 3, APS.

Office Services Specialist, W02260M, PB 2, VTH.

Office Services Specialist, W023388J, PB 2, Dean of Students.

Office Specialist, 007887C, PB 2, Personnel Services.

Radiologic Technologist, W022238J, PB 3, Health Center.

Security Guard, W020470Y, PB 1, Police.

Storekeeper, W02291M, PB 2, VTH.

Veterinary Technician, W023340M, PB 4, VTH.

OFF CAMPUS

Adult Program Assistant, 006604J, PB 2, Prince William County.

Adult Program Assistant, 006602J, PB 2, HNFE.

Eenep Adult Program Assistant, 006103M, PB 2, VCE—Prince William County.


Research Specialist, 003230M, PB 3, Hampton Roads AREC.

Youth Program Assistant, 007233J, PB 2, HNFE.

Youth Program Assistant, 005889J, PB 2, HNFE.

Youth Program Assistant, 007464J, PB 2, HNFE.

FACULTY POSITIONS

INSTRUCTIONAL

Educational Leadership/Policy Studies. Assistant/Associate Professor, Educational Research. Contact: Dianne Yardley, 101 War Memorial (0317), Review begins Jan. 1.

Teaching and Learning, Assistant Professor, Technology Education. Contact: Jacqueline Nottingham, 201 Burruss (0202), Open until filled.

Undergraduate Admissions, Assistant Director, Admissions. Contact: Jacqueline Nottingham, 201 Burruss (0202), Open until filled.

Collaborative, Multicultural Student Recruitment. Contact: Jacqueline Nottingham, 201 Burruss (0202), Open until filled.


Correction

(Editors’ note: In last week’s edition of Spectrum, the final paragraphs of the page 4 article “Participants sought for innovative program” were inadvertently omitted. The omitted information is reprinted below.)

Participants will also train at no cost in a private facility on North Main Street, with each session supervised by a personal trainer, and some participants will also receive personal nutritional counseling. The total value of the assessments and personal training and counseling is about $3,000.

The research group is particularly looking for men and women who fit the following criteria: males between the ages of 25 and 45 and females between the ages of 25 and 55; individuals who are currently sedentary and have been for the past six months; participants who do not currently participate in any formal exercise or activity program more than one day a week are considered sedentary; individuals who consider themselves to be overweight (Individuals who are 10-30 pounds more than their recommended weight are considered overweight.) For more information and to enroll in the study, go to www.activeLIFE.com. For additional information, call Lesley Fox at 1-877-845-7747, Teaching/Learning. Assistant Professor, Instructional Technology. Contact: Dianne Yardley, 101 War Memorial (0317), Review begins Feb. 1.

Computer Science. Assistant Professor (2). Contact: Dennis Kafura, 660 McBryde (0106), Review begins Feb. 1.

Human Development. Assistant Professor (2), Marriage/Family Therapy Doctoral Program. Contact: Howard Protinsky, 366 Wallace (0416), Review begins Jan. 15.


NON-INSTRUCTIONAL


Office of the Provost/University Special Initiatives. Master’s in Information Technology Program Director. Contact: Leonard Ferrari, Torgersen 2000 (0285), Review begins immediately.

Athletics. Head Men’s Soccer Coach. Contact: Pamela Linderus, 359 Jermyn (0502), Deadline is Dec. 10.


Undergraduate Admissions. Assistant Director, Admissions. Contact: Jacqueline Nottingham, 201 Burruss (0202), Open until filled.

Undergraduate Admissions, Assistant Director, Multicultural Student Recruitment. Contact: Jacqueline Nottingham, 201 Burruss (0202), Open until filled.


Center for Housing Research-hosts scholarship, architect

By Aubrey Campbell, University Relations intern

The Virginia Center for Housing Research at Virginia Tech has hosted to constant Kijanenko, an architect, professor, and author from Russia whose studies and interests lie in housing policy and residential architecture. Kijanenko was recently awarded a four-month grant through the International Research and Exchanges Board (IREX) to conduct independent research in the United States. The grant was sponsored by the Bureau of Cultural and Educational Affairs of the U.S. State Department through a Fellowship Program called Freedom Support Act in Contemporary Issues.

During his visit, Kijanenko said “we’ve been trying to expose him to different contacts and research through field trips and exploring different housing issues.” He has also been exposed to various cultural events that the area has to offer, including a Hokie football game.

