SPECTRUM

Virginia Tech
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

http://www.spectrum.vt.edu

VOLUME 25 NUMBER 6 FRIDAY, OCTOBER 4, 2002

TODAY'S EDITION
See page 4 for an article on a possible malaria breakthrough.

Restructuring efforts under way; more to follow

By Mercedes Meeks

In its effort to move into the ranks of America's top-30 research institutions, the university has begun implementing the restructuring plan approved by the Board of Visitors in June.

Four departments became affiliated with new colleges on July 1. The Department of Art and Art History moved from the College of Arts and Sciences to the College of Architecture and Urban Studies. The Interior Design Program moved from the College of Human Resources and Education to the College of Architecture and Urban Studies. The Department of Communication Studies moved from the College of Arts and Sciences to the College of Human Resources and Education. And the Department of Hospitality and Tourism Management moved from the College of Human Resources and Education into the Pamplin College of Business.

The Design Consortium, established by the Colleges of Human Resources, Architecture and Urban Studies, and Arts and Sciences in 1994, has moved together under one umbrella college—Architecture and Urban Studies. The consortium consists of programs in apparel design, architecture, art and art history, interior design, landscape architecture, and theatre arts.

"To most students we hope that the changes are relatively transparent," said Joe Merola, senior administrative fellow for restructuring. "There are obviously many students who will report to a different dean for certain administrative issues, but beyond that the student's interaction with the department should not change."

In other restructuring activity, a new School of Biomedical Engineering and Sciences has been formed. "This school adds another dimension. Not only do you have departments from different colleges, which are formerly from the College of Engineering and the College of Veterinary Medicine, now Wake Forest University's medical school is also a partner," Merola said. "It is expected that this school will grow participation from many of the science departments."

Changes in the College of Arts and Sciences are next on the horizon. The largest college within the university will become two new colleges. One will be a college of sciences, yet to be named; the other will be a college of arts,

(See RESTRUCTURING on 3)

Police ticketing careless pedestrians on campus

Improving pedestrian safety is and has always been a priority for the Virginia Tech Police Department (VTPD). In a policy instituted October 1, pedestrians will be ticketed for crossing any street on campus in a careless manner. A careless manner is defined as walking out into the street without looking, thereby causing cars to stop. The ticket will carry a $30 fine plus $47 in court costs. Officers will be posted at high-traffic areas such as Washington Street, around the Drillfield, Perry Street and in front of McBryde.

This decision is only a small part of the changes that have been made on campus in an effort to improve pedestrian safety after a student was struck by a car near Lee Hall on Washington Street in April.

The VTPD will be enforcing Code of Virginia laws (46.2-923 and 46.926) that deal with pedestrian offenses. The code states that "when crossing highways, pedestrians

(See POLICE on 2)

Virginia Tech Police Department officers were on duty at intersections this week as the new policy went into effect. (*R.Griffiths*)

Navy to use Tech's remote-control excavator

By Anne Fowler

A team of Virginia Tech mechanical engineering (ME) students, working with Texas-based National Instruments Corp., the U.S. Navy and Case Construction Equipment, has developed a remote-control method for operating an excavator that will dig for ordnance at the Naval Surface Warfare Center in Dahlgren.

Thanks to the remote-control technique, a Navy operator will work from inside the safety of a shielded trailer 1,000 yards from the excavation site.

The students modified LabVIEW software developed by National Instruments to enable the excavator's operator to manipulate the machine's two dual-axis joystick controls via the Internet.

Meanwhile, the operator can observe

(See NAVY on 4)

The excavator in action, with no operator in the cab. (*M. Kiernan*)

Tech a leader in new aerospace institute

By Liz Crumbley

Virginia Tech and the University of Virginia are the leaders of a consortium selected by NASA to create the National Institute of Aerospace (NIA), a research-and-education collaboration with a potential value of $379 million in grants over the next 20 years.

"The NIA will be a world-class institute," said Malcolm McPherson, interim dean of the College of Engineering. "Our consortium will team with the NASA Langley Research Center in Hampton to do the most advanced aerospace and atmospheric research, develop new technologies for the nation and help inspire the next generation of scientists and engineers."

