



# Collaborate and innovate

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While Stephen Pessiki was studying environmental engineering at Drexel University in Philadelphia, Pa., he had an epiphany. He was working as an assistant on the Center City Commuter Connection project, which involved digging a massive tunnel through the city, and found himself

standing on the roof of a tunnel that went right under an existing building. He was amazed.

“It was incredible that they were able to do that,” Pessiki says. His boss later showed him the blueprints of the building, which was designed in anticipation of the tunnel project. “That’s when I knew that I wanted to be in construction.”

Throughout the undergraduate program, he spent a lot of time studying materials science. “To be a good structural engineer, you have to know a lot about materials,” he says. “It expands your understanding of how structures behave under loads.” That knowledge would become a key component of his career.

After graduating in 1984, he went to Cornell University in Ithaca, N.Y., to complete a master’s degree and worked with the National Bureau of Standards (now the National Institute of Standards and Technology [NIST]) studying concrete material behaviors. He also spent time as a teaching assistant and realized that he really liked teaching, so instead of finding an industry job, he stayed at Cornell to complete a doctorate. Three years later, he started fielding offers.

While finishing his degree, Pessiki worked as an adjunct professor at Syracuse University in New York, honing his teaching style on the fly while commuting between classes. “When I ran out of material, I learned to tell jokes,” he says, but he was excited to see what else was out there.

That summer he was offered three options: an industry job with an engineering firm in San Francisco, an academic position at the University of Canterbury in New Zealand, and a research role at NIST.

Pessiki was most intrigued by the New Zealand job, but he was dating his future wife at the time and they weren’t sure she’d be able to work in the country. At the time, there was no email and limited internet access, so they were stuck calling employment bureaus in the middle of the night trying to

get answers. “We couldn’t figure it out,” he says. “So I turned them down.”

He also turned down the other two jobs in hopes of landing an academic position closer to home. He had nothing lined up, but a few months later he heard that Lehigh University in Bethlehem, Pa., was hiring. He applied and got the position over 100 other applicants. “Looking back, I realize how foolish I was to say ‘no’ to three good job offers, but it turned out to be a blessing,” he says.

Pessiki has now been with Lehigh for 30 years, and throughout that time he has been an active member of PCI.

Early in his tenure, PCI provided funding for a research project, and he has been involved ever since. “PCI was a natural environment for me,” Pessiki says. “It is a very fertile environment for an engineer.”

Over the years, Pessiki has worked on multiple committees and led a number of research projects of relevance to precasters. These include groundbreaking work addressing thermal bridges in precast concrete sandwich panels.

He recalls suggesting to Kim Seeber that the sandwich panel committee consider testing a three-wythe precast concrete panel. “Kim thought it was the silliest idea he’d ever heard, but he let me talk,” Pessiki says. “By the time I was done talking, he said it was worth a try.”

That’s the kind of culture that Pessiki came to love about PCI. “They are always willing to listen and to take a chance on an idea,” he says. “And they are very receptive to working with academia.”

Pessiki went on to be involved in several PCI-sponsored ATLSS (Advanced Technology for Large Structural Systems), and PRESSS (Precast Seismic Structural Systems) research programs, many of which have been highlighted in *PCI Journal*. In 2002 he received PCI’s Distinguished Educator Award, and in 2004, he was named a PCI Fellow. His work is also reflected in precast concrete building codes. “I take a lot of pride in that,” he says.

Now he encourages other young academics and engineers to reach out to PCI and similar organizations to continue this legacy of collaborative work. “It’s an opportunity for us to influence industry,” he says, “and for PCI to help nurture the next generation of engineers.” 