Bohland specifies ‘Research-30’ strategies

By Jeannie M. Garon

“We are beginning the time of change in our culture as a university,” Interim Provost James R. Bohland told Virginia Tech center directors and administrators at the group’s fall 2000 meeting in mid-November. Bohland said that in 2010, Virginia Tech will have more university structures able to weave entrepreneurial faculty activities into the overall university fabric, a goal whose presence is not only in instruction but also in research and outreach, and an outreach program that emphasizes bringing new technologies and understandings of technology to more citizens of the Commonwealth, which he notes could open new businesses and strengthen the university’s outreach and development efforts.

“I have taken my name out of consideration at both North Carolina and Alabama,” Bohland said at a press conference Monday afternoon. “When you get away a little bit, you realize how special this place is. I know that the grass always looks greener on the other side. But when you sit back and look, you see how green the grass is right here. It’s always flattering when people are interested in you,” he said. “I want to do is continue to build this program and be the best program in the country year-in and year-out.”

Theoretical physicist shows single molecule can be transistor

By Susan Trudove

The problem: Smaller, more powerful microprocessors require squeezing more transistors into a chip—but there’s a limit. Transistors switch current on and off and amplify current. In existing transistors, this is done by applying voltage to a gate electrode, between the input (source) and output (drain) electrodes. More transistors in a single chip means more computational speed. Presently, a single chip can hold up to 28 million transistors, but leakage and tunneling are already a problem. Stray current (leakage) causes crossed signals and electrons bypassing gate fields (tunneling) prevents current amplification.

The solution may be molecular electronics.

“We can use molecules as transistors, switches, and memory devices,” said Massimiliano Di Ventra, who joined the physics faculty at Virginia Tech this summer. “We want to integrate billions of molecules into a single chip,” he said. “We will have this technology probably in 15 to 20 years.”

Di Ventra is a theoretical physicist whose research focus is to understand how molecular electronic devices work. He studies how a specific molecule will behave under current flow. “I inject current into the molecule to see if it can work like a transistor, a switching device, and the like.”

This spring, he demonstrated that a benzene molecule can work as a transistor (published in the June 5, 2000 issue of Applied (See THEORETICAL on 7)

Beamer and staff remain at university

By Larry Hincker

Head football coach Frank Beamer and his staff will remain in Blacksburg, thanks to a new package agreed upon Monday morning by Beamer and university officials.

“Today’s a great day for Virginia Tech football,” Beamer said at a press conference Monday afternoon. “When you get away a little bit, you realize how special this place is. I know that the grass always looks greener on the other side. But when you sit back and look, you see how green the grass is right here. It’s always flattering when people are interested in you. It’s always flattering when people are interested in you. It’s always flattering when people are interested in you.”

Beamer’s new deal is worth $1,025 million per year plus incentives. Under the new package, he will receive a $200,000 bonus if he leads his team to a BCS bowl and a $100,000 bonus for playing in any other bowl. These amounts are in addition to the normal bowl compensation currently in his contract.

“Director of Athletics Jim Weaver said, “Every year when you’re as good as our coaches have made this program in recent years, you’re going to have people who come calling for their services. We are pleased that we were able to conclude negotiations this morning and reach a new arrangement that will keep Coach Beamer at Virginia Tech.”

An additional $100,000 annually will be devoted to raises for the coaching staff. The coaching staff also will receive new homes based on the Hokies’ bowl participation and performance. Each staff member will receive an additional $25,000 if the team plays in a national championship game and $10,000 more for a win. They will receive $20,000 for going to a BCS bowl and $5,000 for a win. A Gator Bowl appearance will earn the coaches $15,000 and a win will earn them $3,750 more. Any other bowl appearance is worth $10,000 more and a win is worth another $2,500.

“I am very pleased to see Coach Beamer stay with Virginia Tech, his alma mater and place of his greatest coaching successes. His tenure at the university has included a remarkable run at the national championship and eight years of football excellence. We hope that he has many more in the future, all of them here at Virginia Tech,” said Tech President Charles Steger. “Frank’s package will be slightly more than one million dollars per year, and the assistant coaches will be receiving base pay raises that will rank the staff salaries number three in the nation.”

ILLIiad software brings recognition

What started out as an effort by the Interlibrary Loan (ILL) department of University Libraries to increase customer service and decrease staff workload has ended in a software license that brings international recognition to University Libraries. Virginia Tech Intellectual Properties, Inc. (VTIP) has finalized terms with OCLC, Inc., the Online Computer Library Center, giving OCLC exclusive world-wide distribution rights to the ILLIiad software.

OCLC is a non-profit, membership, library computer service and research organization dedicated to the public purposes of furthering access to the world’s information and reducing information costs. OCLC has a membership of more than 36,000 libraries in 74 countries. Its WorldCat database contains over 42 million bibliographic records and is the most consulted database in higher education. OCLC’s interlibrary loan functions include a network of 6,700 participating libraries.

In 1996, Harry Kriz, director of Interlibrary services at University Libraries, initiated the software development effort that culminated with the creation of ILLIiad. The goal of that effort was to develop an automated, customer-oriented, paperless interlibrary loan system to provide interlibrary loan and document delivery services to the entire Virginia Tech community, both in Blacksburg and beyond.

From the initial planning stages, the ILL staff worked with Virginia Tech Intellectual Properties to protect the university’s interests in what had the potential to become a widely used system.

