



South Texas to MIT: STCC Student Earns High-Level Internship

BY JUSTINE MURPHY
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Gerald Gagnon has come a long way from his South Texas upbringing. His ambition for higher education brought him to the Northeast about three years ago, where he discovered better educational opportunities. He settled in western Massachusetts and earned an associate's degree in liberal arts from Springfield Technical Community College (STCC), where he is now pursuing a degree in optics and photonics technology.

"[An STCC professor] said a lot of students weren't taking advantage of this great program that deals with cutting-edge technology and can lead to a lucrative career," Gagnon said. "I was thinking back about what I used to do that would make me happy. When I was younger, I used to take things apart and try to find out how they work and discover the science and math behind it."

Gagnon enrolled in the optics and photonics technology program, and past May he completed the one-year certificate requirement.

"STCC is the only college in the region to offer a two-year degree program in optics and photonics," said John B. Cook, president of STCC. "This gives area students like [Gagnon] a tremendous opportunity to receive the specialized training they need to start an exciting career in advanced manufacturing."

Gagnon will return to STCC this fall to pursue his associate of science degree in optics and photonics technology. He said he recommends the program to anyone who wants to work with lasers and cutting-edge technology, adding that students "should not be intimidated by thoughts that the program will be too difficult."

"At first, I had doubts and anxieties," Gagnon said. "But by the end of the one-



Gerald Gagnon (right), a student in the Springfield Technical Community College (STCC) optics and photonics program, is spending the summer as an intern in MIT's Lincoln Laboratory. Also shown here is Nicholas Massa, chair of the Optics and Photonics Technology Department at STCC.

year certificate program, I was amazed at how much I knew and how much knowledge I gained."

An internship this summer is further preparing him for an optics and photonics future. With encouragement from Nicholas Massa, chair of STCC's Optics and Photonics Technology Department, Gagnon is spending the summer as an intern at MIT's Lincoln Laboratory, a U.S. Department of Defense (DoD) Research and Development Laboratory.

"I come from a humble background. I'm the oldest and the first to go to college in my immediate family," Gagnon said. "Now I'm this guy from South Texas who's right here on the East Coast, going to MIT. I say that to my family and they can't believe it. These types of accomplishments were not in the cards for a lot of people I know."

Gagnon credits STCC for such an opportunity. "If it wasn't for the optics and photonics technology program, I wouldn't have had this opportunity," he said. "This program made possible something I thought was unattainable."

The MIT internship was established

via collaboration between Lincoln Lab, the commonwealth of Massachusetts, and AIM Photonics, a Manufacturing USA institute that promotes the manufacturing of photonic integrated circuits (PICs) in the U.S. for academic, commercial, and government applications. Massachusetts is supporting AIM Photonics and several other Manufacturing USA institutes through a \$100 million Manufacturing Innovation Initiative (M2I2) administered by the state's Executive Office of Housing and Economic Development.

A member of AIM Photonics, Lincoln Lab has received a \$1.9 million M2I2 grant to procure a germanium (Ge) material deposition reactor that will augment its existing 200-mm-wafer silicon fabrication toolset. The addition of this reactor will enable the lab to establish the nation's first DoD Trusted PIC Foundry. Lincoln Lab plans to use this enhanced capability to develop advanced photonics fabrication processes, provide internship and apprenticeship opportunities, and engage with companies throughout the U.S.

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