

The University RESEARCH NEWSLETTER

The University Research Newsletter is published twice a year by the Office of the Provost.

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A Message from the Provost

It is with great pleasure that I welcome you to the first issue of Millersville University's research newsletter,

an ongoing publication sponsored by the Office of the Provost and produced by the students of the University Honors College, an important center for student research. Our plan is to publish this newsletter twice a year, and to include special features and commentaries that complement the regular news sections that will be found in every issue.

Research in its many and diverse forms is the life-blood of any university, and it is one sign of a dynamic academic climate. Intellectual, scientific, and social inquiry and investigation—in short, the research process—are central to Millersville University's identity as a premier regional comprehensive university committed to scholarship and civic engagement. Our intention in offering this newsletter is to share the significant and ongoing research conducted by fac-

ulty, students and other members of the University community with the citizens of the Commonwealth of Pennsylvania.

My personal hope is that through these pages, our friends and community partners will gain a fuller appreciation of the role research plays in the University's civic and professional development. Scholarly and creative endeavors are important ways in which the University's faculty and students are striving to increase knowledge and understanding and also contribute to the welfare and vitality of our community.

Thank you for your continuing support of Millersville University.

Sincerely,

Vilas A. Prabhu, Ph. D.

*Provost and Vice President
for Academic Affairs*

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Millersville University
SEIZE THE OPPORTUNITY

Millersville University is an Equal Opportunity/Affirmative Action institution. A member of the Pennsylvania State System of Higher Education. 3614A-1210

SCHOOL OF Science & Mathematics

BY ALYSSA LEISTER

Looking at the School of Science and Mathematics, one will find that the faculty and staff of various departments have conducted a significant amount of research in the last year. Two books have been published while another four are at press. More than fifty articles have been written, some published and some at press. In addition to teaching at Millersville University, members of the faculty held forty-two positions of leadership in academic or professional organizations. Two of these organizations are specifically devoted to research in their



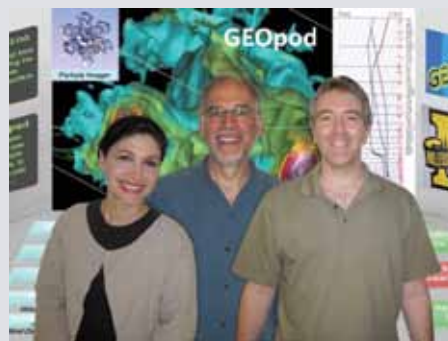
given fields. Faculty members in the School have participated in ninety-three seminars and presentations throughout Pennsylvania, fourteen other states, and five countries. Twenty-five grant applications were funded covering a wide range of projects, totaling more than \$1,300,000.

Dr. Todd Sikora (Earth Sciences) authored a refereed article with Dr. George Young and Millersville University alumnus Michael Bettwy. The article focuses on the effects that the Chesapeake Bay bay-breeze has on the weather of the surrounding areas. Their investigations showed that the bay-breeze has a significant impact on local air traffic, including military operations.

Working interdepartmentally, Drs. **Ximena Catepillan** (Mathematics), **Natalia Dushkina** (Physics), and **Nazli Hardy** (Computer Science), published an article entitled “An interdisciplinary course in mathematics, science, and women’s studies at Millersville University” for the digital journal *Matematicalia*.

Intelligent Machines Laboratory (IML)

Collaborative research is the standard in the Intelligent Machines Laboratory (IML). **Drs. Gary Zoppetti, Muhammad Chaudhary, and Roger Webster** (Computer Science) direct the lab, which has housed numerous grant-funded initiatives that provide faculty and students with innovative applied research opportunities. “Our thrust is state-of-the-art, internally and externally funded research with undergraduate student involvement,” Webster explains, noting that over the years other science faculty have joined their C.S. colleagues in hands-on research with practical application.



The National Science Foundation, Penn State College of Medicine, the Pennsylvania Lions Sight Research Fund, and the William O. and Dr. Katherine Gibson Have-meier Fund are among the external funding partners in IML-supported research. University grants continue to support several ongoing research projects.

