CUTR awarded $292,000 from FDOT to Conduct Naturalistic Bicycling Behavior Pilot Study

CUTR was recently awarded an innovative research project with a total budget of $292,000 from the Florida Department of Transportation (FDOT) to conduct a naturalistic bicycling behavior pilot study. The major objectives of the research project are to fully understand bicycling behaviors via comprehensive analyses of naturalistic bicycling data collected from the project, and develop effective countermeasures to improve bicycle safety in Florida. This research project is led by Dr. Pei-Sung Lin (PI), Dr. Achilleas Kourtellis (Co-PI) from CUTR, and Dr. Srinivas Katkoori (Co-PI) from Computer Science and Engineering (CSE) Department. This research project will be conducted through a full collaboration from researchers in CUTR and CSE department.

The safety of bicyclists is of particular concern in Florida, where bicycle fatality rates were nearly triple the national average in 2011. Many factors influence how and where bicyclists ride their bicycles, including roadway facilities, environmental conditions, and interactions with other road users. FDOT is committed to be proactive to find effective solutions through full understanding of bicycling behaviors on roads and the interactions among bicyclists, other road users, traffic control devices, and environmental conditions.

The researchers of this naturalistic bicycling behavior pilot study will develop a cost-effective Bicycle Data Acquisition System (BDAS) with cameras, GPS and various sensors, recruit 100 participants in the Tampa Bay area for the study, install BDAS on participants' bicycles, collect and analyze naturalistic bicycling behavior data from these 100 participants, and provide research findings and recommendations to FDOT.

The CUTR and CSE researchers will focus on providing an in-depth understanding of the factors, risks, and causes contributing to bicycle crashes, and providing ways for better bicycle facility planning and design, engineering improvements, law enforcement, and road user education to significantly improve bicycle safety. The researchers would also like to provide results and findings to benefit future large-scale naturalistic bicycling behavior studies.