ILLIiad went on line at Virginia Tech in March 1997, and shortly thereafter VTIP began receiving inquiries from other libraries interested in acquiring a license to the
Saiful Rahman and William Trantier of electrical and computer engineering (ECpE) received the Third Millennium Medal from the Institute of Electrical and Electronics Engineers. The medal recognizes outstanding contributions made to the engineering profession and to advancements that will be significant in the new millennium. Rahman is the director of the university’s Alexandria Research Institute, and Trantier is the Bradley Professor of Communications in ECpE.

Ted Rappaport, founder of the Mobile & Portable Radio Research Group (MPRG), testified before the House Subcommittees on Telecommunications Trade and Consumer Protection earlier this year during a review of the Federal Communications Commission’s spectrum management responsibilities. In 1999 Rappaport and MPRG graduate students Roger Skidmore and Kirk Carter conducted an analysis of low-power FM radio frequencies. These frequencies would give low-power FM broadcasters, such as schools and churches, access to the airwaves.

Martin Schnitzer, professor emeritus of management, co-authored Government, Business, and the American Economy, with Robert Langran, political-science professor at Villanova University. The book, published by Prentice-Hall, is the 28th Schnitzer has written in the area of economics, political science, and management while at Virginia Tech.

The American Society of Agricultural Engineers has named two faculty members, Eldridge R. Collins Jr. and John S. Cundiff, fellows of the society. To be named a fellow, an individual must demonstrate unusual professional distinction, with outstanding qualifications and experience in the field of agricultural engineering. Only about 2 percent of the society’s active members have achieved the grade of fellow. A 42-year member of the society, Collins is a professor and Extension agricultural engineer in the Department of Biological Systems Engineering. He was honored by the society for his research and advisory contributions in the area of pollution stemming from animal production facilities. Cundiff, a professor in the Department of Biological Systems Engineering, was honored for his dedication to teaching, research, and development of society standards, and his role in planning specialty conferences.

Sandra Kulik, fire safety engineer with Environmental Health and Safety Services, has successfully completed the requirements to obtain designation as a certified fire protection specialist (CFPS). Successful completion of the board examination demonstrates expertise and experience in fire protection and prevention. The CFPS board is administered by the National Fire Protection Association.

Richard E. Sorenson, Pamplin College of Business dean, and Norrine Bailey Spencer, associate dean of the college’s undergraduate programs, recently attended the 2000 Continuous Improvement Symposium of the International Association for Management Education (AACSB). The presentation, “A Collaborative Model for Leadership Development: Changing the Process and the Curriculum,” featured the work of the board of the Virginia Tech Center for Leadership Studies and the multiple minors and concentrations offered in leadership. Sorenson chairs the board and directs the center, and Spencer is a member of the board.

Michael Hughes, professor of sociology, has been appointed editor of the Journal of Health and Social Behavior, a major sociological journal published by the American Sociological Society. The journal publishes articles in medical sociology and is carried by medical-school and social-science libraries. It is known for its articles on the causes and consequences of social stress as well as articles on social factors in physical health, the organization of health care, and health policy.

Chemistry Professor David G. Kingston has been appointed to a four-year term as a member of the Bio-Organoic and Natural Products Chemistry Study Section of the Center for Scientific Review. Members are selected on the basis of demonstrated competence and achievement in their scientific discipline as shown by their accomplishments in the publication of articles in scientific journals, and other significant scientific activities, achievements, and honors. Study sections review grant applications submitted to the NIH, make recommendations on

Mark Schneider, Department of Architecture, received a National Endowment for the Humanities grant of approximately $11,000 to help Maya architecture and culture at the Mayan World Institute in Guatemala, Mexico, and Honduras for six weeks this past summer. Schneider has also had two papers accepted for presentation at conferences: “Geometries of the Modern: Between Structure and Gestalt” was accepted for the ACSA (Architectural Central Region Conference), Wright State University of Michigan, and “Architecture as Masque: The Rehabilitation of Minnesses” was accepted for the Second Savannah Symposium on Authenticity in Architecture to be held at the Savannah College of Art and Design, February 15-17, 2001.

Heiner Schnoedt, Department of Architecture, was the faculty advisor of Nasser Abulhassan, who was a finalist in the International Otis Elevator Sponsored Urban Housing Competition. There were entries from 1,245 students, 166 schools of architecture, and 46 countries. Schnoedt and Abulhassan received sponsored travel to Hong Kong, where Abulhassan received both the Merit Award ($1,000) and the Technology Award for innovative urban technology ($500). The college also received $500. Schnoedt also swept the annual ACSA/Wood Products Council Carl E. Darrow Student Design Competition, taking home seven of eight prizes totaling $8,500.

Warren Kark, Department of Architecture, has been responsible for the development of the campus master plan for Isk University to be constructed in Sile, Turkey, approximately 60 kilometers west of Istanbul. Isk University was founded in 1998 and is currently located in temporary facilities in Istanbul. The campus master plan is totally undeveloped and will be used for the construction of all infrastructure systems in addition to the campus structures. Construction will be phased over five to ten years with a first-phase student body of approximately 3,500 students. The campus will eventually accommodate 10,000 students. Kark will continue consulting on the project through completion.

Kark also made a presentation on University Campus Planning for the 21st Century at the annual national convention of the Society of College and University Planning (SCUP) in Denver Colorado in July.

Flynn L. Auchey, building construction department, has been recognized for his research on Risk Management. Based on positive response to his presentation of a Project Risk Identification and Selection Conference (PRISM tm) at the Project Management Connections 2000 World Conference in September, Auchey was invited to present the Model at the 2nd International Conference on Decision Making in Urban and Civil Engineering, November 21-23, 2000 in Istanbul. The model is designed to help upper management make informed project-selection decisions based on predicted profitability.

