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AFTAC enters into research agreement with FIT

By Susan A. Romano, AFTAC Public Affairs

PATRICK AIR FORCE BASE, Fla. – At a signing ceremony held at Florida Institute of Technology's campus in Melbourne, Fla., Aug. 3, the Air Force Technical Applications Center entered into a cooperative agreement with the university to explore high performance cloud computing, modeling and simulation.

The cooperative research and development agreement, also known as a CRADA, tasks AFTAC with providing subject matter expertise in nuclear monitoring analysis and nuclear event detection, and tasks FIT with performing research in pattern recognition, machine learning, high-performance computing, information assurance and geophysical modeling and simulation – all in a secure environment.

A CRADA is a government contract allowing for R&D collaboration between federal laboratories and non-federal entities to provide quick, unique access to extensive government-funded research that can be leveraged by both parties to yield powerful, scientific results.

"Florida Tech is the only independent technological university in the southeast," said Dr. Glenn Sjoden, AFTAC's chief scientist, "so it stands to reason that we would reach out to them to collaborate on cloud computing. By engaging in the CRADA process, we hope to enable 'best value' solutions for the Air Force."

Cloud computing and big data analytics are becoming a key offering in government practices because they enhance the mission and reduce costs. As the Air Force continues to seek out ways to modernize its information technology infrastructure, it must also evaluate its efficiencies, effectiveness and overall compatibility of existing data processing techniques.

"AFTAC is the Department of Defense's sole organization responsible for nuclear treaty monitoring," said Dr. William Junek, a geophysicist with AFTAC's Treaty Monitoring Directorate. "Because of our critical role, the center has a cadre of highly-skilled scientists and engineers in the fields of geophysics, nuclear physics, chemistry and electro-optical engineering. Add that up, and the Florida Tech team will have access to equipment and resources valued at nearly $100 million."

FIT has six academic divisions offering undergraduate, master's and doctoral programs with emphasis in science, nuclear engineering, aeronautics, mathematics, cybersecurity and other fields of study to a student population of more than 9,000. Ninety percent of FIT's teaching faculty have Ph.Ds or terminal degrees appropriate to their respective fields.

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At the agreement signing ceremony, Florida Tech's president and chief executive officer had nothing but praise for his faculty.

"I am so incredibly proud of the effort that has gone into this partnership," said Dr. T. Dwayne McCay. "When I first learned about the project, I was a bit skeptical, especially knowing what I know about AFTAC's very sensitive mission. But seeing this room filled with AFTAC personnel makes me glad I was wrong! We're thrilled to be undertaking this partnership and so glad to have AFTAC on our Florida Tech team.

The Air Force Technology Transfer (T2) Program, headquartered at Wright-Patterson AFB, Ohio, serves as the intermediary agency that provides assistance and guidance to participating partners. The program was created to ensure Air Force science and engineering activities are transferred or intentionally shared with state and local governments, academia and industry. The exchange of that knowledge leverages the Department of Defense's research and development investment.

"These agreements are mutually beneficial to the Air Force and our partners," said Keith Quinn, T2 program manager. "The Air Force benefits from the knowledge and skill sets of our partners while experiencing a cost savings in the cloud computing effort and the FIT team has access to Air Force expertise and state-of-the-art facilities and equipment."

According to the agreement, it is estimated the Air Force will save more than $500,000 from the collaborative efforts on cloud computing.

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