Richard D. Leyton-Romero

Date of Birth: 01-May-1996
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Languages: English + Español
Nationality: USA + Colombian dual national
Location: Johannesburg, South Africa

Education

University of the Witwatersrand – PhD Electrical Engineering 2026
- **Research Focus:** Applied Optimal Control
- **Supervisor:** Professor David J.N. Limebeer
- **Thesis:** The Usage of Optimal Control for Motorsport Performance Development

Oxford Brookes University – MSc Motorsport Engineering 2023
- **Dissertation:** The Effects of Race Vehicle Setup on Lap-by-Lap Tire Warm-Up Response

University of South Florida – BSME Mechanical Engineering 2020
- **Minor Degree:** Entrepreneurship
- **Senior Design:** Mazda BP4W Camshaft Design

Experience

Owner/Operator, Tampa Dynamics LLC – Tampa, Florida 2019 – 2023

Provided race engineering support to motorsport organizations such as Pirelli Motorsport, Ian Lacy Racing, Ferrari of North America, Riley Technologies, and Multimatic Motorsports.

- Optimized vehicle setups by assessing car and driver stability characteristics, leading to increased driver confidence.
- Leveraged driver-in-the-loop simulation to pinpoint location-specific performance and stability issues, ensuring thorough preparation before arrival to an event.
- Evaluated and optimized tire usage during track events by monitoring thermal activity and wear ensuring maximum vehicle performance.

Mechanical Engineer, Comp Cams – Memphis, TN 2019
- Tuned control parameters for vintage Chevrolet engine retrofitted with modern electronic fuel injection by monitoring and adjusting air:fuel ratios and spark timing.
- Provided powertrain consulting for race teams across various motorsport categories from professional drag racing to boat racing.

Publications

Limebeer, D. J. N., Leyton Romero, R. D., and Massaro, M. (2025). An optimal control approach to the generation of yaw-moment diagrams. *Vehicle System Dynamics*, 1–25. doi.org/10.1080/00423114.2025.2471344

Skills

Programming and Computation MATLAB, Python, Maple, Mathematica,
Mechanical Design and Simulation: SOLIDWORKS (certified), CATIA V5, LS-DYNA, STAR-CCM+
Motorsport Data Visualization: MoTeC i2, Cosworth Pi, WinTax4