Other university members of the National Institute of Aerospace Associates consortium are the American Institute of Aeronautics and Astronautics Foundation, Georgia Tech, North Carolina State University, North Carolina Agricultural and Technical State University, and University of Maryland-College Park.

The bulk of the work in preparing the successful proposal was carried out by a writing team with members from each of the seven partner institutions and chaired by Walter O'Brien, head of Virginia Tech's Department of Mechanical Engineering. "Dr. O'Brien and his team did a truly outstanding job," McPherson said.

The Virginia Tech engineering college and the University of Virginia School of Engineering and Applied Science led the consortium in vying for leadership of the NIA through a competitive process initiated by NASA in 2001. Their competitors included other universities in Virginia and from throughout the U.S.

The NIA will be located near NASA Langley. The strategic partnership will foster research in revolutionary aerospace systems, planetary capture-and-entry technology, aerodynamics, aerothermodynamics, and acoustics; structures and materials, airborne systems, atmospheric and vehicle sensor system technology, and atmospheric chemistry and radiation sciences.

Ultimately, research in these areas could lead to improved weather forecasting and better understanding of climate changes,

(See TECH on 3)

Bonds on the Ballot November 5 Register to Vote by October 7.

ACTIVITIES

EVENTS

Friday, 4

Last Day to Drop.

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

Saturday, 5

VT Open House.

Chamber Music, 8 p.m., Blacksburg Presbyterian Church.

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

Sunday, 6

VT Open House.

Ensemble Concert, 8 p.m., Squires Recital Salon.

Monday, 7

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

Faculty Development Workshop, 10 a.m. to noon, 1120 Torgersen.

Faculty Development Workshop, 3 to 5 p.m., 1120 Torgersen.

Faculty Development Workshop, 3 to 5 p.m., 3060 Torgersen.

Tuesday, 8

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

Faculty Development Workshop, 10 a.m. to noon, 1120

Faculty Development Workshop, 3 to 5 p.m., 3060 Torgersen.

Faculty Development Workshop, 3 to 5 p.m., 1120 Torgersen.

Wednesday, 9

Faculty Development Workshop, 10 a.m. to noon, 1120 Torgersen

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

YMCA Noon Slide Show, noon, Cranwell Center.

"With Good Reason," 7 p.m., WVTF.

Thursday, 10

Faculty Development Workshop, 10 a.m. to noon, 3060 Torgersen.

Faculty Development Workshop, 3 to 5 p.m., 1120 Torgersen.

Women Faculty Research Series, 4 to 5:30 p.m., DBHCC.

Football, 7:45 p.m.: at Boston College. ESPN.

Ensemble Concert, 8 p.m., Squires Old Dominion Ballroom.

Friday, 11

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

SEMINARS

Friday, 4

MCBB, 12:20 to 1:10 p.m., Fralin auditorium: Jeff Dangl, UNC—Chapel Hill.

Biomedical Sciences, Engineering, 3 to 4 p.m., 110 Holden: Laurie Locascio.

Geological Sciences, 3:30 p.m., 4069 Derring: Rick Law.

MSE, 3:30 p.m., 100 Hancock: Jennifer Franklin and Guofeng Bai.

History Faculty Research, 3:30 to 5 p.m., 427 Major Williams: Dan Thorpe.

STS, 4 p.m., 132 Lane: Joe Pitt.

Monday, 7

Biochemistry, 4 p.m., 223 Engel: Mary F. Roberts, Boston College.

Horticulture, 4 p.m., 409 Saunders: Jonathan Watkinson.

Tuesday, 8

Service-Learning Center, 12:30 p.m., DBHCC: Heather Switzer.

Wednesday, 9

OIRD/Political Science, noon to 1:30 p.m., 527 Major Williams: Marc Barany.

Friday, 11

MCBB, 12:20 to 1:10 p.m., Fralin auditorium: Channe Gowda, Penn State.

Geological Sciences, 3:30 p.m., 4069 Derring: Clark Johnson, University of Wisconsin.

MSE, 3:30 p.m., 100 Hancock: Richard J. Matyi, Quantum Metrology Group, NIST.

