

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

As one faculty member observed recently, scholarship and research are essential

to professional development and the enhancement of “intellectual curiosity.” This is as true of faculty as it is of students. Whether centered in a professional discipline, the community, or the classroom, all research has an applied aspect. *The University Research Newsletter* was established three years ago to promote the diverse research culture at the heart of University life.

This issue offers several new features. The editors have moved from brief citations to more substantive features that are project-oriented. In addition to an interview page, readers will find

greater emphasis on undergraduate student research and how Millersville students have used their success to pursue graduate and professional school research opportunities. Finally, this issue introduces a feature on the research activities of retired faculty, an important but sometimes neglected element of the larger University research culture. With thanks to the Honors College student editors who oversee the process, I hope you enjoy this issue.

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. 4855-1112

UNIVERSITY Arts Initiative

BY AMY PARKER

Millersville University's recently completed Winter Visual and Performing Arts Center has come equipped with new opportunities for community engagement and student research through the University Arts Initiative. The Initiative is focused on creating deeper "town-gown" partnerships around the new facility. The Winter Center, the Ware Center, and classrooms will come together like never before at Millersville, with new opportunities to connect campus with community. Dr. Diane Umble, acting dean of The School of Humanities and Social Sciences, says, "I believe the arts are essential in fostering creativity, problem solving and collaboration.... It is through arts that we learn how to imagine the way things could be different."

Barry Kornhauser, a renowned playwright and director of the Family Arts Collaborative, is preparing programs that foster community engagement for the Arts Initiative. He says, "This is a multifaceted arts program designed specifically for young people, their families or caregivers, and the social service agencies that reach out to



them, along with the involvement of Millersville University students and academic programs." In doing this, he will be creating and coordinating opportunities for faculty and student research as well as community engagement.

The programs are abundant and foster appreciation for the arts. A residency is being planned in conjunction with the Millersville Department of Social Work and the Pennsylvania Council on the Arts. The School District of Lancaster will bring a visiting artist to a school to create art books based on the struggles that students have

faced in their lives. The Studio for Students program will also begin soon, where in the course of six months of the academic year, the art gallery at the Winter Center will host art shows displaying work created by students (grades K-12) from various area schools. Mr. Kornhauser would also like to plan a national storytelling festival on campus at the end of the season, which will offer a full-day community celebration featuring different arts programs. Kornhauser expects Millersville students will have new opportunities for internships and research.

The Disability Arts program will be expanded as well. For example, in February 2013, Kennedy Center arts consultants, including performing artists with disabilities, will participate in a day-long on-campus event. In the spring, a local dance company featuring artists with disabilities will make their rehearsal home at the Winter Center.

Millersville is proud to offer Barry Kornhauser's expertise as a new platform for community and civic engagement in the arts.

Convergence: Disability Arts

In an unusual blending of research interests and performance expertise, Millersville's Family Arts Collaborative will join with the School of Humanities and Social Sciences and the University Honors College to host a day-long conference on "Disability Arts." Scheduled for February 18, 2013, the

program will join disability advocates, performance artists, and scholars to advance a local agenda to celebrate disability awareness and artistic expression. "I hope this conference will open eyes and hearts to the notion that individuals with disabilities should be given a chance to fully participate

in the cultural life of the community," said organizer Barry Kornhauser. Participants will include leaders of the movement from the John F. Kennedy Center in Washington, D.C., the Smithsonian's Director of Accessibility Programming, and local performance artists.

THE SOFTWARE Productization Center

BY DANIEL LIPSON

The Software Productization Center (SPC) at Millersville University brings together multiple disciplines to assist local technology-focused entrepreneurs, at no cost to them, in transforming their software concepts into marketable products. Students from the computer science, graphic art and design, and business administration departments, under the guidance and supervision of experienced faculty, work with clients to design, build, and market these innovative software products.

Past collaborations with the SPC have included local companies Cruzstar, Express Dynamics, MRG Power Laboratories, and Runoff Studios. Dr. Stephanie Schwartz (Computer Science) directs the SPC. “Leading the SPC has given me a really unique vantage point on entrepreneurship,” she says. “As a team, we become very invested in the projects. I have gotten to experience the highs and lows with the entrepreneurs, but without the actual risk.”

This year, the SPC is working with clients Fran Gillott and Ryan Keener, co-founders of DeliveryCrowd.com, who seek to “revolutionize” the delivery industry. Gillott and Keener have developed a crowd-sourced delivery process, where drivers with smart-phones, known as Crowdies,



are connected in real-time to businesses in need of delivery services. These may include restaurants, dry-cleaners, or even automotive parts distributors.

