SPECTRUM

Virginia Tech
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TODAY'S EDITION
See page 2 for information on university activities.

NPR president, White House correspondent to speak here

By Karen Dillon

National Public Radio President Kevin Klose and NPR's White House Correspondent Don Gonyea will speak at the Donaldson Brown Conference Center Wednesday, Dec. 5 at 4 p.m. The event, hosted by WVTF Public Radio, is free and open to the public.

Klose and Gonyea will discuss a variety of news-related topics including NPR's coverage of the September 11 terrorist attacks. Audience members are encouraged to ask questions and make comments throughout the discussion.

Before joining NPR in December 1998, Klose served as president of Radio Free Europe/Radio Liberty. Klose, a former editor and national and foreign correspondent of *The Washington Post*, is also an award-winning author and international broadcasting executive. He is a founder of the Intermedia Survey Institute of Washington, a non-profit research firm specializing in media and opinion survey in Eurasia.

Gonyea was named NPR's White House Correspondent in January 2001. His coverage of President George W. Bush can be heard on NPR's *Morning Edition, All Things Considered, and Talk of the Nation.* Gonyea has been reporting for National Public Radio since 1986. Before covering the White House, Gonyea spent nearly 15 years in Detroit reporting on the automobile industry and labor issues. In addition to his work with NPR, Gonyea has been a contributor to *The NewsHour with Jim Lehrer* and PBS's *This Week in Business*. His work is also seen and heard on the BBC, the CBC, and in the Columbia Journalism Review.

National Public Radio is a non-profit news and cultural radio programming service, with 600 stations and a weekly audience of almost 15 million listeners. Founded in 1970, NPR has been the primary source of global news and information, and music and cultural programming for generations of radio listeners. NPR News operates around the clock, with bureaus in key cities in the United States, as well as in major cities throughout the world.

WVTF Public Radio is a National Public Radio (NPR) member station broadcasting locally produced and national news and information, public affairs, classical and jazz music, entertaining programs, 24 hours a day on 89.1 FM in Roanoke, 88.5 and 89.3 FM in Charlottesville, 91.9 FM in Marion and on the World Wide Web at www.wvtf.org.

Engineers, mathematician get AF grant

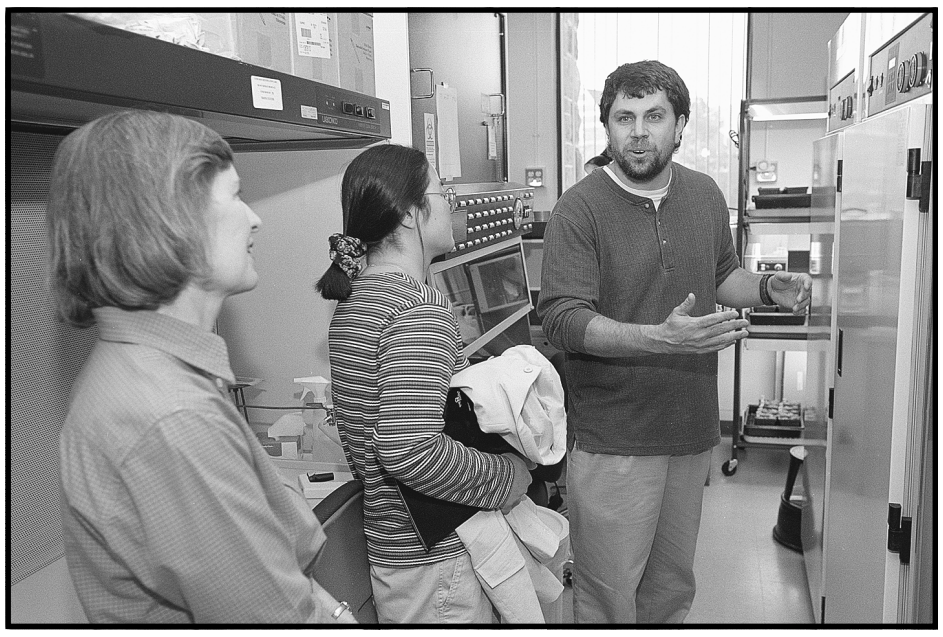
By Sally Harris

A team of engineers and a mathematician from Virginia Tech and the University of Florida has won a $556,511 grant from the Air Force Office of Scientific Research to work on theory and algorithms for global/local design optimization.

