By Larry Hincker
Wake Forest University and Virginia Tech announced plans Tuesday to establish a joint school of biomedical engineering and science. The Virginia Tech–Wake Forest University School of Biomedical Engineering and Sciences will be operated jointly at each school’s campus.

“This is a natural partnership between Virginia Tech, with no medical school and Wake Forest, with no engineering school. We are extremely excited about affiliating with a highly respected university like Wake Forest,” President Charles W. Steger said.

“Improvements in human health are increasingly the result of cooperative advancements in medicine, science, and engineering. We offer to each other access to leaders in their respective fields,” said C. Douglas Maynard, interim dean of the Wake Forest School of Medicine.

Operationally, the school will be run jointly by Tech’s College of Engineering, the Virginia Maryland College of Veterinary Medicine, and the Wake Forest University School of Medicine.

The joint plan for the schools will be to offer the M.S. and Ph.D. degrees in biomedical engineering (BME) and to be the focus of collaborative research. Elaine Scott, director of the Virginia Tech’s Center for Biomedical Engineering and author of the original proposal, said “We expect about 80 students within about five years. Tech currently has 30 students in the BME graduate option and Wake has seven, so a total enrollment of about 80 students is quite achievable.”

Scott sees joint instructional and research programs initially focusing on a) biomechanics, and physics and two large auditoriums, as well as several research labs. University planners hope to have the bid process under way within days and have the building under construction before the end of the year. The project had been in limbo since Gilmore froze all capital-construction projects through-out the state earlier this year because of a state funding shortfall. The new building will replace Davidson Hall, constructed in 1928.

The Board of Visitors Executive Committee has approved a “collaboration agreement” between the university and the proposed Edward Via Virginia College of Osteopathic Medicine. The agreement spells out responsibilities of each school and sets the stage for further negotiations.

“These are the first concrete steps necessary to helping make the Via College of Osteopathic Medicine a reality,” said James Bohland, senior fellow for biomedical, bio-engineering, and health projects. Bohland is responsible for negotiating the university’s part in the new school.

Commenting on the strategic nature of this partnership, President Charles Steger said, “This is in concert with new directions for the university. Our affiliation with Carilion on biomedicine, our new bio-informatics institute, the collaboration with the Via Osteopathic College, and the partnership with Wake Forest on biomedical engineering, all steer us in the direction of research in human health.”

In August, the Harvey W. Peters Foundation announced plans to establish the new medical college in Blacksburg. It has filed papers, hired a dean, and ultimately plans to enroll its first class of students in the fall of 2003.

The collaborative agreement allows for the contractual use of university facilities and offices by the medical college. Actual services and costs are yet to be negotiated, but it is envisioned that the new school might draw upon typical academic support and student services such as those of the Office of Sponsored Programs, Institutional Review Board, Printing Services, Parking and Transportation, and Physical Plant, Library, Health Services, and Food Services.

It is also expected that the medical college would contract for the use of certain university facilities for teaching and research. It intends to hire selected faculty members from Virginia Tech under a contract-reimbursement basis to teach some courses. The medical college also will have its own full-time faculty but those who perform research will have joint appointments at both schools.

According to John Rocovich, chair of the Harvey Peters Foundation, the medical college plans to locate in the Virginia Tech Corporate Research Center near the Ramble Road entrance. It will begin building its first building in 2002 and will be ready for the first incoming class in fall 2003.

Mark McNamara, university provost, likes the dual teaching and research mission of the new partner. “We see opportunities for collaborative medical research between their faculty and ours. We have strengths in...”

(See VTPD on 4)
**Events**

Friday, 19
- Last Day to Resign.
- AWA Speaker. 3 p.m., 100 Cowgill.
- International Club, details TBA.

Saturday, 20
- VT Open House.
- Campus Clean-up Day, 2 to 5 p.m., War Memorial Hall.
- Chamber Music, 8 p.m., Squires Recital Salon.

Sunday, 21
- VT Open House.
- YMCA Hike, 1:30 p.m., YMCA Parking Lot.
- Chamber Music, 3 p.m., Squires Recital Salon.

Monday, 22
- Faculty Development Workshop, 10 a.m. to noon, 1120 Torgersen.
- Family, Work/Life Resources Program, noon to 1 p.m., DBHCC room G.
- Faculty Development Workshop, 3 to 5 p.m., 1120 Torgersen.

