Quality Living
Without Depleting Earth’s Resources

By Sally Harris

The challenge of having a high quality of life while living within the natural limits of the Earth was the central question addressed at a recent event on Advancing Community Sustainability.

Held at the Hotel Roanoke and Conference Center June 1-3, the meeting was conducted by Tech’s School of Public and International Affairs with sponsorship from COTA, the National Oceanographic and Atmospheric Administration, the Virginia Department of Environmental Quality, and the Vital Signs Project.

There is growing consensus among scientists and policy makers that human communities are consuming more resources and producing more wastes than the Earth can replace or absorb. “If humans are to have a livable future, we must radically change the way we design and operate our communities,” according to Richard Rich, chair of the Department of Political Science in the College of Arts and Sciences and organizer of the conference. “Speakers at the Advancing Community Sustainability meeting presented ways to redirect our practices and reform our institutions to improve the quality of life we enjoy while protecting the Earth’s ecosystems for future generations.”

The topics they addressed included such things as controlling urban sprawl, building resource-efficient housing, creating resilient local economies, using alternative energy sources and waste-treatment processes, developing sustainable jobs, ending dependence on the automobile, protecting urban watersheds, and promoting environmentally sound products, businesses, and production processes. The audience of state, local, and federal officials, scientists and policy makers, and educators and students in the field sent home with a wealth of new ideas to implement in their own communities.

Biomedical Informatics Research Group Develops Diagnostic Software

By Jeffrey S. Douglas

A multi-disciplinary informatics research group working in the Virginia-Maryland Regional College of Veterinary Medicine has created a Java-based “problem-list-generator” learning tool that helps veterinary students improve deductive reasoning skills as they learn the art and science of diagnosing disease.

Currently being beta-tested by second-year students in the VMRCVM, the software is the “brainchild” of veterinary clinical pathologist Holly Bender and a 16-member inter-disciplinary team of faculty members and graduate students from across the university collaborating as the Biomedical Informatics Research Group.

The technology appears so successful the United States Department of Agriculture has funded the group with a Higher Education Challenge Grant to develop a diagnostic training module for food-animal diseases using the technology.

Bender began working on the project to improve the way veterinary students learn how to apply knowledge in a problem-solving environment. While first-year students enrolled in the DVM curriculum spend much of their time learning facts, second-year students are challenged to begin developing higher-order thinking skills by applying their knowledge in case-based problems.

“This can be a very painful process,” said Bender, an associate professor in the Department of Biomedical Sciences and Pathobiology. “This software facilitates their thinking.”

One of the biggest problems she saw in her (See BIOMEDICAL ON 3)

Gwen Lloyd Receives NSF CAREER Award

By Jean Elliott

Gwen Lloyd, a mathematics educator in the Department of Mathematics who also teaches methods courses in the Department of Teaching and Learning, recently received a CAREER award from the National Science Foundation (NSF). The Faculty Early Career Development (CAREER) Program is a foundation-wide activity that offers the NSF’s most prestigious awards for new faculty.

Lloyd’s award will support the development of an integrated program of research and education and was received from the Research in Education, Policy, and Practice (REPP) program—part of the Directorate of Education and Human Resources (EHR). The grant is for $438,354 for the years 2000-2005. The project is titled, “Building a Theory of Teacher Learning: With and About Mathematics Curriculum: The Role of Innovative K-12 Materials in Elementary Teacher Education.”

Lloyd will focus on the professional development of prospective elementary teachers in the context of current mathematics-education reform efforts in the United States.

“Numerous empirical studies over the past decade have indicated that teachers’ attempts to enact reform visions in their classrooms are fraught with conceptual and practical challenges, many of which relate to teachers’ lack of personal familiarity with reform-oriented instructional practices and representations of mathematics,” Lloyd said. “In light of this situation, this project creates opportunities for prospective teachers to learn about mathematics and pedagogy by working with reform-oriented K-12 curriculum materials, and examines how such experiences can promote meaningful, long-term changes in prospective teachers’ conceptions and classroom practices.”

In the mathematics and methods courses required of prospective elementary teachers, strategies will be developed for using reform-oriented curriculum materials to support the transformation of prospective teachers’ conceptions of mathematics, teaching, and learning. The specific challenges that teachers encounter through engagement with curriculum (See LLOYD on 4)

Engineering Staff Association Honors Cole and Berry

By Liz Cummings

Lovedia Cole of industrial and systems engineering (ISE) and David Berry of materials science and engineering (MSE) have been selected by the College Association for Staff in Engineering to receive the 2000 Exemplary Employee Awards for outstanding contributions and service.

