

President Steger Outlines International Component in Research Vision for Virginia Tech

Virginia Tech can look to the future with optimism, and we should, as an academic community, embrace the goal of reaching a new level among research universities. What does this goal imply for us? Conventional measures, such as total expenditures on research and development, will continue to be important. But other measures will become more significant as well. To suggest just a few: our contributions to economic development and other forms of outreach; our national and international collaborations with other universities and with the private sector; and our ability to innovate in information and communication technology, and thus to connect ourselves with the world.

If we look concretely at the institutions with whom we would like to be compared in 10 years, we must increase significantly our level of sponsored research, and we must also increase our scholarly productivity across the board. To accomplish all of these goals will require new resources. One of these resources lies in our recruitment of scientists of international caliber. New types of international alliances are necessary to insure success in the future.

Moreover, we share an obligation to create a civilized and



Dr. Charles W. Steger, newly installed as the 15th President of Virginia Tech, foresees increased international involvement for university faculty and students

reflective environment. The university should, and indeed must, be a place that mirrors our broader society. At Virginia Tech, we have made progress in providing opportunities for involvement in global gender issues. Once we have achieved those first goals, we will look to further improvements. I will also ask staff to look at improving opportunities for other underrepresented groups in the faculty, staff, and student bodies. We must also expand the international and multi-cultural perspective in our curricula and in the life of our campus community, if we are to function successfully at the global level in the ways to which we aspire. The life of the university is defined by the intellectual, emotional, and physical well being of our community. In that regard, we

must encourage an environment that fosters respect, stimulates debate, and provides opportunity for persons and groups to pursue mutual interests for the betterment of all.

Our goal of becoming a top 30 research institute must include an international component if we are to succeed. The scope of our vision will not be restricted to already developed countries because it will be truly global in design. Virginia Tech will

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Perspectives

From the desk of Dr. S.K. De Datta, Director of the Office of International Research and Development, Outreach Division, Office of the Provost, and Associate Dean of the College of Agriculture and Life Sciences

The Office of International Research and Development (OIRD)/Virginia Tech is changing its coverage with the changes in the marketplace. Competition for the donor-funded projects, especially for United States Agency for International Development (USAID) funded projects, has become fierce. Major consortia are no longer significant players in many of these donor-funded initiatives. It is the private sector and Non-Governmental Organization (NGO) groups who are calling the shots. These groups will invite or accept a university (or universities) on a specifically targeted objective. In turn, a university then has the priority of engaging specific faculty from the university community in addition to collaborating with another university or institution.

In these changing environments, OIRD/Virginia Tech needs to aggressively follow the lead of any Request for Proposals/Request for Applications (RFP/RFA) being released and initiate discussions at a very early stage of partnering. If the

discussions prove fruitful in creating strategic partnerships, then a tentative agreement is in order with a full review by the Office of Sponsored Programs. Faculty should be contacted for possible opportunities, with CVs to be collected and reformatted to match that of the tasks as required by the RFP/RFA.

If it is an Indefinite Quantities Contract (IQC), OIRD/Virginia Tech needs to proactively pursue significant leads from USAID missions in different countries. We need to touch base with USAID officials in the Mission and review Virginia Tech's experience and capabilities on specific issues.

By following all these leads and proactively pursuing opportunities that will involve faculty all across Virginia Tech, this will foster greater activity in international research and development.

OIRD/Virginia Tech continues its mission to do exactly that.

Notables

Faculty Involvement Around Campus

College of Business

Devi R. Gnyawali, Assistant Professor, Department of Management, participated in a five-day Faculty Development in International Business seminar organized by the University of South Carolina. The program prepares faculty to plan and teach courses in international business management with a focus on management of multinational corporations. **George Morgan**, Department of Finance, Insurance and Business Law, and Charles Bostian of the Center for Wireless Telecommunications hosted Telecom Austria representatives who visited CWT to gather information on the status of broadband wireless deployments in the US, the VA Tech LMDS project, and to report on their demonstration deployments in Europe.

College of Natural Resources

In April and May, **Jeff Waldon** of the Conservation Management Institute assisted the Environment Family of The World Bank in evaluating their knowledge management activities. The World Bank has undergone a major initiative to update and reorganize information management and communications systems over the last three years. Waldon is preparing a report identifying process and product successes and recommendations for knowledge management for the coming fiscal year.

