

Keeping Cyclists Safe is Focus of Project to be Shared During Student Research Week

DEK: Graduate research assistant Jorge Ugan wants to make it safer for you to ride your bicycle in Orlando

ORLANDO, March 26, 2021 – Riding a bicycle in Central Florida can be dangerous, which is why UCF student Jorge Ugan wanted to see if he could put his engineering skills to make it safer.

Before he could design his solution, however, he worked on a research project that he will share during the Student Scholar Symposium, which is part of UCF's annual Student Research Week, March 29-April 2.

While Ugan rides his bicycle for fun away from traffic, many of his friends rely on them for transportation, which is one reason he wanted to help.

“I have many colleagues and friends that ride for transport and have reported the dangers they have experienced,” he says. “Pedestrians and bicyclists unfortunately are the vulnerable road users that tend to suffer the most when involved in a crash. By research determining which areas have a low frequency of bicycle crashes, we can get an idea of the factors that affect bicyclist safety and hopefully create safer roads for all road users.”

Ugan, from Miami, is seeking a master's degree in transportation systems engineering and is a graduate research assistant in the UCF Smart & Safe Transportation Lab. He looked at roadway characteristics, such as the width of lanes, presence of on-street parking, median width and other factors to determine how they affect bicycle crashes. He believes the information will help roadway planners in Orlando and beyond.

The findings may require some rethinking, he said. For example, his study found that wherever there is on-street parking, bicycle crashes occur more often. Perhaps the solution is to remove on-street parking, which could create other challenges, too, he says. But a conversation can't even begin if there is a lack of information.

Thousands of cyclists are killed each year. According to data from the National Highway Traffic Safety Administration and the U.S. Census Bureau's American Community Survey, five of the top 10 most dangerous cities for cyclists are in Florida including Miami and Fort Lauderdale.

"With emerging new technologies to the transportation industry, we hope to identify methods that can reduce pedestrian and bicyclist crashes, which transportation planners can use to create guidelines that will promote safety for all road users," Ugan says. "These guidelines could also be adopted by other metropolitan cities."

To find out more about Ugan's work and that of other undergraduate and graduate students, check out the Student Scholar Symposium during this year's virtual [Student Research Week](#). Hundreds of students will be presenting their work. Those with a valid UCF email are welcome to attend virtually. Details and schedule of all events can be found on the website.