

## Top Engineering News:

### GE Cuts 1,480 jobs

General Electric Transportation has laid off 1,480 of some of Erie's best-paying jobs, the *Erie Times-News* reports.

The layoff is due largely to the fact that the company has not received any new North American locomotive orders this year.

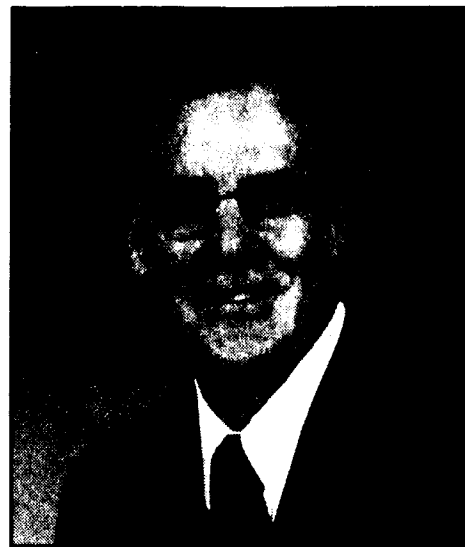
The outlook for locomotive production in 2010 is grim, leading the company to lay off employees due to a simple lack of work. The cuts that GE is making, including pay freezes, a cut on executive

pay, trimmed travel expenses, and layoffs will save about \$150 million, according to Shaun Francis, GE's general manager of human resources.

"I can't stress enough the fact that we are still committed to Erie," he said. "This is a difficult day for all of us. It's a difficult day for the leadership and the community, but we are very proud of our 100-plus-year relationship, and we look forward to the next 100 years."

## Engineering School welcomes new faculty

**Dr. Gary Smith**  
PLASTICS ENGINEERING



Quick facts:

**Dr. Gary Smith**

**Education:**  
Ph. D. in Chemistry, SUNY Albany  
**Teaching:**  
Intro to plastics; plastic materials  
**Industry experience:**  
30 years; plastics at General Electric  
**Researching:**  
Composites, polymers

Dr. Gary is joining the School of Engineering at Penn State Behrend after almost 30 years' experiences in the plastics industry.

Smith, who is currently teaching two plastics courses at Behrend, has been added to the faculty as a Lecturer in Engineering.

Smith received an undergraduate degree in mathematics at S.U.N.Y. Albany, and a Ph. D in Chemistry. His three decades within the field of plastics involved working with new materials and processes in various capacities. He worked for General Electric for many years, and according to the Penn State Behrend website was awarded 13 awards including the GE Plastic Worldwide Technologist of the Year in 1988.

In 1989, he says, he attempted to enter into early retirement, but found himself "too young, and too poor," so he re-entered the industry doing thermoplastic composites.

Having taught only evening chemistry courses at the University of Evansville in Indiana, the prospect of teaching full-time intrigued him, but he "never got around to it" until the Behrend job opened last spring.

Since moving to the college in mid-August, Smith is already impressed with the School of Engineering.

"It's a great hands-on program," he says. "The courses are designed to let students go into the workforce right away. They are able to do specialized jobs right away; it's very practical education."

In the future, Smith hopes to teach a special topics course; this week, he says he will submit the basics of the course so that the college might offer it in the future. This course would be materials-based, and could involve medical, automotive, and even electrical components.

In his free time - of which he insists he has none - Smith coaches his three children's sports teams, plays golf, and enjoys boating.

**Mr. Ralph Sprang**  
ELECTRICAL ENGINEERING



Quick facts:

**Mr. Ralph Sprang**

**Education:**  
Masters in E.Eng., Johns Hopkins  
**Teaching:**  
Processors; electrical systems program  
**Industry experience:**  
20 years as an electrical engineer  
**Researching:**  
Working on Ph. D. at Pitt

Ralph Sprang, who has spent more than 20 years as a journeyman in the electrical engineering industry, has joined Behrend's School of Engineering for the 2009-2010 school year and beyond.

Sprang will teach towards his specialty in a microprocessor class that will teach both the hardware and software side of the subject. He will also instruct a visual basic programming class.

