
Paper ID: 455 - Energy Savings in Ultra-Light Electric Vehicles through Custom Power Electronics and Optimized BLDC Control

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Kevin Jesú Antezana Livia was born in Lima, Peru, in 2002. He received his B.S. degree in Mechatronics Engineering from the National University of Engineering (UNI), Lima, Peru, in 2026. He also completed an academic exchange program at Hochschule Hof: University of Applied Sciences, Germany, focusing on artificial intelligence, robotics, and applied engineering.

He currently works as an Instrumentation and Control Trainee at DRA Global (Lima, Peru) within the mining projects sector. His professional and research interests encompass electric powertrains, power electronics, autonomous systems, and vehicular robotics. In international technological competitions, he served as the Propulsion Area Leader for the Eco Motors UNI team, representing the university in the 2024, 2025, and 2026 editions of the Shell Eco-marathon in Rio de Janeiro, Brazil. Additionally, he presented his research on sliding mode control and LiDAR-SLAM for autonomous UAV inspection at the XVI National Mining Congress (CONAMIN). Mr. Antezana was awarded first place in the ABET Project Competition at UNI for the design and implementation of an experimental test bench for BLDC hub motors.