

SPECTRUM

Virginia
Tech

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

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

VOLUME 24 NUMBER 21 FRIDAY, FEBRUARY 8, 2002

TODAY'S EDITION
See page 4 for
additional campus
news coverage.

Research expenditures show second double-digit increase

By Susan Trulove

Research expenditure growth at Virginia Tech grew 12.3 percent to \$216.3 million for fiscal year (FY) 2001, the university Controller's Office has reported to the National Science Foundation (NSF).

Len Peters, vice provost for research, said, "This is the second year that the increase has been greater than 10 percent, and the current year is off to an outstanding start as well." (Editor's note: See accompanying article on page 3.)

In FY 2000, Virginia Tech reported total research and development expenditures of \$192.6 million for the NSF survey of colleges and universities nation-wide—a 14-percent increase from the previous year. Also in FY 2000, Virginia Tech's dollar increase in research expenditures was the twelfth-highest increase among the top 50 universities, Peters said. "The difference in dollars between Virginia Tech and six of the nine universities in the 41 to 50 rankings ahead of us was reduced."

The university learned in December that its ranking for FY 2000 had moved from 50 to 51 as a result of the University of Maryland at Baltimore surging ahead by nearly 60 percent from 71st to 44th.

A review of that university's web site shows significant National Institutes of Health, pharmaceutical company, and other medical research sponsorship in the last two years. The University of Maryland at Baltimore also began a major faculty recruitment program in the early 1990s.

Peters reported that sponsored-research growth at Virginia Tech in the first six months of the current fiscal year (July 1 to Dec. 30, 2001) is up almost 50 percent. Sponsored research is a portion of research expenditures.

Expenditures include research sponsored by state and federal agencies, private foundations, and industry, as well as institutional investment in research, both direct and indirect. Indirect investment includes equipment and utilities, for example. The fiscal year ends June 30. It takes until the end of December for NSF

rankings of the previous fiscal year's expenditures to be made available because almost 600 colleges and universities are included in the survey.

Virginia Tech can look forward to increased expenditures based on the increased awards in 2001, Peters said. "Although, of course, other universities are also within striking distance of the top 50. The competition is fierce among the top 100 of the 589 institutions ranked, often with only a few hundred thousand dollars difference out of hundreds of millions of dollars of expenditures representing the difference in ranking between two institutions."

President Charles Steger has challenged the university to achieve top-30 status by 2010. The higher ranking will provide resources for teaching programs as well as research that will improve the quality of life in the state and the nation, Peters said.

"Prospects for the university to achieve the top-30 goal remain good; our growth in research funding has more than met our expectations," Peters said. "Faculty members are doing their

(See RESEARCH on 4)



WATFORD

Watford named Black Engineer of the Year

By Liz Crumbley

Bevlee Watford, associate dean for academic affairs and director of the Office of Minority Engineering Programs (OMEP) for the Virginia Tech College of Engineering, has been selected to receive the national 2002 Black Engineer of the Year Award/College Level Educator.

Watford will be honored during the Black Engineer of the Year Conference, February 16 in Baltimore, Maryland. The conference is hosted by the Council of Engineering Deans of Historically Black Colleges and Universities, Lockheed Martin Corp., and *USBE and Information Technology* magazine.

Appointed as founding director of the OMEP in 1992, Watford has developed a number of mentoring and training programs for students from the middle-school years through undergraduate university studies. Her work has led to significant improvements in

(See WATFORD on 4)

Interior-design program ranked eleventh nationally

By Jean Elliott

Virginia Tech's Department of Near Environments in the College of Human Resources and Education jumped up two places from last year's ranking of interior-design-education programs.

DesignIntelligence, the industry newsletter, now recognizes Virginia Tech's program as the eleventh-best in the nation.

DesignIntelligence conducts a comprehensive study of the nation's top interior-design firms to determine their annual ranking of colleges and universities. The results of the 2001 study have also been published in the newly released *Almanac of Architecture & Design, Third Edition*.

