



# IEEE

# MADISON SECTION NEWSLETTER

**VOLUME 8, NUMBER 7**

*SERVING IEEE MEMBERS OF SOUTH CENTRAL WISCONSIN*

**OCTOBER 2005**

## **Ideas to Profits: Embracing Failure as a Milestone to Success**

### *Joint meeting with IEEE Entrepreneurs Network Affinity Group*

**Date/Time:** Thursday, October 20, 2005, 11:45 AM - 1:00 PM  
**Speaker:** Debra Malewicki, Ph.D., Director, Wisconsin Innovation Service Center  
**Location:** Rocky Rococo's Pizza, 7952 Tree Lane (Madison Beltline Hwy. at Mineral Pt. Rd.), 608.829.1444  
**Menu:** Pizza buffet, salad and soft drinks (cost \$10.00, free for student members)  
**RSVP:** by October 17th to Les Schroeder via email (l.schroeder@ieee.org) or call 608.444.9144

*Non-member guests are always welcome!*

"Ideas to Profits: Embracing Failure as a Milestone to Success" is an annual innovation commercialization conference sponsored by the Wisconsin Innovation Service Center. This year's event will be November 4th and 5th at the University of Wisconsin-Whitewater.

The outstanding workshops focus on facilitating successful innovation commercialization-covering publicity and marketing strategies, cost-effective intellectual property decisions, licensing, success stories, and much more. A new workshop offers tips and strategies for consumer product developers interested in using direct response TV and Wal-Mart as possible distribution channels. A special track once again focuses on the new product commercialization issues specific to manufacturers.

Nearly all successful, innovative entrepreneurs have scaled tremendous obstacles on the road to creating profitable and growing businesses. If "fear of failure" is keeping you from taking the plunge with a new venture or moving your company in a new direction, come hear our keynote panel of seasoned, award-winning entrepreneurs tell their adversity tales and how they retrenched for success.

Last year's conference attracted over 200 representatives from innovative manufacturers, technology companies, inventors and new ventures, along with students and faculty.

The Ideas to Profits brochure can be viewed at <<http://academics.uww.edu/business/innovate>>.

Debra Malewicki is Director of Business Outreach Services at the University of Wisconsin-Whitewater, which oversees the Wisconsin Innovation Service Center and the Small Business Development Center and acts as a gateway for business to UW-Whitewater resources. She has directly assisted innovative manufacturers and aspiring entrepreneurs with making more profitable product and market development decisions for over 20 years, personally working with over 3,000 inventors and product developers. WISC services have provided insight on over 6,000 products and services from a wide variety of industries through projects covering new product feasibility, competitive intelligence, licensing/strategic partnering, distributor assessments, and customer satisfaction.

## **Wisconsin Public Utility Institute's Fall Power Lunch Series - Emerging Technologies**

WPUI is offering a Fall Power Lunch Seminar Series on emerging technologies! Join us to learn about growing technologies in the field, how feasible they are, and what obstacles stand in the way of deployment. The following lunches may be of interest to electrical engineers:

### **Broadband Over Power Lines – Monday, November 21, 2005**

- BPL Developments and Current Initiatives
- Feasibility and Barriers to wide-spread BPL

### **Transmission Technologies – Monday, December 19, 2005**

- Explore Three New Transmission Technologies
- Federal Initiatives to Support Transmission Infrastructure
- What Obstacles Still Need to be Addressed

The Wisconsin Public Utility Institute is part of the University of Wisconsin Madison School of Business, Executive Education. We have a 23 year history of advancing the understanding of public policy issues in the energy and telecommunications fields through seminars like these. We are pleased to be offering a new power lunch seminar series with the Public Service Commission of Wisconsin.