College of Architecture and Urban Studies

Dr. Humberto Rodríguez-Camilloni, Professor of Architecture and Director of the Henry H. Wiss Center for Theory and History of Architecture will lead a study tour to Brazil for the Society of Architectural Historians next 7-20 August 2000. This tour will study the multifaceted character of Brazilian architecture and urbanism, from the colonial transpositions of Baroque Portugal seen in Ouro Preto to the modernist vision of the future at Brasília. Other principal cities to be visited -- Rio de Janeiro, Belo Horizonte and Sao Paulo -- represent the essential aspects of Brazilian culture across four centuries, from 1532 to the present. **Professor John O. Browder** (Urban Affairs and Planning) and **Marcos Pedlowski** (Universidade Estadual Norte Fluminense) have published "Agroforestry Performance on Small Farms in Amazonia: Findings from the Rondonia Agroforestry Pilot Project" in *AGROFORESTRY SYSTEMS* vol. 49(1), June 2000. The paper details growth performance of experimental on-farm agroforestry plots involving upto 25 plant species and lessons learned from both successful and failed plantings on this 7-seven old project in the western Brazilian Amazon. Browder also completed a supervisory mission for the World Bank's Planaflo program in Rondonia, Brazil earlier in the year.

College of Human Resources and Education

The Educational Leadership and Policy Studies Department of the College of Human Resources and Education is planning a conference, "Women in Leadership," for July 2001 at Oxford University. Coordinated by **Dr. Janet Johnson**, Dean of CHRE; **Dr. David Alexander**,

Chair of ELP; and **Dr. Claire Cole Vaught**, Professor of Counselor Education, the event will be held at the only women's college, St. Hilda's, still in existence at Oxford. **Dr. Rosemary Blieszner**, Department of Human Development, was one of five invited keynote speakers at the International Conference on Personal Relationships, Brisbane, Queensland, Australia, 27 June - July 2, 2000. Her presentation was "A family is a circle of friends who love you": Circles and cycles of close relationships in old age." **Dr. Victoria R. Fu** and **Dr. Lynn T. Hill**, Department of Human Development, brought 15 undergraduate and graduate students to study abroad in Switzerland and Italy in May and June, 2000. The title of the course is, "Transformation of Self as Teacher through Documentation and Reflection in Diverse Cultural Contexts." **Dr. Ken W. McCleary**, Hospitality and Tourism Management, has completed work on the hypertext on "Tourism Marketing", organised and drawn up under project Magellano, for the Ente Bilaterale Nazionale Turismo and other international partners. The first edition of the CD, supported by a specialised integration on the Internet, is available in both Italian and English, and projects are underway for translation into Spanish, Chinese and other languages.

College of Arts and Sciences

Thomas H. Ollendick, University Distinguished Professor of Psychology, co-chaired the Second International Conference on Children's Mental Health in Kuala Lumpur, 4-11 June 2000. In addition, he presented a keynote address on anxiety in children and serve as a reactant to various presentations from throughout the world. **Cahit Coruh**, Professor and Department Chair, Geological Sciences, presented the initial results of his collaborative research with the scientists of the Scientific and Technical Research Council of Turkey on "Stress-strain distribution along major active faults in Anatolia: Response to tectonic plate buckling using finite element method" at the 2nd Balkan Geophysical Congress and Exhibition in Istanbul, Turkey. As a follow up of this research, Coruh is scheduled to present and discuss a proposal on earthquake predictions in Anatolia. He is also invited to present a key note address at the International Earth Sciences Colloquium on the Aegean Region in September. As President of the Geochemical Society, **Dr. Michael Hochella** will preside over the annual meeting, the Goldschmidt Conference, in Oxford, England, from 3-9 September 2000. Next year's meeting will be held at the Hotel Roanoke and Conference Center from 20-24 May 2001. **Professor Bonham C. Richardson**, Department of Geography, gave a paper entitled "British Caribbean Forestry in the 1880s," at the 32nd Annual Conference of the Association of Caribbean Historians. The meetings were held in Cayenne, French Guiana, 14-19 April 2000. **Dr. John M. Carroll**, Professor of Computer Science, Education, and Psychology, and **Dr. Mary Beth Rosson**, Associate Professor of Computer Science, were visiting scientists at Xerox Research Centre Europe in Cambridge, England. They gave colloquia at Bremen University, Cambridge University, the University of Hamburg, the University of Hertfordshire, the University of Stockholm, and the University of York. They also made presentations at the ACM CHI'2000 Conference on Human Factors in Computing Systems in the Hague, the Netherlands, at the IFIP WG 9.3 International Conference on Home Oriented Informatics and Telematics in Wolverhampton, England, at the International Network Conference 2000, in Plymouth, England, and at the European Conference on Object-Oriented Programming in Cannes, France. **Richard E. Nance**, Systems Research Center and Department of Computer

