Javier Del Ser Lorente

Principal Investigator (PI) at TECNALIA · Distinguished Researcher at EHU

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Researcher in Artificial Intelligence, Machine Learning and Deep Learning, with a focus on Trustworthy and Responsible AI (explainability, fairness, robustness, AI safety, human-centric AI) and Evolutionary Computation / Swarm Intelligence. Clarivate Highly Cited Researcher (2025, 2026), listed since 2021 in the Stanford/Elsevier top-2% ranking in AI, member of the Scientific Panel advising the European Commission on the implementation of the EU AI Act (2026), author of 220+ JCR journal articles (85% Q1, 35% D1) and 230+ conference papers, 20 supervised PhD theses (19 defended, one awaiting defence), 9 patents, and 65+ research projects and technology transfer contracts. Citations (Google Scholar, Nov 2026): 46,644; h-index 75; i10-index 272.

PROFESSIONAL EXPERIENCE

2024–present **Distinguished Researcher, Department of Mathematics, Faculty of Science and Technology**
University of the Basque Country (EHU), Leioa, Spain
- Member of the MATHMODE research group (excellence group, category A, Basque Government).

2024–present **Visiting Professor**
University of Natural Resources and Life Sciences (BOKU), Vienna, Austria

2024–present **Distinguished Visiting Professor**
University of Granada, Granada, Spain
- Director of the TECNALIA Chair in Artificial Intelligence at the University of Granada.

2017–present **External Lecturer, Master in Advanced Data Analytics / Big Data Analytics**
University of Málaga, Málaga, Spain
- Best overall rated lecturer by the students in all six editions of the master programme.

2015–2024 **Adjunct Professor (Profesor Asociado), Department of Communications Engineering, Bilbao School of Engineering**
University of the Basque Country (EHU), Bilbao, Spain
- Courses in the BSc in Telecommunication Technology Engineering (distributed programming, network deployment and management, advanced programming, multimedia services).

2011–present **Principal Investigator (PI), DIGITAL Unit – Core AI**
TECNALIA Research & Innovation, Derio, Spain
- Leads the strategic research agenda in Applied Artificial Intelligence; Scientific Director of the Joint Research Lab in Applied AI (JRL-A2I) with EHU and BCAM.
- Former Technology Director of the OPTIMA (Optimization, Modeling and Analytics) business area, leading a team of 22 researchers (approx. 2.2M€ yearly contracting).
- Senior Researcher and Project Manager (2011–2012).

2008–2010 **Senior Research Scientist, TELECOM Unit**
Fundación Robotiker (now part of TECNALIA), Zamudio, Spain
- Torres Quevedo post-doctoral contract (Spanish Ministry of Science and Innovation, 2009).

2008 **Professor and Researcher, Higher Polytechnic School**
Mondragon University, Mondragón, Spain

2006–2008 **Post-doctoral Researcher, Department of Electronics and Communications**
CEIT – Centro de Estudios e Investigaciones Técnicas de Gipuzkoa, San Sebastián, Spain
- Torres Quevedo post-doctoral contract (2008).

2003–2007 **PhD Researcher (Iñaki Goenaga Foundation fellowship) and Teaching Assistant / Associate Lecturer**
CEIT and University of Navarra (TECNUN), San Sebastián, Spain
- Fellowship awarded to the top 32 graduates of 2003 in the Basque Country.
- Taught Data Transmission and Information Theory & Coding (2003–2007).

External Scientific Member (by invitation), formerly Visiting Researcher in the Data Science group
Basque Center for Applied Mathematics (BCAM), Bilbao, Spain

EDUCATION

2013 **PhD (European Doctorate) in Information and Communication Technologies**
Universidad de Alcalá

- Thesis: "Study and Development of Advanced Meta-heuristic Approaches for Resource Allocation in Intelligent Communication Systems".
- Advisors: Prof. Sancho Salcedo-Sanz and Prof. José Antonio Portilla-Figueras.
- Sobresaliente Cum Laude and Extraordinary PhD Award (Premio Extraordinario de Doctorado).

2006 **PhD in Control Engineering and Industrial Electronics**
University of Navarra (TECNUN)

- Thesis: "Iterative Joint Source-Channel Coding Techniques for Single and Multiterminal Sources in Communication Networks" (defended 23/10/2006).
- Advisor: Prof. Pedro M. Crespo Bofill.
- Sobresaliente Cum Laude (unanimous). Diploma of Advanced Studies (DEA) in 2005 with a grade of 9.5/10.

2003 **MSc (Ingeniero Superior de Telecomunicación) in Telecommunication Engineering**
University of the Basque Country (EHU)

- Final project: "Design and Implementation of a System for the Measurement of Flicker Noise in Power Transmission Networks" (9/10).

