SCHEV produces reports on institutional effectiveness

By Jeanne M. Garon

Interim Provost James R. Bobland announced today that Christine Jarchow, currently assistant director for education abroad in Virginia Tech’s University Office of International Programs (UOIP), has been appointed interim director of UOIP. Jarchow will lead operations from August 1 to June 30, 2002, replacing current UOIP Director Lyn Gray, who has announced her resignation to pursue overseas opportunities.

“We are very lucky,” Bobland said, “that at a time of transition in UOIP, and growth in Tech’s international programs overall, we have found someone with Christine’s personal qualities, background, and experience in UOIP to lead the office.”

Jarchow came to Tech in 1999 from the University of Florida, Gainesville, where she served in its Office of Overseas Study. She has a bachelor’s degree in business administration and a master’s degree in international relations, both from the University of Florida.

Bobland said Jarchow’s appointment will allow the office to continue moving forward while the university forms a task force to review Tech’s international programming. The task force will be chaired by Robert C. Bates, dean of the College of Arts and Sciences. The outcome of the task force’s efforts, Bobland said, will be “the recommendation and implementation of a new structure that better integrates all pieces of Virginia Tech’s campus-wide international efforts.” Bobland said he foresees committee recommendations within six years.

Grad student to meet Nobel laureates

By Susan Trulove

Mark Makela, a Virginia Tech Ph.D. student in physics, is one of eight doctoral students selected by Oak Ridge Associated Universities (ORAU) to attend the annual meeting of the Nobel laureates in Lindau, Germany, where he will have the opportunity to discuss his development of a new specialized coating for storage of neutrons, a fundamental subatomic particle.

Nobel laureates in chemistry, physics, physiology, and medicine have convened in Lindau on an alternating basis for one week each summer since 1951 for open meetings with promising science students and young researchers. This seminar provides top science students from around the world a unique opportunity to spend time with key figures in their fields.
New Jefferson Lab resources presented

By Susan Trolley

The Thomas Jefferson National Accelerator Facility is one of the select few institutions of its kind in the world, known as the Jefferson Lab, the facility “offers capabilities unique in the world for Virginia research universities and microelectronics industries,” said Fred Dyalla, manager of the free-electron laser (FEL) at the lab, which is located in Newport News.

Dyalla and two associates will be on campus on July 18 to discuss the lab’s new research capabilities and their plans for a proposed Virginia Nanofabrication Center. Interested individuals are invited to a 9:30 to 11 a.m. meeting in 325 Burruss with the Jefferson staff, whose presentation is entitled “Expanding the Next Generation Light-Source Capabilities at Jefferson Lab: From the Far Infrared to the X-ray Regime.”

The visit is being hosted by the Research Division. Call Robert Porter at 1-747 or e-mail reporter@vt.edu for more details of Dyalla’s day on campus.

Jefferson Lab’s new research configuration pairs a synchrotron x-ray light source and an ultra-high-resolution lithographic system with the FEL. These components, valued at $68 million, are being donated by a major corporation and DARPA. “They offer a unique opportunity to build capabilities in the state that will benefit research universities and attract companies in the burgeoning microelectronics and nanotechnology fields,” said Dyalla, who is interested in building a state-wide user community for the facility.

The Jefferson Lab is a basic research laboratory built to probe the nucleus of the atom. The lab is managed by a consortium of 53 universities called the Southeastern Universities Research Association or SURA under contract with the Department of Energy. In addition to the exploration of the nucleus, JLab works to educate the next generation in science and to partner with industry to apply JLab’s advanced technology. The lab represents a $600 million investment of the federal government, the state of Virginia, the City of Newport News, foreign contributors, and the U.S. nuclear physics research community. The lab has an annual operating budget of approximately $70 million.

Conservation Management Institute gets national attention

By Lynn Davis

Last summer an albatross flying far from its normal range brought national attention to the college’s Conservation Management Institute (CMI), when Peter Jennings closed his nightly national ABC news program with a clip from Scott Klopfer, CMI division leader for GIS and Remote Sensing. The New York Times also ran a feature and the photo.