Of the several current projects, GEOsciences Probe of Discovery (GEOpod) best represents the nature of IML-based collaborative research. **Drs. Zoppetti, Richard Clark, and Sepi Yalda** have worked together to enhance what is called the Integrated Data Viewer visualization software for the Geosciences. Their team includes two Penn Manor High School teachers and a software development team consisting of three MU computer science undergraduates. As Zoppetti explains, “GEOPOD represents an example where computer scientists and their students, and atmospheric scientists and their students, have collaborated to design, assess, and implement a new approach to learning using 3-D immersion into the physical world.”

SCHOOL OF Education

BY DAN LIPSON

Dr. Sandra Deemer (Educational Foundations) and Melissa Ostrowski (adjunct for Educational Foundations and Penn Manor High School counselor) are studying students' perceptions of the newly implemented career-based graduation project for the Penn Manor School District and assessing their progress throughout the process. Research began in the fall of 2007 and will continue with students from the Penn Manor High School class of 2014. The findings will affect policies and practices related to implementing and designing high school graduation projects nationwide.

Dr. Laurie B. Hanich (Educational Foundations) is currently studying children's mathematics performance in the elementary classroom over a two-year time frame. Specifically, she is interested in how children's achievement profiles like high reading and low math affect

The faculty in the Millersville University School of Education were very active during the 2009-2010 school year. Twenty-six graduate students and twenty-three undergraduate students were involved in research theses. Twenty-five faculty members have published articles in multiple journals, and another seven have published books, with one currently at press. Forty faculty members have presented papers at regional meetings or conferences, with fifty-three more presenting at the national level and another twenty five internationally. Members of the School of Education have also received funding for numerous research endeavors. Twelve faculty grant and contract proposals were funded to the amount of \$366,925, and another \$1,260 was given to undergraduate students.

their patterns of beliefs and what sources children use in developing beliefs about their own abilities. The data from her study will be part of a larger intervention study that examines resiliency in young children who struggle with mathematics.

Dr. Nanette Dietrich (Educational Foundations) is working on the *Model My Watershed* project. Using twenty-first century technologies and cutting-edge science, secondary education students

can actively engage in "real-time" research about the environment. *Model My Watershed* is designed to build on the GoogleEarth platform, and students will be able to create models and study environmental conditions in their own neighborhoods. This investigation challenges students to make real-world decisions based on scientific knowledge and models.

Disabilities Rights Advocate



Dr. Thomas Neville, a nationally recognized researcher and advocate in the fields of special education and disabilities rights, has played

a key role in one of the most important education law decisions of the last two decades. As a member of the Gaskin Settlement Advisory Board, Neville has worked closely with attorneys, school districts, advocates, and families to assure compliance with federal law and the mandate that each child has a right to a full public education in the "least restrictive environment."

The 2005 Gaskin Settlement Agreement (SA) concluded an eleven-year legal battle over the rights of students with intellectual disabilities to receive a full and appropriate public education. Named for Lydia Gaskin, one of the plaintiffs in the original suit and a child (now adult) with Down Syndrome, the judgment affects more than 280,000 Pennsylvania children and their families. Neville noted that since the 2005 settlement more than a million IEP's (individual education plans) have been completed. The SA, which established a board to monitor compliance, has been heralded as an educational and civil rights milestone in Pennsylvania.

Neville served on the advisory board until it concluded its deliberations in September 2010, holding regular public hearings and helping to shape the terms and conditions of inclusion by the standard of "least restrictive environment." "The aim," he explains, "is to cause kids to be together while breaking down the bias that results from children being removed from their nondisabled peers." With a leadership role in a number of organizations and causes, Neville continues to lend his expertise to disabilities-related initiatives throughout the country.

SCHOOL OF Humanities & Social Sciences

BY ERIN DONOVAN

The 2009-2010 school year was productive for Millersville's School of Humanities and Social Sciences. Fourteen books were published in the past year, as well as seventy-nine articles. Undergraduate students contributed six of these articles. Faculty members also presented nineteen papers at regional conferences, thirty-nine at the national level, and eighteen at the international level. Nine grants and contract proposals were funded, totaling \$300,000.

