

## DANIEL B. FAMBRO STUDENT PAPER AWARD

**Ericka Mora Campos**

**“How Many Trajectories Should Be Collected to Evaluate Signal Coordination Performance? – Cluster Analysis Using Connected Vehicle Data”**



Congratulations to Ericka Mora Campos for being selected to receive the 2023 Daniel B. Fambro Student Paper Award for the paper titled “How Many Trajectories Should Be Collected to Evaluate Signal Coordination Performance? – Cluster Analysis Using Connected Vehicle Data.”

This award recognizes a significant paper prepared by a student member of ITE and honors the work of Daniel B. Fambro, who was a professor at Texas A&M University and an associate research engineer at the Texas A&M Transportation Institute and passed away in 1999. In naming the award in Dan’s honor, ITE recognizes his exemplary service to ITE, and his dedication to his students and the profession. The award provides ITE a means to encourage student members to investigate transportation subjects and report on independent and original research. The Dan Fambro Award recognizes outstanding accomplishment in this area and ITE is pleased to shine a spotlight on young and talented transportation researchers.

Ericka’s award-winning research paper sought to investigate the minimum size of trajectories required to indicate signal operational performance. Practitioners can usually conduct floating car investigations to collect trajectory data to assess signal timing and coordination. Several measures of effectiveness can be extracted through vehicle trajectories to indicate the quality of signal timing, among which travel time, arrivals on green per arrivals on red, and stops per mile are the most popular ones to characterize the operations of progressed traffic intuitively. Such floating-car investigations do not require additional infrastructure investment, but the data collection is typically performed manually, which can be costly and time-consuming. Consequently, it can be challenging to implement the trajectory-based signal performance measurement to achieve a representative sample size through a minimum effort of doing travel runs. Although comprehensive signal performance studies should be based on several trajectory samples, this paper aims to investigate the minimum size of trajectories required to indicate signal operational performance.

Ericka Mora Campos is a Graduate Research Assistant at the Center for Advanced Transportation Education and Research at the University of Nevada, Reno. An international student from Costa Rica, Ericka obtained a



## 2023 Excellence in Transportation Awards

bachelor's degree in Civil Engineering from the University of Costa Rica and has worked as an engineer in both the private and public sectors. She completed a master's degree at the University of Nevada, Reno, in 2021 and is currently a Ph.D. student. Ericka enjoys community service, mentoring TMCC students, and an array of extracurricular activities.

Upon receiving the Daniel B. Fambro Student Paper Award, Ericka said, "It brings me great joy to share my knowledge with students, colleagues, and community members. Researching and sharing my findings with others is a significant part of my purpose, and I intend to keep doing it even after completing my Ph.D. program."

Ericka's research and findings will be published in an upcoming issue of *ITE Journal*.

Congratulations, Ericka, on your exemplary research and your Daniel B. Fambro Student Paper Award!