Robert G. Dyck, Department of Urban Affairs and Planning, led a People to People Ambassadors delegation of 14 American architects and planners to Prague and Budpest in October. The group met with their counterparts in the planning departments of the two cities as well as with housing, transportation, and historic-preservation officials and private-sector developers. The Ambassadors program was established by President Dwight D. Eisenhower as a means to international understanding and world peace.

Pia Sarpaneva, associate professor of architecture, served as a chairperson in the 8th International Alvar Aalto Symposium “architecture in the year zero,” held in August in Jyväskyla, Finland. She was also a visiting juror at Yale University School of Architecture in October for graduate design studio mid-term reviews.

Faculty members John A. Rohr, Charles Goodsell and Gary Wamsley, and two former adjunct faculty members, James Colvard and Ron Boster, were awarded a submission to the NIH, making recommendations on the applications for the appropriate NIH national advisory council or board, and survey the status of research in their fields.

Kent Holliday of the Department of Music will receive an ASCAP-US Standard Award this year. The cash award is made by the American Society of Composers, Authors and Publishers (ASCAP). It reflects ASCAP’s “continued commitment to assist and encourage writers of serious music,” according to Marilyn Bergman, ASCAP’s president and chairman of the board. Holliday also received an ASCAP Award for 1999-2000 and was selected as winner of the 1998 Virginia Music Teachers’ Association Commissioned Composer Competition.

Prentice Hall has published a second edition of Engineering Vibration, a textbook by Dan Inman, director of the Virginia Tech Research Group on Extension, as a chairperson in the 8th International Alvar Aalto Symposium, he was responsible for the design of a network of forests, was involved in organizing several of the sub- sessions, chairing one of them, organizing the general arrangement of sessions in forest projects, and presenting a paper on the history of forest-products research in IFURO. He participated in the pre-congress session of the IFURO Executive Board and as an honorary member of IFURO in the closing session of the congress. Following the congress he participated in a study of management of national parks in the moist tropical forests of Malaysia.

James E. Johnson, associate dean for outreach and professor of forestry, moderated a technical session and presented a paper entitled “The Forest Bank—An Innovative Program to Manage Forests and Protect Biological Resources on Private Land.” As chair of the Research Group on Extension, he was responsible for coordinating the technical session, including conducting the review, acceptance, and editing of both oral and poster papers.

Bob Smith, associate professor in the Department of Wood Science and Forest Products, presented two papers: “The Development of an Effective Marketing Communication Network for Successful Technology Transfer: An Empirical Study Based on the Diffusion of Portable Timber Bridge Technology” (with graduate student Ren Jye Shiah), and “Identifying and Evaluating the Educational and Training Needs in the Disciplines of Forest Products and Wood Science” (with graduate students Eric Hansen and Scott Bowe). He also attended a post-conference tour that studied the Malaysian rubberwood industry.

Jim Chamberlain, a Ph.D. candidate in wood science and forest products, presented his research in a sub-plenary meeting on non-wood forest products. Chamberlain’s research is focused on managing the natural forests of the eastern United States for non-timber products, including such things as medicinal plants, products for the floral industry, and culinary and edible products.

David Klemerer, professor of forestry, presented a paper, “Does Discounted Cash Flow Exaggerate the Advantage of Borrowing?” served as a post-conference, and moderated a session on “Forest Management Planning and Managerial Economics.”

Scott M. Salom, associate professor of entomology with a courtesy appointment in the department of forestry, gave an invited paper entitled “Hemlock Woolly Adelgid in the United States: Status of Ongoing Biological Control Efforts,” and co-organized and co-moderated a session on “Insects Affecting Reforestation.”

Achiveers
A LETTER TO THE FACULTY

This is a letter of request to you. The Faculty Senate has unanimously passed its new Constitution but now needs your help in making this change official. This important task of streamlining senate procedures and bringing them up to date with current university realities involves faculty governance within the university through the senate.

Your senate has been in the process of updating the Faculty Senate Constitution and Bylaws during the past six months. We realized last year that it had been many years since the constitution was last revised. Many changes have since occurred within the university, not least of which was the transition from the quarter system to the semester system. More importantly, we recognized that the size of the Senate Committee on Reconciliation is not substantial enough to handle the increased level of responsibilities.

During my tenure as a senator and now as president I have come to realize how few faculty are aware of the senate and its roles. Briefly, the senate:

Serves as the only independent forum for shared governance; Provides a peer structure for counseling, intervention, and self-policing through the critical work of its Ethics Committee, and Bylaws within which we will collect votes. Your college or school's Faculty Senate's web site at www.facultysenate.vt.edu and view the constitution, bylaws and the governance chart.

directly represents faculty needs to the General Assembly and to the media; Provides a peer structure for counseling, intervention, and self-policing through the critical work of its Ethics Committee, Commission on Reconciliation, and Faculty Review Committee; Makes or nominates appointments to all university committees and commissions.

The governance chart published above illustrates faculty governance within the university through the senate.

At the beginning of Spring Semester, you will find a hard copy of the revised Constitution and Bylaws in your mailbox along with a ballot. We will also distribute electronic versions and Bylaws in your mailbox along with a ballot. We will also distribute electronic versions of the Constitution. Please vote.

Mitzi R. Vernon, President Faculty Senate vernon@vt.edu

FRIDAY, December 1, 2000 SPECTRUM 3

VMRCVM’S Lindsay honored by parasitology society

By Jeffrey S. Douglas

Parasitologist David S. Lindsay, associate professor in the Virginia-Maryland Regional College of Veterinary Medicine, was recently recognized with the most distinguished honor conferred by the American Society of Parasitology.