Drs. Robert Bookmiller and Kirsten Nakjavani Bookmiller (Government and Political Affairs) have received a research grant from the Department of Foreign Affairs and International Trade. Their research concerns Canada's role in the international Human Security Network, and their findings appeared in the October 2010 issue of *The British Journal of Canadian Studies*.

Dr. Caleb Corkery (English) has written a book, *Citizen Orator in the West African Savannah*, to be published by Cambridge Scholars Publishing. This text is the result of research done on West African orators; it presents the use of proverbs as rhetorical instruction in West Africa. This style in many ways advances the goals of the Western tradition.

Dr. Leroy Hopkins (Foreign Languages, German) has authored four articles that are being considered for publication by the College Language Association and the Lancaster County Historical Society. He

has also contributed to a collection of work supported by the American Association of Teachers of German (AATG), which looks to attract students of color to study and teach German.

Dr. Christine Filippone (Art and Design) delivered a paper in October 2010 entitled "From Miracle Machines to Nuclear Dreams: Alice Aycock's Quest for Alternative Futures" at the annual conference for the Society of Literature, Science, and the Arts. In this paper, Dr. Filippone examines Aycock's views and how they provided female artists validation and flexibility in a closed technological society.

Dr. Ronald Frankum (History) has completed a 600+ page manuscript, entitled *The Historical Dictionary of the Vietnam War*, to be published by Scarecrow Press. This text includes almost 700 entries on all aspects of the Vietnam War, as well as chronology, maps, and illustrations.

Writing Circles



First conceived as an "intensive three-day collaborative writing residency," historian **Dr. Tracey Weis** (History), explains, the MU Writing Circles have

developed as important campus resources for ongoing scholarly research and investigation. There are currently four such interdisciplinary collaboratives that include twenty faculty members from across the University. *The Women's Narrative Group* is the oldest circle, and it includes faculty from English, Communications and The-

atre, and the University Archives. *Health, Medicine and Society; Community-Based Teaching & Learning*; and *Oral History as a Collaborative Teaching Tool* round out the active sessions.

Interdisciplinary in nature, the program has successfully bridged the sometimes too formal scholarly distinctions that exist on a university campus. In addition to supporting colleagues in their research and publication, several of the circles also focus on understanding university culture. "I broadened my knowledge and understanding of various issues related to human

health," says biologist **Dr. Dominique Dagit** (Biology), "as well as the sociological and historical aspects of healthcare." Sociologist **Dr. Carrie Smith** (Sociology/Anthropology), credits the experience with "giving me the experience and courage to join a 'virtual group' of colleagues [in the field] working on their first book projects related to reproduction and birth." Linking junior faculty with "more seasoned faculty members," MU Writing Circles enhance collegiality and collaborative scholarship as essential ingredients in faculty professional development.

Faculty & Student Collaboration

BY DAN LIPSON

Deena Baskin

A.G. Breidenstine Award Winner

Deena Baskin, a 2009 graduate, received the 2009-2010 A.G. Breidenstine Award for “outstanding undergraduate research.” Her thesis, directed by Dr. Kenneth Shields (English), explores the reasons why the dying Irish language made a comeback in war-torn Northern Ireland. Her research in Belfast and other parts of Northern Ireland was supported by a University research grant. Baskin’s study combined comparative literary perspectives, public policy analysis, and in-depth personal interviews. An English major and University Honors College graduate, Baskin will receive her award in the spring 2011.

**Edward Kimmel, Lindsey Crouse,
& Dan Boyer**
ExSciTech

Edward Kimmel, Lindsey Crouse, and Dan Boyer are working with Dr. Gary Zoppetti (Computer Science) on a volunteer-computing system called ExSciTech. Volunteer Computing (VC) uses the computational resources of volunteers with Internet-connected PCs to address fundamental problems in science. ExSciTech will be an interactive and user-friendly VC system to Explore Science, Technology, and Health. Kimmel, Crouse, and Boyer, members of the ExSciTech development team, are investigating graphics and gaming technologies that will help volunteers discover how rewarding and exciting science can be. ExSciTech, a three-year project funded by the National Science Foundation’s Social-Computational Systems program, aims to increase the science delivered to scientists by Docking@Home, a VC project targeting the design of new drugs for diseases like HIV and breast cancer.