The design of large-scale systems such as automobiles, aircraft, and ships involve multiple disciplines such as structures, fluids, propulsion, economics, and manufacture. These systems require a decomposition of the global optimal-design problem into disciplinary sub-problems that ideally can be done concurrently and independently, said Layne Watson, professor of computer science and mathematics in the College of Arts and Sciences.

"Typically the subsystems are coupled and cannot be optimized independently of

(See ENGINEERS on 4)



LAB TOUR Assistant Professor John McDowell, right, provides information for Laboratory Employee Professional Development Network members Harriet Williams, left, and Judy Yan the group toured various labs and learned about new technologies at the Fralin Biotechnology Center on Wednesday. This was the second in a series of tours for laboratory employees. The College of Veterinary Medicine hosted the first tour, which assisted the network to identify opportunities to share resources, expertise, knowledge and skills from different parts of the campus. For more about the LEPD Network, contact Terri Tishman at uld@vt.edu. (J. McCormick)

Interim dean named for Arts and Sciences

Clara B. Cox

Lay Nam Chang, head of the physics department, has been named interim dean of the College of Arts and Sciences, effective in mid-January when the current dean, Robert C. Bates, leaves to become provost at Washington State.

"Dr. Chang emerged as an energetic and effective scholar who combines established leadership experience at Virginia Tech with a quiet passion to move the college and the university forward in its quest for enhanced stature and success. He is committed to the goals of diversity and excellence, and he is prepared to face the challenges and opportunities that lie ahead," Provost Mark G. McNamee said in announcing his selection for the position.

McNamee had asked members of the faculty and staff within the college to nominate candidates for the position.

'Dr. Chang emerged as an energetic and effective scholar who combines established leadership experience at Virginia Tech with a quiet passion to move the college and the university forward....'

Chang, department head since 1995, joined the Virginia Tech faculty in 1978 after working on the physics faculty at the University of Pennsylvania for seven years. He has conducted research at MIT and the University of Chicago and has been a visiting scientist or visiting instructor at institutions of higher education in Denmark, British Columbia, Singapore, and the United States. Since earning a Ph.D. in theoretical physics from the University of California at Berkeley, he has written extensively for refereed journals and has published numerous reports on his work.

(See INTERIM on 4)

Provost solicits candidates' names for dean position

By Clara B. Cox

University Provost Mark G. McNamee is soliciting assistance in identifying possible candidates for dean of the College of Human Resources and Education. The current dean, Janet Johnson, has announced that she will retire next summer.

"At the end of August, the Board of Visitors approved an update to the strategic plan, including a set of ambitious goals to increase the university's stature as one of the nation's leading research universities. We are looking for a leader for the College of

(See PROVOST on 4)

Shelton announces organizational changes in Office of Budget and Financial Planning

By Larry Hincker

In keeping with the university plan to seek alternative revenue streams for the university and to assist with the development of new state funding model that will benefit Virginia Tech, while strengthening financial practices within the university, organizational changes within the Office of Budget and Financial Planning have been announced by Dwight Shelton, vice president for budget and financial management.

Bea Mahan, formerly director for budget development and financial planning, is now associate vice president for budget and financial planning. Mahan will continue to focus on financial planning and analysis and on development of the university's appropriations request to the state for the operating and capital budgets. She will also coordinate leadership activities in the budget and financial management areas in Shelton's absence.

"Bea's new appointment will also strengthen our ability to support the work of Vice President Ridenour and Provost McNamee in establishing the university's strategic initiatives," Shelton said.

Tim Hodge, formerly the director of budget operations, is now the budget director. Hodge's title signifies an elevation in his re-

(See SHELTON on 4)

Tech to face Florida State in Gator Bowl

The Virginia Tech athletics department has announced that it will accept a bid to play in the 57th Toyota Gator Bowl.

Tech will face Florida State on Jan. 1, 2002 at Alltel Stadium in Jacksonville. Kick-off is set for 12:30 p.m., and the

(See GATOR BOWL on 4)

ACTIVITIES

EVENTS

Friday, 30

Pay Date for Faculty and Staff Members.
International Club, details TBA.

Saturday, 1

Football, 1 p.m., Lane Stadium: Miami.
Men's Basketball, 7 p.m.: At UVA.