Tuesday, 23
- Faculty Development Workshop, 10 a.m. to noon, 1120 Torgersen.
- CITICYF Grand Opening, 11 a.m., Wallace atrium.
- Faculty Development Workshop, 3 to 5 p.m., 1120 Torgersen.

Wednesday, 24
- YMCA Open University Registration, 9 a.m. to 6 p.m., YMCA Office.
- Faculty Development Workshop, 10 a.m. to noon, 3060 Torgersen.
- Faculty Development Workshop, 12:30 to 1:30 p.m., location TBA.
- Faculty Development Workshop, 1:30 to 3 p.m., 3060 Torgersen.
- Faculty Development Workshop, 3 to 5 p.m., 3060 Torgersen.
- CEUT Program, 4:15 to 6 p.m., Hillcrest large conference room.
- “With Good Reason,” 7 p.m., WVTF.
- VT in Spain Information Meeting, 7 p.m., 327 Major Williams.

Thursday, 25
- YMCA Open University Registration, 9 a.m. to 6 p.m., YMCA Office.
- Faculty Development Workshop, 10 a.m. to noon, 1140 Torgersen.
- YMCA Slide show, noon, Cranwell Center.
- CEUT Program, 3 to 5 p.m., DBHCC.
- Faculty Development Workshop, 3 to 5 p.m., 3060 Torgersen.

Friday, 26
- YMCA Open University Registration, 9 a.m. to 6 p.m., YMCA Office.
- International Club, details TBA.
- New River Valley Symphony, 8 p.m., Burruss auditorium.

**Seminars**

Friday, 19
- MCBB, 12:30 p.m., 102 Fralin: Marvin Cassman, NIGMS.
- VIA—CEE, 2:30 p.m., 100 Hancock: Glen Daigger, CH2M Hill.

Monday, 22
- Biochemistry, 4 p.m., 223 Engel: Andrej Sali, Rockefeller.

Wednesday, 24
- Human Development, noon, Wallace atrium: Joyce Arditi.
- ESM, 4 to 5 p.m., 110 Randolph: Takaru Igusa, Johns Hopkins.

Thursday, 25
- Geological Sciences, 4 p.m., 4069 Derring: Shelley Kenner, Kentucky.

Friday, 26
- MCBB, 12:30 p.m., 102 Fralin: Jim Maller, Colorado.

**Information-technology center holds grand opening**

IAWA advisor to lecture
Brinda Somaya, Indian architect and International Archive of Women in Architecture (IAWA) advisor will speak on village earthquake rehabilitation, urban architectural issues in India, and architecture by Indian women architects today at 3 p.m. in 100 Cowgill.

Seminar on evaluation of instruction offered
The Office of the Provost, CEUT, CIL, and IDDL will present a seminar, “The Evaluation of Instruction,” today from 8:30 a.m. to noon in 150 Squares. Margaret Miller, president emerita, AAHE will present the invited address, “The Scholarship of Teaching and Learning.”

By Jean Elliott
The Center for Information Technology Impacts on Children, Youth, and Families (CITICYF) will celebrate its grand opening on Tuesday, Oct. 23, at 11 a.m. in the Wallace atrium.

Peggy S. Meszaros, director of the center, plans to use the opening as an opportunity to hear reports on the first research mini-grants awarded to faculty members. The CITICYF, which was established on Nov. 1, 2000, will also recognize founding center affiliates.

The focus of CITICYF is to examine how continued growth in technology affects children, youth, and families. Through research and outreach, the center provides critical insights and data on issues of concern to families, educators, policymakers, and business and agency leaders.

The center’s initial research explored the appropriate use of technology in home and academic settings. Lynn Hill, an assistant professor in human development, along with Kelly Wells and Angela Primavera, studied the use of technology in Virginia Tech’s Child Development Lab School. They found that many children in the four-to-five age range already had extensive knowledge of the computer.

Many were already capable of using word-processing programs to write simple letters. Others were skilled with drawing programs, scanners, and printers. A few of the children understood many of the intricacies of searching the World Wide Web for information. Three-year olds were intrigued with computers and scanners, but not as proficient. While their work was exploratory in nature, they were quick learners.

Kathleen Carico, assistant professor in teaching and learning, examined how the discussion of literature is affected when K-12 teachers and Extension specialists use technology in their instruction. Interdepartmental team members were Ann Hertzler and Denise Brockett (human nutrition, foods, and exercise), Daisy Stewart and Greg Sherman (teaching and learning), and Nancy Templeman (Extension).