This study is the industry's only "customer-satisfaction"-oriented ranking of interior-design degree programs. Principals,

interior-design directors, and human-resources directors from over 300 leading U.S. interior-design firms were asked to name from which accredited schools they have had the best experience hiring employees relative to the past 10 years. The Foundation for Interior Design Education Research (FIDER) accredits the various programs.

This year's survey also gathered information on recruiting practices, the skills of recent interior-design graduates, and their starting salaries. Firms in each market sector and throughout all regions of the country were contacted. The results provide the best overview of the reputation of each school within the practicing interior-design community.

"The faculty members in our interior design program are a very cohesive group of

professionals who thoughtfully address issues of programming and curricula," said LuAnn Gaskill, department head of near environments.

"They have integrated international education, diversity of learning experiences, and design-oriented technologies into the educational environment. Our students benefit with opportunities to engage in creative thinking and problem-solving techniques in the design of functional and aesthetic interior environments."

"There are approximately 500 interior-design programs in the nation, and we are proud that Virginia Tech has climbed from thirteenth to eleventh," said interior-design professor Joan McLain-Kark. "It is particularly satisfying to know that the leading, award-winning firms, including industry giants and top sector leaders, think so highly of our graduates."

Police Department adds K-9 unit

By Tatiana Aras,

University Relations intern

The Virginia Tech Police Department has welcomed a new four-legged member to its force. Hokie, a two-year-old German Shepherd, will be a part of the police department's first K-9 unit.

Last year, officers in the Virginia Tech Police Department were asked to volunteer to be a part of this program. After reviewing many applications, Officer Keith Weaver was selected to partner with Hokie. Weaver was chosen, in part, because of his willingness to dedicate time and effort to bond and train with Hokie. Training is a continual process which is essential for the dog and his handler to function as a team. It also serves to insure that the team will be operating at optimum efficiency.

Acquiring Hokie is part of Police Chief Debra Duncan's new initiatives for the Police Department. These initiatives focus on proactive, as opposed to reactive, community policing. The police department views Hokie's role in the community as an important one.

"Hokie will serve as a good form of interaction with the community because people are more likely to approach an officer with a friendly dog," Lt. Deborah Morgan said.

In addition, Hokie will be trained to perform many tasks for the police department. "Hokie will be trained for everything from narcotics to searches," said Morgan. "He is a multi-purpose dog."

Weaver and Hokie began a 12-week training program at a Police K-9 Training School in Roanoke on February 4.



HOKIE

Equal Opportunity, Diversity Commission proposed

By Clara B. Cox

Working together for the past five months, the University Committee on Equal Opportunity and Affirmative Action and the Advisory Council on Diversity and Multicultural Affairs have drafted a resolution to amend the University Council constitution and by-laws to establish a Commission on Equal Opportunity and Diversity.

The university community can learn more about the commission at an open session at noon on February 20 in 150 Squires Student Center. Representatives of the two sponsoring units will be on hand to answer

(See EQUAL OPPORTUNITY on 3)

ACTIVITIES

EVENTS

Friday, 8

TA Event, 7:30 p.m., Haymarket Theater: The Vagina Monologues.

Saturday, 9

YMCA Hike, 10 a.m., YMCA Parking Lot.
Men's Basketball, 7:30 p.m.: At Providence.

Sunday, 10

Women's Basketball, 2 p.m.: At Connecticut.

Monday, 11

Bloodmobile 10 a.m. to 4 p.m., Squires Old Dominion Ballroom.

Art Exhibit Opening, 9 a.m. to 11 p.m., Squires Studio Theater: "Since September 11, 2001...a Community Exhibit" (Through 2-28).

CommonHealth Program, 5:30 to 8 p.m., 135 War Memorial Hall.

Black History Month Event, 7:30 to 9:30 p.m., Squires Brush Mountain.

Tuesday, 12

Bloodmobile, 10 a.m. to 4 p.m., Squires Old Dominion Ballroom.

