



# PANORAMA

## 360° OF WPI ONLINE AND CORPORATE EDUCATION

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Corporate & Professional Education, Worcester Polytechnic Institute



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# WELCOME TO PANORAMA!

Welcome to the very first issue of *Panorama*, a digital magazine designed for working professionals by the folks at WPI Corporate & Professional Education (CPE). This digest will be published three times a year and will share what's new in our world of part-time graduate education.

It took some serious brainstorming to land on the name of this newsletter. At WPI, we build well-rounded students by combining theory and practice. We wanted to create something for our readers that embodied this philosophy of holistic learning. As we tossed around ideas, the “panorama” feature on our smart phones came to mind. It seemed like the perfect metaphor for this magazine's purpose: a 360° snapshot of life at CPE. Thus, *Panorama* was born.

In this issue, you will hear from a WPI faculty member about the innovative research on autonomous vehicles happening in his lab right now. You'll also find more information on the new programs we launched in 2017 for online and corporate graduate students, and what makes them unique. Plus, we have answers to the top questions from online graduate students and resources for brushing up on power-grid security and interpersonal skills. Whatever your connection to CPE, we know you'll find something to enjoy here.

Happy reading!

*Kate Gorton*

*Panorama* Editor



# WPI

## ENERGY SYMPOSIUM

September 28, 2017

#WPIENERGY

On September 28, WPI welcomed guests to the campus center for the 7th Annual Energy Symposium. This year's topic was **"Engineering Impacts from Energy Policy"** and featured speakers such as Joseph Bush from Worcester Clean Tech Incubator; Dr. Edvina Uzunovic, Vice President of IEEE; Dr. Yousef Mahmoud from WPI; and the symposium's keynote speaker Dr. George Baker. Dr. Baker's morning keynote, "EMP Knots Untied," was a critically informative address to the audience, highlighting information on what electromagnetic pulses are and how they currently and will continue to affect our world.

After the keynote, Dr. Uzunovic assumed the stage to share how further developing the smart grid requires widespread changes in the fundamentals of power engineering education. Dr. Yousef Mahmoud then hosted a panel of energy professionals entitled: "Careers in the Power Industry." Panel members included Carol Sedewitz, Vice President of Electric Asset Management at National Grid; Paul Cody, Chief Executive Officer at CE Power; Dr. Joseph Bush, Executive Director at the Worcester CleanTech Incubator; and Silvia Valerio, Manager of Protection & Control Engineering at United Illuminating, part of AVANGRID.

Once the panel wrapped, attendees separated into their chosen breakout sessions. They came together for a networking luncheon alongside some of the up-and-coming great minds in power systems: WPI's own students, who were invited to participate in the day to learn more about their future field and meet industry leaders. The day concluded with breakout sessions around other important topics concerning the future of power. This was one of the most well-attended energy symposiums at WPI since its inception, a trend we hope will continue into next year's event and beyond.



BY ZOE HYDE

WPI CPE, PANORAMA CONTRIBUTOR

# NEW ONLINE PROGRAMS LAUNCHED BY POPULAR DEMAND

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WPI stays on the cutting edge of education by launching new programs each year and 2017 was no exception. Online programs new to the scene include Data Science, Biotechnology, and Biomedical Engineering. Here are the highlights of these new offerings:

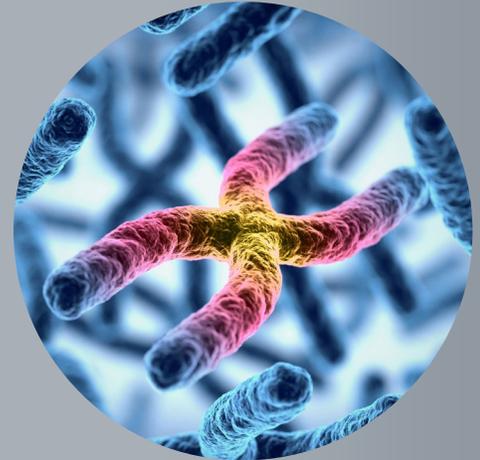
## DATA SCIENCE



WPI's online [MS program in Data Science](#) teaches students to analyze and synthesize big data so informed and innovative decisions can be made. Students will dive into analytics, computing, statistics, and business intelligence and in turn apply these skills as leaders in the industry.

