

Dr. Austin Valentine Angulo

Austin Valentine Angulo, Ph.D.

204 D Ketter Hall

Buffalo, NY 14260-4300

(804) 513-4106 | avangulo@buffalo.edu

1 PERSONAL INFORMATION

1.1 Education

Ph.D., Civil and Environmental Engineering 2018-2021

University of Virginia, Charlottesville, VA

Advisor: Brian L. Smith

Thesis: Pedestrian Safety: Virtual Reality Simulator Development and Validation for Analysis of Alternative Safety Technologies

Access: <https://doi.org/10.18130/q1z0-ab81>

M.S., Civil and Environmental Engineering 2016-2018

University of Virginia, Charlottesville, VA

Advisor: Brian L. Smith

Thesis: User Recognition at Mid-Block Crossings via Connected Vehicle Technology: An Evaluation of Driver Awareness via Eye Tracking and Stated Preference Data

Access: <https://doi.org/10.18130/V3KH0DZ3Q>

B.S., Civil and Environmental Engineering 2011-2015

University of Virginia, Charlottesville, VA

1.2 Work Experience

Assistant Professor | 2022-Present

SUNY University at Buffalo – Buffalo, NY

Postdoctoral Research Associate | 2021-2022

University of Virginia – Charlottesville, VA

Graduate Research Assistant | 2016-2021

University of Virginia - Charlottesville, VA

- Co-Founder of the Omni-Reality and Cognition Lab (<https://engineering.virginia.edu/omni-reality-and-cognition-lab>)
- Dwight David Eisenhower Transportation Fellowship Graduate Research Fellow at FHWA Turner Fairbank Highway Research Center

Co-Instructor – CE 2010 | 2018-2020

University of Virginia - Charlottesville, VA

Traffic Engineer | 2015-2016

Iteris Inc. - Sterling, VA

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Traffic Engineering Intern | 2014-2015

Charlottesville City Hall - Charlottesville, VA

Research Assistant | 2012-2014

University of Virginia - Charlottesville, VA

Highway Linesman | 2010-2012

Denville Line Painting Inc. - Denville, NJ

1.3 Fellowships, Honors, and Awards

UVA Civil Engineering Graduate Award for Superior Teaching	2021
Graduate Assistants in Areas of National Need Teaching Fellowship	2019-2020
FHWA Dwight D. Eisenhower Transportation Grant for Research Fellowship	2016-2019
FHWA DDETF Innovative Doctoral Research Showcase	2019
NSF Research Coordination Network - Mainstreet21 Pipeline Grant	2019
UVA Research Innovation Award Program - Seed Grant	2018
VDOT SmarterRoads Hackathon Grand Prize	2018
University of Virginia Engineering Research Symposium – 2 nd Place Podium	2018
Research Experience for Undergraduates (University of Virginia)	2013
Green Initiative Funding Tomorrow Grant (University of Virginia)	2013

2 RESEARCH ACTIVITIES

2.1 Publications

Guo, X., **Angulo, Austin V.**, Robartes, E., Chen, T., Heydarian, A., Smith, B. *In Press*
ORCLSim: A system architecture for studying bicyclist and pedestrian physiological behavior through immersive virtual environments
Journal of Advanced Transportation | 2022

Angulo, Austin V. and Smith, Brian L.
Evaluation of driver performance with a prototype cyber physical mid-block crossing advanced warning system
Journal of Safety Research, Volume 79 p.237-245| 2021
<https://doi.org/10.1016/j.jsr.2021.09.004>

Guo, X., Robartes, E. M., **Angulo, Austin V.**, Chen, T. D., & Heydarian, A.
Benchmarking the Use of Immersive Virtual Bike Simulators for Understanding Cyclist Behaviors.
Proceedings 2021 ASCE I3CE | 2021
<https://doi.org/10.31224/osf.io/mrxqh>

Angulo, Austin V., Chen, T., Heydarian, A., Smith, B. *In Prep*
Validation of virtual reality simulator with real-world observations for pedestrian safety at midblock crossings|

Angulo, Austin V., Guo, X., Chen, T., Heydarian, A., Smith, B. *In Prep*

Evaluating current and future midblock crossing safety treatments using virtual reality simulation

2.2 Presentations

2.2.1 Contributed Talks

Angulo, A., Robartes, E., Guo, X., Chen, T., Heydarian, A., Smith, B. 2022. Virtual reality vs. real-world: A validation of pedestrian safety at midblock crossings. ASCE ICTD 2022 Annual Meeting, Seattle, Washington.