Off-Campus Housing Fair, 10 to 4 p.m., Squires Commonwealth Ballroom

DBHCC Luncheon, 11:30 a.m. to 1:30 p.m., DBHCC.

CommonHealth Program, 12:10 to 12:55 p.m., DBHCC conference room A.

Black History Month Event, 6 to 7 p.m., Squires Cardinal Room.

Wednesday, 13

Bloodmobile, noon to 6 p.m., Squires Old Dominion Ballroom.

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

Women's Basketball, 7 p.m.: At Providence.

Men's Basketball, 7 p.m.: At West Virginia.

Thursday, 14

Theatre Arts Event, 8 p.m., Squires Studio Theater: "Never in My Lifetime."

Friday, 15

Pay Date for Faculty and Staff Members.

CommonHealth Program, 12:10 to 12:55 p.m., Southgate Personnel classroom.

Black History Month Event, 5 p.m., Squires Black Cultural Center.

SEMINARS

Friday, 8

Highlands in Chemistry, 11:15 a.m., 3 Davidson: Tom Smith, Xerox Corp.

MCBB, 12:20 to 1:10 p.m., Fralin auditorium: Jack Meeks, UC-Davis.

Geological Sciences, 2:30 p.m., 4069 Derring: Lisa Kennedy.

STS, 3 p.m., 225 Major Williams: Richard Burian.

Tuesday, 12

ECE, 3:30 to 4:20 p.m., 300 Whittemore: Roger Stolen.

Friday, 15

Highlands in Chemistry, 11:15 a.m., 3 Davidson: Barbara J. Garrison, Penn State.

BULLETINS

Pulitzer for Poetry winner to read

Yusef Komunyakaa, winner of the Pulitzer Prize for Poetry will read from his work at 7 p.m. on Friday, Feb. 22 at Volume Two Bookstore.

The reading is expected to be of particular interest to students and scholars of African American literature and contemporary poetry. Komunyakaa is the author of 12 books of poetry, the most recent of which include *Pleasure Dome: New and Collected Poems*, *Talking Dirty to the Gods* and *Thieves of Paradise*. The latter titles were finalists for the National Book Critics Circle Award. He received the Ruth Lily Poetry Prize in May, 2001. Forthcoming is a collection of poem entitled *Scandalize My Name* (Picador, UK). He won the

Pulitzer Prize for *Neon Vernacular* in 1994. He has also published *Blue Notes: Essays, Interviews and Commentaries* and co-edited *The Jazz Poetry Anthology* and *The Second Set: The Jazz Poetry Anthology*.

He is a chancellor of the Academy of American Poets and a professor in the Council of Humanities and Creative Writing Program at Princeton University.

His honors include the William Faulkner Prize from the Université de Rennes, the Thomas Forcade Award, the Hanes Poetry Prize, fellowships from the Fine Arts Work Center in Provincetown, the Louisiana Arts Council, and the National Endowment for the Arts. In 1999, he was elected a chancellor of the Academy of American Poets.

New faculty award available

The January 18 Opportunity Update (www.rgs.vt.edu/funding/ou/update.html) contains information on an early career award—the Camille and Henry Dreyfus New Faculty Awards Program for faculty members in the chemical sciences. The internal letter of intent is due in March.

There is a February 28 internal deadline for other limited-submission programs, previously announced. Details are still available on the OU.

The site is a service of the Research Division. E-mail lizacker@vt.edu for automatic notifications.

New limited-submission programs announced

The Research Division has announced three limited submission programs on its February 1 Opportunity Update site.

The sites are the American Honda Foundation Grants in Youth and Scientific Education, with an internal deadline of March 13; the NIH Curriculum Development Award in Neuroinformatics Research and Analysis, due March 14, and the Pfeiffer Foundation Grants-in-Aid in medicine and pharmacy, due June 13. More information is available at www.research.vt.edu/research/limitsubs/.

February 28 is the internal deadline for the Burroughs Wellcome Fund Career Award "at the Scientific Interface: Bridging Support for Physical / Computational Scientists Entering Biology."