BULLETINS

MAP MURI to sponsor plenary lectures

The Macromolecular Architecture for Performance (MAP) Multidisciplinary University Research Initiative (MURI) will sponsor a session of three plenary lectures from 3 to 6:30 p.m. on Sunday, Oct. 6, in 3 Davidson Hall.

The lectures will focus on the synthesis and properties of functional macromolecules. The session is open to the university community and will feature Ralph H. Colby from Pennsylvania State University, Department of Materials Science and Engineering, Geoffrey W. Coates from Cornell University, Department of Chemistry and Chemical Biology, and Donald J. Leo from Virginia Tech, Department of Mechanical Engineering.

For more information, contact Cheryl L. Heisey, 1-3329, (*rogersmca@aol.com).*

Grad student to speak on AIDS in Africa

Natural-resources grad student Marc Barany will speak on "The AIDS Plague in Africa—Some Research Needs and Contributions from the Natural Resources Sector" on Wednesday, Oct. 9, from noon to 1 p.m. in 527 Major Williams. This talk is part of the Office of International Research and Development Lecture Series on International Development.

Virginia Tech to celebrate anniversary of Clean Water Act

By Susan Trulove

The Clean Water Act, which was signed into law in 1972, aims to restore and maintain the nation's water quality. During the week of October 14-19, the Water Resources Research Center at Virginia Tech will celebrate the 30th anniversary of the Clean Water Act with a focus on the Stroubles Creek watershed and the Duck Pond.

The Water Center launched the Stroubles Creek Watershed Initiative in 1999 to provide opportunities in research, education, service-learning, outreach, and university-community partnership. The main campus is situated within the boundaries of the Stroubles Creek watershed. According to Tamim Younos, Water Center interim director and project leader for the initiative, the program provides an excellent opportunity for students and faculty members to think globally and act locally. Since 1999, more than 20 graduate and undergraduate students have participated in the program.

Highlights of the planned events during the week include a workshop by U.S. EPA experts on Use Attainability Analysis of polluted surface waters and a public meeting for the Stroubles Creek Total Maximum Daily Load (TMDL) process. The Clean Water Act requires developing a TMDL plan for impaired waters—that is, waters that do not meet established water-quality standards.

The third Annual Stroubles Creek Watershed Forum will be held on Friday, Oct. 18. Students will present assessment results for the Stroubles Creek corridor land use, associated water-quality issues, and plans for restoration of Stroubles Creek.

Also, a brief ceremony will be held to dedicate the Duck Pond educational sign that was installed last May across from the Duck Pond gazebo. The sign, designed by Phi Sigma Pi Honor Society members and the Water Center interns in collaboration with the University Architect Office, introduces the watershed and Duck Pond features. Educational events related to water protection are planned in the Duck Pond area for citizens.

The events are sponsored by the Water Center, Virginia Tech Museum of Natural History, and the Service-Learning Center. For more information, go to *http://www.vwrrc.vt.edu* or contact the Water Center at 1-5624 or *water@vt.edu*.

Depression screening offered October 10

October 10 is National Depression Screening Day, and the Cook Counseling Center web site (*http://www.ucc.vt.edu/*) is offering a free and anonymous self test for depression.

The screening is available to all members of the university community including faculty and staff members, administrators and students. The self test is available on line throughout the year.

Individual who would prefer to talk to someone in person may call the Cook Counseling Center at 1-6557 or visit the screening booth in the McComas Hall lobby on October 10.

The Cook Center is sponsoring the screening program in collaboration with Screening for Mental Health, the non-profit organization that conducts National Depression Screening Day.

POLICE

Continued from 1

shall not carelessly or maliciously interfere with the orderly passage of vehicles. They shall cross, wherever possible, only at intersections or marked crosswalks" and "no pedestrians shall step into a highway open to moving vehicular traffic at any point between intersections where his presence would be obscured from the vision of drivers of approaching vehicles by a vehicle or other obstruction at the curb or side."

For the past year, VTPD officers have been ticketing drivers who do not yield to pedestrians in the crosswalks. "Pedestrian safety is a shared responsibility by both the motoring and walking public; in other words, pay attention when crossing the street or driving on campus. Your safety is our priority," VTPD Chief Debra Duncan said.