Gillott and Keener work with students and faculty at all levels of production. Together, Keener and the Computer Science and Graphic Art and Design departments have developed software that will allow Crowdies, who operate as independent contractors, to specify their delivery area, availability, and how much they are willing to accept to perform a delivery. The Crowdies will then be connected to the

appropriate firms in a virtual marketplace. Gillott is now working with the business administration department to create a marketing strategy and business plan.

Gillott and Keener, whose contract ends with the SPC in November, are grateful for the help they have received. “The collaboration with Millersville’s SPC has been incredibly valuable,” says Keener. “The experience has not only accelerated the development of our software, but has also helped us refine our ideas and algorithms in a way that might not have happened on our own.” Gillott adds, “The quality of the students is top notch. Collaborating with such bright and eager talent is refreshing as we dedicate our lives to making DeliveryCrowd successful.”

The SPC is mutually beneficial to all parties involved. Clients receive assistance and guidance to make their ideas into reality, while students and faculty are able to hone their skills in marketing, software development, graphic design, and client service.

The SPC hosted an official launch party for DeliveryCrowd in November 2012 at the Ware Center, in downtown Lancaster.



MILLERSVILLE STUDENTS Pursuing Research Degrees

David Walton

Class of 2012
Honors Chemistry

Walton is currently enrolled in the Ph.D. program in chemistry at the California Institute of Technology. During his Millersville career, Walton wrote a thesis entitled “Promising Iridium (I) and Rhodium (I) Catalysts for transfer hydrogenation in Green Chemistry: Structure and Catalytic Properties.” Walton also received the PASSHE 2012 Syed R. Ali-Zaidi Award, which recognizes outstanding academic achievement and participation in extra- and co-curricular activities.

Michael Parker

Class of 2012,
Honors Biology,
University Honors
College

Parker is currently enrolled in the Ph.D. program in biology at Yale University.

During his career at Millersville, Parker worked with Dr. Yuan Zhong on his thesis “Genome-Wide Comparative Analysis of the Terpene Synthase Gene Family in *Arabidopsis thaliana* and *Medicago truncatula*.” The study identified, compared, and analyzed the Terpene Synthase (TPS) gene families in two model plant species.



John Timlin III

Class of 2012, Honors Physics,
University Honors College

While at Millersville, Timlin researched supernova remnants in the Magellanic Clouds, and analyzed the nucleosynthesis yields of the supernova DEM L71 to determine the size and location of the progenitor star. Currently, Timlin is enrolled in the Ph.D. program in astrophysics at Drexel University.

William Serson

Class of 2012, Honors Biology,
University Honors College

Serson is presently enrolled in the Ph.D. program in biology at the University of Kentucky. During his time at Millersville, Serson studied the climatological and ecological factors affecting expression of polyphenol oxidase in *Ailanthus altissima*. Serson also was the recipient of a Hoffman Endowment Scholarship at Millersville.

Lauren Hood-Bleiler

Class of 2009, Honors History, University
Honors College

During her time at Millersville, Hood-Bleiler was a recipient of the 2009 A.G. Breidenstine Award for her thesis dealing with students’ experiences at the Carlisle Indian School. She is currently pursuing a graduate degree in occupational therapy at Thomas Jefferson University.

Luke Harbaugh

Class of 2008,
Honors History,
University Honors
College

While at Millersville, Harbaugh researched the challenges of American interdiction of the Ho Chi Minh trail. He is presently finishing his Master in Divinity degree at Duke University.



Sarah Darling

Class of 2012
Honors
Communication,
University Honors
College

During her time at Millersville, Darling researched “The Impact of Divorce on Adolescent Communication.” In this thesis, Darling explored adolescents’ relationship satisfaction, as well as their different experiences in self-disclosure, based on their parents’ relationship status. She is currently pursuing a graduate degree in educational administration at the University of South Carolina.



Danielle Farnell
Class of 2012,
Honors Biology,
University Honors
College



Farnell is enrolled in the Physician's Assistant Degree Program at the Philadelphia College of Osteopathic Medicine. While at Millersville, Farnell studied the effectiveness of randomly amplified polymorphic DNA (RAPD) and amplified fragment length polymorphism (AFLP) analysis in identifying sex-specific DNA *indoryteuthis pealeii*.

Joseph Tomlinson
Class of 2009, Honors Biology and
Chemistry, University Honors College

Tomlinson is currently enrolled in the Ph.D. program in biochemistry at the University of Virginia. During his career at Millersville, Tomlinson conducted an investigation of antimicrobial activity in the Dayflower Genus *Commelina*.

Lindsey Wegrzyniak
Class of 2007,
Honors Biology,
University Honors
College



While at Millersville, Wegrzyniak researched the applicability of amplified fragment length polymorphism (AFLP) technology in the identification of sex-specific genomic sequences. Currently, Wegrzyniak is pursuing a medical residency in obstetrics and gynecology at the Penn State Hershey Medical Center.