**Fall 2005  
Short Courses from  
Engineering Professional  
Development**

- **Planning and Implementing Point-to-Point Microwave Radio Systems**  
*October 5–7, 2005 in Madison, WI*
- **The Engineer in Transition to Management**  
*October 18–20, 2005 in Madison, WI*
- **Electrical Grounding of Communications Systems**  
*October 31–November 2, 2005 in Madison, WI*
- **Fiber Optic Communications: A Practical Introduction**  
*November 8–10, 2005 in Madison, WI*
- **Introduction to Right-of-Way for Utility Engineers, Technicians and Managers**  
*November 16–17, 2005 in Madison, WI*

For further information...

Web: <http://epd.engr.wisc.edu> or E-mail: [danbeck@engr.wisc.edu](mailto:danbeck@engr.wisc.edu)  
College of Engineering Department of Engineering Professional Development

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For more information including rates, locations, and agenda and speaker details, visit <http://uwexeced.com/wpui/programs/Power%20Lunch%20Home.htm>.

## Making the Transition from School to Work: Lessons Learned

by Brent Rowe

My interest in the IEEE began as a place to get free pizza, and to hear about internships, co-ops and job openings. To a dollar-conscious college student, this was the perfect combination — free food and the chance to make more than minimum wage. During my junior year in college, I heard about the Washington Internships for Students of Engineering (WISE), a summer public policy internship sponsored by the IEEE. My interest was piqued — I was intrigued by the public policy process and excited by the prospect of a summer in Washington, D.C.

My experience during the summer of 2001 was nothing short of fantastic, and I am grateful to the IEEE and IEEE-USA. Through visits to more than 30 organizations, I learned how different public policy organizations interact, and subsequently how standards and laws are made, and how engineers can use their expertise to influence laws and regulations. I also researched spectrum allocation as it relates to 3G technologies, and published a paper based on my findings. Further, through spending time in Washington for 10 weeks, I became part of a network of students, IEEE members and staff, and public policy advocates and practitioners, many with whom I still keep in contact.

That summer in Washington provided a unique introduction to the world of public policy and the way in which technical expertise can help shape legislation and policies. After WISE, I was determined to work in the public policy arena and, if possible, on technology issues. The following summer, I worked for a Member of Congress, gaining a greater understanding of policy-making. When I graduated in 2003, I found a perfect fit at Research Triangle Institute (RTI), where I am currently employed.

My team at RTI focuses on the intersection of three disciplines: technology, economics and policy. My engineering background and WISE experience helped secure my job offer, and equipped me with the tools to succeed in my new position. My involvement with the IEEE continues to open doors and affords me a certain amount of respect from many of my more experienced colleagues. Currently, I am working towards a master's in economics with a focus on technology policy.

### Transitioning out of college

Although I am now well entrenched in my work, moving from the college mindset to the working world was not as seamless as I had anticipated. I still recall fondly the days of sleeping in before going to class, after burning the midnight oil in the lab or going over homework. Gradually, over the course of six or eight months, I adjusted to the new schedule and routine. So, graduating students, be forewarned. It is a drastic change, but being early and prompt in a work environment makes a world of difference.

Other "growing pains" associated with the transition to work are more subtle. In particular, the importance of understanding interpersonal communication in the workplace cannot be overemphasized. In college, experiences such as student government and social and honor societies can help you begin to understand how to work with people

with diverse personalities. However, in the workplace, understanding the behavioral characteristics of each of your colleagues (and clients or customers, if you have direct interaction with them) can be extremely important. Further, developing an understanding of your own nuances and personality traits can help you as you interact with others, allowing you to be more successful and gratified at work.

Another significant change I witnessed in the workplace was a renewed focus on the quality of my work. As a student, I felt a great sense of accomplishment when I received a good grade on a set of problems or a test, but I never felt full ownership over my work. I always considered myself at the mercy of each professor (even those who I truly enjoyed).

