Ricardo Osmar Jacome

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EDUCATION

University of Nebraska – Lincoln Estimated Graduation Date: December 2020

- Master of Science in Mechanical Engineering and Applied Mechanics (3.90 GPA)
  - Specialization in Dynamics &Vibrations
  - Secondary Areas of Study: Systems, Design and Controls

University of Texas – Rio Grande Valley May 2017

- Bachelor of Science in Mechanical Engineering (3.98 GPA)
  - Minor in Business Administration (4.00 GPA)

WORK EXPERIENCE

Graduate Research Assistant *University of Nebraska – Lincoln* 2017-Present

- Data Analyst for Midwest Roadside Safety Facility, involved in Finite Element Analysis simulations for crash testing analysis, experience with high speed data acquisition systems, filtering techniques, and sensor data analysis.

Teaching Assistant *University of Texas – Rio Grande Valley* 2015-2017

- Mentor in an engineering class of ~120 undergrad students. Explained concepts to students and graded lab reports. Class topics covered were Linear Algebra, Probability, Statistics and Vector Calculus.

Science Tutor *University of Texas – Rio Grande Valley* 2014-2017

- CRLA Level 2 Certified. Tutored students in the areas of Chemistry, Physics, Math and Engineering. Certified to train entering level tutors into the customer service environment.

UTCRS Internship *Mid-America Transportation Center* Summer 2015

- Position focused development of dynamic simulations on Adams MSC software for slopes at railway intersections. Created cost-benefit analysis into the deletion of these slopes for the railway industries.

ASSOCIATIONS

- Tau Beta Pi, Member (2016-Present)
- Brazilian Jiu-Jitsu Club (2014-2017)
- Hispanic Scholarship Fund Scholar (2018-Present)
- Society for Industrial and Applied Mathematics (2019 - Present)

SOFTWARE PROFIENCY

- ***Microsoft Software***: Word, PowerPoint, Excel.
- ***Design/Simulation Software***: Solidworks, Adams MSC, CarSim, Simulink
- ***Finite Element Analysis Software***: Autodesk Simulation & LS-Dyna
  - FEA on Tire Debeading Simulation: https://rickjacome.github.io/CurriculumVitae/files/2017-12-14-Jacome-Final-Report.pdf
- ***Programming/Processing Software:*** C++, MATLAB, LabView, Arduino, Python
  - FFT Analysis on Steering Wheel Vibration: https://rickjacome.github.io/CurriculumVitae/files/2019-5-17-Vibrations-Jacome.pdf
  - Inverted PID Pendulum Controller: https://rickjacome.github.io/CurriculumVitae/files/2018-12-5-Pendulum-Jacome.pdf
  - Wavelet Analysis on Accelerations: https://rickjacome.github.io/CurriculumVitae/files/2019-12-11-Wavelets-Jacome.pdf

SKILLS

- Fluent in English and Spanish
- Intermediate French
- Guitar Player
- Beginner Japanese
- Stock Market Investor

AWARDS

- Dwight David Eisenhower Transportation Fellowship 2018-2020
- Mid America Transportation Center Student of the Year Award 2018
- Society of Automotive Engineers/Heinz C. Prechter Automotive Excellence Scholarship 2017-2018
- Nebraska Engineering Recruitment Fellowship 2017-2019
- Summa Cum Laude Honors 2017

PRESENTATIONS/PUBLICATIONS

- Jacome R. "*Road Curvature Decomposition for Autonomous Guidance",* Presentation, WCX SAE World Congress Experience, Detroit, MI, April 2020
- Jacome R. "*Road Curvature Decomposition for Autonomous Guidance",* Poster Presentation, Dwight Eisenhower Panel at Transportation Research Board, Washington, DC, January 2020
- Jacome, R., Stolle, C. and Sweigard, M., "*Road Curvature Decomposition for Autonomous Guidance*," SAE Technical Paper 2020-01-1024, 2020, doi:10.4271/2020-01-1024.
- Jacome R. Stolle, C., & Sweigard M., *"Smart Barrier Scheme for Autonomous Guidance - MATC Year Two Report",* Internal Report, October 2019.
- Jacome R. Stolle, C., & Sweigard M., *"Virtual Barriers for Mitigating and Preventing Run-off Crashes, Phase I",* Mid-America Transportation Center, Internal Report, August 2018.
- 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.
- 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.