CAMPUS UPDATE

Arts and Sciences appoints development director

By Sally Harris

Evan Bohnen, former director of development for the College of Arts and Humanities at Minnesota State University, Mankato (MSU), assumed the duties of director of development for the College of Arts and Sciences in August, according to Dean Lay Nam Chang.

Bohnen will be responsible for all aspects of the development program for the College of Arts and Sciences. Bohnen will work closely with Chang and the faculty to identify the academic and programmatic priorities of the college's students and faculty members and to build relationships with alumni, emeriti faculty members, and friends on behalf of the students and their aspirations. "In the year ahead," Bohnen said, "I look forward to expressing thanks to many of the current supporters of the college's mission and meeting many of the individuals who care deeply about the future success of Virginia Tech."

Bohnen has more than six years of professional fund-raising experience. At MSU, he managed all aspects of development for the College of Arts and Humanities, which consists of eight departments and has nearly 8,300 alumni. During his MSU tenure, Bohnen also served at various periods as the development director for MSU's College of Education, director of development for the university's International Student Endowment, and director of development for MSU's Campus Annual Fund Drive. He also managed the university's annual faculty and staff initiative involving 1,123 faculty and staff and 110 volunteers, achieving 50-percent donor participation.

He was the principal constituent-based development officer securing more than $6 million during the first four years of MSU's first-ever comprehensive campaign, and he assisted in surpassing the $35-million goal one year ahead of schedule.

TECH

Continued from 1

faster and safer commercial aircraft, more reliable military reconnaissance and civilian-rescue aircraft, spacecraft that can explore the atmospheric evolution of other planets, and devices to test clouds for airborne biological agents.

NIA plans also include a strong educational component. A campus will be established near NASA Langley and the partner universities will offer graduate degrees in science and engineering through on-campus and distance-learning courses.

"The consortium will encourage participation in the NIA by other universities," McPherson said. "In particular, we will invite Hampton University to join us because of its special expertise in atmospheric sciences and its proximity to NASA Langley."

At full force, the consortium plans to have as many as 250 researchers—faculty members, graduate students and associates—working for the NIA.

NIA funding for the first five years will come in two packages, according to McPherson. Through a cooperative agreement, NASA will provide $69 million for the institute's base operational expenses. In addition, up to $49 million will be awarded in the form of contracts for specific research projects. The base-operation funding will be up for renewal every five years over a 20-year period.

"We also expect to bring in additional funding through research contracts with industry and other agencies that can benefit from NIA expertise," McPherson said.

The consortium plans to start operations in January 2003 at rented facilities in Hampton. Permanent quarters for the NIA will be constructed with money raised by the consortium, McPherson said.

Another goal of the NIA is to stimulate commercialization of new intellectual property and facilitate the growth of new business opportunities related to advances in aerospace and atmospheric research.

"Virginia Tech's leadership role in creating and running the NIA is a recognition of the high reputation earned by the university in the fields of engineering and scientific research," McPherson said.

Virginia Tech
VIRGINIA POLYTECHNIC INSTITUTE AND STATE INIVERSITY

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, acting director of college and media relations.

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

TO THE EDITOR

We are puzzled by the apparent priorities of the decision makers here at Virginia Tech. On September 11, a ceremony was held to remember those who died in the terrorist attack in 2001. We understood that the original plan was to fire the cannon four times—in remembrance of the four planes that crashed. However, the decision was made to fire it only twice because it would disrupt classes too much to fire it all four times. Several selections were played on the carillon, but it was turned down so low that it was often impossible to hear above campus noise. Again, we were told that the decision to keep the volume down was because playing it louder would disrupt classes too much.

On the other hand, we had an evening football game on September 12. Faculty members were permitted to cancel classes after 4 p.m. Those not having the required game parking permits were asked to move their cars by 4:30 from the parking lots where they park when they go to work, and some were told they could not park in their normal lots as early as after 7 p.m. on Wednesday, the day *before* the game. The band is permitted to practice on the Drillfield at any time during the day, if they are practicing for a game. That their practicing may disrupt classes is not considered.