For the past 10 years, Cole has been program support technician for ISE’s graduate program. The first point of contact for applicants to the program, Cole also works with all of the candidates as they pursue their graduate degrees and maintains contact with former students after they receive their degrees—“Her rapport with students is outstanding,” said J.W. Schmidt, director of ISE’s graduate program, nominating Cole for the award.

“Lovedia is one of the most treasured assets in the ISE department,” said Ph.D. candidate Barbara Finaticelli. “In fact, Lovedia is one of the main reasons I decided to come to Virginia Tech. All of the other schools I looked at had excellent academic programs in my area, but none of the other schools had an ambassador as effective as Lovedia.”

John Tester, who recently completed the Staff in Engineering to receive the 2000 Exemplary Employee Awards for outstanding service and contribution.

Subhash Sarin of industrial and systems engineering (ISE) has won the 2000 Albert Holman Distinguished Educator Award, the top educational award from the Institute of Industrial Engineers (IIE).

The award recognizes outstanding educators who have contributed significantly to industrial engineering through teaching, research, and publication.

Since joining the Tech faculty in 1983, Sarin has been elected by ISE students as one of the top five outstanding faculty members in the department.

In 1997 the Virginia Tech Student Engineers’ Council selected Sarin to receive the College of Engineering Sporn Award for excellence in undergraduate instruction. In 1998, Sarin received the Platta Award for outstanding teaching and public service from the Virginia Engineering Award Committee.

Before coming to Tech, Sarin was on the faculty of Ohio State University. He studied as an undergraduate at the University of Delhi in India, and received his M.S. from Kansas State University and Ph.D. from North Carolina State University.

(See SARIN on 4)
Forestry expands digital resources

By Lynn Davis
Extension specialist Jeff Kirwan and Forestry Professor John Sciler are bringing the ever-expanding digital resources of the college to the public schools of Virginia. Last year they launched a project aimed at middle-school students called FORSite (Forestry Outreach resources for teachers). This on-going project has students investigating trees on their school grounds, then reporting and analyzing data over the Internet. In addition, undergraduates from the college travel to schools to make presentations about forestry. One of the goals is to make the general public more aware of forestry practices and the contribution that forestry makes to Virginia’s economy.

The newest phase of the project is a web site just for teachers. This “teacher’s edition” presents information about forestry by grade so that it can be used in tandem with the state’s Standards of Learning (SOL). For example, a fifth-grade teacher faced with teaching the standard of learning about cell structure, can visit the web site, click on the grade and the specific SOL, and find information about cell structure in wood and how it relates to paper and other forest products produced in Virginia.

1999 patent recipients honored

Virginia Tech faculty members, students, and staff members who received 30 patents during 1999 were honored by the University and Virginia Tech Intellectual Properties, Inc. (VTIP) at a reception at the German Club on May 10. “The creativity and contributions to the growth of knowledge and technology transfer that patents signify are an important form of scholarship,” said Len Peters, vice provost for research and dean of the Graduate School. President Charles Steger said “the patents awarded to Virginia Tech faculty and staff members and students in 1999, most of which have been licensed, represent a significant resource for economic development.”

Michael Martin, executive vice president of VTIP, presented plaques and certificates. A full list of patent recipients is available on Electronic Spectrum at http://www.unirel.vt.edu/spectrum/

Chen receives Fulbright award

Joseph S. Chen, assistant professor in Hospitality and Tourism Management, has been awarded a Fulbright grant to conduct research in Taiwan. Chen departs in July for a two-month appointment at Shih-shan University in Taipei where he will concentrate on developing curriculum with respect to marketing, tourism behavior, tourism impacts and tourism technology for Taiwan.

Dr. Chen is one of approximately 2000 U.S. grantees who will travel abroad for the 2000-2001 academic year through the Fulbright program. Established in 1946 under legislation introduced by the late Senator J. William Fulbright of Arkansas, the program’s purpose is to build mutual understanding between the peoples of the United States and the rest of the world.

“Because the Fulbright Senior Scholar Award helps U.S. scholars gain better international exposure with affiliated, munificent assistance from host countries, as well as promotes collaborative works between the United States and international scholars to reveal critical challenges facing tomorrow’s world,” Chen said.

Recipients of Fulbright awards are selected on the basis of academic or professional achievement and because they have demonstrated unusual leadership potential in their fields. On July 22, Chen returns to receive the Journal of Hospitality and Tourism Research (JHTR) “Best Article” Award at the 2000 Council of Hotel, Restaurant, and Institution Educator Annual Conference in New Orleans. JHTR is a top-tier-refereed journal in the area of hospitality and tourism management. The topic of Chen’s award-winning article is, “The use of logit analysis to enhance market segmentation methodology.”

