

Tuesday, August 28, 2007

Volume 02, Issue 26

Jerrie Fiala, Editor: [jerrie.fiala@wmich.edu](mailto:jerrie.fiala@wmich.edu)**CEAS projects honored as top 2007 Michigan innovations**

Projects coordinated by two CEAS professors were highlighted last month in a special supplement of *Business Review Western Michigan*, which were honored by the weekly publication as being “the most innovative people and companies for 2007.”

Winning one of eight innovation trophies were **Dr. Margaret Joyce** - an associate professor in the paper engineering, chemical engineering and imaging (PCI) department - and her team. They developed technology to form radio frequency identification (RFID) tags by printing antennae and integrated circuits directly to paper and board at commercial-press speeds.



The RFID team: front (from left): **Dan Fleming**, **Margaret Joyce**, and **Gururaj Neelgund**; back (from left): **Erika Hrehorova**, **Sasha Pekarovic**, **Brad Bazuin**, **Marian Rebros**, and **Ramesh-Chandra Kattumenu**

The RFID project is being funded by a \$966,000 21st Century Jobs Fund initiative to create jobs in Michigan's emerging technologies. The project is aimed at bolstering homeland security through improvements to technology to enable products to be tracked and identified with tags that use RFID.

Another project goal is to grow the Michigan economy by changing the industries' base technology, which will lead to the creation of jobs. “If we can develop this technology to the point where we can commercialize it, there is real potential for a positive effect on Michigan's economy,” Joyce said.

Joyce's team includes professors **Dr. Shasha Pekarovicova (PCI)**, **Dr. Dan Fleming (PCI)**, **Dr. Brad Bazuin (ECE)**, and **Dr. Valery Bliznyuk (PCI)**, and post doctoral students **Dr. Marion Rebros**, **Dr. Erika Hrehorova**, and **Dr. Gururaj Neelgund**, and several MS students and industrial partners.

Joyce, who joined the CEAS faculty 12 years ago, specializes in coating formulation and development and coating processes. In addition to RFID, her current research involves nano materials and composites, barrier coatings, curtain coating, and coating-ink

interactions. She directs WMU's Center for Coating Research and Development, teaches courses on coating technology, and chairs an annual WMU Barrier Coating Symposium.

Joyce's credentials include 12 years of industrial experience in coatings for textiles and paper, publication of more than 40 technical papers, and 3 patents. A TAPPI fellow and active member of several professional organizations, she earned her BS in chemical engineering, MS in textile engineering, and Ph.D. in paper at North Carolina State University. For more information, contact her at [margaret.joyce@wmich.edu](mailto:margaret.joyce@wmich.edu)



In October 2006, representatives of WMU, Dana Corp., Eaton Corp., L-3 Communications, and MANN+HUMMEL joined the US Army's TARDEC and the US Dept. of Energy's Oak Ridge laboratories to form CAViDS

CEAS's **Dr. William Liou**, a professor in the mechanical and aeronautical engineering (MAE) department, was honored as one of 25 finalists in the competition for his work in developing WMU's Center for Advanced Vehicle Design and Simulation (CAViDS) to coordinate the efforts of WMU, federally funded labs, and automakers to enhance vehicle design and analysis.

To that end, a CAViDS Consortium began operations at the beginning of this year. It was formed with the signing of Memoranda of Understanding in October 2006 with four manufacturers – Dana Corp., Eaton Corp., L-3 Communications, and MANN+HUMMEL – and two government lab affiliates: the US Army's TARDEC and the US Dept. of Energy's Oak Ridge National Lab.

“CAViDS Consortium helps the members to leverage resources efficiently,” Liou said, “so that, collectively, we can go a whole lot farther with the investment than individual members can on their own.”

Liou, whose primary research area is computational methods, also directs WMU's computational fluid dynamics lab. He teaches fluid mechanics, thermodynamics, computational fluid dynamics, propulsion, and aerodynamics at grad and undergrad levels. For more information, contact him at [william.liou@wmich.edu](mailto:william.liou@wmich.edu)

Send your thoughts on this article or your suggestions for future articles to the editor at [jerrie.fiala@wmich.edu](mailto:jerrie.fiala@wmich.edu). Thank you.