



Department of Computer Science

Fall 2009 Newsletter

<http://cs.millersville.edu/>

NOTES FROM THE CHAIR

Our faculty continue to be very active in grants (some noted below), publishing papers in conference proceedings, and attended several regional, national, and international conferences.

[Dr. Zoppetti](#), working with Drs. Clark and Yalda in Earth Sciences, has received a grant from NSF to work with data visualization for meteorological information. Several of our students will be working on this grant.

[Dr. Elzer](#) received a grant with the University of Delaware on Multimodal Access to Information Graphics. She also continues her work on Productization for local businesses.

Our students continue to be involved in many exciting activities. Students presented three papers at regional conferences during the past year. One student participated in a National Institute of Standards and Technology (NIST) fellowships this summer. A total of 15 independent studies were conducted last year.

We continue to update our curriculum. Last year we added courses in "E-Commerce Concepts and Programming" and "Computer and Network Security" to our official electives. Both courses had previously been taught as Special Topics.

Our latest lab upgrades include new computers for our teaching lab and a cluster of computers for high performance computing.

Our faculty are also engaged in the community. Drs. Liffick and Hardy were honored for their respective community work by the Civic and Community Engagement Research project at Millersville. [Dr. Liffick](#) was honored with his wife, Alanna, for their work with Silent Witness and the MU Allies program. [Dr. Hardy](#) was honored for her work with Mr. Charlie Reisinger in the Millersville University / Penn Manor Cyber Partnership.

More details on many of these items may be found elsewhere in this newsletter.

You can update your postal and email addresses by visiting our website, <http://cs.millersville.edu>, and following the instructions and link at the bottom of the main page. Future issues of our newsletter will be sent by email, so please act today.

We enjoy hearing from you. Feel free to drop me an e-mail at hutchens@cs.millersville.edu. If you would like for us to include comments on your activities in future newsletters, state that explicitly in your e-mail.

FACULTY SPOTLIGHT

Drs. Gary Zoppetti (CSCI), and Sepideh Yalda and Richard Clark, both from earth sciences, received a \$350,000 grant from the National Science Foundation to develop a software module that will provide a student with the ability to explore real-time data interactively at the controls of their personal virtual platform.

The project is called "**Geosciences Probe of Discovery**," or GEOPOD. Because 3D visualizations of real-time atmospheric data, including gridded output from weather

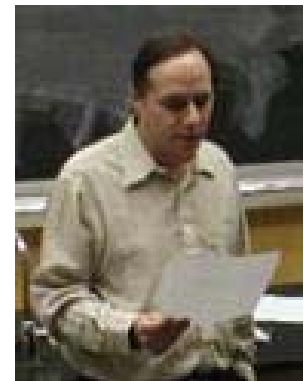
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models, are commonplace in the meteorology community, the researchers aim to develop a virtual experience that will allow students to immerse themselves and to navigate within real and current data while being guided by a tiered instructional design strategy. The investigators envision that this will lead to enhanced learning and discovery.

Students Ky Waegel and Michael Root are assisting with the software development, building upon previous work by MUCS graduate Kenneth Mitton.



Dr. Stephanie Elzer

In last year's newsletter, we introduced you to the fledgling **Software Productization Center (SPC)**, a cross-disciplinary center involving Computer Science, Business/Marketing, Graphic Design and Communication/PR, funded by a three year PASSHE grant which began in January of 2008. The term "software productization" refers to the process of turning a rudimentary software concept or early prototype into a marketable product. Thus the efforts of the SPC are primarily focused on assisting local entrepreneurs with market research, the technical implementation of a working prototype of the software concept, the development of business and marketing plans for the launching of the product, and the branding and physical packaging of the product. Once the collaboration with the SPC is complete, the entrepreneur should be prepared to sell their product, either by attempting to raise additional funds (through business loans, angel investors, venture capitalists, etc.) or by directly selling to a customer base. The model upon which the SPC is based leverages faculty expertise to guide and mentor students in working with the participating entrepreneurs.



This has been a busy year for the SPC! In May, the SPC wrapped up their first project. This was with Express Dynamics, a software company focused on providing applications that allow nonprogrammersto develop customized programs for business-related purposes, and the work was centered around web marketing and branding. The launch of the second SPC collaboration, Cruzcourt, was celebrated on October 15th at the Murata Business Center in Carlisle. The SPC has worked with Cruzstar to develop the Cruzcourt software and graphics, and the company is now ready to launch the new product; Cruzcourt will provide corporate clients with an off-site company cafeteria complete with a secure web-based ordering system. Meanwhile, a third project is beginning. The entire SPC team is looking forward to our collaboration with MRG Power Labs/York Laboratories on The Grease Thief! For more information, please see <http://www.millersville.edu/spc>.

Dr. Roger Webster was awarded a Keystone Innovations Zone grant of \$10,000 on a joint project with Microsurgery Simulation Software Inc. for "The Development of an Ocular Trauma Microsurgery Simulation for Training Healthcare Professionals."



Dr. Nazli Hardy has returned this Fall after having taken maternity leave during Spring 2009; she is a proud mother to a baby girl.

Congratulations to Dr. Hardy on her promotion to Associate Professor.



FACULTY PUBLICATIONS

Burns, Rich, Stephanie Elzer and Sandra Carberry. Modeling Relative Task Effort for Grouped Bar Charts. In Proceedings of the Annual Meeting of the Cognitive Science Society, Amsterdam, Netherlands, July 2009, pages 2292-2297.

Demir, Seniz; Sandra Carberry and Stephanie Elzer. Issues in Realizing the Overall Message of a Bar Chart., in Recent Advances in Natural Language Processing V, Nicolas Nicolov, Galia Angelova, and Ruslan Mitkov (Eds), Current Issues in Linguistic Theory, John Benjamins, 2009, pages 301-310.

