Exponent®
Engineering & Scientific Consulting

Ricardo Jacome, Ph.D.

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Professional Profile

Dr. Jacome is an expert in vehicle dynamics and performance in various crash modes. His research includes crash analysis, full-scale crash testing of roadside safety installations, virtual simulation, and vehicle dynamic testing. His industry experience includes algorithm development and hands-on performance evaluation for both vehicles and tires. Dr. Jacome's combination of experience in car crash testing, vehicle dynamic testing, and tire performance assist clients in crashworthiness cases.

Prior to joining Exponent, Dr. Jacome worked at Bridgestone Americas Technology Center. His role was the development of algorithms for tire performance evaluation and prediction in commercial and passenger vehicles. During this role, Dr. Jacome conducted field testing and investigation on tire attributes and design procedures to understand their contributions to vehicle safety and performance. He was responsible for tire wear predictions, commercial tire casing performance, and enhancing virtual modeling techniques in Bridgestone's platforms.

Dr. Jacome has four years of experience working in roadside safety as a Graduate Research Assistant for the Midwest Roadside Safety Facility in Lincoln, Nebraska. He was responsible for full-scale crash testing, simulation, and documentation in accordance with NHTSA standards. He also performed testing in vehicle performance under split-mu conditions. His doctorate studies focused on the field of vehicle dynamic trajectory generation for Connected and Automated Vehicle technology to support highway safety which produced multiple presentations and publications.

Academic Credentials & Professional Honors

Ph.D., Mechanical Engineering and Applied Mechanics, University of Nebraska, Lincoln, 2021

B.S., Mechanical Engineering, University of Texas, Rio Grande Valley, 2017

Dwight D. Eisenhower Transportation Research Fellowships 2019, 2020, 2021

SAE Doctoral Research Fellow 2020

SAE Heinz C. Pretcher Scholarship 2018

Mid-America Transportation Center's Region VII University Transportation Centers Student of the Year 2018

Professional Affiliations

The Tire Society - member, reviewer

Society of Automotive Engineers, SAE – member

Publications

Jacome R, Stolle C, Sweigard M. Road curvature decomposition for autonomous guidance. SAE Technical Paper 2020-01-1024, 2020, doi:10.4271/2020-01-1024.

Jacome RO, Stolle C, Faller RK, Grispos G. A dynamically-concise roadmap framework for guiding connected and automated vehicles. 2021 IFIP/IEEE International Symposium on Integrated Network Management (IM), 2021, pp. 1009-1017.

Presentations

Jacome RO. A dynamically-concise roadmap framework for guiding connected and automated vehicles. IFIP/IEEE IM 2021 - 4th International Workshop on Intelligent Transportation and Autonomous Vehicles Technologies. Bordeaux, France, May 2021.

Jacome RO. Road coordinates for autonomous vehicle guidance. Poster presentation, safety performance and analysis doctoral student competition. P21-2128, at Transportation Research Board, Washington, DC, January 2021.

Jacome RO. Midwest virtual road corridor (MVRC): an ultra-compact road map representation for CAVs. Dwight David Eisenhower Transportation Fellowship Program Posters. P21-20421, January 2021.

Jacome R. Road curvature decomposition for autonomous guidance. Poster Presentation, Dwight Eisenhower Panel at Transportation Research Board, Washington, DC, January 2020.

Jacome R, Trevino T. Multibody simulation for intersecting slopes at railway roads using ADAMS MSC software. Presentation, The University of Texas Rio Grande Valley, UTCRS Symposium, Edinburg, TX, October 2015.

Jacome R, Garcia R, Stutz J, Moya J. Second generation multi-station polymer creep-tester. Presentation, The University of Texas Rio Grande Valley, Senior Design Project, Edinburg, TX, May 2017.

Peer Reviews

The Tire Society