Jose L. Aguilar

Full Prof. at the Universidad de Los Andes, Mérida, Venezuela; Research-Professor at EAFIT University, Medellín, Colombia; and Senior-Researcher at IMDEA (Madrid Institute for Advanced Studies) in Spain.
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Interests: parallel and distributed systems (performance evaluation, task/data/transaction assignment and scheduling, fault tolerance, middleware design, etc.), computational intelligence (artificial neural networks, evolutionary computation, fuzzy logic, swarm intelligence, multi-agent systems, etc.) applied to combinatorial optimization, pattern recognition, control systems (identification and supervision systems, distributed and intelligent control, industrial automation, etc.), data and semantic mining, among others.

EDUCATION
- B. S. degree in System Engineering in 1987 from the Universidad de los Andes-Merida-Venezuela,
- M. Sc. degree in Computer Sciences in 1991 from the Université Paul Sabatier-Toulouse-France,
- Ph.D degree in Computer Sciences in 1995 from the Université Rene Descartes-Paris-France.
- Postdoctoral Research Fellow in the Dept of Computer Sciences at the University of Houston (1999-2000).
- Postdoctoral Research Fellow in the Department of Automática at the Universidad de Alcalá (2020-2022), with a GOT ENERGY TALENT fellowship of the H2020-MSCA-COFUND programme of the EU.

HONORS/AWARDS [partial list]:
- President, Centro Latino-Americano de Estudios en Informática (CLEI). Periods 2021-2024.
- LAAS Research Fellows, Laboratory for Analysis and Architecture of Systems, France, 2021- currently
- Member as Individual of Number, Academy of Merida. July 2016-currently.
- Executive Secretary, Centro Latino-Americano de Estudios en Informática (CLEI). Periods 2016-2020.
- Regional Technology Award 2015 Mention: Technological Research, FUNDACITE Merida.
- Scholarship. Computer Intelligence Society (CIS)-IEEE to participate in the IEEE World Congress on Computational Intelligence (IEEE WCCI) in Beijing, China, July 2014
- Regional Award Group Research- Edition 2011: At CEMISID.
- Member of the International Technical Committee of the IEEE Neural Networks (CIS IEEE Technical Committee on Neural Networks). January 2010- 2018 (http://www.ieee-cis.org/technical/nntc/)
- Estadal Corresponding Member of the Academy of Merida in the area of Physics, Mathematics, Chemistry, Health and Technology. July 2010-July 2016.
- Regional Technology Award. Mention Technological Development - 2010 Edition
- Tutor of the Master's thesis, 3rd place XII Latin American Master's Thesis Contest -CLEI, UNESCO, Cali, Colombia, Oct. 2005, entitled: "Protocol cache coherency for Distributed Systems" Author: R. Sumoza.
- Honorable Mention work entitled "Definition of an Energy Function for the Random Neural Optimization Problems to solve." Award for Best Scientific and Technological Work. Mention Mathematics. Regional Awards for Science and Technology, 1999 Edition, FUNDACITE -Merida, July 2000.
- Special award for the works: a) "Evaluation of the Level of Digital Transformation in MSMEs using Fuzzy Cognitive Maps …", XLIX Latin American Computer Conference, 2023, b) "A Novel Methodology to obtain Optimal PI Controller Gains using Multi-gene Genetic Programming for …", 3th IEEE Ecuador Technical Chapters Meeting, 2018. b) "A Recognition Algorithm Using the Random Neural Network", 3rd Intl Congress in Computer Science, Mexican Academy for Research in Computer Science, 1996.

MOBILITY [partial list]:
- Prometeo Researcher at the Technical University of Loja (UTPL), Escuela Politécnica Nacional (EPN) and Yachay-EP, Ecuador (2014-2017)
- Sabbatical year at the Université Paul Sabatier and Laboratoire d'Architecture et d'Analyse des Systèmes (2010-2011)
- Visiting research in different universities : Université Pierre et Marie Curie-Paris-France (1997-1999): scientifique publications/projects; Laboratoire d'Architecture et d'Analyse des Systèmes, Toulouse-France (2000-2002, 2006-2009, 2012-2014, 2018-2019, 2021-2022): scientifique publications and exchange of researchers/students, PCP projects; Carlos III Madrid-Spain (2009, 2012): scientifique publications and

exchange of researchers; Institut National de Recherche en Informatique et en Automatique Nice-France (2003, 2005): scientifique publications and exchange of researchers/students; Universidad de La Plata-Argentina (2011): exchange of researchers; Universidad de Chile-Chile (2016, 2107): CYTED project, exchange of researchers; Universidad de Alcala-Spain (2017-2019): H2020 project, scientifique publications and exchange of researchers/students; Université de Pau et des Pays de l'Adour-France (2017-2018): scientifique publications and exchange of researchers/students; among other institutions.