The Fulbright program, America’s flagship international educational-exchange program, is sponsored by the Bureau of Educational and Cultural Affairs, United States Department of State. For 54 years, Fulbright programs have exchanged nearly a quarter million people—86,000 Americans who have studied, taught or researched abroad and more than 144,000 students, scholars and professionals from other countries who have engaged in similar activities in the United States.

Wireless Telecommunications Center forms affiliation with defense contractor

By Judy H. Hood
The Center for Wireless Telecommunications at Virginia Tech has formed a new industrial affiliation with the Gaithersburg, Md. facility of BAE Systems Science and Technology. BAE Systems Science and Technology is the fourth-largest defense contractor and third-largest aerospace company in the world and largest defense contractor and third-largest aerospace company in the world.

The Gaithersburg operations, formerly Watkins-Johnson Company’s Telecommunications Group, is now a business unit within the Aerospace Electronics sector of BAE Systems Science and Technology. The group will now be known as the Gaithersburg Facility. It is organized as a business unit within the Aerospace Electronics division of BAE SYSTEMS North America.

As a Technology Development Center of Virginia’s Center for Innovative Technology (CIT), the Center for Wireless Telecommunications (CWT) combines the resources of financial and engineering experts in all facets of the wireless telecommunications industry. The center’s faculty, staff, and students conduct research on radio frequency (RF) systems and components, antennas, satellite communication, wireless networks, and business and regulatory issues affecting wireless telecommunications. The center draws on resources from nationally recognized research groups and Virginia’s many satellite communications, telecommunications, and electronics companies. The Gaithersburg facility specializes in RF electronic products and state-of-the-art equipment for applications in communications surveillance, direction finding, and signal processing.

CWT offers cost-effective university teams and existing laboratories to help companies leverage their resources and achieve stronger results. The center has been involved in projects ranging from space telecommunications to television marketing.

SPECTRUM FRIDAY, July 7, 2000
FRIDAY, July 7, 2000  SPECTRUM 3

EMPLOYMENT

Classified Positions

Biomedical

Continued from 3

Students were a tendency to jump to diagnostic conclusions on the basis of pre-conceived notions without fully considering all available evidence. To counter that, the web-based tutorial forces the students to work through a process where they "arrange data abnormalities in a causal hierarchy.

For example, clinical pathologists routinely evaluate blood-chemistry assays that provide information on blood hemoglobin, white blood cells and a range of other parameters.

By systematically identifying all available data related to its normative values, hypothesizing about mechanisms responsible for the aberrations, and factoring into these a problem-solving hierarchy, the students build a deductive "argument for the complete process of the disease." Bender said.

"They're accounting for their decisions better."

A project under way is developing a set of 16 web-based interactive tutorials that describe the physiological processes behind disease states affecting different organ systems.

The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise.

"I have been struggling with this problem for close to 20 years," Bender said. "It takes the approach the problem with novel solutions." The Biomedical Informatics Research Group has been meeting once a week for two-and-a-half years and includes faculty members, graduate students and professional students from the departments of Teaching and Learning, Computer Science, Accounting and Information Systems, the VMRCVM, and the University of Virginia at Wise. 
Norris receives Willa Cather Fiction Prize from Helicon Nine Press

By Sally Harris

Lisa Norris, who just received the Willa Cather Fiction Prize from Helicon Nine Press for her book of short fiction titled *Ter Guss*, experiences “interlocking circles” in her life, both geographically and professionally.

Norris earned her first degree at Vir- ginia Tech in 1979 in forestry and went on to work as a fire dispatcher, Appalachian trail ranger, and biological technician. But she later earned degrees in English and creative writing and became a teacher and a writer.

In addition, Norris loves the West, particularly Idaho, but also has a special place in her heart for Blacksburg, where she now teaches in English department in the College of Arts and Sciences.

Both geographically and professionally, the landscapes in which she thrives influence her essays and short stories, including those that won the Willa Cather Fiction Prize. The prize, given by Helicon Nine Press, includes $1,000 plus publication of the book in the fall of 2000.

Norris is teaching in Kansas City as part of the publication.

Helicon Nine, Editions established the prize in 1991 to honor Cather, a writer “from the heartland whose works reflect the poetic mood and complex concerns of America.” An advisory panel chooses 10 finalists and submits the entries to a distinguished writer for final selection.

This year’s judge was AY Young, author of more than 20 books of poetry, fiction, and memoirs, world traveler, and writing and literature teacher at places such as Stanford, the University of California at Santa Cruz, and the University of Michigan.

“Ten stories within a disturbing collection revolve around Americans’ passionate devotion to guns, gun-toting, sexually tinged violence, and the normally pursued power and dignity,” Young said of Norris’s collection. “From the trailer parks and working-class suburbs of Big Sky County to vast Alaska and the jungles of the Philippines, these characters—and characters they are, most of them women, some of them girls—walk tightlyrope. They move through shadows and the dimly lit edges of love, family, marriage, and other at-risk relationships. With a sharp eye for money and the bizare, the author of these troubling stories lays out clear, compelling version of the way the we live right here and now...”