HONORS AND AWARDS

2026 **Highly Cited Researcher 2026**, Clarivate. Included again in the list of the most influential researchers worldwide, for the second consecutive year.

2025 **Highly Cited Researcher 2025 (Computer Science)**, Clarivate. Top 0.1% most influential researchers worldwide; one of the two researchers in Spain in the Computer Science category.

2025 **Annual Best Paper Award, Information Fusion**, Elsevier / Information Fusion. For "Explainable Artificial Intelligence (XAI) 2.0 – A manifesto of open challenges and interdisciplinary research directions".

2024 **Best Paper Award, IJCNN 2024**, International Joint Conference on Neural Networks (IJCNN). Among more than 1,000 presented papers, for "Balancing Performance, Efficiency and Robustness in Open-World Machine Learning via Evolutionary Multi-objective Model Compression".

2023 **BRTA Prize to the Best Research Trajectory**, Basque Research and Technology Alliance (BRTA). Awarded among more than 3,400 researchers.

2023 **Outstanding Research Paper (High Commendation) Award**, IEEE Intelligent Transportation Systems Magazine. For "Road Traffic Forecasting – Recent Advances and New Challenges".

2023 **First Prize, AI4ES Datathon (Cervera Network of Excellence)**, CDTI. Challenge on the incidence and evolution of viral diseases (Department of Health, Generalitat de Catalunya).

2023 **Certificate of Appreciation**, IEEE Intelligent Transportation Systems Society. For contributions to the IEEE Intelligent Transportation Systems Society.

2021 **Top 2% most influential researchers in Artificial Intelligence**, Stanford University / Elsevier. Listed every year since 2021, in both the single-year and career-long editions.

2020 **Best Paper Award Finalist, IEEE CEC 2020**, IEEE Congress on Evolutionary Computation.

2015 **Extraordinary PhD Award (Premio Extraordinario de Doctorado)**, Universidad de Alcalá. Ranked first of the doctoral cohort.

2012 **IEEE Senior Member**, Institute of Electrical and Electronics Engineers (IEEE).

2011 **"Talento de Bizkaia" Prize**, Bizkaia:Xede / Bizkaia Talent Foundation.

2009	**Torres Quevedo post-doctoral grants**, Spanish Ministry of Science and Innovation. Awarded twice (2008 and 2009).
2005	**Travel grant, Summer Research Institute**, École Polytechnique Fédérale de Lausanne (EPFL).
2003	**Iñaki Goenaga PhD Fellowship**, Iñaki Goenaga Foundation of Technology Centres. Awarded to the top 32 graduates of 2003 in the Basque Country.

ACCREDITATIONS

2024	Established (independent) Researcher, R3.
2020	Full Professor (Catedrático de Universidad) and Associate Professor (Profesor Titular), ANECA.
2015	Profesor Agregado and Profesor Adjunto, UNIBASQ (Basque Agency for Quality of the University System).
2010	Profesor Asociado (adjunct professor), UNIQUAL.

RESEARCH STAYS

2017–2018	University of Málaga, Department of Languages and Computer Science (10 weeks), multi-objective optimization with Prof. A. J. Nebro and Prof. J. M. García-Nieto.
2015	Yachay EP, Quito, Ecuador (4 months), leading an international tender on Big Data infrastructure and teaching AI to local researchers.
2010–2012	VTT Technical Research Centre of Finland, Oulu (approx. 5 months in total), soft computing for cognitive radio with Dr. Marja Matinmikko.
2007	University of Delaware, USA (5 months, post-doctoral), joint source-channel coding with Prof. Javier Garcia-Frias.

EDITORIAL BOARDS

Area Editor	Information Fusion (Elsevier, Q1/D1).
Associate Editor	Swarm and Evolutionary Computation (Elsevier); Cognitive Computation (Springer); IEEE Transactions on Intelligent Transportation Systems; IEEE Transactions on Emerging Topics in Artificial Intelligence; Memetic Computing. Former AE of the International Journal of Bio-Inspired Computation, Wireless Communications and Mobile Computing, and Algorithms.
Guest Editor	More than 20 special issues in D1/Q1 journals, including Information Fusion, Future Generation Computer Systems, Applied Soft Computing, Swarm and Evolutionary Computation, IEEE T-ITS, IEEE ITS Magazine and Journal of Computational Science.
Reviewer	More than 40 journals.

