Yineth Martinez

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Education

2022–2023 **Universidad Tecnológica de Pereira**,
Master in Electrical Engineering, thesis title, Identification and control of large-scale interconnected multivariable system.
GPA 4.8/5.0

2016–2021 **Universidad Tecnológica de Pereira**,
Undergraduate in Electrical Engineering, thesis title, Simulation and real-time adaptive control of a smart grid.
GPA 4.0/5.0

Publications

Y. Martinez Armero, "Simulacion y control adaptativo en tiempo real de una red inteligente," 2021.

Y. Martinez-Armero, J. B. Renteria-Mena, and E. Giraldo, "Robust embedded control applied to a twin rotor mimo system." *Engineering Letters*, vol. 31, no. 1, 2023.

Working papers

- Y. Martinez Armero, S. Lopez Blandon and E. Giraldo, "Optimal Control and Low-cost HIL Simulation of a Multivariable Interconnected Smartgrid", 2023.
- Y. Martinez Armero, S. Lopez Blandon and E. Giraldo, "Low-cost Arduino-based hardware in the loop simulation and control of dynamic systems", 2023.
- Y. Martinez Armero, P.A. Munoz and E. Giraldo, "Adaptive Multivariate EMD Data Driving EEG Processing for Brain Activity Estimation", 2023.
- Y. Martinez Armero, P.A. Munoz and E. Giraldo, "Harmonic State Estimation based on an Adaptive Multivariate EMD for Large Scale Electric Power Systems", 2023.

Complementary Courses

- Computer vision *Prof. German Holguin and Byron Hernandez, Universidad Tecnológica de Pereira, Colombia* 40 HOURS
- Power system dynamics and control *Prof. Alejandro Garces, Universidad Tecnológica de Pereira, Colombia* 40 HOURS
- 3D printing *Prof. Sergio Velarde, Universidad Tecnológica de Pereira, Colombia* 60 HOURS
- Linear multivariable control *Prof. Eduardo Giraldo, Universidad Tecnológica de Pereira, Colombia* 40 HOURS
- Kalman filter *Prof. German Holguin, Universidad Tecnológica de Pereira, Colombia* 30 HOURS
- Power system analysis *Prof. Ramon Alfonso Dallego Rendón, Universidad Tecnológica de Pereira, Colombia* 64 HOURS.
- Operation of electrical power systems, *Prof. Andres Ricardo Herrera, Universidad Tecnológica de Pereira, Colombia* 64 HOURS.
- Stability of electrical power systems *Prof. Andres Ricardo Herrera, Universidad Tecnológica de Pereira, Colombia* 64 HOURS.
- Smart power grids *Prof. Juan Jose Mora, Andres Ricardo Herrera, Universidad Tecnológica de Pereira, Colombia* 60 HOURS.
- Computational methods and models *Prof. German Holguin, Universidad Tecnológica de Pereira, Colombia* 60 HOURS.
- Distributed Optimization *Prof. Cesar Uribe, Universidad Javeriana, Colombia* 10 HOURS
- Convex Optimization *Prof. Alejandro Garces, Universidad Tecnológica de Pereira, Colombia* 40 HOURS
- Selected Topics in Machine Learning Optimization, Computer Vision and Networks *Prof. Carlos Parra Rodriguez, Guha Balakrishnan, Cesar Uribe, Arlei Silva ,Universidad Javeriana, Colombia* 40 HOURS.
- Programming in Pythyon *Prof. Mauricio Holguin ,Universidad Tecnológica de Pereira, Colombia* 48 HOURS

- Mathematical Models in Population Dynamics *Prof. Pablo Amster ,Society for Industrial and Applied Mathematics – CoSIAM* 12 HOURS
- Linear Multivariate Control *Prof. Eduardo Giraldo ,Universidad Tecnológica de Pereira, Colombia* 50 HOURS
- Diploma in 3D Printing and New Technologies *Prof. Sergio Velarde ,Universidad Tecnológica de Pereira, Colombia* 120 HOURS
- Embedded Systems *Prof. Andres Felipe Calvo Salcedo ,Universidad Tecnológica de Pereira, Colombia* 40 HOURS
- STEAM diploma and project formulation course *+Mujer+Ciencia+Equidad ,Ministerio de Ciencia Tecnología e Innovación, Organización de estados iberoamericanos OEI, Colombia* 95 HOURS
- Power Electronics Seminar *Universidad Nacional de Asunción, Universidad de Talca, Paraguay ,Chile* 4 HOURS

Projects

Jan 2023–Apr 2023 **Researcher**, *EEG Signal Analysis using simulated data*, *Prof. Pablo Andres Munoz,University of Quindio, Colombia*, Implementation of decomposition methods for localization of active brain sources from simulated electroencephalography (EEG) signals..

Jun 2022–Ongoing **Co-researcher, Master's Thesis**, *Identification and control of large-scale interconnected multivariable system*, *Prof. Eduardo Giraldo,Technological University of Pereira, Colombia*, In this work is proposed a methodology for control design and HIL simulation of a multivariable interconnected Smartgrid.

Skills

Languages	Matlab (A), Python(A), C/C++(B), SQL(B)
WebD	Latex/overleaf, Colaboratory
Utilities	Anaconda, Jupyter Notebook
Communication	English(SRW)

Extra Curriculars

Jan 2019–Dec 2020–Nov 2022–Ongoing **President Control System Society of IEEE, Universidad Tecnológica de Pereira**, *Member*.

Jan 2019 – Ongoing **Women in Engineering**, *Member*, Volunteering, Universidad Tecnológica de Pereira.

2020 – Ongoing **Group in automatic control, Universidad Tecnológica de Pereira**.

Grants awards

Nov 2022 **Recognition of the best degree project year 2021**, *Aciem Risaralda*.

References

Eduardo Giraldo,
Full Professor,
Department of Electrical Engineering, |
egiraldos@utp.edu.co.

Alexander Molina-Cabrera,
Dean,
Engineering faculty,
almo@utp.edu.co.