RESEARCH THESIS SUPERVISION (43 MS and 28 PhD) [partial list]:
Aguilar has supervised more than 70 M.S. and Doctoral students. He is currently supervising 8 Ph.D. and 5 MS theses. Some of the most recent graduating PhD students (The complete list in https://n9.cl/juws8):
- PhD in Engineering of the EAFIT University, Colombia, MSc.. Rodrigo Garcia: "Precision Agriculture for Grazing and Animal Health Management: a case study in Colombia", August 2023.
- PhD in Computer Science, Escuela Politécnica Nacional, Ecuador, MSc. Mayra Carrión: "iPlus una Metodología Centrada en el Usuario para el Diseño de Juegos Serio", February 2023.
- PhD in Applied Sciences of the Universidad de Los Andes, Venezuela, MSc. Francisco Diaz: "Concepción de un Motor de Juegos Serios Emergentes para Aulas Inteligentes", December 2022
- PhD *in Electrical Engineering,* Escuela Politécnica Nacional, Ecuador, MSc. Luis Morales: "Formalization of Fuzzy LAMDA Controllers", September 2021.
- PhD of the *École doctorale des sciences exactes et leurs applications* de l'Université de Pau et des Pays de l'Adour (France), MSc. Manuel Sanchez: "Autonomic Process Management for Industry 4.0", May 2020.

FUNDED GRANTS
He has been the coordinator or inviting research in more than 30 research or industrial projects supported by the Venezuelan Scientific Office, the French Scientific Office, the Spanish Scientific Office, the Scientific Office of the Universidad de Los Andes and EAFIT, INTEVEP (Venezuelan Institute of research in oil), the European Economic Community, SENESCYT-Ecuador, among other organizations. In these projects, he has written more than 50 technical reports.

PUBLICATIONS
He has more than 700 papers in journals, books and conference proceedings. Also, he has published/edited more than 10 books. He has more than 190 articles in Q1, Q2 and Q3 journals, and his H-index is 47 in Google Scholar and 30 in Scopus. He has over 70 papers in the conference proceedings indexed in CORE.

SUMMARY OF PROFESSIONAL ACCOMPLISHMENTS	
Number of refereed publications in international books, journals, conferences, symposia, workshops	713
Number of refereed international journal publications	346
Number of refereed international conference/symposia/workshop papers	285
Number of refereed book chapters	82
Number of books authored	9
Number of books edited	10
Number of refereed international journals I currently serve as Editor-in-Chief	2
Number of refereed international journals I currently serve as editorial board member/Associate Editor	12
Number of international conferences/workshops/symposia served as General Chair/Program Chair	10
Number of refereed proceedings of international conferences/workshops/symposia co-edited	7
Number of Special issues of international refereed journals served as a lead editor or Co-Guest editor	5
Number of refereed international conferences/workshops/symposia I served as a Technical Program Committee (TPC) member	202

Refereed Journal Publications [Partial list, the complete list in: https://shorturl.at/nxR24**]**
- R. García, J. Aguilar "A meta-learning approach in a cattle weight identification system for anomaly detection". *Computers and Electronics in Agriculture*, Vol. 217, 2024.
- J. Rufino, J. Ramirez, J. Aguilar, C. Baquero, J. Champati, D. Frey, R. Lillo, A. Fernandez "Performance and Explainability of Feature Selection-Boosted Tree-based Classifiers for COVID-19 Detection" *Heliyon Journal*, vol 10, no. 1, 2024.

