

Stockton University Students to Collaborate with FAA on Research Projects at Tech Center

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Galloway, NJ - Students from Stockton University will collaborate with scientists at the FAA's William J. Hughes Technical Center in Egg Harbor Township, N.J. to develop algorithms and other research tools used in the development of the FAA's Next Generation Air Transportation System (<u>NextGen</u>).

NextGen is the FAA's transformation of the world's largest and most complex air traffic control system; from ground-based radar to satellite-based navigation, from voice to digital communication, and from point-to-point data to a fully integrated information management system.

"We're very proud of our progress in making NextGen a reality and collaboration agreements like this play an essential role in our continued success," said FAA Technical Center Director Shelley Yak.

A new agreement will enable students from the School of Natural Sciences and Mathematics (NAMS) to work under the mentorship of a Stockton professor on a project identified jointly by the two parties as best meeting the needs of the FAA and the skills and interests of the students.

"These types of agreements provide the Technical Center with opportunities to positively influence America's future workforce on the rewards of working in the aviation industry," said Yak, who is also a 1984 Stockton graduate with a B.S. in Information & Computer Sciences.

The students will work under the direction of Stockton Mathematics Professor Chia-Lin Wu, in collaboration with Stockton '06 graduate Jessica Young, of the FAA's Modeling and Simulation

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Branch, which performs research to assess the operational and technical feasibility of proposed system changes to NAS operations. Young earned a B.S. in Math with a minor in Computer Science after Wu persuaded her to become a math major, she said.

"The cooperative agreement, put together by Professor Wu, is a great example of the opportunities Stockton University students have to become involved in undergraduate research, which benefits the community and the nation," said Dean Peter Straub of NAMS. "Simulation and modelling are key elements in applied mathematics that allow testing of aircraft systems to their limits. Student participation has the potential to engage and enthuse the next generation of FAA scientists, making this a mutually beneficial agreement."

Wu explained: "This agreement creates an opportunity for the Stockton math program and the FAA aviation branches to begin a joint research project. This will provide our math undergraduates with an inside view of the world of aviation research. The FAA will benefit from the collaboration and gain multiple perspectives on the joint research."

The FAA will provide access to the necessary data and tools and expertise in any subject matter required to complete the projects. The FAA will not provide any direct funding for the projects.

The initial research project is expected to involve three students. The number of students and time required to complete other projects will be agreed upon prior to the start of each task. One or more professors will serve as mentors throughout the duration of each student project.

"Graduates can do so much with a math degree, but specific career paths aren't always obvious to Math major," Young said. "I hope this collaborative research relationship will allow Stockton's math students to gain some real-world experience applying their valuable logic, reasoning and analytical skills to research on air traffic operations in the National Airspace System and to improve the current analytical techniques of the FAA's Modeling and Simulation Branch."

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