Lindsay, a member of the Department of Biomedical Science and Pathobiology, was presented the Henry Baldwin Ward Medal for 2000. Lindsay received the award during the society’s annual meeting in San Juan, Puerto Rico.

Lindsay has been a major figure in international parasitology research for much of the past two decades. Much of his work has involved the examination of the protozoal parasites causing diseases like cryptosporidiosis, coccidiosis infection in pigs, and toxoplasmosis.

More recently, he has been recognized for his work as part of a USDA-funded team that made a major breakthrough in the understanding of an economically significant parasitic disease afflicting cattle. Working in the college’s Center for Molecular Medicine and Infectious Disease, Lindsay and colleagues demonstrated that the dog is a “definitive host” for Neospora caninum, a single-celled parasitic organism which causes pregnant cows to abort their fetuses.

He has also been working on an improved diagnostic test for equine protozoal myelitis (EPM), a fairly recently identified disease which causes a range of neurological problems in horses.

In the Ward Medal acceptance speech, Lindsay attributed the honor to “a great deal of luck and association with extremely talented people.” He then chronicled the scientists and the organizations he has been affiliated with during a career that has coincided with major advancements in the field of parasitology.

Lindsay worked at Auburn University and the American Parasitology Institute at Beltsville, Maryland before joining the Virginia Tech faculty in 1997.

A LETTER TO THE FACULTY
Seminar addresses challenges for high-bandwidth communications

By Jeanne M. Garon

Virginia Tech will sponsor the fifth event in its Executive Forum in Information Technology series on December 11 at the Omni Hotel in Richmond.

The seminar, "The Last Mile to Virtual Communities: Putting the ‘E’ in Economic Development," will address challenges and potential solutions to linking high-bandwidth communications to homes and businesses affordably, while stimulating demand for and full use of electronic e-commerce, e-government, and e-learning applications.

"The rapid growth of the Internet, increased dependence on information or data in all sectors of society, and the tendency world wide to deregulate telecommunications for global commerce have fueled our nation’s and state’s appetite for access to greater bandwidth and the commerce, government, and learning applications it enables," said Anne Moore, director of information technology initiatives at Virginia Tech. "This seminar is one in a series designed to bring Virginia Tech’s expertise in information technology (IT) to the professionals most in need of it, while also facilitating new dialogue on IT issues throughout the commonwealth."

The seminar aims to connect representatives from major telecommunications providers with local and state government officials, business owners and managers, and city and county officials. Issues to be explored include the regulatory environment, how best to leverage new electronic applications for business, government, and education, and how best to apply resources such as Net.Work.Virginia and VirginiaLink to economic-development needs.

The seminar features plain-language discussions, audience-interactive format, emphasis on broadband network options available in Virginia today, and will showcase network-based projects already under way across the state.

Clinton Miller, commissioner of the State Corporation Commission, will deliver the luncheon address, while the afternoon panel discussion will include economic-development officers and infrastructure managers from several Virginia counties. The forum, which is under way. Since 1964, the fellowships have offered a select group of outstanding men and women a year-long opportunity to participate in government at the highest levels. Between 11 to 19 fellows are chosen each year to serve as full-time, paid assistants to members of the cabinet and senior White House staff. Fellows also participate in an education program of speakers and travel that complements their work assignment. February 1 is the application deadline.

An applicant must be a U.S. citizen. Employees of the federal government are not eligible unless they are career military personnel. Applicants should be out of school and working in their chosen professions, and are expected to have a record of remarkable achievement early in their careers, the potential to be leaders in their professions, and a proven commitment to public service. There are no formal age restrictions, however, as a result of the selection criteria, the average age of fellows is typically 31-33. Fellowships are awarded on a strict non-partisan basis.

For more information and to receive an application, visit www.whitehousefellows.gov.
**Computed-radiography service added at equine center**

**By Jeffrey Douglas**

Non-invasive imaging capabilities at the Marion duPont Scott Equine Medical Center at Leesburg, Virginia have been significantly enhanced with the acquisition of an advanced computed-radiography system. The university-affiliated equine hospital becomes one of just a few veterinary-referral centers in the country to offer the service, according to center officials.

"This computed-radiography system raises the standard of medical imaging at the Equine Medical Center," said Nat White, assistant director for clinical services. "This new technology not only provides optimal diagnostic service for horse owners, but it also expands our opportunities for teaching and research."

The new Fuji radiography system produces a highly refined digital image which is useful for evaluating both orthopedic and soft-tissue problems. The image can be digitally enlarged and/or enhanced to reveal problems that cannot be identified using less-advanced imaging technologies like standard film x-rays and roentgenography. Digital images from computed radiography can be stored in a variety of media and formats, easily archived with patient records, and can be transmitted electronically throughout the world on the internet, White said.

The new computed-radiography service was made possible through the generosity of several donors who supported the project. Recognizing the urgent importance of providing Equine Medical Center clients and patients with the most advanced diagnostic-imaging technologies available, Bertram R. Firestone and wife, Jean Ellen Shehan, and Irwin Wayne Uran, and an additional anonymous donor provided gifts to purchase the equipment.

The Marion duPont Scott Equine Medical Center, located in Leesburg, is one of three campuses operated by the Virginia-Maryland Regional College of Veterinary Medicine, a two-state professional school with major campus facilities at Virginia Tech in Blacksburg and the University of Maryland at College Park. The Equine Medical Center offers 24-hour emergency referral service along with surgical, medical and diagnostic services.

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**Rudd named to IAMS position**

John C. Rudd, finance implementation team leader for Virginia Tech’s Administration Information Systems, has accepted an appointment as the university’s director of internal audit and management services, effective December 1.