Klopfer took the shot during a field trip to Fire Island National Seashore off Long Island. During the trip, members of the GIS & Remote Sensing Division collected ground data for a vegetation-mapping project they conducted for the National Park Service. They used a series of aerial photos to identify, digitize, and categorize vegetation types. While heading back to their lab after a long day in the field, they spotted the albatross soaring along the beach amongst a flock of black-backed gulls. The seabird’s home is in the oceans of the Southern Hemisphere, and albatrosses rarely come to shore.

CMI is a grant-funded research center affiliated with the College of Natural Resources at Virginia Tech. Formerly known as the Fish and Wildlife Information Exchange, which was founded in 1991, CMI was established in 2000 after a re-organization to better address multi-disciplinary research questions that affect conservation management effectiveness in Virginia, North America, and the world.

Researchers work on projects both independently and in cooperation with faculty members from Virginia Tech and other research institutions to provide support to conservation and management organizations in their efforts to assess, monitor, protect, and manage the earth’s renewable natural resources. They have worked with federal, state, and local agencies, international agencies, and non-governmental organizations.

Modern natural-resource management is a complex integration of biological, physical, and social sciences, and the CMI combines each of these fields into a comprehensive approach to conservation. There are eight divisions of the CMI that work together toward this goal: GIS and Remote Sensing, Fish and Wildlife Information Exchange, Military Lands, Human Dimensions, Outreach and Education, International, Invertebrate Research, and Conservation Genetics. Each division brings to natural-resource management a unique array of skills, tools, and perspectives combined with a respect and understanding of the importance of incorporating elements of the other divisions into successful projects.

For more information about each division and for descriptions of recent and current projects, visit the web at http://fwie.fw.vt.edu.
EMPLOYMENT

CLASIFIED POSITIONS

The following classified positions are currently available. More details of these positions, specific application procedures, position closing dates may be found on the Personnel Services web site at http://www.psc.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 do not include state benefits. Individuals with disabilities desiring assistance or accommodation in the application process should call the application deadline. Closing date for advertised positions is 1 p.m. Monday. An EEO/AA employer committed to diversity.

Three full-time food-service positions available:

Asbestos Lead Inspector, 007002Y, Pay Band 4, EHS.
Assistant Manager, 000514H, Pay Band 3, RDP/Owens Food Court.
Associate Director for Prospect Research, 007004S, Pay Band 4, University Development.
Database Administrator, 007770M, Pay Band 5, VBI.
Electronics Technician, 007656Y, Pay Band 4, VT/IT.
End Processing/Preservation Assistant, 000139Y, Pay Band 2, University Library/Technical Services.
Enrollment Services Specialist, 006928B, Pay Band 3, ECE.
Housekeeper, 001181J, Pay Band 1, ULSA.
Housekeeping - Night Crew, 002742H, Pay Band 1, RDP.
Housekeeping Assistant Supervisor, 000550H, Pay Band 1, RDP/Owens Dining Center.
Housekeeping Worker, W022490H, Pay Band 1, RDP.
Information Systems Administrator, 007669M, Pay Band 4, CVM.

Laterally Laboratory Specialist, 007245M, Pay Band 3, Biochemistry.
Laboratory Specialist, 007707M, Pay Band 3, CE.
Laboratory Specialist Advanced, 007733M, Pay Band 4, BSM.
Laboratory Specialist Senior, 007546M, Pay Band 4, CVM.
Office Services Specialist, 001268F, Pay Band 4, Purchasing.
Painter, 007757F, Pay Band 3, Physical Plant.
Photography Manager, 002415S, Pay Band 5, University Relations/Visual/Broadcast Communications.
Police Officer, 002973Y, Pay Band 3, Police.
Program Analyst, 006143F, Pay Band 5, Budget/Financial Planning.
Sales/Marketing Manager, 004784H, Pay Band 3, RDP/Personal Touch Catering.
Shopleader Supervisor, 007404H, Pay Band 1, RDP/West End Market.
Unlaps Security Guard, 007723Y, Pay Band 1, Policing.
 Sous Chef, 000940H, Pay Band 3, RDP/ Southgate Bake Shop.
Support Center Coordinator, 002636M, Pay Band 5, CVM.
University Editor, 000046S, Pay Band 5, University Relations.
Web Developer, 006718M, Pay Band 5, CVM.
Windows NT Systems Administrator, 002413Y, Pay Band 4, Library Systems Department.