Other opportunities being announced at www.rgs.vt.edu/funding/ou/update.html include an Early Career Award from the Human Frontier Science Program, which offers long-term fellowships; the change in the deadline date to March 18 for proposal submission for the Computer and Information Science and Engineering Research Resources Program; and undergraduate internship openings with the Center for Intelligent Material Systems and Structures at Virginia Tech.

For a weekly e-mail notification, send an e-mail to Liz Ackerman at lizacker@vt.edu.

Other funding resources are available at www.research.vt.edu/funding.

On-line bioterrorist course offered

By Cate Mowrey

In response to concerns of the public resulting from recent anthrax exposures, Virginia Tech is offering the on-line non-credit course, "The Threat of Bioterrorism."

The course is available to anybody in the world with Internet access for \$39 through <http://vto.vt.edu>. The course is delivered by Nammalwar Sriranganathan, a veterinary microbiologist, teacher, researcher and diagnostician at the Virginia-Maryland College of Veterinary Medicine. Virginia Tech alumni can take this course free of charge through the VTalumnNET life-long learning gateway.

Various acts of terrorism, some in the form of biological agents, may now threaten society. The course may help put some fears to rest by providing an examination of anthrax as well many other biological agents which could be used as a bioterrorist threat.

A direct link to the course is located at http://www.vto.vt.edu/course_ll.php?id=DVMK016.

eDan program sparks regional interest

By Jeanne Garon

Virginia Tech's eDan program in Southside Virginia garnered strong interest last week at the annual conference of the Southern Growth Policies Board in Atlanta.

The program, an effort by the Future of the Piedmont Foundation and Virginia Tech to accelerate high-speed Internet connectivity and economic development in Virginia's Dan River Region, was featured in a presentation that Brenda Neidigh, the university's eCorridors Program director, delivered to an audience of state governors, legislators, and other economic and community-development stakeholders from across the South.

In an invited presentation, "eCorridors Program: Creating Competitive Advantage for Rural Communities," Neidigh told the audience that the Dan River region may be the first in the country to have an advanced computer-network architecture that includes community-based Multimedia Service Access Points (MSAP's) and next-generation fiber optics in an inter-community link.

According to Neidigh, eCorridor routes—electronic highways carrying high-speed Internet traffic, such as the eDan infrastructure

envisioned for the Dan River region—are predicted to spark "transformative economic activity" in networked communities, much as interstate highways once brought new bustle to formerly isolated towns. "In the new global economy, a 'networked economy' relying increasingly on communications among networked computers, any community lacking the ability, at a reasonable cost, to provide high-volume information, products, and services to the world will have a severe competitive disadvantage," she said.

Neidigh was part of a panel that was asked to discuss the impact of research universities on local economic development. "eDan, the pilot project of Virginia Tech's state-wide eCorridors Program, is a good example of how Virginia Tech is partnering with communities interested in using technology to advance economic development," she said.

The eDan project is intended to be a proof-of-concept model for the eCorridors Program and is envisioned to serve as the prototype for a broader regional initiative known as the e58 Corridor, which is being funded in part by the Virginia Tobacco Indemnification and Revitalization Commission.

FPMC to hold annual meeting

By Lynn Davis

The Center for Forest Products Marketing and Management in the College of Natural Resources will hold its annual meeting March 19 on campus. The meeting gives companies an opportunity to meet with faculty members and students who specialize in wood products.

The annual meeting will include a business meeting and dinner, and feature guest

speaker George Barrett from the *Weekly Hardwood Review*. The business meeting will focus on an update of the center's activities in 2001 and include open discussion regarding the direction of the center. The meeting is free to all members of the center, but non-members are also welcome. For more information, contact Joanne Buckner at 1-5876 or ctrfpmjo@vt.edu.

EMPLOYMENT

CLASSIFIED POSITIONS

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

Administrative Assistant, 001854F, PB 3, BFP.

Administrative Staff Assistant, 001771Y, PB 3, VP for Administration/Treasurer.

