

SPRING 2019

# ENGINEER

Boston University College of Engineering

→ **INSIDE**

WATCH MAN  
ENGINEERING  
FOR MIDDLE  
SCHOOLERS

## INSIDE THE MIND (AND HEART) OF THE SOCIETAL ENGINEER

---

A BIG  
IDEA  
TURNS  
10

BOSTON  
UNIVERSITY



# PLOT TWIST

SOLVING AN ENG ALUM'S CAREER PATH  
BY LIZ SHEELEY

**K**athleen Pellegrino's (ENG'62) career path reads much like the plot of a mystery novel, with its unexpected twists and turns, and a surprise ending that no one was expecting.

After graduating as one of the first women engineers from Boston University, Pellegrino has now retired four times and published two murder-mystery novels, with two more on the way.

Although Pellegrino bounced around in her professional life, she retained an unwavering love for mysteries. During her time as a professor more than 20 years ago, she used novels as a break from the sometimes-monotonous task of grading papers. "I would read a chapter, and then I would go back with a refreshed brain and read five more papers, and it worked very nicely for me so I could be fair to my students," she recalls.

She didn't want to unravel only fictional mysteries; the plot thread that ties her life together is her passion for solving problems and creating solutions. She says she uses her BU engineering training as an approach to every problem she's faced in her career and life.

"There was no better preparation for the kind of thinking that you need to survive in life than I got at Boston University," she stresses. "The professors at BU taught me process versus answers. They taught me, you have a process to solving. You must do critical analysis. You must think about, 'How do I solve something unknown?' And, it's okay if you don't get the right answer, because eventually you'll get the right answer, if your process is good."

When Pellegrino started at BU—she initially enrolled in the College of General Education, but was interested in the School of Fine and Applied Arts—she was an actor. At the time, the School of Fine Arts and the College of Industrial Technology (now the College of Engineering) were in the same building. One day in the common lunch area, she sat at a table with some engineers who were discussing their work, and she thought, "Oh, I can do that!"

"I don't think young women, definitely back then and even today, are brought up with the idea that they can do anything," she says. "I think it's really important they understand, 'Yes, you can do that. Don't listen to anyone that says you can't do that.'"

That is something her father, a mechanical engineer, taught her. He passed down his love of problem solving to his daughter. He also passed down his love of mystery novels.

"My dad traveled all over the country for the stainless steel fabrication business, and when he would come home from his business and sales trips, my mother would unpack his bag and there would be detective novels in there," she remembers. "I had a special relationship with my father; he took me to his machine shops and I saw how he jumped in to help employees and worked with his hands—and if there was anybody in this world that I wanted to emulate, it was my father."

After completing her degree in general engineering, Pellegrino took a job at GE Aviation, then left to get married and be a stay-at-home mom to her four children. And rather than seeing her absence from the working world as a setback, she viewed it as an opportunity to then return to school and learn something new when her youngest began preschool.

She earned an MBA and taught business at Springfield Technical Community College and Western State University while running her own tax accounting firm on the side. After 22 years, she took advantage of an opportunity to shift career gears again, this time into government. She accepted appointments as a police commissioner in Springfield, Mass., and later as head of the city's parking authority.

"I was one of five police commissioners and I don't think many people understand how difficult it is to manage the police department because we were an independent commission that did the hiring and firing—almost like the board in a corporation," she points out.

"I have always been fascinated with policing. I had an uncle who, when I was a little girl, was a police captain. If I was born in another time, I would've wanted very much to be a major crimes unit detective over anything."

The Springfield commission, which she joined in 1996, hired the first woman police chief of a major city in the Northeast and made changes that kept the Springfield Police Department from what would have been a mandated federal takeover.

"For years I'd been teaching business management, and I understood the concept of managing myself—I ran my own business. I don't think I ever worked so hard, and it's a volunteer position. I can't tell you how many nights I worked until 9 o'clock at night, writing

things or trying to figure things out and to be helpful to the chief," she says.

After three years on the commission, the mayor asked Pellegrino to take over the Springfield Parking Authority, which was on the brink of bankruptcy. She helped pay off \$5 million in bonds over three years and saved the authority from financial ruin.

"I had all the ramps in one of the major garages repaired because the city couldn't afford to tear the parking garage down," she explains. "And I brought in a new material so that we could protect the rebar that was already in the concrete and stop the advancement of already damaged rebar."

Based on her research, interviews and understanding of chemistry, Pellegrino discovered this newer material that hadn't been widely used yet. And although the government bidding process for the materials to repair the garages was grueling, she never settled.

"That was 24 years ago, and the parking garage still stands there," she says. "I will tell you, the engineering training did me very well for everything I went into."

## SHE KNOWS THAT ALL THE EVIDENCE POINTS BACK TO HER TRAINING AS AN ENGINEER AT BU.

Her engineering background was also valuable when she became a licensed construction supervisor after becoming interested through her work on the Springfield Preservation Trust. Over 13 years, Pellegrino and her business partner rehabbed many historic commercial and residential buildings in and around Springfield that were over a century old.

After her most recent retirement, Pellegrino decided to take a creative writing course at the Springfield Museum. She says that although she'd always written as part of her varied professional life, she'd had restraints on the content—but now the handcuffs were off.

The last novel in her *Evil Exists in the West Side* trilogy will be published next year, and she's in the midst of writing a fourth book. The series takes place in the fictional town of West Side, Mass., outside of Springfield. All crime mysteries, her books feature serial murder plots and are tied together by the main investigator, major crimes unit Captain Rudy Beauregard.

She takes her wide range of life experiences, like being a police commissioner, and uses them as material for her novels, almost as if she went undercover in her own life to do background research for her book plots. "I have an understanding of the law—my husband's a retired justice from Massachusetts trial court and I have a son who's a lawyer," she notes.

Pellegrino doesn't have to search far and wide for clues as to how she had success over such a wide range of professions; she knows that all the evidence points back to her engineering training at BU: "That training, that analysis of self-criticism, looking in the mirror and saying, 'Well, you know that's not really right, go back to the beginning and try again.'"

"So many people think engineers can't write, but writing, like engineering, is about forming a beginning, middle and end," she says. "When you don't know who the murderer is and you have to stop and figure out what's going on and look at the evidence, that's critical thinking, and that's an engineer." ■