- R. García, J. Aguilar, A. Pinto, "An Autonomous System for the Self-supervision of Animal Fattening in the context of Precision Livestock Farming", *Future Generation Computer Systems*, Vol. 150, pp. 220-231, 2024
- M. García, J. Aguilar, "A Bio-inspired Emergent Control Approach for Distributed Processes", *Applied Soft Computing*, 2023.
- W, Hoyos, J. Aguilar, M. Toro, "Federated learning approaches for fuzzy cognitive maps to support clinical decision-making in dengue", *Engineering Applications of Artificial Intelligence*, vol. 123, 2023.
- C. Cuartas, J. Aguilar, "Hybrid Algorithm based on Reinforcement Learning for smart inventory management", *Journal of Intelligent Manufacturing*, vol. 34, pp. 123–149, 2023.
- C. Quintero-Gull, J. Aguilar, "LAMDA-HSCC: a semi-supervised Learning Algorithm based on the Multivariate Data Analysis", Vol. 202, *Expert Systems with Applications*, 2022.
- C. Ouedraogo, C. Chassot, S. Medjiah, K. Drira, J. Aguilar, "Adaptive Performance Analysis in IoT Platforms", *IEEE Transactions on Network and Service Management*, 2022.
- J. Aguilar, A. Garces-Jimenez, D. R-Moreno, R. Garcia, "A Systematic Literature Review on the use of Artificial Intelligence in Energy Self-Management in Smart Buildings" *Renewable and Sustainable Energy Reviews*, Vol. 151, November, 2021.
- Y. Quintero, D. Ardilas, E. Camargo, F. Rivas, J. Aguilar, "Machine Learning Models for the Prediction of the SEIRD variables for the COVID-19 pandemic based on a Deep Dependence Analysis of Variables", *Computers in Biology and Medicine*, 2021.
- M. Sanchez, E. Exposito, J. Aguilar, "Implementing self-* autonomic properties in self-coordinated manufacturing processes for the Industry 4.0 context", *Computers in Industry*, Vol. 121, 2020.
- F. Pacheco, E. Exposito, M. Gineste, C. Baudoin, J. Aguilar, "Towards the deployment of Machine Learning solutions in traffic network classification: A systematic survey", *IEEE Communications Surveys and Tutorials*, Vol. 21, No. 2, pp. 1988-2014, 2019
- J. Aguilar, J. Cordero, O. Buendia, "Specification of the Autonomic Cycles of Learning Analytic Tasks for a Smart Classroom", *Journal of Educational Computing Research,* vol 56 no. 6, pp. 866-891, 2018.
- J. Terán, J. Aguilar, M. Cerrada, "Integration in industrial automation based on multi-agent systems using cultural algorithms for optimizing the coordination mechanisms", *Computers in Industry*, 91, 11-23, 2017.
- D. Zubillaga, G. Cruz, J. Aguilar, L. Aguilar, J. Zapotecatl, N. Fernandez, D. Rosenblueth, C. Gershenson, "Measuring the Complexity of Self-organizing Traffic Lights", *Entropy,* Vol. 16, pp. 2384-2407, 2014.
- N. Perozo, J. Aguilar, O. Terán, H. Molina, "A Verification Method for MASOES", *IEEE Transactions on Systems, Man, and Cybernetics: Part B,* vol. 43, No. 1, pp. 64-76, 2013.
- C. Bravo. J. Aguilar, J Aguilar-Martin, F. Rivas, A. Rios, L. Saputelli. "An implementation of a Distributed Artificial Intelligence Architecture to the Integrated Production Management", *Journal of Natural Gas Science & Engineering*, Vol. 3, No. 6, pp. 735-747, 2011.
- M. Cerrada, J, Cardillo, J. Aguilar, "Agents-Based design for fault management systems in industrial processes", *Computer in Industry*, Vol. 58, pp. 313-328, 2007.
- M. Cerrada, J. Aguilar, A. Titli, "Dynamical Membership Functions: an Approach for Adaptive Fuzzy Modelling", *Fuzzy Sets and Systems*, Vol. 152, No. 3, pp. 513-533, 2005.
- J. Aguilar, "A Color Pattern Recognition Problem Based on the Multiple Classes Random Neural Network Model", *Neurocomputing (special issue: Hybrid Neurocomputing)*, Vol. 61, pp. 71-83, 2004.
- J. Aguilar, "Learning Algorithm and Retrieval Process for the Multiple Classes Random Neural Network Model", *Neural Processing Letters*, Vol. 13, No. 1, pp. 81-91, 2001.
- J. Aguilar, "Definition of an Energy Function for the Random Neural to solve Optimization Problems", *Neural Networks*, Vol. 11, No. 4, pp. 731-738, 1998.
- J. Aguilar, E. Gelenbe, "Task Assignment and Transaction Clustering Heuristics for Distributed Systems". *Information Sciences: Informatics and Computer Science*, Vol. 97, 199-219, 1997.

Edited/Authored Books [Partial list]
- J. Aguilar, J. Amaya, A. Gil (Eds.) *Introducción a la Computación Afectiva*, Fondo Editorial UNET, 2020.

Recent chapters [Partial list, the complete list in: https://shorturl.at/yEO03]
- F. Jimenez, M. Tabares-Betancur, J. Aguilar, "Synthetic Hyperspectral Data for Avocado Maturity Classification", *17th Colombian Congress-CCC 2023* (M. Tabares, P. Vallejo, B. Suarez, M. Suarez, O. Ruiz, J. Aguilar, Eds.), Advances in Computing book series, Springer, Vol. 1924, pp. 259–270, 2023