Sunday, 2

YMCA Hike, 1:30 p.m., YMCA Parking Lot.
Faculty Recital, 3 p.m., Squires Recital Salon.

Monday, 3

University Council, 3 p.m., 1045 Pamplin.
Men's Basketball, 7 p.m., Cassell Coliseum: VMI.
Ensemble Concert, 8 p.m., Squires Recital Salon.

Wednesday, 5

CommonHealth Program, 5:30 to 8 p.m., 135 War Memorial Hall: Adult CPR.
"With Good Reason," 7 p.m., WVTF.
Women's Basketball, time TBA: At Pittsburgh.

Friday, 7

Men's Basketball, 9 p.m. Thorpe Classic: Murray State.
International Club, details TBA.

SEMINARS

Friday, 30

Highlands in Chemistry, 11:15 a.m., 3 Davidson: Paula Hammond, MIT.
MCBB, 12:20 p.m., 102 Fralin: Paul Dent, MCV/VCU.
Philosophy, time, location TBA: Stephen Turner, South Florida.

Wednesday, 5

Geological Sciences, 3 p.m., 4052 Derring: Kurt Rudolph, ExxonMobil.
ESM, 4 to 5 p.m., 110 Randolph: In Lee, KAIST.

Thursday, 6

Geological Sciences, 4 p.m., 4069 Derring: Wayne Lusardi, NCUAUIMS.

Friday, 7

MCBB, 12:20 p.m., 102 Fralin: Maynard Olson, Washington.
Philosophy, 3 p.m., 225 Major Williams: Joe Neisser, Radford.
Highlands in Chemistry, 11:15 a.m., 3 Davidson: Wenbin Lin, North Carolina.

BULLETINS

Binmore to present Buchanan lectures

Ken G. Binmore director of the Center for Economic Learning and Social Evolution, University College, London, will be on campus December 3 through 7 to present the 2001 James M. Buchanan lectures, titled "Game Theory and the Social Contract."

Binmore is an economist with major contributions in evolutionary game theory, bargaining theory, experimental economics, political philosophy, mathematics and statistics.

His lectures are scheduled for Monday, Dec. 3, in 3008 Pamplin from 4 to 5:15 p.m.; Tuesday, Dec. 4, in 1045 Pamplin from 4 to 5:15 p.m.; Wednesday, Dec. 5, in 1045 Pamplin from 4 to 5:15 p.m.; Thursday, Dec. 6, in 1001 Pamplin from 4 to 5:15 p.m., and Friday, Dec. 7, in 1045 Pamplin from 4 to 5:15 p.m.

Planning begun for Women's Month 2002

The Women's Month Committee has begun planning for Women's Month 2002. Those who would like to propose an event for inclusion on the calendar should contact the Women's Center for a form. Deadline for submissions is December. 7. For more information, contact Denise Collins, assistant director of the Women's Center at Virginia Tech, Price House, 0270, or call 1-7806.

Changes under way at Shultz parking lot

By Steve Mouras

The Shultz Parking Lot (adjacent to the Shultz Dining Facility in the Upper Quad area) is in the final stages of having a new parking gate installed. The gate will generate the need for the following changes/events:

The northern entrance of the lot (closest to McDonald's) was permanently closed November 19. The decision to close the entrance was based on safety issues with traffic on Turner Street, and the steep slope of the entrance, which would also have been a serious issue if a gate were installed. The former entrance is planned to be used as the roadway inside Shultz Lot to a smaller lot with increased handicap parking spaces.

The gate will be activated on January 7. The gate will remain designated for faculty and staff use from 7:30 a.m. to 5 p.m., Monday through Friday. Faculty and staff permit holders can gain access with a Hokie Passport or by purchasing a transponder ($25 one-time cost for the hands-free option) at Parking Services. Visitors can gain access by getting a key code number from Parking Services. Retirees who use Shultz Lot must contact Parking Services to be entered into the parking system. Anyone who uses a permit that was purchased under another person's account also must contact Parking Services for Hokie Passport activation. To confirm the parking gate will open for Hokie Passports, call Parking Services at 1-3200. Hokie Passport, transponder, or key code will permit access to both gates and all future faculty/staff gates.

A training session for the gate will be held on December 6 from 9-10 a.m. in 434 Major Williams. There will be a 30-minute information session on the gate system and its operations and to answer questions.