Carberry, Sandra, Stephanie Elzer, Richard Burns, Peng Wu, Daniel Chester, and Seniz Demir. Information Graphics in Multimodal Documents, in Multimedia Information Extraction, Mark T. Maybury (Ed.), AAAI/MIT Press, 2009, to appear.

Elzer, Stephanie, Edward Schwartz, Sandra Carberry, Daniel Chester, Seniz Demir and Peng Wu. Bar Charts in Popular Media: Conveying Their Message to Visually Impaired Users via Speech, in Advances in Intelligent Information Systems, Z. W. Ras, W. Ribarsky (Eds), Studies in Computational Intelligence, Springer, 2009, to appear.

Nazli Hardy, "The Case for the Universal Personal Internet Identification," The 2008 International Conference of Information Security and Internet Engineering , July, 2008, London, ISBN: 978-988-17012-5-1. (awarded 'certificate of merit')

Nazli Hardy, Marcos Pinto & Hsinrong Wei, "The Impact of Collaborative Technology in IT and Computer Science Education: Harnessing the Power of Web 2.0," ACM Conference on Information Technology Education, October 16–18, 2008, Cincinnati, Ohio, ISBN: ACM 978-1-60558-329-7/08/10.

Nazli Hardy, "Women in Computer Science: Harnessing the Power of Web 2.0 to Draw Women to Computer Science Field," ACM Conference on Information Technology Education, October 16–18, 2008, Cincinnati, Ohio, ISBN: ACM 978-1-60558-329-7/08/10.

Nazli Hardy & Chris Hardy, "Interactive Google Map Application to Mark Species Distribution on Campus," the Eastern Conference of the Consortium for Computing Science, Hood College in Frederick, Maryland, October 10, 2008.

Nazli Hardy, Syed V. Ahmed, "Architectural Feasibility of an Intelligent E-Commerce Network: Simulation of the Network Efficiencies," Networking and Electronic Commerce Research Conference, Italy, October 2008, (pp. 97-104) ISBN: 978-0-9820958-0-5.

OTHERS 2008-2009 (?)

NEWS AROUND TOWN

Windows Lab Upgrade

This summer the Department upgraded the PCs in the Windows laboratory. The lab contains 27 machines, each running an Intel Xeon processor with four cores clocked at 2.66 GHz. For rendering power each system is equipped with an nVidia GeForce 285 GPU. The machines run the 64-bit edition of Windows Vista Business to fully utilize 5 GB of DRAM.



Mrs. Bonnie Work is retiring from Millersville University after 27 (?) years of dedicated service to the Department. We have all depended on her, she is a treasure to faculty and students alike; she will be irreplaceably missed.



Programming Team

This year our programming teams competed in 2 contests. In the Fall 2008 semester we traveled to Shippensburg University to compete in the ACM-ICPC (Association for Computing Machinery – International Collegiate Programming Contest). We competed in the Mid-Atlantic Region with 147 teams representing 64 schools. We took 2 teams to this contest. The Millersville Daemon Llamas team consisting of William Killian, Ken Mitton, and Jordan Hollinger which ranked 40th in the region. The Millersville Marauders team consisting of David Hober, Dan Baker, and Josh Adams placed 105th in the region. In April 2009 we took 2 teams to the PACISE (Pennsylvania Association of Computer and Information Science Educators) programming contest that was hosted by Slippery Rock University. Our teams did well against the sister PASSHE schools. The Millersville Gold team consisting of Jordan Hollinger, Ken Mitton took 5th place while the Millersville Black team consisting of Josh Adams, Kaitlyn Allen, and Ben Bryant took 12th place. There were a total of 18 teams competing at the conference. The department would like to thank these students for taking the time to practice, compete, and represent Millersville at these annual competitions. We also would like to wish David, Dan, Josh, and Kaitlyn the best on their future endeavors, they graduated in May 2009. The teams are already getting geared up for the competitions in the 2009-10 academic year.

Cyber Defense Team

2009 shaped up to be a better year than the last for the MU Cyber Defense team. With only 2 team members returning, the biggest challenge the team faced was finding new team members. Josh Adams and Dan Baker were able to recruit Dan Wyatt, Kyle Thomas, Trevor Scheitrum, Elyse Dougherty, Will Killian, and Ken Mitton to complete the 2009 team. This team came together quickly and realized there was work to be done. The team spent most of the Winter/Christmas break in the networking lab getting up to speed. The team concentrated on learning the ins and outs of firewalls, VoIP clients and servers (voice over Internet Protocol), web technologies, operating systems and anything else we knew that could and would be thrown at us at the qualifying contest. All the long hard hours in the lab culminated on January 17th, 2009 at White Wolf Security in Lancaster, PA. Millersville competed against 3 other regional schools for a spot at the Mid-Atlantic contest that was held in March 2009. The qualifying round was a one day, grueling eight hour contest of defending your network from real life professional hackers. There were two qualifying rounds held for a total of 8 teams. Millersville came in 3rd at their qualifier and placed 6th overall. So with a new found respect for network security and a burning desire to do better next year, the 2010 team is getting ready to fire up the security lab and start looking at new ideas and new tactics to help them defend their network in the qualifying round in January 2010. Good luck team!

How YOU Can Help

Like what you read about CSCI alumni, faculty, students, and programs? Please keep our programs strong and support CSCI students. Give on-line @ <http://www.millersville.edu/>. Click on the 'Giving' tab OR send your gift to Millersville University, Development Office, P.O. Box 1002, Millersville, PA 17551-0302. Gifts can be restricted or unrestricted.

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