Assistant Manager, 001209H, PB 3, RDP.
Development Associate, 007880S, PB 3, University Development.

Event Services Office Manager, 001954J, PB 3, UUSA.

Fiscal Coordinator, 006544S, PB 3, University Relations.

One full-time food-service position available.

Laboratory Aide, 007915M, PB 1, Entomology.

Laboratory Technician, 002999M, PB 3, VTH.

Operations Manager, 007121H, PB 4, RDP.

Radiologic Technologist, 002394M, PB 3, VTH.

Sales/Marketing Manager, 000478H, PB 3, RDP.

Sous Chef, 007881H, PB 3, RDP.

Sous Chef, 000940H, PB 3, RDP.

PART TIME

Animal Care Technician, W022563M, PB 1, VTH.

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

Ipm Program Technician, W023371M, PB 3, Entomology.

Isb Program Assistant, W023360M, PB 3, Biochemistry.

Laboratory Specialist, W023361M, PB 3, Biochemistry.

Radiologic Technologist, W022412M, PB 3, VTH.

Research Assistant, W023351M, PB 3, AAE.

Veterinary Technician, W023340M, PB 4, Veterinary Teaching Hospital.

OFF CAMPUS

Director of Nursing, 002178M, PB 4, CVM.

Geographic Data Developer, 007913M, PB 4, BSE.

Radio Announcer, W020800S, PB 3, UR/WVTF Radio.

FACULTY POSITIONS

NON-INSTRUCTIONAL

Geological Sciences. Research Associate (re-advertised). Contact: Patricia Dove, 4068 Derring (0420). Open until filled.

University Development. Assistant/Associate Director of Development, College of Engineering (re-advertised). Contact: Susan Sink, 333 Norris (0259). Open until filled.

Physics. Research Associate, Physics Education. Contact: John Ficenc, 123 Robeson (0435). Review begins immediately.

Physics. Postdoctoral Associate, String Theory. Contact: Djordje Minic, 123 Robeson (0435). Review begins April 1.

Virginia Cooperative Extension. Extension Agent, Agriculture/Natural Resources (internal search). #FA558, Northampton Co. Contact: Steve Umberger, 121 Hutcheson (0437). Review begins immediately.

University Development/University Relations. Director of Special Events. Contact: Margaret Zelinski, 315 Burruss (0253). Review begins Feb. 15.

University's sponsored research continues to grow

By Susan Trulove

"If the number of proposals and awards is any indicator, university faculty members have responded to the challenge of becoming a top-30 research institution," said Len Peters, vice provost for research.

In fiscal year (FY) 2001, Sponsored Programs witnessed a record number of proposals—exceeding 2,500 for the first time and requesting funding in excess of a half billion dollars, according to David Richardson, director of sponsored programs.

And in the first six months of FY 2002—July through December 2001, sponsored-research activity again grew at a significant rate. "Researchers landed 1,108 awards for \$83.1 million," Richardson reported, "up from 1,001 awards and \$55.6 million or a 49-percent increase in funding, compared to the same period a year ago."

Awards to the Research Division increased nearly 200 percent, from 73 awards

for \$6.9 million to 111 awards for \$20.2 million. "These are awards to the university research centers," said Jim Blair, associate provost for research. "For example, the Virginia Tech Transportation Institute continues to grow strongly."

The report on growth by college and division for FY 2001 appears in the Sponsored Program section of the 2000-2001 *Research Division and Graduate School Report to the Faculty*, which will be delivered to faculty members in early February. It is on line at www.research.vt.edu/resmag/2001AR/.

In the first six months of FY 2002, the College of Engineering led the way, accounting for \$22.9 million, a \$5-million increase over the same time last year and 28 percent of the total research awards. "Almost all colleges and administrative units increased," Peters said.

He points out that increased research means increases in support for students, increased research opportunities for students at

all levels, and results in new content for instruction and publication.

"Virginia Tech maintains a very diversified pool of sponsors," Richardson said. The federal government remains the source for the majority of awards. Over the last five years, support from the National Science Foundation, United States Department of Agriculture, and the Department of Health and Human Services have all increased by more than 50 percent. During this same course of time, industrial sponsorship more than doubled.