Professors teach course to women engineers in France

By Sally Harris

For two weeks, Gary Downey, professor of science and technology studies and Tech Ph.D. Juan Lucena, associate professor of science, technology, and globalization at Embry Riddle Aeronautical University, co-taught a two-week version of their Engineering Cultures course at the International Institute for Women Engineers (IIWE) in Paris, France.

The course was funded by a grant from the U.S. National Science Foundation and hosted by EPF: *Ecole d'Ingenieurs*. The IIWE brought together 30 outstanding female engineering students from all over the world, including Ami Arief of Virginia Tech, to learn about the global dimensions of engineering practice and their implications for women. Participants included students from 17 countries, including Tanzania, Malta, Australia, Finland, Norway, Austria, Palestine, France, England, Tunisia, Brazil, Greece, Indonesia, Guatemala, Spain, and the United States.

The purpose of Engineering Cultures, a highly popular course among engineering students at Virginia Tech, is to help students become global engineers by learning to work with people who define problems differently than they do. The course explores the ways in which what counts as an engineer and engineering knowledge has varied significantly around the world, Downey said.

For example, where British engineers value practical knowledge, tend to work in private industry, and constitute a relatively low-status occupation, French engineers value theory, as-

(See PROFESSORS on 3)

BRRG endows polymer science scholarship

By Liz Crumbley

A $25,000 scholarship for Virginia Tech undergraduates has been established by the Blue Ridge Rubber Group (BRRG), a regional subdivision of the Rubber Division of the American Chemical Society.

The BRRG endowment will provide a scholarship each year for a junior or senior who is studying polymer science while majoring in chemical engineering or chemistry.

BRRG has 216 members in North Carolina, Tennessee and Virginia. Members are manufacturers and suppliers of polymers, chemicals and equipment for the rubber industry.

"We know that Virginia Tech has an excellent polymer-science program and we're always trying to find good employees for the polymer industry," said Rick Swenson, a former BRRG chairman who initiated the endowment. "My last goal as chairman was to establish a scholarship that will continually support students entering our industry."

"It is our hope that the endowment will promote interaction, on a regional level, between Virginia Tech and the Blue Ridge Rubber Group," said current BRRG Chairman Wiley Betts, who presented the first endowment check to Virginia Tech. "Since our industry is a mature one, there is a significant need to cultivate and recruit students and stewards at the point at which they are making career decisions."

U.S. News & World Report's "America's Best Graduate Schools 2000" survey ranked Virginia Tech's polymer program fifth in the nation.

Study may offer better clean-up of gasoline spills

By Sally Harris

In an effort to enable more effective clean up of gasoline spills, Virginia Tech geological-sciences researchers are looking at whether microbes use terminal electron accepting processes (TEAP's) sequentially or simultaneously.

Jackson M. Spain is conducting the research as part of his master's thesis, under the direction of Madeline Schreiber, assistant professor of geological sciences.

Underground storage tanks such as those at service stations sometimes leak, creating underground gas plumes, Spain said. The gas then can get into the groundwater. The most dangerous components of the gasoline are benzene, toluene ethylbenzine, xylenes, or BTEX, because they are most soluble and most likely to get into the groundwater. BTEX components particularly benzene, are carcinogenic.

Bio-remediation, which relies on naturally occurring subsurface bacteria to break down contaminants, is an accepted treatment method for cleaning up gasoline spills. The terminal electron accepting process (TEAP) that bacteria use to break down gasoline compounds exerts a strong control on the extent and efficiency of bio-remediation. The use of oxygen (aerobic respiration) yields the most energy to the bacteria and thus results in the most complete and rapid bio-remediation. When oxygen is not present, bacteria can use other TEAP's, such as nitrate reduction, iron reduction, sulfate reduction, and methanogenesis, to break down gasoline compounds.