Lauren Wegrzyniak
Class of 2009, Honors Biology, University
Honors College

Wegrzyniak, during her time at Millersville, conducted research in the detection of sex-specific genomic sequences in cephalopods using randomly amplified polymorphic DNA (RAPD) analysis. She is currently enrolled in the Doctor of Dental Surgery program at the University of Pennsylvania.

Alexandra Mairs-Kessler
Class of 2008, Honors History, University
Honors College

Mairs-Kessler is currently enrolled in the Ph.D. program in history at the University of Delaware. As a student at Millersville, she examined Bermuda's active support of the Anglo American Revolution through the smuggling trade.

Sarah Mahdally
Class of 2010, Honors Biology, University
Honors College

Mahdally is presently enrolled in the D.O. medical degree program at the Lake Erie College of Osteopathic Medicine. While at Millersville, she studied polyphenol oxidase and the Inducible Wound Response in *Ailanthus altissima*.



GREEN Chemistry Catalysts

Dr. Edward Rajaseelan (Chemistry), in collaboration with Dr. Laura Anna, has performed research on his study “N-Heterocyclic Carbene Complexes of Rhodium and Iridium: Green Chemistry Catalysts.” Eight Millersville University chemistry alumni and three current seniors assisted with the project.



The study’s main initiative was based on the idea of “green chemistry,” which has become an evolving interest over recent years. Green chemistry involves minimizing both the use and generation of hazardous substances. Ideally, reduced production of hazardous substances will result in less hazardous wastes and an overall healthier

environment. One of the main goals of green chemistry involves the efficient use of resources, such as petroleum chemical products. It also includes the practical use of safe, non-toxic chemicals wherever applicable.

As Dr. Rajaseelan noted, a growing interest within green chemistry is the transfer hydrogenations of unsaturated bonds. Hydrogen gas, which is not used in normal hydrogenation reactions, poses heightened safety hazards due to its flammable and explosive properties. By opting for catalytic reductions, the opportunity for a reduction of waste production will ensue. The total energy use and toxicity can also be significantly decreased.

According to Rajaseelan, “The development of new and more effective catalysts for these reactions is the purpose of the research in the lab. N-heterocyclic carbenes (NHCs)

have been considered excellent spectator ligands in homogeneous catalysis, especially in transfer hydrogenation reactions. We have synthesized several rhodium and iridium complexes of triazole based NHCs and studied their catalytic properties in several transfer hydrogenation reactions.”

Five of the eight Millersville University chemistry majors who assisted in the research study presented their results at the National Meeting of the American Chemical Society. These students are continuing their individual studies in graduate school, including North Carolina State University, University of North Carolina Chapel Hill, Duke University, University of Rochester, and California Institute of Technology. Dr. Rajaseelan and three of his students have co-authored several journal articles since 2009. Three new chemistry majors have joined Dr. Rajaseelan’s research team this academic year.

Crime Reduction Initiative

Dr. Mary Glazier, professor of sociology and director of the Center for Public Scholarship and Social Change, serves as the research partner for the Lancaster Violent Crime Reduction Initiative. The Initiative is led by the Lancaster Bureau of Police and is a collaboration of the police department with Lancaster

County Courts, CareerLink of PA, Water Street Ministries, Boys and Girls Club of Lancaster and other community partners to reduce the violent crime associated with drug dealing in a portion of the southwest quadrant of Lancaster City. As a part of Dr. Aaron Porter’s course, SOCY 448: Urban Ethnography, a dozen Millersville University students are

assisting the Initiative in identifying neighborhood anchors in the southwest quadrant of Lancaster City. Through applied research analysis, human subject interviews and ethnographic observation, faculty and students are developing an overarching assessment of the community’s strengths and weaknesses.

RESEARCH In Retirement

“I believe that research, learning and history as public service are a life-long vocation rather than a job, defined simply as the daily interaction in the classroom. Retirement from the latter is not an end, but a continuation.”

—Saulius Suziedelis, Ph.D.

A specialist in East European and Soviet history, Saulius Suziedelis joined the Millersville University Department of History in 1990, teaching graduate and undergraduate courses in Russian and European history, Nazism and the Holocaust, as well as surveys of intellectual history in the Honors Program. He served as editor of the *Journal of Baltic Studies* (1994-1998) and was elected president of the Association for the Advancement of Baltic Studies (2002-2004). Since retirement in May 2008, Suziedelis has remained active in teaching, research, and public service. He continued to direct the University's Annual Conference on the Holocaust and Genocide until 2010, and he has participated in and made presentations to the Center for Advanced Holocaust Studies (CAHS) of the United States Holocaust Memorial Museum (USHMM) and its Silberman Seminar.