We find something terribly wrong with this picture.

Karen Mundy
R.J. McDaniel
Pat Ballard

RESTRUCTURING

Continued from 1

also now unnamed, although Merola said, "Their favorite name is the College of Liberal Arts." Departments will be re-aligned within the two new colleges in addition to existing colleges. Merola anticipates that this change will become effective by July 1, 2003.

More restructuring moves are planned over the next year. A resolution has been drawn up to change the name of the College of Human Resources and Education to the College of Human Sciences and Education. The college began as the School of Home Economics.

Two new schools have also been proposed. One is the School of Education, which would be under the College of Human Sciences and Education. "Schools are relatively loose structures that allow groups from different departments to work together," Merola said. "It would allow them to bring together all of their educational components as well as come up with some new direction and thoughts for the educational programs that can best serve the process of getting educators ready to serve the state."

The largest school on the re-organizational chart is the School of Computational Science and Information Technology (the name is still under discussion). "In considering the reputation of Virginia Tech, we are looked at as being very strong in information technology, not just computer science, but also business-information technology, computer engineering, and even instructional technology found in the College of Human Resources and Education," Merola said. "We are trying to work with these different departments and colleges to form a school that will allow them to work in a more cohesive way to present themselves better to the outside world for the purposes of fund raising, obtaining grants, and showing how much we really have, as well as to help internally with cooperation."

Merola said that some behind-the-scenes adjustments have yet to be implemented, such as "dealing with the computer system, i.e., who has authority to see certain information on the Banner system and who should have access to certain accounts." But in terms of administrative issues and making the restructuring official, Merola added, those things occurred on July 1.

EMPLOYMENT

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

FULL TIME

Three full-time food-service positions available.

Administrator/Institute for Cultural Policy/Practices, 008024B, PB 3, School of the Arts.

Budget Analyst, 006927F, PB 4, BFP.

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

Cashier, 000559H, PB 1, RDP.

Catering Office Coordinator, 007103H, PB 3, RDP.

Database Coordinator, 008025H, PB 4, RDP.

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

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

Financial Analyst, 006676Y, PB 4, OPS.

Fiscal Assistant, 006654B, PB 2, Biology.

Housekeeping Worker, 007776C, PB 1, DBHCC.

Housekeeping Worker, 002243H, PB 1, RDP.

Hvac Technician, 008001H, PB 3, RDP.

Programmer, 007991S, PB 4, University Development.

Scientific Glassblower, 001267B, PB 5, Chemistry.

PART TIME

Animal Care Technician, W022675M, PB 1, VTH.

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

Equipment Inventory Assistant, W023230C, PB 2, University Controller.

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

Large Animal Husbandry, W022155M, PB 1, VTH.

OFF CAMPUS

4-H Technician, 008022M, PB 2, VCE—Dickenson County.

Accountant, CCCCCC, PB 0, VTF.

Accountant Senior, CCCCCC, PB 0, VTF.

Administrative Program Support, 007411B, PB 3, Engineering/NVC.

Nursing Supervisor, 006726M, PB 3, CVM.

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

FACULTY POSITIONS

INSTRUCTIONAL

Department of Finance, Insurance and Business Law—Department Head. Contact: Dilip K. Shome, (1016). Search closes in one week.

NON-INSTRUCTIONAL

University Development—Assistant Vice President for Constituent Groups. Contact: Rhonda K. Arsenault, Office of University Development, (0336).

University Development—Assistant Vice President of Development for Colleges. Contact: Rhonda K. Arsenault, Office of University Development, (0336).

University Development—Assistant/Associate Director(s) of Development, College of Engineering (three positions). Contact: Rhonda K. Arsenault, Office of University Development, (0336).

Veterinary Medicine—Outreach Director. Contact: Robert Martin, Veterinary Teaching Hospital.

Virginia Cooperative Extension, Director/Associate Dean Contact: Andy Swiger, College of Agriculture and Life Sciences, (0402).

Virginia Cooperative Extension, Chesterfield County—Extension Agent 4-H. Contact: Robert Ray Meadows, VCE, 121 Hutcheson, (0437).