PROFESSIONAL SERVICE

- Member of the Scientific Panel of independent experts on AI advising the European Commission on the implementation of the EU AI Act (2026).
- Member of the expert team that drafted the Spanish R&D&I Strategy in Artificial Intelligence (Government of Spain, 2019).
- General Chair: IEEE ITSC 2023, IDC 2018, ICHSA 2017 and MOBILIGHT 2011 (all in Bilbao). Technical Program Co-Chair: IEEE ITSC 2018, CAEPIA 2018.
- Member of the organizing committees of more than 100 conferences and workshops; organizer of more than 20 special sessions and workshops at IEEE CEC, GECCO, IEEE SSCI, IEEE ITSC, ICCS and PAAMS.
- Expert evaluator for 15 international R&D funding agencies (e.g. Spanish State Research Agency, Independent Research Fund Denmark, National Science Centre Poland, Italian MIUR, Argentina's ANPCyT, CHIST-ERA, A*STAR Singapore, Qatar University).
- Member of more than 30 PhD committees in Spain and abroad (Sorbonne Université ISIR/ENSTA Paris, NTU Singapore, University of Trento, among others).

- Individual supporter and TECNALIA point of contact for ELLIS, CLAIRE and BDVA; former elected member of the Steering Board of the Net!Works European Technology Platform (2012).

RESEARCH OUTPUT (SUMMARY)

- 223 JCR journal articles (85% Q1, 35% D1), 238 conference contributions, 8+ book chapters and 5 edited books.
- 45 national and 23 international research projects (leading 13 and 4), 22 contracts with companies (leading 3).
- Co-inventor of 9+ patents and 3 IP assets transferred to industry.
- 20 PhD theses supervised (19 defended, one awaiting defence; 2 Extraordinary PhD Awards) and more than 45 BSc/MSc theses.

SELECTED PUBLICATIONS

1. X. Xing, F. Shi, J. Huang, Y. Wu, Y. Nan, S. Zhang, Y. Fang, et al.. “On the Caveats of AI Autophagy”. *Nature Machine Intelligence*, 2025.
2. **J. Del Ser**, A. Barredo-Arrieta, N. Díaz-Rodríguez, F. Herrera, A. Saranti, A. Holzinger. “On Generating Trustworthy Counterfactual Explanations”. *Information Sciences*, 2024.
3. L. Longo, M. Brcic, F. Cabitza, J. Choi, R. Confalonieri, **J. Del Ser**, R. Guidotti, et al.. “Explainable Artificial Intelligence (XAI) 2.0: A Manifesto of Open Challenges and Interdisciplinary Research Directions”. *Information Fusion*, 2024. Best Paper Award
4. I. Triguero, D. Molina, J. Poyatos, **J. Del Ser**, F. Herrera. “General Purpose Artificial Intelligence Systems (GPAIS): Properties, Definition, Taxonomy, Societal Implications and Responsible Governance”. *Information Fusion*, 2024.
5. **J. Del Ser**, A. Martinez-Seras, M. N. Bilbao, J. L. Lobo, I. Laña, F. Herrera. “Balancing Performance, Efficiency and Robustness in Open-World Machine Learning via Evolutionary Multi-Objective Model Compression”. *2024 International Joint Conference on Neural Networks (IJCNN)*, 2024. Best Paper Award
6. S. Ali, T. Abuhmed, S. El-Sappagh, K. Muhammad, J. M. Alonso-Moral, R. Confalonieri, R. Guidotti, et al.. “Explainable Artificial Intelligence (XAI): What We Know and What Is Left to Attain Trustworthy Artificial Intelligence”. *Information Fusion*, 2023.
7. N. Díaz-Rodríguez, **J. Del Ser**, M. Coeckelbergh, M. L. De Prado, E. Herrera-Viedma, F. Herrera. “Connecting the Dots in Trustworthy Artificial Intelligence: From AI Principles, Ethics, and Key Requirements to Responsible AI Systems and Regulation”. *Information Fusion*, 2023.
8. E. Osaba, E. Villar-Rodriguez, **J. Del Ser**, A. J. Nebro, D. Molina, A. LaTorre, P. N. Suganthan, et al.. “A Tutorial on the Design, Experimentation and Application of Metaheuristic Algorithms to Real-World Optimization Problems”. *Swarm and Evolutionary Computation*, 2021.
9. A. B. Arrieta, N. Díaz-Rodríguez, **J. Del Ser**, A. Bennetot, S. Tabik, A. Barbado, S. García, et al.. “Explainable Artificial Intelligence (XAI): Concepts, Taxonomies, Opportunities and Challenges Toward Responsible AI”. *Information Fusion*, 2020.
10. **J. Del Ser**, E. Osaba, D. Molina, X. S. Yang, S. Salcedo-Sanz, D. Camacho, S. Das, et al.. “Bio-Inspired Computation: Where We Stand and What's Next”. *Swarm and Evolutionary Computation*, 2019.

Full list: https://javierdelser.github.io/publications/ and Google Scholar.

LANGUAGES

Spanish (Native) · Basque (Fluent) · English (Fluent (C1)) · German (Basic)