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Faculty Support and Productivity.
• Research and public service expenditures per full-time faculty.
• Student credit hours taught per FTE faculty.

Virginia Tech institutional measures:
• Total research expenditures as reported to the National Science Foundation.
• Number of invention disclosures made in a reporting year as defined by the Association of Research Libraries divided by the number of full-time equivalent students.

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• Materials Science/Engineering.

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Computer-science student wins IBM challenge

By Sally Harris

Brent Metz, a Virginia Tech junior in computer science, won IBM’s one-time “Cool Blue VoiceXML Challenge” in April. Metz’s received the grand prize of $25,000 plus opportunities for internships in the VoiceXML competition. VoiceXML, the company said in a news release, is a new standard for using the voice to browse on-line information.

Metz “used IBM’s WebSphere Voice Server Software Developers Kit (SDK) that incorporates VoiceXML technology to create a nutritional-planning tool in which users follow simple voice prompts to learn more about nutrition and plan their diet,” the IBM release said.

“What impressed me about Brent’s program was how smoothly he integrated so many complex components,” said Peter Lefkin, executive director of the VoiceXML Forum. “The application had a crisp, professional feel, as well as the type of user interface that encourages users to explore all of the layers of the program. Obviously Brent is a talented programmer, and I look forward to his future contributions to the VoiceXML community.”

Metz is going to Virginia Tech on a full scholarship from two other contests he has won. He won $20,000 for Outstanding Technical Achievement from ThinkQuest in 1996 and a $15,000 first-place award from ThinkQuest in 1997.

Metz won the grand prize (top award) in the international IBM challenge that had 1,800 applicants. He said the fact that Virginia Tech has won this award and also the programming team contest shows the quality of programming work being done at the university.

As a result of his win, Metz has been offered and has accepted an internship with IBM in California this coming summer. Called the “Extreme Blue” internship, it is available to only 40 or 50 students each year, he said. “I’m interested in seeing what the big corporate culture is like so I can get a feel for whether it’s right for me or not,” he said.

Newly formed LEPN holds kick-off event

The newly formed Laboratory Employee Professional Development (LEPDN) Network held its kick-off event May 23.

The event included a one-hour introductory program followed by a five-hour good-laboratory-practice (GLP) certification program. During the introductory program, Dean Robert Bates from the College of Arts and Sciences, Dean Peter Eyre from the College of Veterinary Medicine, and Assistant Vice President Linda Woodard discussed the value of laboratory technicians and laboratory employees to the university and the important contributions they make in support of research activities.

Delbert Jones, president of the Staff Senate from the College of Veterinary Medicine, provided an overview of the Laboratory Employee Professional Network and its objectives. Following the presentations, participants were asked to provide input regarding potential networking and professional-development activities that would benefit the laboratory employee community.

The GLP certification program included an overview of GLPs and their importance, personnel responsibilities, training records, standard operating procedures, equipment SOP’s and records, recording raw data/documentation, and labeling requirements.

The LEPDN was created to support laboratory employees by sponsoring programs of general interest to laboratory technical personnel with guest speakers, workshops; providing opportunities for training, certification and licensure in specialized areas; identifying opportunities to share resources, expert knowledge and skills from different parts of campus; identifying the role of laboratory technical personnel in the university’s drive to rank among the nation’s top 30 research institutions; and providing mentors for new laboratory technical personnel.

A leadership team composed of members representing most colleges with laboratory research developed a charter for the network and is responsible for the selection and implementation of activities. Members include Rebecca Barlow, Dick Harshberger, Jones, Laura Link, Julie Petruska, Suzanne Pivovano, Kathryn Reynolds, Steve Van Aken, and Woodard. The LEPDN is sponsored by Personnel Services and University Leadership Development.

For more information, contact University Leadership Development.

Ford donates $10,000 to car team

By Liz Crumbley

Ford Motor Co. donated $10,000 to help the Virginia Tech Formula SAE Car Team get ready for this year’s international competition, May 16-19 in Pontiac, Michigan.

The Virginia Tech team has participated in the Society of Automotive Engineers Formula Car competition since 1988. Each year, more than 100 teams of engineering students from the U.S. and several other nations design and build small racing cars according to Formula SAE rules. In 1991, the Virginia Tech team won first place.

