

Juan Pablo González Alzate

PERSONAL INFORMATION

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EDUCATION

- 2025-present **PhD Mathematical Engineering Student**, *Universidad EAFIT*, Medellín, Colombia
- 2020-2023 **MEng, Engineering in Industrial Automatization**, *Universidad Nacional de Colombia*, Medellín, Colombia, Master thesis: Decision-making system for the location, sizing, and optimal dispatch of charging stations for the energy supply of a multimodal electric transport system.
- 2014-2020 **BEng. Control Engineer**, *Universidad Nacional de Colombia*, Medellín, Colombia.

PUBLICATIONS AND CONFERENCES

Peer-reviewed manuscripts

- Acceptance Osorio-Gómez, G., Ortega, A. M., Bernal-del Río, S., & **González-Alzate, J. P.** (2025). Electric motorcycles in Colombia: A systematic assessment of barriers and opportunities to sustainable mobility. In Proceedings of the 2025 International Conference on Renewable Energy Research and Applications (ICRERA 2025). Universidad EAFIT / Inter-American Development Bank (IDB).
- González Alzate, J. P.**, Bernal del Río, S., Espitia, G., & Osorio-Gomez, G. (2025). Methodology for assessing the feasibility of implementing energy communities through multi-dimensional territorial configurations. *International Journal of Environmental Science*, 11(12s), 129–136. <https://doi.org/10.64252/zctn5s37>
- Uribe, A., Yepes, M., **González-Alzate, J. P.**, Arenas-Vasco, A., Montoya, A., & Mejía-Gutiérrez, R. (2025). Charging policies for battery swapping station for hybrid motorcycles. *Cleaner Logistics and Supply Chain*, 16, 100240. <https://doi.org/10.1016/j.clscn.2025.100240>
- Gabriel Espitia Mesa, **González-Alzate, Juan Pablo**, Santiago Bernal del Río, Ricardo Mejía Gutiérrez, Gilberto Osorio Gómez. Integrated approach for energy communities systems design in developing countries. 2024 9th International Conference on Renewable Energy and Conservation (ICREC 2024). Rome, Italy.
- González Alzate, J.** (2023). Sistema de toma de decisiones para la ubicación, dimensionamiento y despacho óptimo de las estaciones de carga para el abastecimiento energético de un sistema de transporte eléctrico multimodal. Universidad Nacional de Colombia. Retrieved from <https://repositorio.unal.edu.co/handle/unal/84078>.

Londoño Lopera, J. C., **González Alzate, J. P.**, Lage Cano, E. C., Vallejo Velasquez, M. A., and Ramírez Patiño, J. F., (2020). Feature selection using LEM algorithm for the classification of emg signals. *Ingenio Magno*, 10(2), 10-21. Retrieved from <http://revistas.ustatunja.edu.co/index.php/ingeniomagno/article/view/1896>.

Montoya Fernández, M., Mira, J. D., Ernst, V. R., **González Alzate, J. P.**, Giraldo Mendoza, F., Valencia Uribe, A., (2023). Modelamiento y dimensionamiento energético de vehículos eléctricos. Ricardo Mejía Gutiérrez, editor académico. Modelamiento sostenible en países en desarrollo: Tecnologías y estrategias de transporte multimodal e inteligente (pp. 103-120). Editorial Universidad Nacional de Colombia. ISBN 978-958-505-284-0 (e-book).

Portilla Caicedo, C., **González Alzate, J. P.**, Sarmiento, I. R., Oviedo Espinosa, J. J., (2023). Soluciones de movilidad terrestre de carga. Ricardo Mejía Gutiérrez, editor académico. Modelamiento sostenible en países en desarrollo: Tecnologías y estrategias de transporte multimodal e inteligente (pp. 163-176). Editorial Universidad Nacional de Colombia. ISBN 978-958-505-284-0 (e-book).

González Alzate, J. P., Portilla Caicedo, C., Valencia Uribe, A., Montoya Fernández, M., Ernst, V. R., Oviedo Espinosa, J. J., (2023). Operación de sistemas multimodales. Ricardo Mejía Gutiérrez, editor académico. Modelamiento sostenible en países en desarrollo: Tecnologías y estrategias de transporte multimodal e inteligente (pp. 253-267). Editorial Universidad Nacional de Colombia. ISBN 978-958-505-284-0 (e-book).

Conference

González Alzate, J. P. (Speaker), Bernal del Rio, S., Espitia, G., & Osorio-Gomez, G. (2025). Methodology for assessing the feasibility of implementing energy communities through multi-dimensional territorial configurations. *International Journal of Environmental Science*, 11(12s), 129–136. INTERNATIONAL CONFERENCE ON RESEARCH CHALLENGES IN SCIENCE AND TECHNOLOGY (ICRCST - 25) 23rd - 24th May 2025 | Bilbao, Spain. <https://doi.org/10.64252/zctn5s37>

González-Alzate, Juan Pablo (Speaker), Lage-Cano, Esteban Camilo, Londoño-Lopera, Juan Camilo, Vallejo-Velásquez, Mónica Ayde and Ramírez Patiño, Juan Fernando. Feature selection using LEM algorithm for the classification of emg signals. at the International Congress of Engineering 2019, V International Congress of Instrumentation, Control and Telecommunications CIICT and II International Congress on Design, Manufacturing and New Materials CIDIFAM. Universidad Santo Tomás de Tunja, Colombia.

González-Alzate, Juan Pablo (Speaker), Electric Mobility Diploma, ME, held from October 21, 2022 to March 25, 2023, financed by UK PACT and designed by the National University of Colombia in collaboration with the Carbon Trust and UPME.