Lenwood McCoy has been serving as director of internal audit and management services for one year while the search for a new director was under way, and was recently named to the position of associate vice president for special initiatives.

Before coming to Virginia Tech, Rudd served as an auditor with the Commonwealth of Virginia’s Auditor of Public Accounts. In 1990, he came to Virginia Tech as manager of general accounting and data control in the Controller’s Office, and has since served as assistant team leader for the Banner Payroll and Human Resources Implementation Team, and as team leader for the Banner Finance Implementation Team. His audit, accounting, and administrative initiatives. He recently completed the state plan for rural health care for a new Medicare program, and he currently holds a research grant from the National Telecommunications and Information Agency to examine the structure and resource systems of community technology centers in disadvantaged neighborhoods.

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**Pettinger receives Preston award**

By Susan Trulove

Terry Pettinger has won the Virginia Tech 2000 William Preston Thesis Award. The award is the university’s highest academic award for master’s-degree students.

Her advisor, English Professor Thomas Gardner, said, "We are attempting to isolate and describe a certain intellectual tension that runs through the six books of poetry that Jorie Graham has written in the last two decades."

The thesis is "Where Intellect and Intuition Converge: Epistemological Errancies in the Poetry of Jorie Graham."

Graham is the major American poet of her generation, having won a Pulitzer prize and a MacArthur "genius" award, and been appointed to a Harvard professorship. But her work is "admirable for its power and potential to allow us to work out our deepest problems," Gardner said. "Words seem limited or corrupt or narrow or too slow; they’re only used to sell things; nobody trusts them."

Pettinger’s thesis "supplies an entrance for Graham’s often-bewildered readers, and, by exploring Graham’s structures in a broad, conceptual manner, makes clear the resonances of Graham’s experiments in the culture at large."

As a result of his discovery, Quinn received the Virginia Outstanding Faculty Member Award in 1991 and received the Virginia Tech Alumni Research Award and a University Distinguished Professorship in 1985. His more recent work is also drawing wide attention. Last year he was a visiting professor at Harvard and Stanford, and he has been invited to give the Cairns lecture at the University of Illinois in November. This summer he will be one of the principal lecturers at a European Union conference in Trieste, Italy.

At Virginia Tech, he is part of the computer-testing project in the math department. "Our goal is to have computer-based testing in as many courses as possible. This will remove routine burdens on faculty members so that they can spend more time with the students." He also directs a number of graduate students.

Hatziou, who has been a member of AAAS since 1979, was named a fellow on the basis of his "research and outstanding scholarly contributions advancing the knowledge of mechanisms of actions and selectivity of herbicides."

I have received numerous awards from other organizations in the past," Hatziou said. "However, I am honored to receive the AAAS Fellow Award is a great honor."

The tradition of AAAS Fellows distinction began in 1874. Prospective fellows may be nominated by the steering group of their section, by three fellows, or by the association’s executive office. The AAAS Council, which is the policymaking body of the association, votes on the final list.

Hatziou joined the Virginia Tech faculty (See FACULTY ON 5)
The following classified positions are currently available. More details of these positions, specific application procedures and position-closing dates may be found on the Personnel Services web site at http://www.ps.vt.edu. Available positions are also listed on the Job Line, a 24-hour recorded message service. For information on all job listings, call 1-5300. Some of the following positions include state benefits. Positions with numbers beginning with a "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

Academic Certification Specialist, 000044R, Pay Band 3, University Registrar.

Accounting Associate, 001060H, Pay Band 3, RDP/Business Services.

Administrative/Research Assistant, 007674T, Pay Band 4, ECE.

Administrative Assistant, 002811R, Pay Band 3, Executive Vice President.

Administrative Associate, 006519L, Pay Band 3, University Development.

Administrative Associate, 002202L, Pay Band 3, University Development.

Admissions Plans/Clearances Team Member, 001534R, Pay Band 3, Graduate School.

Animal Care Supervisor, 006998J, Pay Band 4, Veterinary Teaching Hospital.

Animal Care Technician, 002281T, Pay Band 3, Biology.

Animal Care Technician, 007617M, Pay Band 2, VMES.

Animal Care Technician, 002817M, Pay Band 2, Veterinary Teaching Hospital.

Assistant Manager, 006522H, Pay Band 3, RDP/Dietrick Express.

Banquet Manager (Food Operations Manager Assistant), 001192G, Pay Band 5, DBHCC.

Business Development Director, 007568T, Pay Band 5, ECE/MPRG.

Buyer Specialist, 004848F, Pay Band 4, Purchasing.

Computer Systems Engineer, 006691J, Pay Band 5, RGS.

Computer Systems Engineer, 001494T, Pay Band 5, CS.

Computer Systems Engineer, 007691T, Pay Band 5, ESM.

Computer Systems Engineer, 000180T, Pay Band 5, CS.

Data Warehouse Architect, 006930L, Pay Band 5, ISC.

Database And Application Development Specialist, 007205L, Pay Band 5, RGS.

Development Associate for Student Calling Program, 007628L, Pay Band 3, University Development.

Director, Gift Accounting/Constituent Record Management, 001540L, Pay Band 5, University Development.

Dishwash, 002947H, Pay Band 1, RDP/Shultz Dining Center.

Editor, Virginia Tech Magazine, 000654L, Pay Band 5, University Relations/Outreach Communications.

Editor/Communications Coordinator, 007681G, Pay Band 5, QIRD.

Electrical Engineer, 005665G, Pay Band 3, Physical Plant.

Electronics Technician, 007655J, Pay Band 4, VTTI.

