Dr. Cosijopii García García.

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Education

Jan 2021 – Feb 2025

Instituto Nacional de Astrofísica, Óptica y Electrónica, San Andres Cholula, Puebla, México

Doctor of Science in Computer Science.

Thesis title: Automatic design of convolutional neural network architectures using Multiobjective Evolutionary Algorithms.

Aug 2018 – Oct 2020

Instituto Nacional de Astrofísica, Óptica y Electrónica, San Andres Cholula, Puebla, Mexico

Master of Science in Computer Science.

Thesis title: A Cellular Evolutionary Algorithm To Tackle Constrained Multiobjective Optimization Problems.

Oct 2012 - May 2018

■ Universidad del Istmo Campus Ixtepec, Ciudad Ixtepec, Oaxaca, Mexico. Bachelor's Degree in Informatics.

Thesis title: Gender classification using anthropometric measurements, texture analysis and ANFIS architecture.

Aug 2009 – Jul 2012

Centro de Bachillerato Tecnológico Industrial y de Servicios No. 91, Ciudad Ixtepec, Oaxaca, Mexico.

High school.

Publications

- Garcia-Garcia, C., Derbel, B., Morales-Reyes, A., & Escalante, H. J. (2025). Speeding up the multi-objective nas through incremental learning. In L. Martínez-Villaseñor & G. Ochoa-Ruiz (Eds.), *Advances in soft computing* (pp. 3–15). Springer Nature Switzerland.

 https://doi.org/10.1007/978-3-031-75543-9_1
- Garcia-Garcia, C., Morales-Reyes, A., & Escalante, H. J. (2024). Progressive self-supervised multi-objective nas for image classification. *International Conference on the Applications of Evolutionary Computation (Part of EvoStar), Aberystwyth, Wales, United Kingdom 3-5 April*, 180–195.

 https://doi.org/10.1007/978-3-031-56855-8_11
- Garcia-Garcia, C., Morales-Reyes, A., & Escalante, H. J. (2023a). Continuous cartesian genetic programming based representation for multi-objective neural architecture search. *Applied Soft Computing*, 147, 110788. https://doi.org/https://doi.org/10.1016/j.asoc.2023.110788
- Garcia-Garcia, C., Morales-Reyes, A., & Escalante, H. J. (2023b). Continuous Cartesian Genetic Programming based representation for Multi-Objective Neural Architecture Search for Image Classification [Poster Presentation]. Computer Vision and Pattern Recognition Conference: LatinX in AI (LXAI) Research Workshop 2023, Vancouver, Canada.

 Phttps://research.latinxinai.org/papers/cvpr/2023/pdf/Cosijopii_Garcia.pdf
- Garcia-Garcia, C., Escalante, H. J., & Morales-Reyes, A. (2022). CGP-NAS: Real-based solutions encoding for multi-objective evolutionary neural architecture search. Genetic and Evolutionary Computation Conference Companion (GECCO '22 Companion), July 9–13, 2022, Boston, MA, USA, 1.

 https://doi.org/10.1145/3520304

- Garcia-Garcia, C. (2022). Automatic design of convolutional neural network architectures using multiobjective evolutionary algorithms (tech. rep.). INAOE.
 - https://ccc.inaoep.mx/archivos/2021/CCC-22-006.pdf
- Garcia-Garcia, C., Martínez-Peñaloza, M.-G., & Morales-Reyes, A. (2020). cMOGA/D: a novel cellular GA based on decomposition to tackle constrained multiobjetive problems. *In Genetic and Evolutionary Computation Conference Companion* (GECCO '20 Companion), 9.

 ♦ https://doi.org/10.1145/3377929.3398137
- Meléndez Acosta, N. J., Solano Monje, R., **Garcia-Garcia**, C., & Riós Figueroa, H. V. (2019). Ca-PSO: Coulomb attracting Particle Swarms. *Programación Matemática y Software*, *ISSN* :2007-3283, 3, 11.

 https://doi.org/doi.org/10.30973/progmat/2019.11.3/1
- 9 Solano Monje, R., Meléndez Acosta, N. J., **Garcia-Garcia**, **C.**, & Riós Figueroa, H. V. (2018). C-PSO: Particle Swarm Optimization by Embedding Coulomb's Law. *COMIA*, 12.

 6 https://doi.org/10.13053/rcs-147-8-24
- Garcia-Garcia, C., & Meléndez Acosta, N. J. (2017). Clasificación de género utilizando medidas antropométricas, análisis de texturas y la arquitectura ANFIS. *Advances in Social Informatics and its Applications*, 136, 33–46. https://doi.org/10.13053/rcs-136-1-3

Experience

October 2024 – Now Associate Professor Universidad del Istmo Campus Ixtepec, Ciudad Ixtepec, Oaxaca, Mexico.

