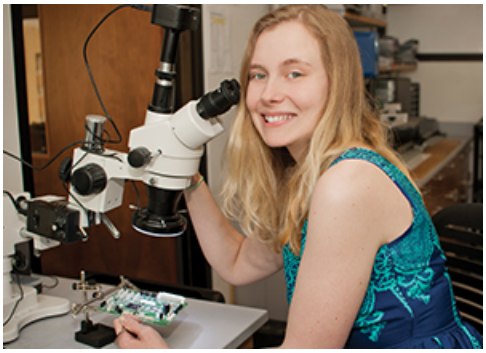
Senior Profile / Natalie Janosik: Finding a Career and Community in Electrical Engineering

By Adam Reger
Issue Date: May 2, 2016

Smoke rises from the circuit board. Senior Natalie Janosik peers through a magnifying lens as she uses a soldering iron to apply heat to a metal circuit board that will validate her research simulations.


Natalie Janosik

Outside, the sun is just coming up. It's a little after 7 a.m., but Janosik has already been at work in Benedum Hall's Student Electronics Resource Center (SERC) for nearly an hour.

For Janosik, who graduates today from the Swanson School of Engineering with a bachelor's degree in electrical engineering, soldering is relaxing. "It's like fishing," she says with a smile. She's been doing it for most of her Pitt career, after wandering into the electronics lab as a freshman.

"She's learned everything about soldering, electronics, computers, circuit design," says Jim Lyle, senior electronics engineer in the Swanson School of Engineering and a codirector of SERC.

"The only time I beat her in here is when her bus is running late," adds Bill McGahey, technology lead in the Department of Electrical and Computer Engineering and a codirector of SERC.

Janosik contributed greatly to the development of SERC, which began operations in early 2016. The center gives students opportunities to learn the hands-on skills that Janosik sought early on, and a place to practice them. While soldering may seem low-tech, it's integral to high-tech engineering in applications such as circuit design for computing, research and prototyping, equipment repair, testing, and validation.

Janosik, a Pittsburgh native, credits her mother, along with Lyle, McGahey, and her mentor, Steven Levitan, for supporting her through a collegiate career that she calls

OTHER STORIES FROM THIS ISSUE
MAY 2, 2016

Just Four Years Ago...

Happenings

Leenie Baker Wins Josephine de Karman Fellowship

Crabb Named 2016 Emma Locke Award Winner

Ying Chen Lien Wins Udall Scholarship

Students Receive Whitaker Awards

Petrose Wins Truman Scholarship

Senior Profile / Kyle Ciccone: Translating His Passions into a Path

Senior Profile / Harinee Suthakar: Connected to the Pulse of the World

Senior Profile / Jesse Israel Exilus: A Focus on International, Immigration Law

Senior Profile / Natalie Janosik: Finding a Career and Community in Electrical Engineering

Senior Profile / Dennis Dever: Safe Moves for Marines, Armed Services Personnel

Senior Profile / Aminah Baxter: Mentoring Others Toward Bright Futures

Pitt Facts

Pitt Proud

Hack-Attack: Pitt-CMU Team Wins Music Tech Competition

A "Father of the Internet" Addresses Graduates

ON THE FREEDOM ROAD

Follow a group of Pitt students on the

"exciting and intense." Her father has not been in her life for many years, and Janosik describes her formative years as difficult.

To an outside observer, the student's busy academic career may seem charted in zigzags: she's gained experience across the engineering spectrum, both inside and outside of Pitt—from working with drones and investigating alternative computing processes to helping defense company Raytheon model components of its threat simulation labs.

As she sees it, though, she's been on a steady trajectory since arriving at Pitt. Janosik entered with a strong interest in optical engineering, which centers on equipment that uses the properties of light, such as lenses and microscopes. In the fall, she'll begin graduate studies at Columbia University in electrical engineering, focusing on photonics: the application of light.

"Think lasers as technology," Janosik explains.

"I've learned a lot from trying different things, and I've expanded my skills," she says. "And I'm a better engineer for it."

Much of her broad experience can be credited to Steven Levitan, who passed away unexpectedly in March. He was the John A. Jurenko Professor of Computer Engineering in the Department of Electrical and Computer Engineering.

It was a speech Levitan gave to a class her freshman year that got Janosik hooked on computer engineering. She reached out that same day to inquire about working in his lab.

"He told me, 'The work is going to be hard. Are you sure?'" Janosik recalled. "Well, I was sure. I volunteered in his lab that summer while working part-time in a chemistry lab."

Levitan became an invaluable mentor—and his positive influence went beyond that, too. Janosik has an autoimmune disorder, and over the course of her college career, the ambitious and early-rising engineer has shifted from trying to do everything, to taking care of herself and knowing her own limits. Much of that maturation, she says, came from Levitan's guidance.

"Professor Levitan was the one who told me to go home and sleep, to take care of myself when I pushed too hard," Janosik says. She describes Pitt's community of electrical engineers as a family, and Levitan as a father figure.

When Levitan died, Janosik lost not just a mentor but a supporter and friend. "He raised brilliant scientists," she says, "and he was a champion for everyone. He knew of my health issues, and he wouldn't coddle me, but he would watch out for me."

"Jim [Lyle] and Bill [McGahey] trained my hands," she added. "Professor Levitan trained my mind."

Along the way, Janosik sought advice and guidance from others, too, including students, faculty, and contacts made during summer jobs and internships, such as her position with Raytheon.

But mentoring, she notes, is a two-way street. She has been just as eager to give advice and to take young engineers under her wing as she has been to reach out for guidance.

Returning to the Roots of Civil Rights bus tour, a nine-day, 2,300-mile journey crisscrossing five states.

Introduction

Day 1: The Awakening
Day 2: Deep Impressions
Day 3: Music, Montgomery, and More
Day 4: Looking Back, Looking Forward
Day 5: Learning to Remember
Day 6: The Mountaintop
Day 7: Slavery and Beyond
Day 8: Lessons to Bring Home
Day 9: Final Lessons

"She's really approachable," says Lyle. "Other students look up to her with a lot of respect for her knowledge, and she's always helping somebody."

"The younger students are so passionate, so full of energy," Janosik says. It inspires her, driving her to reach out with any guidance she can offer to the next classes of Pitt engineers.

The satisfaction she receives from helping younger students has informed one of Janosik's career goals, to teach at the university level. This comes as no surprise to those who know her.

"She's capable of anything," says McGahey. "She's going to be an excellent researcher."

"We're going to miss her a lot," adds Lyle.

For her part, Janosik gives credit to the family she found at Pitt.

"When I started in the electrical engineering department, I was looking for a family," she says. "A father to look up to and siblings with whom I could grow. Not every department starts an electronics resource center and develops these great projects. Not every department has professors with the same passion. I really found a family here. That's been my most rewarding experience at Pitt. That's what everyone wants: to find a family."

PittChronicle
Newspaper of the University of Pittsburgh

Pitt Chronicle
Office of University Communications
200 South Craig Street
Pittsburgh, PA 15260

ucomm@pitt.edu
412-624-1033