After receiving an undergraduate degree in Electrical Engineering from Ohio State and his Master's from Johns Hopkins, Sprang spent time working on consumer and defense electronics. His last job before coming to Behrend, which he held for nine months in Pittsburgh, involved semiconductor crystals for x-ray and radiation detectors.

He had always been drawn to teaching, he says, often teaching younger engineers new techniques and leading seminars and training at companies he worked for.

The transition to being a full process, however, brought him a new challenge: being able to relate and connect to students. His inspiration, though, can come from knowing just what students will face after they receive a diploma.

"The industry wants students who know how both the hardware and software side of electrical engineering," he says. "It's what attracted me to teach at Behrend; these students are learning both sides."

Sprang expects to stay as a professor, given the opportunity, and is working on his Ph. D in electrical engineering at Pitt.

Sprang also has a passion for woodworking, and spends a lot of time fixing up his home. He enjoys artistic drawing, having developed the skill over the past few years.

**Dr. Yongfang Zhong**  
MECHANICAL ENGINEERING



Quick facts:

**Dr. Yongfang Zhong**

**Education:**  
Ph. D. in M. E., University of Illinois  
**Teaching:**  
Fluid Power (ME 432)  
**Industry experience:**  
Refrigeration; coolant systems  
**Researching:**  
Energy efficiency

Even before she left her home country of China, Dr. Yongfang Zhong knew she had a passion for teaching.

One of the School of Engineering's newly hired professors this year, Zhong will teach fluid power and other mechanical engineering classes.

Zhong received both her undergraduate and master's degrees from Zhejiang University in China. Following her graduation, she was offered a scholarship for a Ph. D at the University of Illinois Urbana-Champaign, and decided to move to America to continue her education.

"I wanted to teach," she says, "and that's why I got [my doctorate]." Zhong also insisted upon gaining industry experience.

"I didn't want my students to think that I'd spent my entire life in school. I wanted to teach with some experience in industry behind me."

That experience came from working on refrigeration and air conditioning systems, testing and modeling for air conditioning, and working on emissions standards and product development for radiators, coolers, and engines.

Zhong plans to continue her research in energy efficiency and environmental issues such as emissions standards. She hopes to research methods to improve energy use, once her schedule calms down.

The move to Penn State Behrend has also taken her out of her element; Zhejiang University has 37,000 students while the University of Illinois has just under 30,000.

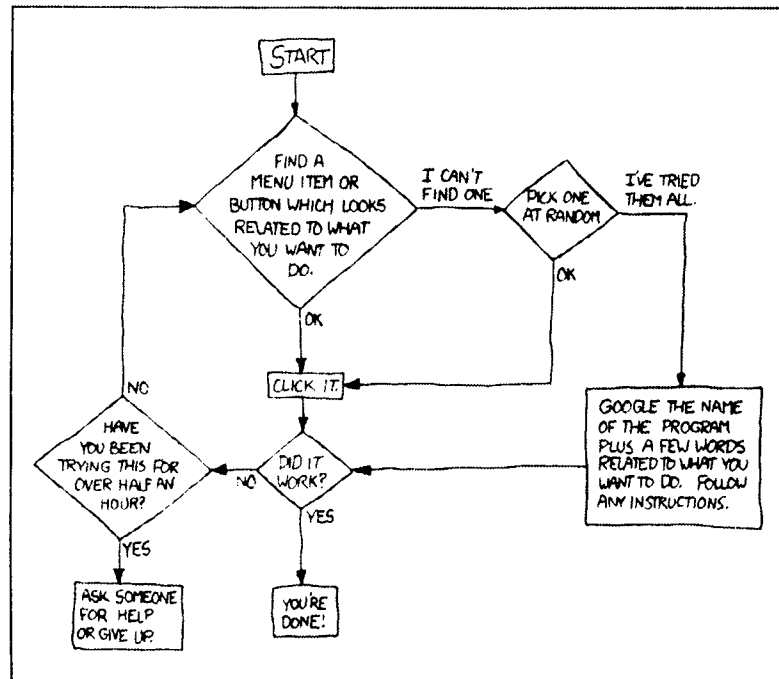
"The focus here is a lot better," she says. "Bigger schools sometimes focus a lot on research and getting donations; Behrend concentrates on the education, and the students."