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Science, presented six sessions in a workshop entitled "Design for Reliability and Supportability and Logistics Integration" held on 10-14 July 2000 at the University of Exeter in the UK. The sessions given by Dr. Nance are grouped under the title, "Reliability, Maintainability and Supportability: Examining the Multiple Roles of Software." **Richard Zallen**, Professor of Physics, presented an invited talk at a workshop on "Phase Transitions and Self-Organization in Electronic and Molecular Networks" held at Cambridge University (UK) on 10-14 July 2000. His talk was entitled "The 16% Solution" and dealt with the concept of the percolation threshold in solid-state systems. **Dr. Joanne C. McNeal**, Director of the Reynolds Homestead, Center for Interdisciplinary Studies (CIS), completed her doctoral research on Western Arctic Women Artists, including support work at the Great Northern Arts Festival in Inuvik, Northwest Territories in Canada every summer from 1992-1998. She has been invited to return to the Festival in July 2000. **Tom Ewing**, Department of History, spent three weeks in Moscow, Russia during June researching the history of Soviet co-education, and particularly the campaign to enroll girls in non-Russian schools in the 1920s and 1930s. The research was conducted in the State Archive of the Russian Federation and the Archive of the Russian Academy of Education and funded by a Humanities Summer Stipend from CIS.

College of Engineering

Dr. Robert Beaton, Industrial & Systems Engineering Department, is conducting research on electronic visual displays through a graduate intern program with the US Army and through contacts with LG Electronics of South Korea. **Dr. John G. Casali**, Industrial & Systems Engineering Department, gave a keynote address at the Brazilian Acoustical Society Congress in Belo Horizonte, Brazil in May. **Dr. Frank Chen**, Industrial & Systems Engineering, delivered a keynote speech on the "Outlook of Industry Cooperative R&D in the New Millennium" at an industrial engineering conference in Taiwan. **Dr. Michael Deisenroth**, Industrial & Systems Engineering, received NSF SUCCEED support, along with **Dr. Pat Koelling**, to start collaborative senior design projects with two Puerto Rican universities, the Polytechnic University of Puerto Rico and the University of Puerto Rico - Mayaguez. **Dr. Kimberly Ellis**, Industrial & Systems Engineering, continued her collaborative research projects with Ericsson in Sweden and in Lynchburg, Virginia. This project involves the development of decision support tools to improve production planning decisions in electronics manufacturing. **Dr. Brian Kleiner**, Industrial & Systems Engineering, organized a Multi-session International Symposium focused on Macroergonomics for the combined IEA2000/Human Factors and Ergonomics Society to be held in San Diego this summer. His Department of Education sponsored "International Operations Consortium" ran two successful joint projects with the VTECH Business School and a university in Lovain, Belgium. **Dr. Kostas Triantis**, Industrial & Systems Engineering, was a visiting scholar at the Athens University of Economics and Business Administration where he delivered a short course on total quality management. **Dr. Eileen Van Aken**, Industrial & Systems Engineering, presented a paper at the World Productivity Congress in Edinburgh, Scotland with **Dr. Antonio Rentes**, a visiting Professor from Brazil. She also has begun collaborative efforts with colleagues at the University of Ghent in Belgium, where she recently presented workshops on team building. The Energy Management Institute (EMI) in the Department of Mechanical Engineering operates a technical outreach program which focuses on responding to a global, competitive market in which energy costs can no longer

be viewed as an inevitable or even necessary part of the process. **Dr. Greg Harrell**, Associate Director for Technical Outreach, has been working with Mobil Oil Company for over four years and has aided in producing over \$103,000,000/year in savings. International survey sites have included Canada, Germany, Japan, China, Nigeria, Indonesia, Mexico, Trinidad, Australia, Philippines, Singapore and Saudi Arabia. **Dr. Charles Bostian**, Bradley Department of Electrical and Computer Engineering, was a member of the Technical Program Committee and co-organizer of a session on broadband wireless propagation issues at the Millennium Conference on Antennas and Propagation in Davos, Switzerland. This conference, sponsored by the European Space Agency and others, drew eleven hundred participants. Two of the technical sessions were chaired by his former students Fatim Haidara, Ph.D, EE, 1993, and Carol Friberg Wilson, M.S., EE. The International Centre of Telecommunications-transmission and Radar (IRCTR), part of the Faculty of Information Technology at the Delft University of Technology, now hosts major researchers in radio physics, communications, and related subjects from countries in Asia, Africa, and Europe. During an eleven-year effort, seven publications in major scientific/engineering journals have been produced by **Dr. David A. de Wolf**, Bradley Department of Electrical & Computer Engineering, and his two major collaborators, H.W.J. Russchenberg and L.P. Ligthart, Director of the Institute.