Enrollment Services Specialist, 001311R, Pay Band 3, Graduate School.

Executive Chef, 000266H, Pay Band 4, RDP/Shultz Dining Center.

Executive Secretary Senior, 007696R, Pay Band 3, University Special Initiatives Office.

Fiscal Technician, 002560M, Pay Band 3, Veterinary Teaching Hospital.

Fiscal Technician, 007697R, Pay Band 3, CTR.

Three full-time food-service positions available.

Honor System Operations Manager, 007648R, Pay Band 3, University Honors—Provost.

Housekeeping Worker, 001631G, Pay Band 1, DBHCC.

Housekeeping Worker, P002005C, Pay Band 1, Physical Plant.

Housekeeping Worker Senior, 006326H, Pay Band 1, RDP.

Housekeeping Worker Senior, 002745H, Pay Band 1, RDP.

Lab Specialist, 001972M, Pay Band 3, Veterinary Medicine—MDL-Academic Affairs.

Mail Clerk, 006695R, Pay Band 2, Undergraduate Admissions.

Medical Technologist, 002596J, Pay Band 4, Veterinary Teaching Hospital.

Medical Technologist (Surgical Ward Technican), 2637J, Pay Band 4, Veterinary Teaching Hospital.

Office Assistant, 007677T, Pay Band 2, VBI.

Office Manager/Administrative Assistant, 000899T, Pay Band 3, ChemE.


Potwash, 007059H, Pay Band 1, RDP/Dietrick Dining Center.

Program Support Technician, 000287T, Pay Band 3, Student Financial Services.

Public Relations Specialist, 007687T, Pay Band 4, ME.

Receptionist/Secretary, 006599L, Pay Band 3, University Registrar.

Security Guard, 002470Q, Pay Band 2, Police.

Security Guard, 002470Q, Pay Band 2, Police.

Security Guard, 002470Q, Pay Band 2, Police.

Security Guard, 002470Q, Pay Band 2, Police.

Storekeeper, W022281J, Pay Band 2, Veterinary Teaching Hospital.

Switchboard Operator, W022101A, Pay Band 2, CNS.


Web Software Developer, W023176A, Pay Band 5, CNS.

OFF CAMPUS

3-H Program Assistant, 000652M, Pay Band 3, VCE—Culpeper.

Announcer Of Classical Music, 001700L, Pay Band 3, WVTW.

Enrollment Program Assistant, 002091J, Pay Band 3, University Relations/WVTW Radio.


Television Systems Engineer, 007160R, Pay Band 4, Virginia Tech Roanoke Center.

Underwriting Account Executive, 001963L, Pay Band 3, WVTW.

INSTRUCTIONAL


NON-INSTRUCTIONAL

Virginia Tech Transportation Institute. Research Associate/Engineer. Contact: Tracey Schroeder, 3500 Transportation Research Plaza (0536). Open until filled.

Virginia Tech Transportation Institute. Research Associate. Contact: Tracey Schroeder, 3500 Transportation Research Plaza (0536). Open until filled.


ACHEIVERS
Continued from 2

Marketing professor Jim Littlefield discussed the status of reform in China at a conference entitled, “China: Opportunities and Challenges for Virginia Exporters” at Radford University on October 4. Littlefield has been organizing and leading students on study tours to China every summer for close to eight years. A group of faculty members and graduate students affiliated with the Center for Wireless Telecommunications participated in the “Wireless Caucus Kickoff” on Capitol Hill in September. Held to promote the wireless telecommunications industry, the event was sponsored by the Congressional Wireless Caucus and organized by the Cellular Telephone Industry Association.

The Tech delegation included faculty members Liching Sung (communications studies), Steven Smith (finance) Charles Bostian (electrical and computer engineering), and graduate student Christian Rieser (electrical and computer engineering). They presented a poster display prepared by Cortney Martin (Communications Network Services) and answered questions from members of Congress, their staffs, and visitors from industry and government.

Virginia Tech was the only university invited to participate. The invitation recognized the university’s leading interdisciplinary research, development, and deployment activities in broadband wireless telecommunications.

Kristin Makovec, a master’s degree student in aerospace and ocean engineering (AOE), is co-author of a paper that won second place in the student paper competition during the American Institute of Aeronautics and Astronautics Conference on Small Satellites held in August at Utah State University. Makovec and two other graduate students—one from Utah State and one from University of Washington—presented their research on a segment of the on-going Ionosphere Observation Nanosatellite Formation project. The students are designing and building three research satellites that will be launched by NASA from the Space Shuttle. The satellites, currently in the initial construction phase, are scheduled to be launched in May 2002. Makovec’s paper describes specifications for cameras that will be used for sun- and earth-horizon sensing on each satellite. Chris Hall of AOE is the faculty adviser for the Virginia Tech “HokieSat” project.

Michael O’Brien, professor of industrial design in the College of Architecture and Urban Studies, was recently co-curator of the special exhibit “Wood, An American Tradition” at the National Building Museum in Washington, D.C. The exhibit runs through April 2001. O’Brien worked for over a year on this project—traveling, researching, writing, collecting wood-product examples, and working with craftsmen to construct a exhibit highlighting wood architecture, technological advances in wood construction, the material’s cultural significance, and its future use in society.

Jamie L. Callahan received the “Receiving Edge Award” from the Academy of Human Resource Development. Callahan’s paper, “Emotion Management and Organizational Functions: A Study of Action in a Not-for-Profit Organization,” was presented at the International Research Conference and selected as one of the 10 best from over 200 papers presented.