Virginia Cooperative Extension, Chesterfield County—Extension Agent, FCS&CI, Management, Housing and Consumer Education. Contact: Eleanor Schlenker, VCE, 121 Hutcheson, 0437

IN OTHER NEWS

Malaria mosquito genome elements may aid disease control

By Susan Trulove

Prevention of malaria through genetic control of the malaria mosquito has become more possible with the completion of the first draft of the genome of the *Anopheles gambiae* mosquito, reported today in *Science*. Among the co-authors are Virginia Tech researchers Zhijian (Jake) Tu, assistant professor of biochemistry, graduate student Jim Biedler, and post-doctoral associate Hongguang Shao, whose focus is the mobile genetic elements, or transposable elements, which make up more than 16 percent of the genome.

More than a hundred researchers in more than a dozen labs contributed to the project, led by Robert Holt of Celera Genomics. The sequence was posted in March. The article in *Science* analyzes the information and reports important findings.

Tu's group is one of several labs involved in characterizing transposable elements (TE's)—segments of nucleic acids, or genetic material, that move around the genome and have a significant impact on its structure and size. Frank Collins of Notre Dame University coordinated the efforts on TE analysis and is also a corresponding author on the *Science* article.

"If you look at the genome as an ecological system, TE's are different lineages that co-evolve with the rest of the genome," Tu said. "They evolve different relationships with the genome. Some are genetic parasites; they appear to do nothing except replicate within the genome. Others are used by the host—the individual organism's genetic machinery—to perform biological functions."

Portions of DNA can produce the enzyme to cut itself out of the genome, then paste itself in elsewhere. In addition to this DNA-mediated TE, there is RNA-mediated TE, which makes many RNA counterparts of itself in a process called transcription. The RNA molecules are copied into DNA (reverse transcription), and then integrated back into the genome.

Tu and colleagues expect that TE's may be used to introduce new genes into the mosquito genome—gene vectors within disease vectors, such as a gene to block transmission of disease into the mosquito, halting the malaria parasites' cycle.

Another use for TE's is as markers, Tu said. "Because they are scattered throughout the genome, they can be used to distinguish between populations of mosquitoes of the same species."

This is important in the current research, using the newly sequenced *A. gambiae* genome. Within the same species of malaria mosquito, some populations are better carriers of disease and some are more resistant to pesticides. "There is a genetic basis for these differences and these markers can help us determine these differences," Tu said.

Tu's lab is also working on mosquitoes that carry Dengue Fever and Yellow Fever and is starting work on species that carry West Nile virus.

Tu's work on characterization and organization of transposable elements in mosquito genomes has been funded by the National Institutes of Health since his arrival at Virginia Tech in 1999.

CVC Kickoff Held

By Karen Cronin

The Commonwealth of Virginia Campaign (CVC) at Virginia Tech is now under way and will continue through November 30.

Again this year, all those returning pledge cards will be eligible for weekly prize drawings. The first two drawings will be for football tickets donated by the Athletic Department. The first drawing will be held on October 8 for tickets to the Rutgers game. The second drawing will be held on October 15 for Temple tickets.

Tech CVC coordinator Steve Mouras said "The Tech CVC Steering Committee is hopeful that by giving away such coveted prizes early in the campaign, we can entice folks to send their CVC pledge cards in early. By choosing payroll deduction, employees can give more with less pain and the deduction will not start until the first paycheck of 2003."

The university's goal for this year is $230,000, but the Steering Committee is determined to increase participation, which has stalled at 15 to 16 percent for the past few years.

Engineering experts awarded Via professorships

By Karen Gilbert

Two faculty members from the Department of Civil and Environmental Engineering (CEE), Imad Al-Qadi and Richard Weyers, have received Via Professorships. This endowed chair recognizes eminent faculty members and is funded by the Marion Bradley Via endowment.

Al-Qadi is nationally and internationally known for his research and scholarly works related to highway-pavement materials, non-destructive methods for infrastructure assessment, and infrastructure-management systems. He is the director of the Roadway Infrastructure Program at the Virginia Tech Transportation Institute. Al-Qadi is responsible for the design and implementation of all pavement-related research at the Smart Road. He received the 2002 International Geosynthetic Society Award for his pavement research, an honor awarded about once every five years.