In 2011 Prof. Suziedelis published the second edition of his *Historical Dictionary*



of Lithuania, and co-authored an article in *Politeja*, the political science journal of the University of Cracow, entitled “War, Holocaust and Politics in Lithuania” (in Polish). Three more article-length studies on World War II will be published this year, including an essay in the collection, *Bringing the Dark Past to Light*, to be published by the University of Nebraska Press.

Suziedelis has been most active in the international arena. In February 2009 he spoke at a panel presentation at the International Book Fair in Jerusalem on issues in Holocaust remembrance, and in December Suziedelis participated in an Israeli-American academic forum at Herzliya University in Tel Aviv. February 2011 found him at University College, London as an invited lecturer at the International Colloquium on Lithuanian-Jewish Relations. In November 2012 he is

scheduled to deliver a paper in Berlin on the historical relevance of Germany's war of annihilation waged against the USSR in the Baltic region.

As a bilingual citizen of Lithuania as well as the United States, Prof. Suziedelis has focused most of his international work on Eastern Europe. In 2011-2012 he delivered lectures on the Holocaust and issues of tolerance to college professors in Lithuania as part of a program co-sponsored by the USHMM and the US Embassy in Vilnius. He also taught an undergraduate course on “Genocide in the Twentieth Century” at Vytautas Magnus University in Kaunas, Lithuania (his parents' alma mater). In November 2011 the Lithuanian Ministry of Education and Science recognized his scholarly work by awarding him the annual prize for Lithuanian scholars living abroad.

Prof. Suziedelis is convinced that his life-long commitment to research and learning within a framework of public service arises out of an early experience of service in the Peace Corps (1967-1969) in Ethiopia. In September 2012 Dr. Suziedelis traveled to Ethiopia along with nearly 100 other former volunteers to commemorate the 50th anniversary of the Peace Corps in that country.

INTERVIEW WITH Oliver Dreon

Recently appointed Director of Millersville's Center for Academic Excellence (CAE), Ollie Dreon (Educational Foundations) originally planned on a career in the sciences. After completing a M.A. at University of Pittsburgh, Dreon earned his Ph.D. (2008) in science education and instructional systems at Penn State University. He joined the educational foundations department in 2007.

How would you describe your educational research interests?

My doctoral dissertation focuses on how educators develop through their participation in communities of practice. This work continues today with my work at Millersville with the Professional Development School. With my interests in technology, I have expanded the lens to include technological supports for building communities and fostering learning.

How do those interests relate to your role as Director of the Center for Academic Excellence?

I see my research as being directly connected to the work I do as the director of the Center for Academic Excellence. My research focuses on educators expanding their pedagogy, whether through the use of technology or through the development of supportive communities of practice. The larger mission of the CAE is to promote excellence in teaching and learning and to foster an atmosphere of collaboration and scholarly inquiry. The mission of the CAE fits perfectly with my research and provides me a tremendous opportunity to expand my work.



What is a community of practice?

A community of practice is a unique group of practitioners who engage in joint activities and discussions. The community has a shared repertoire of resources, experiences and tools. From a learning perspective, communities of practice enculturate newcomers into the practice and help apprentices develop fuller participation within the community.

How might we think of your workshops as "applied research pedagogy"?

I practice what I preach. In developing workshops, planning lessons or teaching online classes, I use the research base to inform my work. Whenever applicable, I unpack these decisions to my students or to workshop participants. These conversations offer opportunities to explicitly model research-based practices and to make the theoretical more concrete.

What do you see as the future direction for faculty professional development programming in the CAE?

The CAE has traditionally offered single programs around topics of interest on campus. I hope to build more long-term systems that foster professional development. For instance, I plan to organize a reading group around the book, *How Learning Works: Seven Research-Based Principles for Smart Teaching* (Ambrose, Bridges, DiPietro & Lovett, 2010). Rather than having a single program or discussion developed around the book, the hope is that the book and reading group promotes a longer-term, engaged dialogue around teaching. I also would like to initiate more thematic programming around specific topics. The CAE could offer a series of programs that focus on discussions to help build capacity across campus and expand instructors' pedagogy in this area.

How would you characterize the place of research in University programming?

Millersville faculty members are scholars for whom research is an important part of their professional identities. The CAE helps support programming related to faculty research, but consistent with Millersville's mission, I am most interested in helping faculty connect that activity to student success. This may take the form of expanding undergraduate research or assisting faculty in connecting more directly their scholarly interests to understanding the complex teaching and learning issues within their disciplines. Many Millersville faculty are well situated to contribute to this effort.