Rosemary Bliessner and Michael Sporakowski were selected fellows within the National Council on Family Relations. Bliessner has established herself as a well-funded and well-published researcher in the area of families and aging and has made a particular contribution through her research on older women’s support networks. Sporakowski, professor and department head of human development, served as president of NCPR, vice president for publications, and editor of “Family Relations.” He has also been honored with the Distinguished Service to Families Award because of his national, regional, and local service on behalf of families.

Glenn Earthman was invited to speak at Cornell University’s lecture series on community building. Earthman’s talk was “Considerations of Comprehensive Land Use and Planning for School Buildings.”

The International Graphic Arts Education Association (IGAEA) has presented the Fred J. Hartman Award to Mark Sanders, associate professor in the Technology Education Program, Department of Teaching and Learning. The Hartman award is given annually to an IGEA member who has devoted many years of service to the Association, and in addition, is nationally recognized through contributions and accomplishments in graphic arts teaching, research, and/or service.

Jim LaPorte, technology education, presented an invited paper titled “Technology Education: from Theory into Practice” at the Chile Technology Education Symposium. The symposium was held in July at three locations: La Serena, Santiago, and Concepción. LaPorte’s paper will be published in the Chilean Ministry of Education and with teacher educators at the University of Play Ancha in Valparaiso regarding the implementation of technology-education programs. LaPorte joined five other international invitees at the symposium, representing South Africa, England, the Netherlands, Germany, and Australia. LaPorte also participated as one of six international invitees at the Finland Technology Education Seminar held in Oulu, Finland. He presented a paper entitled “Technology Education in the United States: A Critical Examination of the Change Process.” The purpose of the seminar is to develop in-service programs for technology-education teachers and to plan a Technology Center featuring interactive exhibits of contemporary technology.

R. Bruce Hall, associate professor of forestry, has co-edited Restoring Nature. Perspectives from the Social Sciences and Humanities with Paul H. Gobstger, a scientist with the USDA Forest Service. Hall specializes in outdoor recreation. Using a recent controversy over ecological restoration efforts in Chicago as a touchstone for discussion, Restoring Nature explores the difficult questions that arise during the planning and implementation of restoration projects in urban and wildland settings. The book is an intriguing exploration of human nature interactions and how values and understanding of nature, as a guide to policy, will provide new insights and practical solutions for anyone working to manage or restore natural ecosystems.

The VMRCVM’s Drug Information Laboratory was recently recognized by the Institute for Scientific Information (ISI) for its on-line version of the FDA Green Book. Published by the Food and Drug Administration’s Center for Veterinary Medicine, the Green Book contains detailed product and licensing information about all government approved animal drugs. The digital publication will now be included in the ISI’s on-line awareness database called Current Web Contents. Current Contents, a database that provides information in the fields of science, social science, technology, and the arts, recently created Current Web Contents, which daily updates the database and an option to link to selected and evaluated web sites. Following passage of the Generic Animal Drug and Patent Term Restoration Act in 1988, the laboratory began publishing a print version of the FDA Green Book in 1989 and has published it annually ever since. The laboratory is the Food and Drug Administration Center for Veterinary Medicine’s Approved Animal Drug Database which is used to produce both versions of the Green Book.

The reference guide includes information on animal drugs’ trade names, generic names, label indications, patent information, and other related facts.

Robert A. Martin, director of the VMRCVM Veterinary Teaching Hospital, has been named president of the American Association of Veterinary Clinicians (AAVC). That 600-member organization includes veterinarians based at colleges, institutions and veterinary practices who are engaged in teaching, service, and/or research in clinical veterinary medicine. As president-elect, Martin served as program chair for the recent AAVC forum held in Seattle in conjunction with the annual meeting of the American College of Veterinary Internal Medicine. He will also plan and preside over an upcoming conference in Arlington, Virginia entitled “Education in the 21st Century” that will focus on the value of practice-based veterinary education.

The AAVC operates the Veterinary Internship/Residency Matching Program and provides programmatic leadership for veterinarians seeking post-DVM training in internal medicine, surgery and other specialties.

David S. Lindsay, associate professor, Department of Biomedical Science and Pathobiology, was presented the Henry Baldwin Ward Medal for 2000, the most distinguished honor conferred by the American Society of Parasitology. Lindsay received the award during the society’s annual meeting in San Juan, Puerto Rico in June. Lindsay has been a major figure in international parasitology research for much of the past two decades. He has most recently been recognized for his work as part of a USDA-funded team that made a major breakthrough in the understanding of an economically significant parasitic disease afflicting cattle.

Lindsay is also working on an improved diagnostic test for Equine Protozoal Myelitis (EPM), a fairly recently identified disease which causes a range of neurological problems in horses.

Scientists in the VMRCVM Laboratory for Neurotoxicity Studies (LNS) and the Immunotoxicity Risk Assessment Laboratory (IRAL) are well under way on an almost $1-million research contract from the U.S. Army designed to assess how stress affects health. The chemicals studied include chlorpyrifos, which is commonly used in insecticides, and triorthotolylphosphate, commonly used as an additive in everything from jet fuel to plastics and lubricants. Faculty members involved with the project include Bernie Jortner, associate professor, Marion Ehrich, professor, Steven Holland, associate professor, and Hara Misra, professor, all in the Department of Biomedical Sciences and Pathobiology. The work is directly related to efforts undertaken by military, governmental, and medical officials to critically examine what has been referred to as “Gulf War Illness.” Victims of Gulf War Illness report a number of maladies, ranging from malaise to neurological disorders and immuno-suppression.

THEORETICAL
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Physics Letters), acting only as a switch but also as an amplifier. Naturecolumnist Philip Ball hailed the work in a “Science Update” article titled “Painless Gain” (Nature, June 2, 2000).

