Manuela Chacon-Chamorro

Full Name: Manuela Viviana Chacón Chamorro

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Education

2023 -	🔖 **Ph.D. Candidate**, Universidad de los Andes. Ongoing. Bogotá, Colombia. Funded by the Google DeepMind–Uniandes Scholarship (2023). Preliminary thesis title: *Emergence of Cooperative Resilience in Artificial Intelligence Multi-Agent Systems.*
2020 - 2023	🔖 **M.Sc. in Applied Mathematics**, Universidad Nacional de Colombia. Master's thesis: *"Study on the Reduction of Overfitting in Residual Neural Network Architectures in a Pattern Classification Scenario."* Thesis awarded with distinction. Manizales, Colombia.
2013 - 2018	🔖 **B.Sc. in Electronic Engineering**, Universidad de Nariño, Colombia. Undergraduate thesis: *"Development of a Multi-Label Identification and Tracking Technique for a Harmonic Radar System."* Thesis awarded with distinction. Pasto, Nariño.

Academic Publications

Journal Papers

1. M. Chacon-Chamorro, F. A. Gallego, and J. Riano-Rojas, "Reducing overfitting in resnet with adaptive lipschitz regularization," *Journal of Computational and Applied Mathematics*, vol. 471, p. 116 747, 2026, ISSN: 0377-0427. 🔗 DOI: 10.1016/j.cam.2025.116747.

2. M. Chacon-Chamorro et al., "Cooperative resilience in artificial intelligence multiagent systems," *IEEE Transactions on Artificial Intelligence*, To Appear, 2025. 🔗 DOI: 10.1109/TAI.2025.3567371.

Conference Proceedings

1. C. Smith et al., "Evaluating generalization capabilities of llm-based agents in mixed-motive scenarios using concordia," in *Proceedings of the 38th Conference on Neural Information Processing Systems (NeurIPS 2025), Datasets and Benchmarks Track*, Accepted as Poster. Co-author: Manuela Chacón-Chamorro, Sep. 2025.

2. M. Chacón-Chamorro and J. Ordóñez, "Trilateración adaptada para posicionar múltiples objetivos en un sistema de radar armónico," in *Proceedings of the 16th LACCEI International Multi-Conference for Engineering, Education and Technology (LACCEI 2018): Innovation in Education and Inclusion*, Student Papers Track, LACCEI, Lima, Peru, Jul. 2018.

Other Academic Contributions

1. M. Chacón-Chamorro, L. F. Giraldo, and N. Quijano, *Cooperative resilience in multi-agent ai systems: From definition to reward inference*, Poster presented at the Cooperative AI Summer School, Winner of Best GIF Award, Marlow, United Kingdom, Jul. 2025.

2   M. Chacon-Chamorro, F. A. Gallego, and J. Riano-Rojas, *Analysis of the overfitting problem in residual neural network architectures from lipschitz continuity and continuous systems approach,* International Workshop: Creating Diverse Scientific Communities in the Americas — *Juntos: Joining UNAL Manizales and UTRGV in the Development of STEM Collaboration*, Lightning talk presentation, Edinburg, Texas, USA: University of Texas Rio Grande Valley (UTRGV), Jul. 2022.

Employment History

2023 – Present   **Research Projects Professional,** Universidad de los Andes, Colombia.
Execution and support of research projects in AI and multi-agent systems.
Additional assignments (adjunct/bonus roles):

- Instructional Materials Assistant, M.Sc. in AI — *Deep Learning Techniques*.

- Instructor, Continuing Education — *Machine Learning Models* (Bancolombia), **2024–I** and **2025–II**.

- Teaching Assistant (Monitor), M.Sc. in AI — *Decision Systems and Intelligent Control* (current).

2025   **Invited Lecturer (Ad honorem),** Universidad de Nariño, Colombia.
M.Sc. in Electronic Engineering — *Deep Learning* course (Semester I, March).

2019 – 2022   **Technical Coordinator (Part-time, 20 hrs/week),** Universidad de Nariño, Colombia.
Coordinated the research project *"Integrated Information System for the Standardization of Specialty Coffee Production Processes in Buesaco, Nariño"* (*"Sistema de información integral hacia la estandarización de los procesos de producción de cafés especiales en el municipio de Buesaco, Nariño"*).
Jul 2019 – Oct 2022.

2022   **Program Development Support & Graduate Teaching Assistant (Part-time, 20 hrs/week),** Universidad de Nariño, Colombia.
Supported the design of the *Program Educational Project (PEP)* for the M.Sc. in Electronic Engineering.
Graduate Teaching Assistant for the course *Optimization* (M.Sc. in Electronic Engineering).
Feb 2022 – May 2022.

2020   **Software Developer (Full-time, 40 hrs/week),** Intelligence Software for the World (ISWO) SAS, Colombia.
Jan 2020 – Oct 2020.