



### **Electrical Engineering Student Receives NASA Fellowship**

**Tampa, Fla. (June 30, 2010)** – David Cure, a doctoral student in the Department of Electrical Engineering at the University South Florida, in Tampa, is the recipient of a prestigious fellowship from the 2010 **NASA Graduate Student Researchers Program (GSRP)**. NASA's Graduate Student Researchers Program (GSRP) awards fellowships for graduate study leading to masters' or doctoral degrees in the fields of science, mathematics, and engineering related to NASA research and development. The fellowship will provide a stipend of \$20,000 per year, support for health insurance, and travel for a 10-week research internship at a NASA center. The fellowship can be renewed for up to two additional years. Annually, NASA's GSRP supports approximately 150 graduate students from a nationwide pool of applicants.

Cure's NASA-supported research will develop a flexible and reconfigurable antenna with moderate bandwidth to enable radiometric sensing for biomedical applications (e.g., body worn sensors).

According to Cure, "The most appealing aspect of this research topic is the challenge imposed by the environment of the intended application. The problem to which this design is subjected to is that the radiometer shall be located in close proximity to materials (body tissue), which affect the antenna radiation characteristics. For this reason, the radiometer must be conformal such that its shape is adjustable to irregular surfaces, have a low profile so it can be worn comfortably, and have the ability to be tuned to offset environmental loading."

This work will advance the fundamental knowledge base concerning microwave sensor systems that are in direct contact with or in close proximity to non-planar media possessing variability in their electronic properties.

Cure's research will be supervised by Thomas Weller, electrical engineering professor and associate dean for research in the College of Engineering. Cure will spend a 10-week internship with his NASA technical advisor Dr. Felix Miranda at the Glenn Research Center.

The goal of NASA's GSRP is to cultivate research ties to the academic community, to help meet the continuing needs of the nation's aeronautics and space effort by increasing the number of highly trained scientists and engineers in aeronautics and space-related disciplines, and to broaden the base of students pursuing advanced degrees in science, mathematics, and engineering. NASA scientists and engineers evaluate fellowship applications on the basis of academic transcripts, research proposals, and relevance to the space agency's mission.

*The University of South Florida is one of the nation's top 63 public research universities and one of only 25 public research universities nationwide with very high research activity that is designated as community engaged by the Carnegie Foundation for the Advancement of Teaching. USF was awarded \$380.4 million in research contracts and grants in FY 2008/2009. The university offers 232 degree programs at the undergraduate, graduate, specialist and doctoral levels, including the doctor of medicine. The USF System has a \$1.8 billion annual budget, an annual economic impact of \$3.2 billion, and serves more than 47,000 students on institutions/campuses in Tampa, St. Petersburg, Sarasota-Manatee and Lakeland. USF is a member of the Big East Athletic Conference.*

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