FY 2002 sponsored activity in the instruction division increased from \$1.8 million to \$3.7 million, as a result of a large informatics development grant in the College of Veterinary Medicine. Public-service funding increased in the first six months of FY 2002 in the public-service division, largely due to activity in the College of Architecture and Urban Studies. Extension declined somewhat.

EQUAL OPPORTUNITY

Continued from 1

questions and provide information. Written comments and questions can be sent via e-mail to multicultural@vt.edu.

"We want to open the door for input and feedback on this proposed resolution and hope the university community will take advantage of these opportunities. The commission would affect all of us—faculty, staff, and students—because of the role it could play in our governance structure and the attention it could give to such issues as campus climate and student, faculty, and staff recruitment and retention. Plus, the new commission would have the responsibility to monitor the implementation of the university's Diversity Strategic Plan," said Ben Dixon, vice president for multicultural affairs.

If approved, the new commission would work on policies and procedures relating to the university's responsibilities for equal opportunity, affirmative action, accessibility, and compliance; diversity planning and evaluation; diversity training and education; assessment of institutional climate; and similar equity and diversity issues affecting the university.

The resolution also calls for the new commission to collaborate with other commissions and committees "to address issues of diversity and equity as they relate to recruitment, retention, and advancement of faculty, staff, and students, particularly those from historically under-represented groups; student life; academic policies and support;

curriculum; research, scholarship, and creative activity; and outreach."

To address these matters, the resolution states, "the commission will aggressively seek the concerns and opinions of interested bodies through various structures and activities."

The chair of the new commission, who would be elected from among its non-ex officio faculty and staff members, would be added to University Council membership, and the Equal Opportunity/Affirmative Action Committee would be deleted from the by-laws.

Ellen Plummer, chair of the EO/AA Committee and director of the Women's Center, said that the Advisory Council on Multicultural Affairs and the EO/AA Committee "have increasingly had overlapping agendas and sets of concerns. Although these advisory bodies serve important and distinct purposes, they lack the authority to formulate or oversee policy. With our renewed commitment to equal opportunity and diversity issues, we felt that they should be elevated to the same level of importance as we grant other facets of university life."

Thirty members would comprise the commission, including the vice president of multicultural affairs or designee; director of Equal Opportunity/Affirmative Action Office or designee; assistant vice president for personnel services or designee; associate provost for academic administration or designee; vice president for student affairs or designee; an academic dean selected by the

Council of Academic Deans; a faculty or staff representative from each of the eight colleges, nominated by the college diversity committees and selected by each college dean; a representative selected by the director of Cooperative Extension; a staff representative selected by the Staff Senate; a faculty representative selected by the Faculty Senate; eight faculty or staff community representatives. The college representatives would alternate between faculty and staff members. The latter eight members would come from the communities of African-Americans, Asian-Americans, Hispanic-Latino-Americans, international faculty/staff members, faculty and staff members with disabilities, lesbian, gay, and bisexual persons; native Americans, and women.

Associate Provost Pat Hyer, who worked with the bodies that drafted the resolution, said that, historically, women and individuals of color were denied access and participation in the academic, social, and cultural life of Virginia Tech and that that lack of participation continues to have an effect on the campus climate. "That was one of the reasons we felt that a new commission was in order," she said.

The proposed resolution calls for the new commission to become effective this fall, provided it is approved by University Council and the Board of Visitors.

The full resolution proposal can be viewed on line by clicking on "Diversity" at <http://www.provost.vt.edu/provost.html>.



VIRGINIA POLYTECHNIC INSTITUTE
AND STATE UNIVERSITY

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

Spectrum is a non-profit publication of the Office of University Relations: Lawrence G. Hincker, associate vice president for University Relations; David Nutter, director of college and media relations.