After she earned a forestry degree from Virginia Tech and worked as a fire dispatcher, Appalachian trail ranger, and biological technician, Norris married, moved to Idaho, got an M.A. in English from Idaho State University in 1985, and taught in Idaho and Oregon for 10 years.

Then the author and her son moved back East to be closer to extended family, and Norris got an MFAn in creative writing at American University in 1991. She has been teaching at Virginia Tech since 1991.

But the West still draws her, and she travels there with her son and “knocks around in Idaho” while she visits her father in Boise. As a result, she is writing a book of essays, tentatively called *Learning the Language*, that deals with recovering from divorce in the landscape that holds all those memories. “I weave my personal loss and recovery narrative with the history and ecology of the places I visit;” she said. The title essay, “Leaving the Language,” is about learning the Nez Perce language at Fishtrap Writers’ Gathering and “the little process, learning the language of forgiveness and love.”

For her work at Virginia Tech, Norris received a Center for Excellence in Undergraduate Teaching (CEUT) faculty grant for spring semester 2000 to create a web site suggesting local environmental projects and related writing assignments. The site is intended for students and faculty across disciplines—but most particularly, for Norris’s English 1106 students, who come from a variety of majors. Her writing has been published in a variety of literary magazines, including the *Kansas Quarterly*, *Green Bean Review*, *South Dakota Review*, and *Northern States Review*.

In addition, Norris recently received a $3,760 Millennium Grant from the College of Arts and Sciences. Millennium grants were offered by the College of Arts and Sciences for the 1999-2000 year to assist in faculty development in their areas of expertise. Norris’s grant will take her from Blackbong to Idaho and Montana this summer to conduct research for *Learning the Language*, set mostly in the Northwest, and for an early draft of a novel.

LIVING

Continued from 1

business leaders, representatives of nonprofit organizations, students, and concerned citizens came from as far away as Hawaii and Alaska. Rich summed up the lessons of the meeting: “The vision of communities that meet the needs of their current residents far better than our cities do today without robbing from future generations by degrading the environment is within our grasp. The technologies and know-how needed to make this a reality are already available. We simply need the political will and intellectual courage to adopt them.”

Rich will produce a publication summarizing the main presentations at the conference. He hopes that these exciting ideas will inspire a variety of projects in Southwestern Virginia and in other locations.

Speakers included Virginia-based leaders such as John Paul Woodley, the state’s secretary of natural resources; Dennis Travicz, the director of the Department of Environmental Quality; Cabell Brand, founder of the Cabell Brand Center for International Poverty and Resource Studies; Richard Collins, founder and director of the Institute for Environmental Negotiation, and John Clark, developer of the Hamounot ecological community.

Organizations represented included the International City/County Management Association, the U.S. Department of Transportation, the U.S. Environmental Protection Agency, the Izaak Walton League, the Green Mountain Institute for Environmental Democracy, the National Tree Trust, the Sierra Club, the U.S. Corps of Engineers, and the Chesapeake Bay Foundation.

SARIN

Continued from 1

Sarin’s teaching is concentrated in the area of operations research. His research in this area and in manufacturing systems has at- tracted support from a number of sponsors, including the National Science Foundation, Mining and Mineral Resources Institute, De- partment of the Interior, U.S. Department of Agriculture, Virginia Department of Transpor- tation, and the Virginia Center for Innovative Technology.

LLOYD

Continued from 1

materials, and the impact of these challenges on teachers’ conceptions and early classroom prac- tices, will be investigated using a case-study method. Through examination of prospective and beginning teachers’ understanding with and about curriculum, this project will produce vital findings about the role that inno- vative curriculum materials can play in the educational reform process. Such results have potential to impact the content and order of teacher preparation and professional develop- ment programs in mathematics education.

An assistant professor at Virginia Tech since 1996, Lloyd has taught mathematics con- tent-and-methods courses for pre-service and in-service teachers, facilitated doctoral semi- nars, supervised student teachers, and worked collaboratively with middle- and high-school teachers on reform-oriented curriculum develop- ment and implementation. In the spring of 1999, Lloyd was a member of a faculty team that received an AChEAR Award from Virginia Tech in recognition of teaching and curriculum development efforts at the Math Emporium.

Her published work has focused on how both pre-service and veteran mathematics teachers interpret, implement, and learn from innova- tive curriculum materials. The CAREER awar- ders are selected on the basis of creative, integrative, and effective research and educa- tion, career development plans, and potential for a lifetime of integrated contribu- tions to research and education.