By Julie Kane
A total of 387 students, 21 more than last year, attended the eleventh annual Graduate School’s GTA (graduate teaching assistant) Workshop. Of that number, 351 (compared to 329 last fall) completed the program to receive one credit for the Grad 5004 course.

“The GTA workshop provides a valuable service to the university,” said Joseph Merola, acting dean of the Graduate School. “As the bar of excellence continues to rise for students at Virginia Tech, there will be increased pressure on GTA’s to hone their teaching skills and demand the best from their students. We deeply appreciate the efforts of those volunteers who make these workshops possible.”

According to Don McKeon, director of ESL/GTA training, “There has been a fairly steady increase in the number of GTA’s attending the workshop over the years.” Because the growing program has outgrown its space in 100 Hancock, McKeon said alternate sites are being considered.

“Since the mid-nineties the number of students has grown from the high two hundreds to the high three hundreds. We expect to reach 400 next year,” McKeon said.

Subjects presented during the three-day workshop included oral presentations, interaction, learning, lecture preparation, grading techniques, teaching labs, digital imaging, the latest developments in information technology, writing across the curriculum, university policies for students, course design, time management, and students with disabilities.

“It is especially important for GTA’s to know the support systems at Virginia Tech,” McKeon said. “They need to be observant and supportive of those students who have learning disabilities or have special needs. People learn differently. The GTA needs to be aware of different learning styles.”

McKeon said GTA’s have a special advantage reaching students because they are students themselves. On the other hand, GTA’s must maintain a professional teacher/student relationship.

Students’ comments were generally positive. Most said they did not know what to expect, but learned a lot, especially from tips and advice given by professors and experienced GTA’s. One student said, “The program covered a wide variety of topics and gave many resources for improving teaching skills, as well as ways to complete thesis work.”

The GTA Program originated as part of Graduate Studies’ Training of the Future Professional program, involving both GTA training and research-career preparations.
**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](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 is the advertised postmark date.