***What sets this program apart:*** The chance to explore and master a variety of open-source software tools, as well coursework focused on leadership in the world of Big Data.

## BIOTECHNOLOGY



WPI's online [MS program in Biotechnology](#) is a skills-focused, non-thesis program that offers a broad base in technical knowledge and lab training. This program is flexible in its design and taught by WPI faculty and industry experts, bringing together theory and practice.

***What sets this program apart:*** Students do most of their coursework online and experience lab training in our state-of-the-art bioprocessing facilities on a schedule that makes sense for working professionals.

## BIOMEDICAL ENGINEERING



WPI's online [Master of Engineering program in Biomedical Engineering](#) prepares graduates to enter the professional workforce. Students acquire an understanding of business practices, regulations, and controls in the biomedical industry. This program is delivered 100% online.

***What sets this program apart:*** It prepares students to hit the ground running in the BME industry through a combination of technical coursework and leadership training.

***All of these programs are designed in unison with industry experts to ensure relevance in the workplace.***

**BY LINDSAY BOHIGIAN**  
WPI CPE, PANORAMA CONTRIBUTOR

# FACULTY SPOTLIGHT

## ALEX WYGLINSKI, PHD



### *The Cutting Edge: Cognitive Radio*

At WPI's [Wireless Innovation Laboratory \(WILab\)](#), my team of graduate student researchers and I have been pushing the envelope in wireless communications, satellite communications, vehicular connectivity, and dynamic spectrum access. To achieve these advances, we are conducting cutting-edge research in [cognitive radio](#), a communication-systems concept that involves the combination of radio technology, artificial intelligence, and computing technology in order to form a highly adaptive wireless communication platform that can sense, learn, and react to/exploit complex transmission environments.

Recently, my students and I have been pursuing research into reinforcement learning-based cognitive radio, especially for applications in satellite communications and vehicular networking, as well as prototyping fifth generation (5G) test-beds using software-defined radio (SDR) platforms and cognitive radio elements. As a result of our team's research track record, the Wireless Innovation Laboratory at WPI is one of the premier cognitive radio hotspots in the Northeast US.

In addition to all the work I am doing in cognitive radio, I also teach some of WPI's online graduate courses in [Electrical & Computer Engineering](#) and [Robotics Engineering](#). Click the links to learn more about these programs.

**BY ALEX WYGLINSKI, PHD**  
WPI ECE & RBE PROFESSOR

### GRAD SCHOOL TIPS & TRICKS

#### *Top 3 Questions about Online Grad School*

Going back to school can be exhilarating, but becoming a student again can bring with it a lot of questions. "Ask Amanda" is a series released on *Catalyst*, our blog for part-time grad students, where WPI CPE's Amanda Keighley answers questions that prospective and current students frequently have. [Check out "Online Grad School FAQ's"](#) for some essential information around what life is like in an online master's program.



**BY ZOE HYDE**

WPI CPE, PANORAMA CONTRIBUTOR

# THE LIBRARY CARD



*Exclusive Content from  
the CPE Collection*



**BY JESSICA ADAMS**

WPI CPE, PANORAMA CONTRIBUTOR

## HOW ARE YOUR “SOFT SKILLS”?

Technical know-how is a requirement of any job, but never underestimate the value of soft skills: the personal characteristics necessary to work effectively and agreeably with others. Soft skills amount to more than being nice; they allow us to understand human nature and apply that knowledge to our jobs. [Read “Soft Skills Are Not Hard to Achieve”](#) and learn how to acquire the skills to improve working relationships and boost project success.

## PROTECTING THE POWER GRID

With over 35 years of experience, Professional Engineer Mike Ahern has witnessed abundant changes and advances in the power systems industry. In this whitepaper, he evaluates recent cyber and physical threats against the power grid. Most importantly, he proposes strategies to prevent further security breaches. [Read “Securing the Grid”](#) to arm yourself with knowledge that may protect your business, your employees, and your own personal information.



