

Agustin Guerra

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PROFESSIONAL PROFILE

Highly motivated engineering professional with **5+** years of experience in the transportation industry. Committed to providing high-quality service focusing on innovation, safety, sustainability, operational performance, diversity, equity, and inclusion. Currently pursuing a PhD degree in Civil Engineering.

EDUCATION

PhD candidate in Civil Engineering <i>University of Florida, GPA: 3.66</i>	Aug. 2019 – Expected May 2023 <i>Gainesville, FL</i>
MS in Civil Engineering <i>University of Kansas, GPA: 3.89</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>

TECHNICAL SKILLS

Expertise: Transportation Engineering, Statistical Analysis, Operation Research, Machine Learning
Languages: Python (Proficient), R (Intermediate)
Software: VISSIM, HCS, AutoCAD Civil 3D, Infracore, Slide-Rockscience
Developer Tools: Github, Visual Studio
Libraries: Pandas, NumPy, Matplotlib, CPLEX

EXPERIENCE

Graduate Research Assistant <i>University of Florida</i>	Aug. 2019 – Present <i>Gainesville, FL</i>
<ul style="list-style-type: none">• Develop optimization algorithms in Python for arterials considering automated-vehicles capabilities• Assist in the implementation of optimization algorithm for isolated intersections• Facilitated the coordination of project activities to meet deadlines• Explained traffic flow theory assignments to students	
Highway & Traffic Consultant <i>WSP</i>	May 2019 – Aug. 2019 <i>Panama</i>
<ul style="list-style-type: none">• Provided safety assessment for roadways, interchanges, and intersections• Developed geometric design proposals• Conducted earthwork estimation for highway projects	
Highway Engineer <i>Louis Berger</i>	Nov. 2012 – Aug. 2017 <i>Panama</i>
<ul style="list-style-type: none">• Developed geometric designs for proposal and as-built drawings for highway projects. Project portfolio comprises several projects in the Latin American region (Panama, Colombia, Honduras, and Peru) adding up to \$3 billion in construction amount• Coordinated with different departments (geotechnical, hydraulic, and pavement) to meet deadlines• Created digital model terrain for highway projects• Verified slope stability analysis using the Slide-Rockscience software• Supervised and mentored drafter team with 4 people	

LEADERSHIP/INVOLVEMENT

Volunteer at the Young Member Council, TRB: Currently developing a website for the the YMC - S&R to enhance communication, and dissemination of events	2022 – Present
Co-founder of the IEEE-ITS Student Chapter: Currently leading the efforts to establish an IEEE Student Chapter focused on ITS at the University of Florida	2022 – Present
ITE University Chapter Vice President: Coordinated student seminars and <u>ITE</u> activities	2021 – 2022
Student Representative at the UFTI Internal Steering Committee: 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

ITS Florida Anne Brewer Academic Scholarships: Awarded by the ITS Florida Chapter	2022
Fulbright Fellowship: Awarded by the U.S Bureau of Educational and Cultural Affairs	2017
Global Best Project: Awarded by the ENR for the Coastal Beltway project in Panama	2015

RELEVANT PROJECTS

4th Bridge over the Panama Canal <i>Panama</i>	2019
<ul style="list-style-type: none">• Provided visibility and safety assessment for intersections and roadways• Developed geometric design alternatives for interchanges• Construction cost: \$1.2 billions	
Corredor Panama Norte <i>Panama</i>	2016
<ul style="list-style-type: none">• Played a major role in the coordination of the project• Developed design drawings and calculations including 3D models of roadways, roundabouts, and interchanges• Provided earthworks estimation	
Perimetral Oriental de Bogota <i>Colombia</i>	2015
<ul style="list-style-type: none">• Coordinated with other departments (geotechnical, hydraulic, surveying) to meet deadlines• Developed design drawings and calculations including 3D models of roadways, intersections, and interchanges• Trained and supervised drafter team• Construction cost: \$428.0 millions	
Panamerican Highway Widening Santiago -Vigui <i>Panama</i>	2014
<ul style="list-style-type: none">• Provided design alternatives including 3D models and drawings for intersections• Analyzed the slope stability of critical sections• Construction cost: \$340.0 millions	
Corredor Turistico La Barca – El Progreso – Tela <i>Honduras</i>	2014
<ul style="list-style-type: none">• Conceived design drawings for roundabouts and urban sections including sidewalks, and bus-stops• Provided traffic signs drawings using the MUTCD and local guidelines• Construction cost: \$120.0 millions	
Slope Stabilization Studies 53 km <i>Panama</i>	2014
<ul style="list-style-type: none">• Interpreted the slope stability analysis results• Examined ground improvement alternatives• Construction cost: \$0.4 millions	
Amador Causeway Widening <i>Panama</i>	2014
<ul style="list-style-type: none">• Assisted with the geometric design of roundabouts• Participated in the creation of the digital terrain model• Assisted with the modeling of critical sections for embankments stability analysis• Construction cost: \$95.0 millions	
Coastal Beltway <i>Panama</i>	2012
<ul style="list-style-type: none">• Developed design drawings for roadways including roundabouts, marine viaducts, and interchanges• Construction cost: \$ 45 millions	

PROFESSIONAL SOCIETIES

<u>IEEE</u> : Institute of Electrical and Electronics Engineers	2022 – Present
<u>ASCE</u> : American Society of Civil Engineers	2022 – Present
<u>ITE</u> : Institute of Transportation Engineers	2019 – Present

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