"Our study is looking at two specific TEAP's, iron reduction and methanogenesis," Spain said. "We're studying how the heterogeneities of Fe(III) concentrations affect which TEAP's are used. We're trying to see if the differences in the Fe(III) concentrations would

(See STUDY on 3)

EMPLOYMENT

CLASSIFIED POSITIONS

FULL TIME

One full-time food-service position available.
Communications Officer, 000657Y, PB 3, Police.
Coordinator of Administrative Affairs, 007879R, PB 4, Executive Vice President's Office.
Development Associate, 007880S, PB 3, University Development.
Financial Planning Manager, 007567F, PB 5, BFP.
Fiscal Technician, 007882B, PB 3, CHPM.
Housekeeping—Night Crew, 007814H, PB 1, RDP.
Housekeeping Manager, 006926H, PB 3, RDP.
Housekeeping Supervisor, 000269H, PB 2, RDP.
Housekeeping Worker, 000096H, PB 1, RDP.
Housekeeping Worker, P002005C, PB 1, Physical Plant.
Laboratory Safety Inspector, 007491Y, PB 4, EHSS.
Laboratory Specialist, 007707B, PB 3, CE.
Medical Technologist, 002596M, PB 4, VTH.
Multimedia Systems/Applications Specialist, 002054A, PB 4, VBS.
Operations Manager, 007121H, PB 4, RDP.
Programmer Analyst, 000800Y, PB 5, IRM.
Shopleader, 007125H, PB 1, RDP.
Shopleader Supervisor, 007797H, PB 1, RDP.
Sous Chef, 007881H, PB 3, RDP.
Sous Chef, 000940H, PB 3, RDP.
Technical Director, Digital Library/ Archives, 006789G, PB 5, Library Archives.
Transportation Planner, 007498F, PB 4, OT.

PART TIME

Animal Care Technician Large Animal, W020066M, PB 2, VTH.
Animal Care Technician/Small Animal, W022675M, PB 1, VTH.
Audio Support Specialist, W023130J, PB 3, UUSA.
Graduation Analyst, W022980G, PB 2, Registrar.
ICU Veterinary Technologist Large Animal, W022218M, PB 2, VTH.
Laboratory Specialist, W023305M, PB 3, APS.
Office Services Specialist, W023338J, PB 2, Dean of Students.
Office Services Specialist, W020153J, PB 2, FWS.
Radiologic Technologist, W022238J, PB 3, Health Center.
Security Guard, W020470Y, PB 1, Police.

UNIVERSITY ONLY

Office Manager/Supervisor, U000934B, PB 3, Computer Science.

OFF CAMPUS

Adult Program Assistant, 006602J, PB 2, HNEF.
Adult Program Assistant, 006604J, PB 2, Prince William County.
Agricultural Supervisor, 000319M, PB 3, Tidewater AREC.
Efnep Adult Program Assistant, 006103M, PB 2, VCE—Prince William County.
Public Relations/Marketing Associate, W023339Y, PB 3, IALR.
Radio Announcer, W020800S, PB 3, University Relations/WVTF Radio.
Youth Program Assistant, 007464J, PB 2, HNFE.
Youth Program Assistant, 005889J, PB 2, HNFE.
Youth Program Assistant, 007233J, PB 2, HNFE.

FACULTY POSITIONS

NON-INSTRUCTIONAL

University Development. Associate/ Assistant Director of Gift Planning (2). Contact: Rhonda Arsenault, 201 Pack Bldg. (0336). Review begins immediately.
University Development. Director of Development, College of Arts/Sciences. Contact: Rhonda Arsenault, 201 Pack Bldg. (0336. Review begins immediately.
University Development. Regional Director of Major Gifts. Contact: Rhonda Arsenault, 201 Pack Bldg. (0336). Review begins immediately.
University Development. Special Gifts Officer. Contact: Rhonda Arsenault, 201 Pack Bldg. (0336). Review begins immediately.
Biochemistry. Research Associate. Contact: Katherine Phillips, 111 Engel (0308). Review begins immediately.
Software Technologies Laboratory. Software Engineer/Developer. Contact: Bert Hubbard, 1900 Kraft Dr., Ste. 105 (0460). Review begins immediately.

Virginia Tech
VIRGINIA POLYTECHNIC INSTITUTE AND STATE INIVERSITY

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Editor
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Assistant Editor

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Lederman co-edits gender, science reader

By Sally Harris

The essays and book extracts in *The Gender and Science Reader*, co-edited by Muriel Lederman of Virginia Tech and Ingrid Bartsch of the University of South Florida, provide a comprehensive feminist analysis of the nature and practice of science.

In the book, well-known feminist writers challenge the self-proclaimed objectivity of scientific practice by uncovering the gender, class, and racial prejudices of modern science. The writings draw from a range of media, including feminist criticism, scientific literature, writings about scientific education, and the popular press.

