

February 10, 2020

Dear Selection Committee of Graduate Student Travel Awards:

It is with great pleasure that I offer my recommendation on behalf of Mr. Ricardo Jacome for this travel grant award at UNL. I am extremely pleased with Mr. Jacome's progress, dedication, work ethic, and integrity, and I highly recommend him for this award.

I am Ricardo's master's thesis advisor since his arrival in the fall of 2017 at the Midwest Roadside Safety Facility (MwRSF), which falls under the Nebraska Transportation Center (NTC) umbrella and hosts researchers from both Civil and Mechanical Engineering. Ricardo immediately engaged in challenging research tasks, including conducting instrumentation data analysis in support of MwRSF's full-scale crash testing program, completing and publishing technical reports, conducting finite element analyses of vehicle crashes in support of barrier design evaluations, and is a veteran of our crash test documentation and analysis team. His work was instrumental in helping full-time MwRSF staff to determine system adequacy for federal crashworthiness criteria. In the fall of 2017, Ricardo began working on the Mid-America Transportation Center (MATC) "Virtual Barrier System for Mitigation of Run-Off-Road Crashes" project, which is intended to develop a virtual lane-keeping assist system to alert drivers of potentially departing the roadway using vehicle-to-roadside infrastructure (V2I) communication. The project has evolved and obtained excellent results regarding vehicle controls, existing Advanced Driver Assistance Systems (ADAS), and guidance techniques, as well as instrumentation and processing algorithms. Ricardo is currently involved with system modeling and the relationship between vehicle stability controls and steering inputs.

During the fall of 2019, Ricardo's research with the MATC Virtual Barrier project culminated in exciting new perspectives in vehicle autonomy research. Ricardo, working with fellow research student Michael Sweigard, co-wrote, edited, and submitted a paper to the WCX 2020 SAE World Congress and the paper was successfully approved for presentation and publication. Now, I support Ricardo's pursuit of additional funding to support travel to the WCX 2020 SAE World Congress. Additional travel funding will reduce the fiscal burden on MwRSF and Ricardo Jacome and ensure he is able to follow through on this paper presentation as planned.

Ricardo is both a student leader and inspiration. He has shown tremendous growth and self-discipline. At MwRSF, Ricardo frequently leads student teams and discussions. He has also been a tireless advocate for MwRSF in academics and has even recruited additional graduate students to come to UNL and study at MwRSF. Ricardo has won multiple nationally-competitive awards for academic and research excellence, including a two-time Dwight D. Eisenhower Transportation Fellowship (DDETFP) recipient and a recipient of the Heinz C. Prechter Automotive Excellence Scholarship.

I am therefore pleased to recommend Ricardo for a travel grant that will allow him to attend to the WCX 2020 SAE World Congress Experience, as he is a deserving and capable candidate, and I urge you to accept his nomination.

Sincerely,

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