Rebecca Settle
*Lancaster County Courthouse
Way-finding Project*

Rebecca Settle, graduate of Millersville University, recently completed a “way-finding” project for the Lancaster County Courthouse. Her main goal was to improve way-finding by specifying which areas of the courthouse were accessible to jurors and individuals with disabilities. Navigation for individuals with disabilities was especially difficult because the existing signage did not provide a clear route between the two courthouses. Settle designed a new signage system that was temporarily implemented in the courthouse. After meeting with county commissioners, courthouse administration, and judges, Rebecca obtained permission to permanently install the new signage. Her experience has helped her to solidify her future interests, capitalize on opportunities at Millersville, and contribute meaningfully to the Lancaster community.

Matt Maze
Dell Internship

Matt Maze recently completed an internship with Dell Computers. The main focus of the internship was to put Matt in a role that simulates the role of a full-time team member. Maze was able to work alongside team members and present his work to the Vice President and other high ranking members of Dell Computers. Specifically, Maze worked on the Dell Management Console (DMC) team. The DMC is a type of software that aids the management of the devices on a company’s network. It monitors all of a company’s devices and warns the user of any problems. Maze worked with multiple programming languages and frameworks to improve the experience of using the DMC. His work is currently being used by the DMC team. As a result of his efforts, Maze was subsequently offered a full-time position working at Dell Computers.

Sara Mitchell
*Self-Awareness Among Brain
Injured Patients*

Sara Mitchell, a graduate student at Millersville University, is researching the relationship between self-awareness of brain injury and an individual’s need for assistance. She is working with Drs. Shaun Cook, Shawn Gallagher, and Claudia Haferkamp (Psychology), as well as Dr. Miller from Acadia Community Integrated Neuro Rehabilitation. Through her research, Mitchell hopes to distinguish between physical support, which involves physically helping clients control mobility, and supervision, which entails giving cues that remind clients how to behave in a reasonable and socially acceptable fashion. Mitchell’s study focuses on the impact that self-awareness has on brain-injured individuals’ ability to resume an independent lifestyle. Her research will help further define the term “assistance,” which will help establish important requisites for attaining independence.

Non-School Faculty

BY DAN LIPSON

Research at Millersville University does not stop at the School level. Faculty outside the Schools are involved in research endeavors of their own. In this first issue, we focus on the Ganser Library faculty and staff. \$16,335 was allocated to fund two grant and contract proposals. Eighteen papers were presented at regional level conferences and meetings, four at the national level, and two more at the international level. Ganser Library faculty and staff members attended seventy-three seminars and professional associations or groups and received \$15,020 for travel to support research presentations.



Professor Jesse Holden, coordinator of technical services, recently published *Acquisitions in the New Information Universe: Core Competencies and Ethical Practices* (Neal-Schuman, Inc.). The book delves into issues such as how libraries meet the needs of its users, especially in the age of new technology and digital access demands. Holden gives his readers suggestions for handling the daily tasks of librarianship, such as staffing, ordering processes, working with vendors, receiving and accessing content, and budgeting, which will benefit the users of libraries and enhance research processes.

Millersville University archivists collaborated with colleagues at Dickinson College to create the *Slavery and Abolition Digital Collection* (University Special Collections), an online resource that makes long out-of-print 19th-century books and pamphlets available to the general public. Grant-funded and combining expertise in Archives and Information Technology, the website project has been used by more than 8,000 individuals from 100 countries.

Professor Scott Anderson, information systems librarian, recently co-authored an article, "Envisioning the Archival Commons" for the *American Archivist*. Anderson and his co-author, Robert B. Allen, propose an archival commons to support a networked documentation effort. By expanding the involvement of users, leveraging existing discovery tools, and reducing the cost of coordination associated with documentation strategies, the commons would further the ability to form social memory.