The book is divided into six sections, each addressing an aspect of gender and science. Through both analytical evidence and personal testimonies, the section on "Women in Science" looks at women's access to the study of science and to employment in that field. "Creating Androcentric Science" explores the gendered origins of science at the time of the Enlightenment. "Analyzing Gendered Science" provides feminist methodologies and epistemology for the study of science. "Gendered Praxis" provides examples of the ways gender bias can affect and distort scientific work. "Science and Identity" looks at how science reinforces gender and racial stereotypes. And "Feminist Restructuring of Science" looks at the future of feminist science studies.

According to Sylvie Coyaud writing in *Nature*, "The editors nicely balance the different schools of feminist theory." The essays include that of John Lukacs, which looks at quantum mechanics with a religious focus. There are also two essays that, according to Coyaud, provide "comic relief" as they tell "how past research in the life sciences proceeded apparently unaware that human organisms, unlike bacteria, come in two versions, or blinded by an eagerness to assign inferior quality to female cells, genes or brains."

The final section of the book discusses ways that the feminist view of science has already changed some fields, such as medical research, and how equal-opportunities policies in the United States "have improved their {women's} lot in publicly funded research," Coyaud said.

Included in the book are introductions to each section, plus a comprehensive bibliography of feminist science studies for those involved in the teaching, research, or study of science.

The contributors include well-known feminist writers such as Donna Haraway, Evelyn Fox Keller, Hilary Rose, and Carolyn Merchant, as well as biologists Christine Wenneras and Agnes Wold. According to Coyaud, the research of Wold and Wenneras "showed that women had to publish 2.6 times more than men in order to obtain the same quality scores for post-doctoral fellowship applications submitted to the Swedish Medical Council."

Lederman is an associate professor of biology and is affiliated with the Women's Studies Program. Bartsch is an assistant professor of Women's Studies at the University of South Florida and is a practicing ecologist.

The book is published by Routledge.

INTERIM

Continued from 1

"Although the university and the college are facing some great challenges, these in turn spawn extraordinary opportunities. As we strive toward meeting President Steger's goal of reaching the top 30, we will be positioning ourselves better to fulfill our potential to be the key player in higher education in the state. I look forward very much to meeting this challenge, with the help and support from the faculty and staff of the college. And I look forward to working with the provost and the president and others in the university as we begin the process," Chang said. He noted that Bates would be "a tough act to follow."

A replacement for Chang to head the Department of Physics will be named within a week.

According to McNamee, the College of Arts and Sciences, Virginia Tech's largest college, is beginning "a substantive discussion of new organizational models that could enhance the ability of the college to achieve its strategic academic goals." He has asked Chang, he said, to lead the effort to evaluate options so that a national search for a permanent dean can begin as efficiently and effectively as possible. McNamee said he hopes to have a permanent dean selected within 12-18 months.

Chang will work with Bates over the next two months to ensure a smooth transition, McNamee said.

PROFESSORS

Continued from 2

pire to work in government, and constitute the highest-level occupation in the country, Downey said.

During the IIWE, students discussed relevant concepts in the morning and then tested their insights in the afternoon through visits to industrial settings. "For example," Downey said, "on the day we compared the identities of women engineers with those of engineers who happen to be women, we then visited Schlumberger, a global company of French origin that specializes in hi-tech instrumentation for oil exploration. Senior women engineers candidly discussed their experiences as engineers and as women in a multi-national environment."

Following seminar meetings on corporate cultures, the group visited ALTIS, a joint venture between IBM and Infineon, and the design center of Renault, where students could see not only the merging of different corporate cultures, but also the complexities of different national cultures operating in the same engineering environment. A discussion of engineering education and practice in Germany was followed by a visit to Rohde & Schwartz, a German engineering company that builds some of the world's best electric measurement equipment.

"Student assessments of the institute experience were strongly positive," Downey said. "As one of the participants put it, 'This was a great experience. I loved meeting students from all over the world and learning about different cultures.'"

STUDY

Continued from 2

cause the TEAP's to be used simultaneously instead of sequentially, which is how the theory predicts and how it's now modeled."