Responsibilities include conducting research activities and delivering lectures.

Nov 2023 – Apr 2024 Research Fellowship - Internship. The French national research institute for digital science and technology (INRIA), Lille, hauts-de-france, France.

Jan 2023 – May 2023 Computational inteligence course assistant. Instituto Nacional de Astrofísica, Óptica y Electrónica, San Andres Cholula, Puebla, México.

Jul 2016 – Dec 2016 Software development intern. EFACEC sistemas de España, S.L. Juchitán de Zaragoza, Oaxaca, México.

Tutorial Instructor

7 Nov 2024 Quinta Semana Temática de Ingeniería en Sistemas Computacionales (Inteligencia Artificial).

Tutorial: Introducción al Cómputo Evolutivo en Python. Veracruz, México.

Tutorial: Evolutionary Computation in Python: Open Source Frameworks. Puebla, Mexico.

24 Aug 2022 IEEE Mexican international conference in computer science 2022.

Tutorial: An introduction to genetic algorithms and their implementation with open source frameworks.

Xalapa, Mexico.

Volunteer

Jan 2021 – Jan 2022

Organizing Committee Member. Web Developer Meeting On Artificial Intelligence And Its Applications (RIIAA in spanish), Mexico City, Mexico City.

Honors and Scholarships

Nov 2023 - April 2024

MOBLILEX scholarship

Research intership Centre Inria de l'Université de Lille, Lille, hauts-de-france, France.

May 2022 - Present

Invited reviewer

Swarm and Evolutionary Computation Journal

Dec 2021 - Jan 2024

Student Council Representative

Computer Science Departament: Scientific diffusion events, induction of new students and meeting events. Instituto Nacional de Astrofísica, Óptica y Electrónica, Noviembre, San Andres Cholula, Puebla, México.

May 2021 - Dec 2024

CONACYT scholarship

Doctor in science degree. Instituto Nacional de Astrofísica, Óptica y Electrónica, Noviembre, San Andres Cholula, Puebla, México.

Aug 2018 - Aug 2020

CONACYT scholarship

Master in science Degree. Instituto Nacional de Astrofísica, Óptica y Electrónica, Noviembre, San Andres Cholula, Puebla, México.

Skills

Languages

Reading, writing and oral expression in English, Native Spanish.

Software Development

Python, Java, C, Matlab, JavaScript, SQL, Docker, Git. LaTeX, MATLAB.

Seminars and congresses

Seminario Nacional en Deep Learning, AutoML y sus aplicaciones, CIMAT, Ciudad Apodaca, Nuevo León, México, November. (Speaker).

- **23rd Mexican International Conference on Artificial Intelligence**, INAOE, Tonantzintla, Puebla, México October. (Full Paper presenter).
- **27th International Conference on the Applications of Evolutionary Computation Part of Evostar Conference**, Aberystwyth University, Aberystwyth, Wales, United Kingdom. April. (Full Paper presenter).
- 5a. Edición de Escuela de Otoño en Sistemas Distribuidos y Redes de Próxima Generación, October 2023, INAOE, Tonantzintla, Puebla.

Seminars and congresses (continued)

- LatinX in AI (LXAI) Research Workshop 2023 / The IEEE/CVF Conference on Computer Vision and Pattern Recognition 2023, Vancouver Convention Center, Vancouver, Canada. June. (Extend abstract presenter).
- MUFRAMEX 2nd Thematic School on Deep Generative Models, Centro de Investigación en Matemáticas (CIMAT), Guanajuato, Mexico. November.
 - GECCO 2022: Genetic and Evolutionary Computation Conference, Hybrid event, Boston Massachusetts, USA. July (Poster presenter).
- 2021 **GECCO 2021: Genetic and Evolutionary Computation Conference**, Electronic event July
- Thirty-fourth Conference on Neural Information Processing Systems (NeurIPS), Electronic event. December
 - 1er. Congreso Internacional en Informática y Ciencias de la Computación, Electronic event. December
 - 8° Seminario nacional de aprendizaje e inteligencia computacional (SNAIC), Electronic event. October
 - 3rd Edition of the International Meeting on Artificial Intelligence and its Applications (RIIAA), Electronic event. August
 - GECCO 2020: Genetic and Evolutionary Computation Conference, July, Cancún, Quintana Roo, (Full Paper workshop presenter).