Angulo, A., Robartes, E., Guo, X., Chen, T., Heydarian, A., Smith, B. 2022. Evaluating current and future mid-block crossing safety treatments using virtual reality simulation. ASCE ICTD 2022 Annual Meeting, Seattle, Washington.

Angulo, A., Robartes, E., Guo, X., Chen, T., Heydarian, A., Smith, B. 2022. Validation of virtual reality simulator with real-world observations for pedestrian safety at midblock crossings. Transportation Research Board 2022 Annual Meeting, Washington, DC.

Angulo, A., Robartes, E., Guo, X., Chen, T., Heydarian, A. 2021. Development of virtual reality simulators to assess perceived safety of vulnerable road users. Transportation Research Board 2021 Annual Meeting, Washington, DC.

Guo, X., **Angulo, A.**, Robartes, E., Chen, T., Heydarian, A. 2021. Assessing and improving cyclists' situational awareness and safety through physiological sensing and augmented reality technology. Transportation Research Board 2021 Annual Meeting, Washington, DC.

Angulo, A., Robartes, E., Chen, T., Heydarian, A. 2020. The use of virtual reality simulators in bicycle and pedestrian human subject testing: A synthesis. Transportation Research Board 2020 Annual Meeting, Washington, DC.

Angulo, A., Robartes, E., Chen, T., Heydarian, A. 2019. Development of virtual reality simulators to assess perceived safety of vulnerable road users. Transportation Research Board 2019 Annual Meeting, Washington, DC.

Angulo, A., Smith, B. 2019. User recognition at mid-block crossings via connected vehicle technology: An evaluation of driver awareness via eye tracking and stated preference data. Transportation Research Board 2019 Annual Meeting, Washington, DC. **Federal Highway Administration's Dwight D. Eisenhower Innovative Doctoral Research Showcase*

Angulo, A. 2019. Should DSRC and C-V2X Coexist? Debate. Transportation Research Board 2019 Annual Meeting, Washington, D.C.

Angulo, A. 2018. The Omni-Reality and Cognition Lab: An overview. Virginia Department of Transportation - Transportation Planning and Advisory Committee.

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Angulo, A., Laffey, S., and Smith, B. 2018. User recognition at mid-block crossings via connected vehicle technology. Virginia Bicycle and Pedestrian Action Committee, Roanoke, VA

Angulo, A. and Laffey, S. 2017. User recognition at mid-block crossings via connected vehicle technology. ITS and VASITE, Richmond, VA.

2.2.2 Posters

Angulo, A., Robartes, E., Guo, X., Chen, T., Heydarian, A., Smith, B. 2022. Evaluating current and future mid-block crossing safety treatments using virtual reality simulation. Transportation Research Board 2022 Annual Meeting, Washington, DC.

Angulo, A., Robartes, E., Chen, T., Heydarian, A. 2020. Virtual reality as a tool for understanding pedestrian and bicyclist perceptions and safety. UVA Engineering Systems and Environment Graduate Research Symposium 2020, Charlottesville, VA.

4 PROFESSIONAL SERVICE AND DEVELOPMENT

4.1 Professional Service

Department Graduate Student Council - Representative	2019-2021
VDOT Hackathon Guidelines Co-Author	2019

4.2 Outreach

Engineering Systems and Environment Graduate Recruitment	2017
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4.3 Professional Development

Institute of Transportation Engineers Student Chapter	2019-2021
Teaching Science in Higher Education, University of Virginia	2018
Undergraduate Researcher, University of Virginia	2011-2015

4.4 Manuscript Reviewer

Journal of Intelligent Transportation Systems: Technology, Planning, and Operations
The IEEE Intelligent Transportation Systems Society Conference

4.5 Society Memberships

American Society of Civil Engineers
Transportation and Development Institute
Institute of Transportation Engineers
Theta Tau Professional Engineering Fraternity