### FULL TIME

**Alternative Transportation Manager** 007293F, PB 4, Office of Transportation.

**Executive Secretary** 001322G, PB 3, University Libraries/Dean’s Office.

**Faculty Data/Procedure Technician** 006285G, PB 3, Personnel Services.

**Federal Reimbursement Unit Analyst** 00748B, PB 5, IPO.

**Financial Aid Area Coordinator** 001519S, PB 3, Controller’s Office.

**Financial Planning Manager** 007567F, PB 5, BFS.

**Grants/Contracts Fiscal Technician** 00765J, PB 3, CRHE.

**Housekeeping—Night Crew** 007814F, PB 1, RDP.

**Housekeeping Manager** 006926H, PB 3, Administration.

**Housekeeping Supervisor** 000269H, PB 2, RDP.

**Housekeeping Worker** P000205C, PB 1, Physical Plant.

**Information Systems Administrator/Maintainer** 00748B, PB 5, STLISE.

**Laboratory Specialist** 007707B, PB 3, CE.

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

**Multimedia Systems/Applications Specialist** 002054A, PB 3, RDP.

**PB 5, AIS.**

**PB 5, Controller’s Office.**

**PB 5, VB/Services.**

**PB 2, Information Technology Specialist.**

**PB 3, Physical Plant.**

**PB 1, Physical Plant.**

**PB 2, Information Technology Specialist.**

**PB 1, Physical Plant.**

**Office Services Assistant** W022114F, PB 2, RMS.

**Office Services Specialist** W020397J, PB 3, SBH.

**Radiologic Technologist** W022383J, PB 3, SHC.

### UNIVERSITY

**Secretary Senior** 002403M, PB 2, CSES.

**Senior Editor** 000001F, PB 3, RDP.

**Transportation Planner** 00748B, PB 4, Office of Transportation.

**PART TIME**

**Animal Care Technician** W02068M, PB 2, VTH.

**Animal Care Technician/Small Animal** W026275M, PB 1, VTH.

**Customer Service Representative** W022099G, PB 2, Registrar.

**ICU Veterinary Technologist** W022211M, PB 2, VTH.

**Laboratory Specialist** W023305M, PB 3, APS.

**Museum Administrator/Program Specialist** 007242G, PB 2, MINH.

**Office Assistant** W022996M, PB 2, CVM.

**Office Services Assistant** W022114F, PB 2, RMS.

**Office Services Specialist** W020397J, PB 3, SHC.

**Radiologic Technologist** W022383J, PB 3, SHC.

**UNIVERSITY ONLY**

**Personnel Assistant** UU007862M, PB 3, CALS—Extension.

**OFF CAMPUS**

**Geographic Programs Specialist** 007845M, PB 4, BSE.


### FACULTY POSITIONS

**INSTRUCTIONAL**

**Architecture, Assistant Professor** Contact: Frank Weiner, 201 Cowgill (0205). Review begins Feb. 15.

**Wood Science/Forest Products, Assistant Specialist** Contact: Robert Smith, 210 Chestham (0323). Review begins Feb. 1.

**Training/Technical Assistance Center—College of Human Resources/Education, Severe Disabilities Technology Coordinator** Contact: Dianne Yardley, 101 War Memorial (0317).
Sandy research staff moving to Collegiate Square

By Susan Trulove

By the end of 2001, staff members of the Office of Sponsored Programs (OSP) who are now located in Sandy Hall will be relocated to Collegiate Square.

The Sandy Hall OSP team processes proposals and budgets and provides grant and contract oversight for researchers in the colleges of Human Resources and Education, Natural Resources, Veterinary Medicine, and Agriculture and Life Sciences, as well as the Virginia Bioinformatics Institute. Being located in Sandy Hall has been convenient, said David Richardson, director of sponsored programs. But the Graduate School now requires that space for programs to serve students.

The Research Division is also exploring its services. “We are re-examining the entire OSP operations to determine how we can best serve Virginia Tech faculty and staff members,” Richardson said. “We will remain true to our mission to provide the best service possible to the Virginia Tech faculty and staff in the pursuit and administration of external funding.”

One plan for addressing the loss of proximity is to provide electronic signatures for the proposal approval form, or yellow sheet. “A faculty member will not have to walk a piece of paper around for two days to get signatures,” Richardson said. “We are also working hard to revise the form so it will also capture additional information. For instance, we want to give credit to co-principal investigators.”

Scardina’s discoveries may prevent water-borne diseases

By Liz Crumbley

A Virginia Tech engineering graduate student has made drinking-water-treatment discoveries that have earned a grant from a national organization and could have a major effect on the treatment industry—and may help prevent outbreaks of water-borne diseases in the future.

Paolo Scardina, a Ph.D. candidate in the Via Department of Civil and Environmental Engineering (CEE), began his research as an undergraduate on the problem of air bubbles in drinking water. Working with Marc Edwards of the CEE faculty, Scardina has continued his research through his master’s and into his doctoral program, and he recently won a highly competitive grant worth $150,000 from the American Water Works Association Research Foundation (AWWARF).

Scardina’s research is also being used by engineers with the California Department of Health Services to identify problems at two facilities that have experienced problems with eruptions of air bubbles.

“When you open a can of soda, bubbles form and rise to the surface,” Edwards said. “The same thing can happen in water from lakes and rivers. When air bubbles are released in a ‘bump’ during the treatment process, pathogens and other particles can escape removal.”

The last treatment barrier in most drinking water treatment plants is filtration, Edwards said, and a bump of bubbles can punch holes in filters—tiny holes, but large enough to let particles and pathogens escape into the water that goes out to customers.

“Many of the drinking water treatment is about 3,000 years old,” Edwards said, “but in all that time, air bubbles in water have not been studied in terms of their ability to affect treatment processes.

Scardina, who began studying air bubbles at Edwards’ suggestion during his senior year at Virginia Tech, identified the causes of bubble formation while he was working on his master’s. “Before Paolo’s findings, we knew that bubbles could cause problems,” Edwards said, “but we didn’t know how they formed or the range of the impacts.”

In addition to studying why bubbles form and how they punch holes in treatment plant filters, Scardina has made some discoveries. Air bubbles can interfere with the first drinking-water-treatment process—settling—where solid particles from incoming surface water drop to the bottom of treatment tanks. “If bubbles are present at this stage,” Scardina said, “pathogens and other particles can attach to them and float on through the treatment after the first of the year. Another important discovery Scardina has made is that bubbles can cause a dilemma for treatment-plant operators at the end of the process. When bubbles form after water has gone through filtration, water-quality tests may wrongly identify the bubbles as dirt particles or pathogens, even though the bubbles themselves are harmless,” Edwards said. “This decreases the validity of and confidence in water quality tests.”

While a master’s candidate, Scardina published two peer-reviewed papers on his findings and made a presentation at an international water-treatment conference in London. “Paolo’s subject area is so new that we had a hard time finding people with enough knowledge of the field to review his papers,” Edwards said.