# WPI IN THE NEWS



## *WPI Welcomes Historic Number of Women in Class of 2021*

As the freshman class of 2021 took their honorary march across the bridge for the first time last month, one may have noticed a marked shift in that class's makeup. WPI's first-year students are 44% young women, a record number for the history books and 10 percent higher than last year! WPI is now one of the nation's STEM institutions with the highest percentage of female students. [Read more.](#)

This change in demographic was not by accident, as WPI has been paving the way for women in STEM for over a decade. These efforts include pre-collegiate outreach, fostering interest in science and among young girls, and the thoughtful allocation of existing financial-aid resources available at WPI. All these efforts have made a difference in leveling the playing field for women to explore STEM opportunities, but the work is far from over. At a recent WPI town hall, President Leshin said the university will continue their work to bring more great minds from underrepresented populations to campus.

**BY KERRY CAREY**

WPI CPE, PANORAMA CONTRIBUTOR

**44%**

**WOMEN**  
CLASS OF 2021

**10%**

**MORE THAN**  
CLASS OF 2020

## GRANT AWARDS

MassTech Collaborative awards WPI a \$5 million grant to build PracticePoint, an innovation center for creating and testing secure and smart medical devices.

» [Learn more about this grant](#)

WPI professors in Mechanical and Electrical & Computer Engineering win a National Science Foundation award for their work in soft robotics.

» [Learn more about this grant](#)

# DATES TO REMEMBER

## NOVEMBER

- 2-3 WPI at ECNE (Energy Council), Newton, MA
- 15-17 WPI at Online Learning Consortium, Orlando

## DECEMBER

- 11-15 “Upstream Processing of Animal Cell Culture Products” training, WPI BETC
- 19 “Bioprocess Monitoring and Error Prevention” training, WPI BETC

## JANUARY

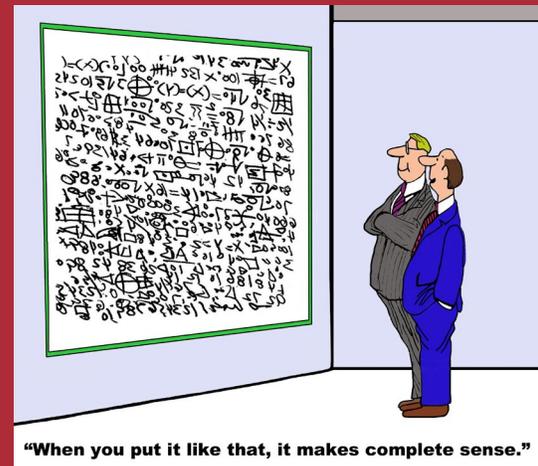
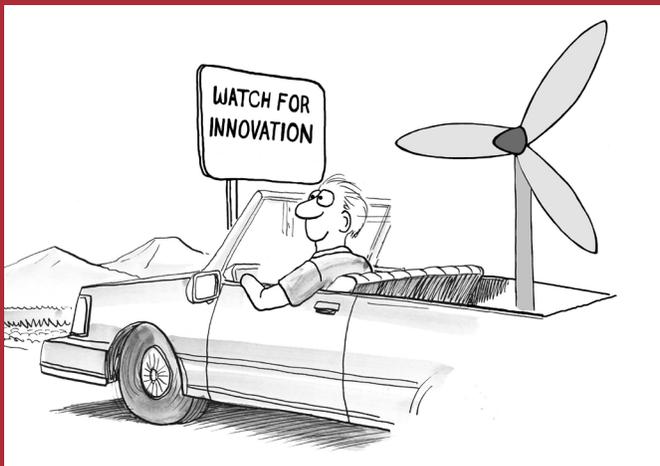
- 18 WPI at INCOSE IW, Jacksonville, FL
- 21 WPI at NEWEA, Boston, MA

[SEE OUR FULL CONFERENCE LIST](#)



BY CINDY PHILBRICK  
WPI CPE, PANORAMA CONTRIBUTOR

TAKE A MOMENT  
TO LAUGH TODAY



“When you put it like that, it makes complete sense.”

## SOCIAL MEDIA MAVENS OF WPI



**KRISTEN GOPPEL**  
WPI CPE DEVELOPMENT  
@kpgoppel

▶ [VIEW TWEET](#)

Happy October!

#everythingiscreepierinlowmotion #dryice  
#carbondioxide #jackolanterns #pumpkins  
#FrankenSTEM @WPICPE



8:29 AM - 3 Oct 2017

5 Likes