Al-Qadi joined the CEE faculty in 1990 after receiving his Ph.D. from Penn State University. The National Science Foundation presented him with a Young Investigator Award in 1994, one of only 100 of such awards made nationwide to young, promising engineering faculty. In 2001, Al-Qadi was the recipient of the Virginia Tech College of Engineering Dean's Award for Research Excellence. He has authored or co-authored over 150 publications and has presented his work at nearly 160 international conferences.

Weyers is an expert in concrete structures and a fellow of the American Concrete Institute. Weyers is a registered professional engineer and land surveyor and has been a professor for 22 years, 16 of which have been at Virginia Tech. Weyers holds two patents on stopping the corrosion of steel in chloride-contaminated concrete. He is the author of 138 publications, including refereed journal articles and technical meetings. The American Society of Chemical Engineers (ASCE) selected Weyers to address the problems with bridge systems in the United States at the Chemical Engineering Roundtable of Rebuilding America's Infrastructure in 2001.

VTPD identifies counterfeit football tickets

By Jean Elliott

The Virginia Tech Police Department and the Athletics Department have identified several instances in which counterfeit tickets were used to gain admission to the Marshall football game at Lane Stadium.

Lane Stadium officials became aware of the fraudulent game tickets at the September 12 game when unsuspecting holders of the bogus tickets attempted to access seat locations already held by legitimate ticket holders.

Approximately 30 tickets in all were found to be forged. The tickets appear to have been reproduced through a color copy printer and later sold outside of the stadium on the day of the game.

While there is no indication that the forgery is widespread, the department is investigating. Police Chief Deborah Duncan said "we are pursuing numerous leads that we already have and intend to prosecute the culprits to the fullest extent of the law."

Lane Stadium officials will increase scrutiny of tickets presented for admission at all of its remaining home games and will implement new screening procedures upon entrance to the stadium.

Fans who purchase or acquire tickets from third parties or outlets other than the Virginia Tech Athletics Ticket Office should be very cautious concerning the authenticity of their game tickets. Individuals found to be in possession of forged tickets will be removed from or denied access to the stadium.

NAVY

Continued from 1

the work on video monitors linked to three cameras mounted on the Case CX160 excavator. "These cameras give us the ability to see all angles of the excavator," ME graduate student Chris Terwelp said. "One camera has a pan-and-tilt module, and we will be adding a zoom feature as well."

Figuring out how to safely operate a 35,000-pound, 110-horsepower excavator by remote control was a major focus of the project. "The issue was how to make sure this thing didn't get away from us," ME Professor Al Wicks said. The students created an emergency-shutdown system using a line-of-sight radio link to the excavator. If a continuous-tone broadcast to a receiver on the excavator is interrupted, the machine automatically shuts down.

Virginia Tech was asked to develop the remote-control technique primarily because of the school's long-lasting, positive working relationship with the Navy, Wicks said.

Wicks and ME Professor Charlie Reinholtz supervised Terwelp and the five undergraduate students who worked on the project. In putting together a team, Wicks and Reinholtz looked for students with an interest in electronics and computer interfacing, as well as a knowledge of LabVIEW. Completing the project in only six months, the team constructed a functioning system, met deadlines, and stayed within their budget.

"This is a great example of good work done on time," Wicks said. "These students really showcased their skills and were able to work together to retrofit the excavator."

The team also won recognition for their work at a national competition. Terwelp, along with undergraduate students Michael Fleming and Ian Hovey, demonstrated the project at NIWeek, an annual technology exhibition sponsored by National Instruments in Austin, Texas. From the stage of the Austin Convention Center, the students successfully operated the excavator—which was located 1,200 miles away in Blacksburg. The team won first place in the NIWeek 2002 Best Applications of Measurement and Automation Paper Contest.

The excavator has been moved from Blacksburg to Dahlgren. The Navy Explosives Ordnance Disposal team will inspect materials the excavator uncovers and will determine how to dispose of any ordnance.

Virginia Tech
Blacksburg, VA 24061

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