CENTERS

BY ALYSSA
LEISTER

Millersville has several centers and institutes working to promote research, leadership, education, community involvement, and overall civic engagement.

The Entrepreneurial Leadership Center is committed to encouraging innovation and creating entrepreneurial opportunities. They do so by linking Millersville University with a network of community and business partners, which promotes the entrepreneurial activities of students and other members of the University community.

The Center for Disaster Research and Education provides multidisciplinary education, research, and internship opportunities and plays a role in education and workforce development for the next generation of emergency managers. The center conducts research and shares its findings both locally and nationally.

The Center for Public Scholarship promotes collaborative research within the Millersville community. The center operates two programs: the Engaged Scholars Program, which mentors faculty members in community-based research and service learning; and the Reflect & Connect Series Program, which encourages students and faculty to reflect on civic engagement and connection to the community.

The Center for Academic Excellence encourages faculty to explore new instructional technologies that will promote interdepartmental work. The center also provides opportunities for faculty to further develop their styles of teaching and learning. All programs are geared towards creating a standard of excellence within each department's team of professors.

The Policy Research Shop provides students with experience in public policy research on issues such as urban revitalization, waste management, veterans' affairs, and public safety.

Other centers around campus include the **Center for Economic Education**, the **Civic and Community Engagement and Research Project**, the **Center for Environmental Studies**, and the **Center for Pennsylvania German Studies**.

Commentary: Digging Deep

BY DENNIS DOWNEY

My well-worn copy of *The American Heritage Dictionary* defines “research” as “scholarly or scientific investigation or inquiry,” or more generally as “close and careful study.” I would add what might be obvious: research is both a *process* and it is the tangible *product* of investigation and inquiry. Much like the corporate world, research is the building block of professional development (R&D) in university life. In a word, expertise matters.

I have been a faculty member at Millersville University for thirty years, and I am known as someone with a fairly conventional approach to scholarship, even though I am drawn to unconventional if somewhat macabre topics like lynching. I am a historian and trinitarian by temperament and training: scholarship, teaching, and engagement are central to authentic faculty development. In my view, scholarly research is the foundation of a mature and engaged professorate. For reasons both personal and professional I am skeptical of academic fads, and I have grown weary of the acolytes of innovation who don't seem to value the necessity of digging deep, to borrow from poet Seamus Heaney.

Over the years I have been active on a variety of professional fronts, but I have come to learn that few labors in academe match the joy and fulfillment that comes from seeing your work in print. I also have learned that I have many Millersville colleagues who share that experience in ways that are appropriate to their academic appointment. For many of us, research and scholarship are the twin pillars of our creative aspirations. And, one of the great and sometimes unnoticed trends is the growing number of undergraduate and graduate students who are engaged in significant and original research, oftentimes in collaboration with a faculty member.

This publication is dedicated to the vast and varied faculty and student-faculty collaborative research that is central to Millersville University's reason for being. In the classroom, the lab, out in the community, and in the solitary cells we sometimes occupy, research is the life-blood of everyday university life. As it should be!

PROFILE



Dennis Downey

Dennis B. Downey is professor of history and director of the University Honors College. A past president of the Pennsylvania Historical Association, Downey currently serves on several editorial and advisory boards. Among his publications is the forthcoming *The Peopling of Pennsylvania* (2010).



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Grants

BY ERIN DONOVAN

In 2009-2010, Millersville University received approximately \$2.7 million in research grant funding. Most of this funding came from federal sources, including the National Science Foundation (NSF). The largest number of grants went to faculty in the School of Mathematics and Science. Computer Science faculty received NSF funding for applied research in which undergraduates assist the faculty with their projects. One significant research grant supports **Dr. James Cosentino** (Biology), who is working on novel cancer detection using nanotechnology.

The School of Education, including its Migrant Education program, also raised a large amount of research dollars from federal awards. In the School of Humanities and Social Sciences, archaeologist **Dr. Tim Trussell** (Sociology and Anthropology) received funding from a private foundation to support archaeological research in Pennsylvania and Bermuda.

Rene Munoz, director of foundation and government support, believes that these research projects have the potential to draw significant funds and positive attention to the University.