Editor
John Ashby, 1-6961

News Bureau Manager
Sherri Box, 1-8508

Production Manager
Melinda Shaver, 1-8524

Business Manager
1-8819

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

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

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

Chemical from the controversial horseshoe crab vital to human health

By Lynn Davis

Over the past several years, management of the horseshoe-crab population has become increasingly controversial. Director of Virginia Tech's new Horseshoe Crab Research Center (HCRC) Jim Berkson claims that the environmental controversy is three-pronged.

"Fishermen catch horseshoe crabs for use as bait in the lucrative eel and conch fishery," he said. "Biomedical companies catch and bleed horseshoe crabs to produce a chemical (LAL) used to detect the presence of bacteria in injectable drugs and implantable devices. Environmentalists are concerned because migratory shorebirds depend on horseshoe-crab eggs to fuel their migration to their arctic breeding grounds each year. The battle over this ecologi-

cally, economically, and medically essential species has become one of the most heated environmental issues on the east coast in recent years."

To obtain data needed so officials will know how to manage such a vital resource, the College of Natural Resources expanded its horseshoe-crab research this year and built a new facility at its Aquaculture Center devoted to horseshoe-crab studies. Capable of holding more than 200 adult crabs, the Horseshoe Crab Research Center (HCRC) is the largest captive system in the nation dedicated to horseshoe crabs.

"We founded the center on the belief that developing effective management strategies requires an understanding of all three dimensions of the horseshoe-crab issue: fisheries, shorebirds, and biomedical companies," Berkson said.

The HCRC combines faculty members, students, facilities, and expertise from Virginia Tech's Department of Fisheries and Wildlife Sciences and Conservation Management Institute in the College of Natural Resources, Virginia-Maryland Regional College of Veterinary Medicine, and the new Virginia Bioinformatics Institute.

"Since September 11 the center has received a lot of attention because of the work

we're doing with horseshoe crabs indirectly relating to counter-terrorism," Berkson said. The chemical that comes from the blood of horseshoe crabs, LAL, is used to test for the presence of endotoxins in injectable drugs and implantable devices. That means all vaccines, including the anthrax and smallpox vaccines, have to be tested using LAL to prevent any contamination, whether intentional or unintentional.

"The recent rush to produce sufficient anthrax and smallpox vaccine really shows how much we depend on LAL and the horseshoe crabs needed to produce it," Berkson said. "At our new Horseshoe Crab Research Center we are working to develop alternative ways to produce LAL to ensure its on-going supply. This is extremely important because we still do not have the information we need to develop effective management regimes and the population of horseshoe crabs may be in a long term decline."

Working in partnership with Virginia Tech are three federal agencies involved in horseshoe-crab research and management, state agencies responsible for horseshoe-crab management in Virginia, Delaware, and Maryland; biomedical companies, including BioWhittaker, the largest producer of the LAL chemical from the crabs; and environmental groups involved in the issue such as the Audubon Society.



A horseshoe crab.

Engineering executive also serves university

By Karen Gilbert

For chairing the College of Engineering Advisory Board in 2000 and the Chemical Engineering Advisory Board, of which she is a founding member, in 1999 and 2000, Lori Wagner has earned the college's Distinguished Service Award.

Wagner said of these responsibilities, "The challenge came from chairing both groups at the same time but my involvement in both better enabled me to align the focus and initiatives of the department with the college."

Wagner found the two boards different. The chemical engineering board was in its infancy so the members were new to their responsibilities and roles. "There was substantial work involved with developing the board structure as well as coaching and directing the interaction between members," she said. "Since the college board had already been in existence and had many members with prior board experience, that chair served more as a moderator with helpful support from the college and Engineering Acting Dean Malcolm McPherson and Director of News and External Relations, Lynn Nystrom."

Wagner, who has a 1982 B.S. and a 1987 Ph.D. in chemical engineering has been at Honeywell/Allied Signal for 15 years. She said, "I have always felt that much of my success in my career was due to the top-notch teaching and mentoring environment that I had at Virginia Tech. By serving on the advisory boards I could give back some of what was provided to me."