College of Agriculture and Life Sciences

The College of Agricultural and Life Sciences implemented a new undergraduate student exchange program this past Spring semester with the University of West Indies (UWI) in Trinidad & Tobago. Two students from the College spent the Spring semester in Trinidad, Maureen McGuigan in Agriculture and Applied Economics and Bethany Perry in Animal and Poultry Sciences. **Dr. Joe Marcy**, faculty member in Food Science and Technology, accompanied the students to Trinidad in January to help them get registered and settled into their new environment. **Dr. John Crunkilton**, Academic Programs Office, visited the students in March to assess their progress and to recruit students from the (UWI) to attend Virginia Tech in Fall 2000. Two students from UWI will be coming to Virginia Tech this Fall.

Corrections to our previous issue: Djavad Salehi-Isfahani is in the College of Arts and Sciences and Donald E. Mullins is in the College of Agriculture and Life Sciences.

The University Abroad is prepared by the Faculty and Staff of the Office of International Research and Development (OIRD) at Virginia Tech, Outreach Division of the Office of the University Provost

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OIRD

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The Office of International Research and Development would like to thank all those individuals who submitted information to the University Abroad Newsletter. Regrettably, some submissions had to be saved for another time due to space constraints.

Virginia Tech's Forestry Program Serves as Role Model for Chinese Visitors

A delegation of forestry higher education officials from the People's Republic of China visited the college last fall. Invited by Paul Mou, Ecologist and Assistant Forestry Professor, the delegation was led by the Director of the Department of Personnel and Education at China's National Forestry Bureau (formerly the Ministry of Forestry) and consisted of the Directors of Graduate Studies from the major Chinese forestry universities and forestry academy.

The Chinese came to Virginia Tech to learn about the forestry graduate programs of this country in order to reform the forestry graduate education policies in China. Dean Greg Brown, Bob Bush, Associate Dean; Harold Burkhart, Chair of the Forestry Department; Geza Ifju, Chair of the Department of Wood Science and Forest Products; Tom Hammett, International Studies Coordinator and Associate Wood Products Professor, and the faculty met the delegation, introduced them to the college's graduate programs, and answered their questions.

Mou arranged for the college's graduate students from China to meet the delegation so they could share their experiences of graduate studies in both countries. The delegation visited the college and its Wood Products Brooks Center and toured the Virginia Tech campus and the Blue Ridge Parkway. Other briefings came from Senior Vice President and Provost Peggy Mezaros, Professor Patrick Miller and Ben Johnson of Landscape Architecture, and Arthur Buikema of Biology at the Mountain Lake research facility. After visiting this campus the group stopped over at North Carolina State University, University of Georgia, Utah State University, and the University of California at Berkeley.



Gaining Work Experience in a Multi-Cultural Environment

Submitted by Karen Gilbert, Public Relations Coordinator for the Industrial & Systems Engineering Department

The Industrial & Systems Engineering (ISE) Department of Virginia Tech recently joined with the Universidad Politecnica de Puerto Rico (UPPR) to create a unique opportunity for both students and faculty. This is the first time a project with Puerto Rican students has been offered through the ISE Senior Design Course. Each university selected two senior industrial

engineering students who were then placed on a four-person team, comprising four teams all together, for a two-semester collaboration. Faculty members of both universities advise the student teams. The common goal of the teams was to work with both Puerto Rican and Virginia based companies to implement industrial engineering improvements while gaining experience in a multi-cultural work environment. Additional goals for this joint effort include exposing students to differences in the educational backgrounds of the two universities and to the cultural differences in both the social and industrial environments.

The Virginia Tech student teams and faculty traveled to San Juan in September for an initial meeting of the project design teams. The Puerto Rican team will reciprocate with a visit to their Virginia Tech team members sometime in the Year 2000 to prepare the formal progress reports for the projects and to plan for the final phases of the work that has yet to be done for each of the sponsor companies. A similar joint venture, which was partly used as a model for this project, is already in place between ISE at VTECH and Ecole des Mines de Nantes in France, and is another program very popular with Virginia Tech students.

Two VTECH faculty members in the Industrial & Systems Engineering Department spearheaded this joint project with the UPPR, Dr. Michael Deisenroth and Dr. Patrick Koelling. The joint effort helps to demonstrate the feasibility of using various technologies, such as: videoconferencing, email, the use of a web-based project management system, and use of a Symposium server to host regularly scheduled meetings of the individual teams and their faculty advisors as a way to interact between teams that are geographically distributed.



Steger Outlines International Component *continued*

continue to utilize its current contacts with international research centers, foreign universities, and other global groups even as it seeks to strengthen and develop others. The structure of higher education is in transition. It will of necessity change in order to respond to the rationalization of the marketplace, which has been brought about by the revolution in information technology and the integration of the global economy. Each period in the life of a great university has its challenges and its hopes and dreams... dreams that must be shared by the entire community, if they are to be realized, and challenges that cannot be overcome unless we join together in our efforts.

adapted from Dr. Steger's Founders Day address

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