During the 2001 competition, the Virginia Tech team placed 34 out of 126 teams in overall scoring and placed fourth in presentation.

“Ford’s support this year was critical to our team,” said Dan Clabackburg, a Virginia Tech alumni and member of Ford’s Road Load Engineering Team. “Students gain access to better machinery, facilities, support mechanisms, and exposure to industry practices and techniques. And Ford gains valuable exposure to students who are the engineers of the future.”

Approximately 40 Tech engineering students were on this year’s team, including 32 seniors who worked on the car for their capstone design project. “The emphasis is on design, not just racing,” Companin said.

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the scientific community as well as meet students from other parts of the world with similar or complementary scientific interests.

Makela was selected for his work in nuclear physics on the Ultra Cold Neutron “A Correlation (UCNA) experiment at Los Alamos National Laboratory (LANL). The UCNA experiment takes a high-precision look at neutron-beta-decay asymmetries; the values of these asymmetries are used to test the fundamental models of physics.

Makela said, “Theoretical physicists predict that polarized neutrons decay asymmetrically — more electrons are emitted one direction than the other. Our experiment will give the most precise measurement of this asymmetry to date, which can be used to guide theorists to a better model of our physical world.”

This experiment uses neutrons, which are cooled to near absolute zero (Ultra Cold Neutrons) and then polarized in a very strong magnetic field. The particles are polarized when their spins are aligned, like compasses in the earth’s magnetic field. “At these low temperatures, neutrons can be contained in bottles, bouncing around like superballs until they decay — each becoming a proton, electron, and anti-neutrino,” Makela said. “This experiment detects the electron emitted from the decaying neutron and tells us the direction and energy.”

Makela’s main contribution to this experiment is the development of diamond-like carbon-coated guides which will transport the polarized UCN through the experiment. The guides have been developed at Virginia Tech using a wide range of the campus’ available resources. Makela’s UCN guides are quartz tubes with an amorphous carbon film deposited on the inside using a pulsed-laser system developed at Virginia Tech. “Films made with this process are as dense as diamond and extremely smooth, with roughness of less than a nanometer,” he said.

His films appear to be the best non-metallic neutron reflectors in the world. Makela will be presenting work done on these films at several European laboratories this year, where they are being considered for use in other UCN experiments.

Makela’s research is part of the UCN project at LANL, which is sponsored by the Department of Energy. The Virginia Tech part of this project is funded by the National Science Foundation.

“I would like to thank my adviser, Dr. (Bruce) Vogelhaar for nominating me for this award and taking me as a graduate student,” Makela said. “I would also like to thank Dr. (Robert) Hendricks and Dr. (Carlos) Suchichat of Megro and the materials science and engineering department for letting me use their laser system and for their help in making this project possible and Dr. (Gary) Pickrell for his technical input.”

Last year was the first year the United States participated in the Nobel Laureate Travel Grant Awards. ORAU managed the program for U.S. Department of Energy (DOE), who funded participation by 30 students.

With the sponsorship of LabBook Inc., Alberto de la Fuente will also meet with the Nobel Laureates in Germany. De la Fuente, a Ph.D. student in the Free University of Amsterdam, is doing research at the Virginia Biotechnology Institute at Virginia Tech under the supervision of Pedro Mendes, research assistant professor. De la Fuente’s research is on the subject of “Metabolic Control of Hierarchical Systems and Dynamics of Genetic and Metabolic Networks.”

Mendes said, “Our research is about the interactions between genes, proteins, and small biochemical compounds in the cells (metabolites). Traditionally, genes have been studied in isolation from proteins and metabolites, but new developments in genomics, such as DNA chips, are making it possible to study genes in context.”

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recommendations being made during fall 2001 followed by any implementations during spring 2002.

Beginning with Jarchow’s appointment, UOIP staff member Leeanne Bonner will assume the role of interim assistant director for education abroad.

Judith White, chair of the Department of Foreign Languages and Literatures, will assume a provisional role as UOIP faculty liaison. A portion of Shrum’s work, according to Bohland, will involve UOIP’s efforts to develop its strategic plan. Shrum will provide continuity in the curriculum. She will also chair faculty committees such as the University Council on International Programs and the Center for European Studies and Architecture (CESA) Advisory Committee.