Wagner was the Honeywell corporate liaison for Virginia Tech in 2000 and has been campus manager for Honeywell since 1995.

RESEARCH

Continued from 1

jobs. If the state, local, and institutional support at Virginia Tech were at the same level as at North Carolina State and the University of Georgia, we would be in the top 40."

Land-grant universities such as North Carolina State University, Pennsylvania State University, the University of Georgia, and the University of California, Davis, receive a substantially greater investment from state, local, and institutional sources.

The FY 2000 ranking of the University of Virginia, the only other state university in the top 100, is number 58 at \$174.5 million.

The NSF Division of Science Resources Statistics survey of R&D expenditures at universities and colleges for fiscal year 2000 can be found in table B32 at www.nsf.gov/sbe/srs/srs02402/start.htm.

General Electric representatives meet Tech students

By Allyson Armistead

General Electric (GE) representatives from around the nation, most of whom are Virginia Tech graduates, recently met 50 of Virginia Tech's top engineering and business majors at the Ninth Annual General Electric Leadership Conference. Held at the Hotel Roanoke, the conference provided an opportunity early in the students' careers to learn about the corporate culture and operating strategies of General Electric.

Through a series of activities such as building bridges out of paper products and participating in simulated real-world business situations, students learned to interact with diverse social styles. They learned how to lead a team by maximizing the strengths of everyone involved as well as how to delegate responsibility to produce a quality product in an efficient amount of time, a secret to GE's success as one of the nation's top industries.

The conference is coordinated by Tech graduate and GE executive Tim Wachenfeld, Wallace Allen, associate director for corporate and foundation relations at Virginia Tech, and

COTA (Virginia Tech's Center for Organization and Technological Advancement), the Student Leadership.

Over the years, this conference has been a stepping stone for many Virginia Tech students toward internships, co-op positions, and full-time employment with General Electric.

In his closing speech, Wachenfeld ex-

pressed GE's commitment to continued investment in Virginia Tech and its students, both through the Annual Student Leadership Conference and the recent donation of \$225,000 to the Faculty for the Future Program that focuses on motivating minority students in engineering to remain in school and pursue doctoral degrees.

WATFORD

Continued from 1

the engineering college's recruitment and retention rates for minority students.

Under Watford's leadership, enrollment of African-American freshmen increased by 55 percent from 1990 to 2001, and the five-year graduation rate for African-American students increased from 30 percent in 1992 to 45 percent in 1996. Watford also has enacted recruitment and mentoring programs for women and Hispanic students that have been successful.

In 1994, the General Electric Foundation awarded a grant of \$305,000 to Watford in recognition of the progress made by OMEP toward increasing the number of graduating

minority engineers. The foundation has made two more grants totaling \$375,000 to support the Virginia Tech-General Electric Fund Scholars Program.

In all, Watford has secured more than \$1.5 million in funding and support for OMEP and other undergraduate programs from a variety of sources including the General Electric Foundation, Intel, the Sloan Foundation, Corning Foundation, Honeywell International, Ingersoll Rand, and Microsoft.

In 1996, Watford received Virginia Tech's Affirmative Action Award for improving the campus environment for minority and women students, and she was featured in an article in *Woman Engineer* about how universities and companies offer support to women in engineering.

In 1997, Watford received the Charles A. Tunstall Outstanding MEP Award from the National Society for Black Engineers (NSBE) for her significant contributions to the success of African-American students at Virginia Tech, and she was selected as one of the 50 Top Minority Women in Science & Engineering by the National Technical Association.

Since accepting the position of associate dean in 1997—on condition that she could continue her work with OMEP—Watford has extended the mentoring programs that proved successful with minority students to additional populations of students.

Watford received her B.S. in mining engineering and her M.S. and Ph.D. in industrial and systems engineering, all from Virginia Tech. She taught at Clemson University before returning to her *alma mater* in 1992.

Non-Profit Organization, Postage Paid
Blacksburg, VA Permit No. 28

Virginia Tech
Blacksburg, VA 24061