If the researchers find that the Fe(III) concentration does affect the use of TEAP's so that they are used simultaneously, scientists can better model the degradation of a plume. "Then, if we can better model the process, we can better clean it up," Spain said. "We can better model how long it would take for remediation to occur or how long we would have to get the gas out before it became a bigger problem."

IN OTHER NEWS

Participants sought for innovative program

Until recently, it was believed that attaining good levels of fitness and strength required hours of training per week. That probably isn't true.

An interdisciplinary research team at Virginia Tech, supported by ASPIRES funds, has developed a better understanding of the mechanisms involved in inducing fitness and strength adaptations. Their innovative work suggests that, with specific prescriptive, progressive protocols, appreciable increases in fitness and strength can be obtained in minimal training time per week. In addition, some new research shows that modest but focused reductions in food intake combined with exercise can lead to continued weight loss and maintenance of weight loss over a two-year period.

The team is recruiting participants for additional studies. The team features Janet Wojcik, Lesley Fox, Carrie Blankenburg, and Richard Winett from the Center for Research in Health Behavior in the Department of Psychology in the College of Arts and Sciences and William Herbert and Sharon Nickols-Richardson from the Laboratory for Health and Exercise Science in the Department of Human Nutrition, Foods, and Exercise in the College of Human Resources and Education.

Many people cite lack of time for exercise and feelings of deprivation during weight-loss attempts as reasons they do not stick to programs. In these respects, the Tech program may help break barriers to exercise training and weight management.

The researchers are beginning another phase of their program and are actively recruiting participants. The program is a 16-week aerobic and strength-training program with the possible addition of a nutrition and activity program followed by a 12-week follow-up period. After baseline testing, participants will be randomly placed in one of three possible study groups. Participation takes only about 60 to 90 minutes per week, with actual training sessions taking about 30 minutes twice per week.

In exchange for their involvement in the study, participants will receive at no cost state-of-the-art assessments, including assessments of fitness, physical activity, strength, body composition, bone-mineral density by DXA analysis, lipids, and nutrition.

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

Tech campus loses historic tree

On November 17, Virginia Tech lost one of its most beautiful and well-known trees, an American elm next to Patton Hall.

Approximately 116 years old, the elm was planted or became established as a wild seedling about 10 years after the university was founded, and about 40 years before Patton Hall was built. Positioned next to a sidewalk where hundreds of students and faculty members pass each day, the tree began developing rot in the center of the trunk, and thus became a serious hazard.

Following advice from professional arborists, university officials decided to remove it. American elms have suffered from a number of severe problems, most notably Dutch-elm disease. Since 1967, Professor Jay Stipes of the Plant Pathology, Physiology and Weed Science Department, and a world-renowned expert in Dutch elm disease, has been treating the tree with chemicals to keep the fungus in check. He and many students over the years have kept the tree relatively healthy.

Approximately 15 years ago, the university attached cables to keep the tree together, but it continued to deteriorate. However, there are plans to replace the tree with new elms that grow rapidly and are resistant to Dutch-elm disease.

Study shows jobs hinder students

By Jean Elliott

Kusum Singh, a professor in educational leadership and policy studies, questions the belief that part-time jobs benefit high-school students.

Her research, which was published in *The Journal of Educational Research*, suggests that students who work more than 20 hours per week take fewer math and science courses. Those students also perform more poorly on tests in those subjects than students who work fewer hours.

The unusually large study looked at more than 26,000 sophomores and seniors from about 1,000 high schools nation-wide. It examined the impact part-time work had on students' course-taking and their achievement on math and science standardized tests. Even when socio-economic status and previous educational achievement were taken into account, jobs still had a "significant negative effect" on course work and achievement in math and science.

"The first 15 hours of work didn't seem to matter," Singh said. "But after that, when students are working 20 hours or more, it starts interfering with school performance."

The number of high-school students holding part-time jobs has risen steadily over the past two decades. Forty-two percent of high-school seniors, 33 percent of juniors, and 15 percent of sophomores worked part time in 1994, according to the U.S. Bureau of Labor Statistics. The United States is one of the few industrialized nations where adolescents commonly both work and attend school. American students' performance on science and math tests has lagged compared with that of other countries—an often-cited concern for education policymakers.

Singh's study, like several others, found no evidence that students suffer academically if they limit work to under 15 hours a week. Some research suggests that when a high percentage of students at a school hold part-time jobs, the school's teaching and learning atmosphere shifts because teachers begin to lower their expectations for student performance.