Trivedi produces instructional CD’s

By Sally Harris

Ketan Trivedi, an instructor in the chemistry department and founder of the company T2I2, combined his chemistry background with a long-term interest in video and other technologies to create a set of three CD’s to teach students how to use scientific calculators.

Trivedi started T2I2 Innovations International (T2I2) is a company that Trivedi started to develop educational programs on CD-ROM and DVD featuring audio, video, interactivity, simplicity, and multimedia training. “The company’s first interactive software product, “Mathematical Operations Using a Scientific Calculator,” teaches students how to use the TI-83/TI-83 Plus calculator for mathematical operations.

In my experience of teaching for 10 years,” Trivedi said, “I’d say more than 30 percent of the students were lacking in an understanding of math concepts and using scientific calculators, Trivedi said. “That led to frustration in the subject matter, when they didn’t understand even the basic things. I got embarrassed to ask how to use the calculator. I wanted to do something to help them in one form or another.”

By 1995, he began developing “Mathematical Operations Using a Scientific Calculator.” After talking with Department of Chemistry Chair Larry Taylor this past summer, he decided to focus his efforts. He used some of his commercial programs, including Director 8. It took eight weeks of 19-hour days to complete the first CD. He produced two other CD’s in three months to complete the learning process for high-school students.

The CD’s have different topics related to learning to perform mathematical calculations using a calculator, starting with simple concepts and moving to the more complex ones. Each topic is narrated and includes an explanation of the mathematical concepts, examples, and worked problems, and videos demonstrating the step-by-step keystrokes needed to perform a calculation on a TI-83 or TI-83 Plus calculator.

One CD deals with statistical analysis, which will be useful in analytical chemistry. Trivedi said, and another deals with matrix algebra, which is applicable to graduate classes in chemistry. The students will have a tutorial to go along with the calculator and can start at the beginning lesson or at their own level and work up.

Trivedi, who teaches in the chemistry department, has a state-of-the-art laboratory in his basement and developed the CD’s on his own time. Trivedi said, therefore, the copyright belongs to his company, not to the chemistry department, but the two are working together to produce other educational products.

NEW CHIEF

Continued from 1

On campus.

In the early 1960s, two additional positions were added to the department, increasing the number of employees to eight. The police department also employed a dispatcher/clerk and a security guard. In 1967, the Nichols was hired as director of security. Nichols, a retiree from the Federal Bureau of Investigation, presided over the change to a security department rather than police. Data were compiled, reports were written, and statistics were submitted to the FBI. The majority of officers attended the State Police Academy in Richmond. In 1968, three additional employees were hired, bringing the total of sworn employees to 11.

The 1970s saw significant growth by adding approximately 20 new buildings and student enrollment increased from 5,500 to 15,000. The department also grew, increasing the number of officers to 23 early in the ‘70s. During 1974-1976, three officers attended the FBI, and the Nichols Academy, and officers were granted permission to carry weapons full time.

During the ‘80s, the department was changed back to a full-service unit. From 1990 through 1999, the department increased in size by five officers, bringing the total to 28, and moved to its present location in the Sterritt Facilities Complex. The department was granted National Accreditation through the Commission on Accreditation for Law Enforcement Agencies, Inc. This accomplishment allowed the department to receive national recognition as a full-service, professional police department. Seven positions were allocated to the department during this decade for a total of 35 sworn officers.

In July 2001, Debra C. Duncan, formerly a patrol officer, became the chief of police. The department currently has thirty-six sworn officers, eight dispatchers, seven security guards, four support personnel, numerous wage employees and four reserve officers. The department responds to over 20,000 calls for service annually.

In support of the new goals and activities, the following promotions and assignments have been made:

- Lieutenant John Brotherton to major/assistant chief; Lieutenant Billy Cardwell to operations captain; Lieutenant David Whitehead to services captain; Lieutenant Jack Ridinger to patrol lieutenant; Sergeant Larry Snidow to investigations supervisor; Sergeant Vince Houston to professional standards lieutenant; Sergeant Debbi Morgan to administrative lieutenant; Sergeant Wendell Flinchum to lieutenant/watch commander; Sergeant Joe Albert to lieutenant/watch commander; Sergeant Dickie Graham to patrol sergeant; Sergeant James Ramsey to patrol sergeant; Sergeant Larry Woodell to patrol sergeant; Officer Phyllis Tresterman to community-outreach sergeant; and Officer Bob Baudo to patrol sergeant.