The transistor’s role as an amplifier is critical to ensure that signals remain strong as they pass from place to place. “So far, obtaining gain from a single-molecule device has been a big stumbling block for molecular electronics,” Ball wrote. “Now Massimiliano Di Ventra...and his colleagues have shown that this hurdle is, in principle at least, surmountable.”

Benzene is a common molecule made up of six carbon atoms forming a hexagon on a plane. It is abundant and cheap to manufacture. Di Ventra, Sokrates Pantelides, a colleague in physics and astronomy at Vanderbilt University, and Norton Lang of the IBM Research Division in New York, did a computer simulation of a benzene molecule sandwiched between two gold electrodes (the source and the drain) and applied an electric field perpendicular to the molecule (the gate field).

In the theoretical simulation with the benzene molecule, the electrons and sound of the two gold electrodes connected to the benzene molecule by sulfur atoms. The gate consists of two charged metal disks above and below the molecule and between the electrodes. The electrons flow from source to drain, but the gate field can be adjusted to control the electron flow. With low voltage at the gate field, there is a very low probability of electrons tunneling across the molecule, Di Ventra said. By increasing the gate field, electrons formed between source and drain and electrons can tunnel across the molecule easily, allowing a large current flow. This electronic bridge is called “resonant-tunneling.” Thus, the molecule acts as a switch, and the signal is amplified by the gate as in conventional field-effect transistors.

“Now, tunneling destroys chips if they are too crowded, but, with what we’ve shown, the phenomenon to our advantage,” Di Ventra said. “We demonstrated that single molecules can do the same job as transistors. But these single elements need to be combined to form molecular chips. This is a major technological problem. It is like in the 1940s when the transistor was invented: It took 25 years before transis tors could be put together in integrated circuits.”

“The next step in molecular electronics is to develop a component that will replace the ones we use in our computers,” he said.

See another article about Di Ventra’s work in the National Partnership for Advanced Computation Infrastructure’s EnVision Science magazine, at www.npaci.edu/envision/v1613/ pantelides.html.
ILLIAD
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ILLIAD system. However, there was no one to support the system at that time. The breakthrough came when VTIP entered into an agreement with Atlas Systems, Inc. to provide future development and technical support for the ILLiad software. Atlas Systems is a Virginia company started by the original programmer of the ILLiad system.

Dan Specht, business manager at VTIP who handled the marketing of the ILLiad system, said ‘finding Atlas Systems was really the key to the whole deal. Software without technical support or enhancements to keep it current has only a limited value. We were lucky to have a company founded by the initial developer available to take on this role.’

With the support and development agreement in place, VTIP began licensing the ILLiad system, completing over 40 licenses in just under two years. Some of the facilities licensing the ILLiad system included California Institute of Technology, Cornell University, the University of North Carolina, Harvard Medical School, Brigham Young University, and Case Western Reserve University.

“I think this rapid success and the caliber of schools we were able to attract is what put us on the scope at OCLC. After one demonstration at the OCLC headquarters, they were talking about how they could benefit from having access to the software,” Specht said.

Kriz believes that ILLiad’s commercial success is due to three major factors rooted in Virginia Tech’s approach to innovation. First, the university’s training programs in process improvement led the ILLiad department to envision ILLiad as a conceptual model of the inter-library-loan process. This conceptual model was later implemented in software. This development approach gives ILLiad enormous flexibility and adaptability to the needs of many other institutions.

Second, the clerical staff’s enthusiasm for finding innovative ways to improve library public services and for working with new and complex technology drove much of the development process. Finally, the encouragement and very active support of Virginia Tech Intellectual Properties was critical in establishing ILLiad as a viable commercial product.

The terms of the license with OCLC should make it one of the largest in the history of VTIP and will provide significant support to the library, Specht said. But more importantly, now libraries throughout the world will be using a program developed by the ILL staff at Virginia Tech.

Dean of Libraries Eileen Hitchingham said the creation of ILLiad anticipated the university’s increasing emphasis on serving a growing community of faculty members and students who may not always be located in Blacksburg. "ILLiad provides a responsive, interactive means by which students and researchers on Tech’s Extended Campus can obtain library materials from the Blacksburg campus libraries or through interlibrary loan from other institutions. We’ve been able to deliver photocopies and even books to faculty members and students all over North America, in Europe, and in southeast Asia because of ILLiad. I hear more spontaneous rave reviews about ILLiad from faculty members and students than for any other library service I have experienced over my whole career.”

Rudd.
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and information systems experience, as well as his project management skills and interactive skills with members of the university community, provide him with the qualifications to serve in this role and move the department forward.

One of Rudd’s first tasks will be to implement a management-services function within the office.

During December, McCoy will complete his work on audits currently under way, and Rudd will finish commitments to the Banner Finance project to effect a smooth transition in the Internal Audit Department.

In January, McCoy will devote full time to his new role as associate vice president for special initiatives, working with Leonard Ferrari, vice provost for special initiatives.

BOHLAND
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we will be successful if we develop a sense of trust among all groups at Virginia Tech. The creation of a greater sense of trust is one of the important responsibilities that those in administrative positions must assume over the course of the next 10 years.”

The university seeks a rating among the top-30 research universities in America as represented in the National Science Foundation’s Survey of Research and Development Expenditures at Universities and Colleges. This annual report is the primary source of information on separately budgeted research and development expenditures within academia in the United States and outlying areas. The results of the survey are sometimes used to assess trends in R&D expenditures. For more information, see http://www.nsf.gov/sbe/srs/ sxreu/start.htm.