After leaving the university, Kijanenko was scheduled for a month-long internship to continue his study of social problems and aspects of housing at the Urban Institute in Washington D.C.
The Virginia Tech Commonwealth of Virginia campaign (CVC) has reached 90 percent of the monetary goal set by the Tech CVC Steering Committee for this year. However, the campaign has only reached 70 percent of the participation goal. The goals were $220,000 with 20 percent participation. As of November 30, the total was $199,595.98 with 14-percent participation. Steve Mouras, Virginia Tech’s CVC chairman, said he was pleased to reach 90 percent of the goal because many charities have been struggling since many people contributed to charities related to the events of September 11.

CVC Ambassador Karen Cronin said contributors with a favorite charity can donate more money to that organization through the CVC pledge. She said all designated money is donated to the designated charities. Payroll deduction can make donations relatively painless.

Prizes are still available in the CVC incentive drawing, including a certificate for dinner for two at the Hotel Roanoke. The campaign ends December 15. For a pledge card and campaign materials, contact Gloria Smith at 1-7810 or gsmithv@vt.edu.

By Tatiana Aras, University Relations intern

A team of Virginia Tech engineering students won second place in the 2001 Future Energy Challenge in Chicago. They received a $9,000 Performance Award for their original prototype of a low-cost inverter that could convert fuel-cell energy into enough electrical power to sustain a household. This type of inverter could lessen the nation’s dependence on conventional power sources and also reduce environmental pollution.

Teams of students from 14 universities competed in the challenge, which was hosted by the Illinois Institute of Electrical and Electronics Engineers (IEEE).

The goal of the first biennial Future Energy Challenge was to encourage the development of low-cost inverters that are designed for distributed energy sources, demonstrate technical progress and potentials for advanced technologies, and improve engineering education.

The Virginia Tech team, which was among five selected to compete in the final stages of the challenge, finished second by a close margin to Texas A&M University.

“Our goal was to develop a system for household application, similar to a power plant for each house,” said Jason Lai, professor of electrical and computer engineering (ECE). Lai and Douglas J. Nelson served as the team’s faculty advisors.

In the future, the type of inverters developed by Virginia Tech and other teams could be used to eliminate the drain on power supply companies during peak usage hours, Lai said.

Planning and building the inverter took the students one year to complete and was a part of the ECE capstone senior design course. The five students who traveled to Chicago to participate in the challenge were Jeremy Ferrell, Heath Kouns, Leonard Leslie, Troy Nergaard, and Brandon Witcher.

Mary Beth Rosson, associate professor in the Department of Computer Science, and John M. Carroll, professor and director of the Center for Human-Computer Interaction, have published an undergraduate textbook, Usability Engineering: Scenario-based Development of Human-Computer Interaction.

The book offers a unique combination of introductory human-computer interaction (HCI) material and hands-on usability methods not to be found in any other book on this subject matter. It integrates concepts and applications in requirements, design, and evaluation of interactive systems.

The HCI content is focused on material that is either central to an appreciation of human needs and preferences or that provides crucial support for the analysis, design, and evaluation of effective interactive systems. The book contains more content on requirements analysis, prototyping, and documentation design than most books in this area, but also contains less on human perception and cognition.

Also unique to this book is the authors’ use of tradeoff rather than the more commonly found HCI guidelines. The tradeoff is a reflecHCT_035-003_921-922tion the challenges faced by designers and programmers in the real world and teach critical thinking and analysis to solve the problems encountered in the engineering cycle rather than a reliance on inflexible rules that are often inadequate.

The book’s approach is to introduce and give an overview of the history of HCI and its concepts while emphasizing a project-based approach that allows readers to see how a project develops at different stages of the usability engineering cycle. The authors favor a scenario-based approach to usability, which uses scenarios as a representation that allows for analysis and for design of use. A scenario describes an existing or envisioned system from the perspective of one or more users and includes a narration of their goals, plans, and reactions.

“Everyone interested in good usability design knows that human-centered, iterative design with field studies, iterative prototypes and testing is the proper way to proceed,” said Don Norman, emeritus professor at University of California San Diego, former chief scientist at Apple Computer, and author of many books on design. “But up to now, learning these skills is not easy, for we have lacked a single, systematic source of information about the methods. This book finally solves the problem. Here, in one comprehensive, easy to read text, there is extensive coverage of the multiple stages of a good interface development process.

The book is ideally suited for a problem-based curriculum, in which students simultaneously learn good development processes while completing a term project. The book gives excellent guidelines, and the case study approach is an excellent organizer and motivator. At last, the proper problem-based textbook.”