

AGUSTIN GUERRA

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PROFESSIONAL PROFILE

I am a highly motivated engineering professional with 5+ years of experience in the transportation industry. My commitment is to provide high-quality solutions to transportation problems. My solving approach focuses on innovation, safety, and operational performance. My research has spanned topics including human factors, driving simulator studies, microsimulation, and optimization frameworks considering Connected and Automated Vehicles' (CAVs) capabilities.

EDUCATION

PhD Candidate in Civil Engineering <i>University of Florida</i>	Aug. 2019 – Expected May 2023 <i>Gainesville, FL</i>
MS in Civil Engineering <i>University of Kansas</i>	Aug. 2017 – May 2019 <i>Lawrence, KS</i>
BS in Civil Engineering <i>Universidad Tecnologica de Panama</i>	Mar. 2008 – May 2013 <i>Panama, PA</i>

RESEARCH EXPERIENCE

Graduate Research Assistant <i>University of Florida</i>	Aug. 2019 – Present
<ul style="list-style-type: none">• Develop optimization algorithms in Python for arterials considering CAVs capabilities• Assist in the implementation of optimization algorithm for isolated intersections• Facilitate the coordination of projects' activities to meet deadlines	
Master's Thesis <i>University of Kansas</i>	May. 2018 – May. 2019
<ul style="list-style-type: none">• Conducted a driving simulator study to assess human behavior under-connected environments during discretionary lane-changing (DLC) maneuvers• Implemented a predictive DLC fuzzy logic model in a driving simulator	

SUMMARY OF RESEARCH SKILLS

- Project management, research methodology & design, participant recruitment, data collection, data management, data analysis (R, SPSS), Python (Matplotlib, CPLEX, Gurobi, Numpy, Pandas, SciPy), \LaTeX , oral presentations, Education and Public Outreach (EPO)

TEACHING EXPERIENCE

Teaching Assistant <i>University of Florida</i>	Sep. 2020 – Dec. 2020
<ul style="list-style-type: none">• Explained and assisted students with traffic flow theory assignments• Created reference material to assist students to understand key course' concepts	
Guest Lecturer <i>University of Florida</i>	Sep. 2021 – Dec. 2021
<ul style="list-style-type: none">• Educated on identifying deficiencies of existing signal control strategies• Introduce CAVs concepts, discrete optimization methods, Python-programming language as a tool for developing optimization frameworks for CAVs	

PUBLICATIONS

Peer-Reviewed Journals

- [1] **Guerra, A.**, L. Elefeteriadou. Platooning Trajectory Optimization for Connected Automated Vehicles in Coordinated-Arterials. *Transportation Research Record*, 2022 (under-review)

PRESENTATIONS

- [1] **Guerra, A.**, L. Elefeteriadou. A Trajectory-based Method for Platoon Formation of Connected and Automated Vehicles. *7th Annual UTC Conference for the Southeastern Region*, 2022
- [2] **Guerra, A.**, L. Elefeteriadou. Platooning Trajectory Optimization for Connected Automated Vehicles in Coordinated-Arterials. *The Transportation Research Board (TRB) 101st Annual Meeting*, 2022
- [3] **Guerra, A.**, L. Elefeteriadou. Platooning Trajectory and Signal Phasing Optimization for Connected Automated Vehicles in Coordinated-Arterials. *The Transportation Research Board (TRB) 101st Annual Meeting*, 2022
- [4] **Guerra, A.**, M. Asgharzadeh, A. Kondyli. Discretionary Lane Changing Decisions for Connected-Vehicles Based on Fuzzy Logic. *Transportation Research Board 99th Annual Meeting Transportation Research Board*, 2020

INVOLVEMENT/LEADERSHIP

- **ITE University Chapter Vice President:** Coordinated student seminars, and ITE activities 2021 – 2022
- **Student Representative at the Internal Steering Committee at UFTI:** Promoted engagement activities between industry professionals and students 2020 – 2022
- **Media Manager at KU Fulbright Student Association:** Led dissemination of activities promoted by the Fulbright Student Board, 2018 2018 – 2019

FELLOWSHIPS & AWARDS

- **Anne Brewer Academic Scholarships :** Awarded by the Intelligent Transportation Society (ITS) Chapter 2022
- **Fulbright Fellowship:** Awarded by the U.S Bureau of Educational and Cultural Affairs to complete a Master's Degree at the University of Kansas 2017
- **Global Best Project in Roads and Highways:** Awarded by the ENR for the Coastal Beltway project in Panama 2015

PROFESSIONAL SOCIETIES

ASCE: American Society of Civil Engineers 2022 – Present
ITE: Institute of Transportation Engineers 2019 – Present

REFERENCES

Lily Elefeteriadou, PhD: Barbara Goldsby Professor, University of Florida
Aurora Izquierdo: Civil Structural Engineer II, WSP
Juliana Canas: Senior Advisor, First Climate
Julio Aysa: Env./Social and Governance Lead Officer, IDB

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