Agustin Guerra

888-858-6716 | agustinguerra@ufl.edu | LinkedIn | Portfolio

Research Statement

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. I am currently seeking faculty positions (starting Jan. 2023 - Aug. 2023).

Education

PhD Candidate in Civil Engineering — Aug. 2019 – Expected May 2023
University of Florida — *Gainesville, FL*

MS in Civil Engineering — Aug. 2017 – May 2019
University of Kansas — *Lawrence, KS*

BS in Civil Engineering — Mar. 2008 – May 2013
Universidad Tecnologica de Panama — *Panama, PA*

Research Experience

Graduate Research Assistant — Aug. 2019 – Present
University of Florida

- Develops optimization algorithms for arterials considering CAVs capabilities
- Assists on the implementation of optimization algorithm for isolated intersections
- Assists in the coordination of projects activities to meet deadlines

Master's Thesis — May. 2018 – May. 2019
University of Kansas

- Conducted a driving simulator study to assess human behavior under-connected environments during discretionary lane-changing (DLC) maneuvers
- Developed and 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), LaTeX, oral presentations, Education and Public Outreach (EPO)

Teaching Experience

Teaching Assistant — 2020
University of Florida

- **Traffic Flow Theory (TTE 6267)**: Assisted with problem explanations

Guest Lecturer — 2021
University of Florida

- **Traffic Flow Theory (TTE 6267)**: Introduce CAVs concepts, discrete optimization methods, Python-programming language as a tool for developing optimization frameworks for CAVs

Presentations

[1] **Guerra** & Elefeteriadou. Platooning Trajectory Optimization for Connected Automated Vehicles in Coordinated-Arterials. *The Transportation Research Board (TRB) 101st Annual Meeting*, 2022

[2] **Guerra** & Elefeteriadou. Platooning Trajectory and Signal Phasing Optimization for Connected Automated Vehicles in Coordinated-Arterials. *The Transportation Research Board (TRB) 101st Annual Meeting*, 2022

[3] **Guerra**, Asgharzadeh & Kondyli. Discretionary Lane Changing Decisions for Connected-Vehicles Based on Fuzzy Logic. *Transportation Research Board 99th Annual Meeting Transportation Research Board*, 2020

Publications

Peer-Reviewed Journals

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

University Service

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

Fellowships & Awards

- **Fulbright Fellowship**: Awarded by the U.S Bureau of Educational and Cultural Affairs to complete a Master's Degree at the University of Kansas
- **Global Best Project in Roads and Highways**: Awarded by the ENR for the Coastal Beltway project in Panama

References

Lily Elefteriadou, PhD: Barbara Goldsby Professor, University of Florida — elefter@ce.ufl.edu
Aurora Izquierdo: Civil Structural Engineer II, WSP — Aurora.Izquierdo@wsp.com
Juliana Canas: Senior Advisor, First Climate — juliana.canas-vanegas@firstclimate.com
Julio Aysa: Env./Social and Governance Lead Officer, IDB — jaysa71@yahoo.com.mx