USU Civil and Environmental Engineering Students win Best Paper Awards | College of Engineering

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News Release — November 23, 2021 — Two Utah State University Civil and Environmental Engineering students were recently recognized by the Utah chapter of the Institute of Transportation Engineers.

Hossein Nasr Esfahani was one of two USU students to recently receive recognition from the Utah chapter of the Institute of Transportation Engineers.

Sailesh Acharya and Hossein Nasr Esfahani each received $150 awards for papers they wrote and presented at the institute’s 2021 student paper competition.

Esfahani’s paper explored how to predict the hourly demand for public electric vehicle charging stations. Acharya’s paper evaluated the number of severe crashes at diverging diamond interchanges in Utah. This is the second year in a row the institute has recognized Acharya’s work.

Acharya’s research found there is a slight decrease in the proportion of severe crashes in Utah’s diverging diamond interchanges overall, but not all interchanges saw the decrease. To better understand the accidents at these interchanges factors such as speed and inclement weather need to be further explored.

Sailesh Acharya recently won a best paper award from the Utah chapter of the Institute of Transportation Engineers. He was one of two USU students to receive the honor.

According to Acharya, there are multiple ways his study’s findings can be utilized.

“These results can be used by the Utah Department of Transportation and other agencies to improve the safety performance of existing diverging diamond interchanges,” he said.

The purpose of Esfahani’s research was to understand how often electric vehicle charging stations are used and how many people use them at once. His research focused on 68 stations throughout Utah. His goal is to predict demand in the future to better serve electric vehicle drivers.

“We could prepare the road networks to have that much traffic,” Esfahani said.

Making sure there are enough public charging stations to satisfy the demand from electric vehicles users is an important part of supporting the adoption of electric vehicles. Esfahani said if there isn’t enough access to charging stations, this could slow the adoption rates.

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