In her free time, Zhong enjoys athletic activities such as jet skiing, running, and swimming; she also enjoys music and movies.

## This week's xkcd: A webcomic of romance, sarcasm, math, and language.

DEAR VARIOUS PARENTS, GRANDPARENTS, CO-WORKERS, AND OTHER "NOT COMPUTER PEOPLE":

WE DON'T MAGICALLY KNOW HOW TO DO EVERYTHING IN EVERY PROGRAM. WHEN WE HELP YOU, WE'RE USUALLY JUST DOING THIS:



PLEASE PRINT THIS FLOWCHART OUT AND TAPE IT NEAR YOUR SCREEN. CONGRATULATIONS; YOU'RE NOW THE LOCAL COMPUTER EXPERT!

courtesy [www.xkcd.com](http://www.xkcd.com)

## Lasher promoted to full professor

Mech. Engineering professor a stalwart of Behrend faculty since 1984

CONNOR SATTELY  
editor-in-chief

Dr. William Lasher, who has been involved in almost every aspect of development for Penn State Behrend's Mechanical Engineering program over the last quarter decade, has been promoted to a full professor position.

Lasher first joined the Behrend faculty in 1984, initially starting out as part of the school's initial degrees, which were interdisciplinary degrees combining energy and environmental science with engineering.

After receiving his undergraduate and bachelor degree from Michigan in naval architecture, Lasher worked at AMSCO (now Steris) as a computer application engineer. He managed a CAD system, and worked to increase the use of computer tools in engineering.

He came to Behrend after seeing a notice in a newspaper that Behrend was starting an engineering program.

He was part of an effort to shift the fledgling program towards one that would include traditional engineering degrees such as Mechanical Engineering.

Two of the biggest changes he had a part in was the hiring of the engineering staff - for which he served on search committees - and the expansion of computer technology at the school.

"When the program was starting out, finding faculty was pretty tough," he said. "People would come look at the campus, which was really small back then, and not take it seriously. It's a lot easier to get faculty now, because they take a look at what we have and are immediately impressed."



Contributed Photo  
Dr. William Lasher.

Also greeting new professors in the 80s was an undeveloped computer situation. When he started, he says, there was one teletype, card reader, display graphics tube, and two key punches in a room in Turnbull. He recalls coming in on Thanksgiving day to install a new operating system. "We did what we had to do to get it all running," he says.

In 2003, he took a sabbatical to New Zealand and restarted his research on sailing aerodynamics.

Lasher was the program chair for Mechanical Engineering for ten years, and retired in July 2009.

His continuation of his research enabled the promotion to full professor, which he calls "a weight off his shoulders."

It'll be hard to judge the difference in workload after the promotion. A lot of his time the past few years, he says, went into being the Mechanical Engineering program chair.

This year will be a "recentering" year, he says, when he hopes to continue committees and stay involved.

He also will continue his personal passion in sailing, sailboat racing, and playing the organ.

If he could give students...

one bit of advice: Why should companies hire you over someone else? Employers look for leadership, influence, and initiative. Try new things; it's okay to fail sometimes!

one warning: Control your career. Always have a view of where you want to go, and make a plan to get there. What skillsets are you going to need, what choices do you need to make to achieve your goals?

If he could give students...

one bit of advice: Keep learning. Technology changes quickly; keep current on what is changing by reading journals. Stay curious and explore. Push yourself to learn your craft.

one warning: Don't leave your first job too quickly. It takes a year or two to switch from being a student to an engineer. Learn the business and what's going on before you move on.

all photos contributed.

# Make yourself multi-dimensional.

Two positions are available for engineering editors with the Behrend Beacon.

Applicants should be:

- Within the School of Engineering
- Self-motivated
- Able to network with professors and students

Every year for a decade, employers have rated communication skills as their biggest priority in new recruits.

What are YOU doing to set yourself apart?

To apply, visit [www.thebehrendbeacon.com/joinus](http://www.thebehrendbeacon.com/joinus) or contact editor@psu.edu