In a professional role, you will likely have more incentives to work hard. Personally, I want my work to reflect my skills because my boss is not the only one who "grades" me. Today, the clients with whom I work at the National Institute of Standards and Technology (NIST), the National Telecommunications and Information Administration (NTIA), and the Department of Homeland Security (DHS) give me feedback through their respect and ultimately through their decision to fund new studies through RTI. Further, the experts with whom I interact provide me with valuable information for each project, and I do not want my analysis or results to disappoint them.

On a purely selfish level, the acceptance or rejection of your work could factor significantly into your next promotion or job. However, more importantly, you should develop confidence and have pride in your work because you are able to see the impacts firsthand. In my current role, I see the fruits of my labor manifested through industry acceptance and, potentially, policy changes resulting from our stud-

ies. The results of your efforts might be a new or better product or process. Whatever it is, be proud of your work and the subsequent results.

### Final Advice

Although I haven't been in the professional world for very long, I'd like to offer to college seniors and recent graduates a few final bits of advice that helped me make the transition from school to work. Think about what you want to get out of your career, but don't always expect every job to lead towards that goal. Speak with your boss about your current and future work interests, as well as your capabilities on a regular basis; ask for feedback if it isn't offered. In my experience, the best way to ensure that you will enjoy your job, and gain promotions and future jobs is to take ownership over your work as much as possible — assess the general and specific requirements for a certain task or job function, propose a potential solution, and offer to take charge of it yourself.

*Brent Rowe is research economist at RTI International in Research Triangle Park, N.C. Rowe is a former WISE intern and an IEEE student member. Comments may be submitted to [todaysengineer@ieee.org](mailto:todaysengineer@ieee.org). Opinions expressed are the author's.*

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### New Senior Members

Congratulations to the following IEEE Madison Section Members who became IEEE Senior Members in the last few months:

Michael G. Morrow

## Eliminate the Guesswork!

- \*Gain knowledge in all EMC design aspects.
- \*Put what you learn to immediate use.



Don Sweeney & Roger Swanberg  
leading a workshop

To register call Carol at  
847-537-6400 or email her  
at [egorowski@dlsemc.com](mailto:egorowski@dlsemc.com).  
For more information click  
on [www.dlsemc.com](http://www.dlsemc.com).



Tired of taking classes that don't give you real world applications and hands-on opportunities to use what you learn?

Here's what students have said about DLS's new EMC seminar/workshop:

"Best program I've seen. Software provided is worth the price of the seminar." Scott D.

"This course would be helpful for any design engineer." Shane S.

"Good information, presented well, extremely relevant." Bryan P.

"It satisfied my requirements - practical application & problem solving." Jack R.

This seminar/workshop is taught by EMC engineers with 75 years combined experience in real world engineering. Spend three days learning EMC requirements and design techniques and a fourth day designing a real life product. Take home the computer program designed by the instructors. As an added extra value with no additional charge, apply what you have learned in an optional 45-minute design review of your own product following the workshop.

**EMC Practical Applications  
Seminar/Workshop  
Northbrook, Illinois  
October 20-21 & 24-25, 2005**

**\$493 discount if you  
register by October 10th.  
Total cost: \$897**

## IEEE Madison Section Elections

Although the IEEE Madison Section Officer Elections will not take place until December, it's time for potential candidates to start thinking about running. Candidate nominations are welcome and encouraged for all positions. The positions include chair, vice-chair, secretary, treasurer, and multiple member-at-large positions. Job descriptions can be found online at <[http://www.ieee.org/organizations/rab/scs/Officer\\_Training/job\\_desc.html](http://www.ieee.org/organizations/rab/scs/Officer_Training/job_desc.html)>. Nominations may be made by telephone or via e-mail to the Chair (278-0377, [rotter@ieee.org](mailto:rotter@ieee.org)).



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Our members have professional interests in computers, power engineering, signal processing, communications, industry applications and a number of other technical fields.

For more information, contact John Hicks at (608) 233-4875 or [jhicks@wisc.edu](mailto:jhicks@wisc.edu).

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