Singh believes a more critical look at the issue is needed. "The common wisdom says work is good for children, but that is more theoretical than empirical," she said.

STUDENT DEATH NOTICE

Cory J. Keeling, Pamplin College of Business.

ENGINEERS

Continued from 1

each other without communicating data during the design process," Watson said. "As system complexity grows, this communication becomes a bottleneck, and the time required for high-fidelity subsystem simulations also grows. This project will develop mathematically rigorous decomposition theories so that large-scale design problems can be effectively solved on massively parallel supercomputers."

Another aspect of the project is the development of cheap surrogate approximations to expensive simulations. This both reduces the subsystem evaluation time and improves the concurrency of the global design process.

"Innovative and radical approaches to large-scale optimal design are being explored, both theoretically and empirically," Watson said. "Computational paradigms such as global/local optimization and cellular automata (models or approaches to computation), which are unproven but hold considerable promise for implementation on massively parallel computers, will be adapted to engineering design problems.

"This project is interesting because it involves both mathematical theory and engineering experiments," Watson said. "Computer-science students are excited about working on a project where the things they design, like composite aircraft-wing panels, are actually built and tested in the lab. Engineering students get to work with our Beowulf supercomputer in Torgersen Hall, something they normally wouldn't have access to."

In addition to Watson, the project team consists of Zafer Gurdal of the Department of Aerospace and Ocean Engineering and the Department of Engineering Science and Mechanics at Virginia Tech, and Raphael Haftka of the Department of Aerospace Engineering, Mechanics, and Engineering Science at the University of Florida.

GATOR BOWL

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game will be shown on NBC.

"We are ecstatic to be going to our seventh New Year's Bowl in nine years," said Virginia Tech Head Football Coach Frank Beamer. "This is certainly a compliment to our program and to our great fan support. We've had a lot of experience with bowls lately and no one treats us better than the great staff at the Gator Bowl."

Virginia Tech is 8-2 heading into Saturday's game against top-ranked Miami while the Seminoles are 6-4 heading into their final game with Georgia Tech on Saturday. Tech and FSU last met two years ago in New Orleans, with the Seminoles taking a 46-29 Sugar Bowl victory to claim the national championship.

The match-up will be the 31st meeting between the two schools, with the Seminoles holding a 19-10-1 lead.

The Virginia Tech Ticket Office will begin taking orders for tickets Tuesday morning. Orders may be placed by stopping by the Cassell Coliseum Ticket Office or by calling 1-800-VATECH4. Tickets for both the general public and Tech students are $40.

SHELTON

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sponsibilities to carry out the allocation of resources and to execute the internal budget plan. Hodge will be responsible for coordinating the development of internal budgets for the university and will provide analysis and assistance to academic and administrative departments in the administration of their annual operation budget.

Executive Vice President Minnis Ridenour said of the organizational changes, "Dwight has been charged with providing leadership to improve our internal-control environment and the financial management of the institution. He has also been asked to assume a greater leadership role of working with state entities in developing and improving funding guidelines that will enhance the long-term funding for Virginia Tech. In this role, he will work directly with his colleagues from other universities and with the staff of legislative money committees, SCHEV staff, and the executive budget office staff. Through the appointments of Mahan and Hodge, Dwight will be in a position to focus on important initiatives such as strengthening business practices and procedures and internal-control activities."

As a part of this new focus, Shelton will continue to work closely with the leaders of the university's academic programs and administrative units to implement sound business practices across the university. These efforts will include such items as the development of best-practices seminars, business-training opportunities for fiscal and administrative staff members, and support services to departments.

PROVOST

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Human Resources and Education who wants to help shape and realize our goals," McNamee said in a recent letter to the faculty. The dean will direct a college that consists of six departments, 160 faculty members, 60 support staff members, and 3,600 students.

McNamee has asked that the university community review the advertisement for the position at *http://www.provost.vt.edu* and direct inquiries and referrals to Gregory Brown, dean of the College of Natural Resources and chair of the search committee. Brown can be reached electronically at *browngn@vt.edu* or via telephone at 1-5481.

"Searches for senior positions such as this can shape an institution for years to come," McNamee said. He also said that the university is especially interested in receiving nominations of women and minority members "who would bring not only their professional expertise, but also their personal perspective to the university's academic administration."