

CURRICULUM VITAE ABREVIADO (CVA)

Part A. PERSONAL INFORMATION

First name	Isaac	Family name	Triguero Velazquez
Gender (*)	Male	Birth date (dd/mm/yyyy)	27/08/1986
ID number	75143219B		
e-mail	triguero@decsai.ugr.es	Web	www.ugr.es/~isaaktriguero
Open Researcher and Contributor ID (ORCID) (*)	0000-0002-0150-0651		

A.1. Current position

Job Title	Associate Profesor	Initial date	30/7/2025
Institution	University of Granada		
Department/Center	Computer Science and Artificial Intelligence	School of Computing	
Country	Spain	Phone Number	+34 627356060
Keywords	General-Purpose Artificial Intelligence; Large-Scale Data Analytics; Few-Shot Learning; Data Preprocessing;		

A.2. Previous positions

Period	Position/Institution/Country/Interruption cause
May 2022 – June 2025	Distinguished Senior Researcher at University of Granada, Spain.
June 2016 – April 2022	Associate Professor at the University of Nottingham, United Kingdom.
October 2014 – May 2016	Research Fellow at Ghent University, Belgium. Cause for interruption was to take the position at Nottingham

A.3. Education

Degree/Master/PhD	University / Country	Year
Postgraduate Certificate in Higher Education (30 credits)	University of Nottingham, United Kingdom	2018
PhD in Computer Science	University of Granada, Spain	2014
Msc Degree in Computer Science	University of Granada, Spain	2009

Part B. CV SUMMARY

Career history

Dr Isaac Triguero received his PhD degree in Computer Science at the University of Granada (UGR) in 2014. His PhD investigated the design of evolutionary algorithms for data pre-processing. In 2014, he joined Ghent University as a postdoctoral fellow. During his postdoctoral stage, Dr Triguero focused on Big Data Learning techniques for complex learning scenarios. In June 2016, he was appointed as an Assistant Professor of Data Science in the School of Computer Science of the University of Nottingham (UoN). Due his excellent research and teaching track record, he was promoted to Associate Professor in 2020. In 2022, he was awarded a Maria Zambrano Senior Research Fellowship at the University of Granada, which has helped him settle in Granada. He is currently accredited by the Spanish Research Agency (ANECA) as a Professor of Computer Science, and waiting for the process to become Professor completed. Since early May 2026, he is the Director of the Andalusian Institute for Data Science and Computational Intelligence.

Scientific contributions

His work focuses on the development of novel large-scale data analytics and optimisation methodologies. Some of the most prominent works include state-of-the-art techniques in Big Data pre-processing, general-purpose artificial intelligence, and real-world applications in the fields of energy and health. He's communicated his research in top journals and conferences



His current H-index=38 and more than 6900 citations (Google Scholar) illustrate the relevance of his work. He has published 60 journal papers with the vast majority in Q1 in Computer Science and 40 conference papers. He belongs to the list of the Top 2% researchers designed by Stanford in 2024.

In terms of funding, he acquired significant funding as PI, totalling over half a million pounds during his stage at UoN and he is currently co-leading three projects on General Purpose Artificial Intelligence: a €1.6M University-Industry Research Grant funded by the European Union-Next Generation EU, a €120K Knowledge Generation Project, funded by the Ministry of Science, Innovation and Universities of Spain, and starting in June 2026, a €270K EU Horizon on emerging capabilities of GPAIS. These works allowed him to become proficient in attracting funding and managing big interdisciplinary projects.

In terms of international collaboration, the most part of his research career has taken place abroad, allowing him to work with many different Universities such as Ghent University, Imperial College, KU Leuven, Federal University of Sao Paulo, among others.

Contributions to society

In terms of collaboration with industry and technological advances, he led a Knowledge Transfer Partnership (KTP) project with the energy provider E.ON (£219K), which investigated sensor data to characterise how customers use energy. He led a 1-year project with Unilever (£118K) which was later continued as a KTP (£191K) that he is currently leading as a PI (externally as he is on extended leave at UoN). This project is unlocking business value from big data by building predictive models to guide faster decision-making. At UGR, he has acted as Co-PI in knowledge transfer projects with FullStep Networks S.A (99K€), Arcelor Mittal (95K€), DEBOS (122K€), and the DONES-AXIA project with the particle accelerator IFMIF-DONES (220K€). He is also the Co-PI of the Andalusian Digital Innovation Hub in AI and Robotics, granted by the EU, aimed to boost AI capabilities in SMEs in the region of Andalusia.

The impact of his work goes beyond industry-related problems. We may highlight his current collaboration in data science for health with Imperial College, which has led to a publication in [The Lancet](#) (IF>30.8), contributing to the management of Idiopathic Pulmonary Fibrosis. As for dissemination of his research/teaching to a wider public, Isaac has contributed multiple times to the YouTube channel [Computerphile](#) with more than 2.3M subscribers.

Training, mentorship, and peer-esteem

At UoN, he established a sub-group of data scientists that has been composed by 8 PhD students and 4 postdoctoral researchers over time. He led to completion 8 of these PhD students (6 UoN, 2 UGR) who are now working either in high positions in industry or academia. His mentoring to previous postdocs has also resulted in outstanding research careers. At present, he is supervising 7 PhD Students.

With respect to other peer-esteem activities, we may highlight some relevant activities. He was Program Co-Chair of three conferences on Big Data, including the 2018 IEEE International Congress on Big Data. He is a Section Editor-in-Chief of the Machine Learning and Knowledge Extraction journal, and an associate editor of the Neurocomputing, and the IEEE Access journals. He chaired the 2020 Technical Challenge of the Computational Intelligence Society ([link](#)). He has been an **External Examiner** at Anglia Ruskin University (United Kingdom) since September 2021 to date. He has co-edited several special issues in high impact journals. He has acted as an external evaluator for ERC, Ikerbasque, and the Swiss government.

Other contributions

We would like to briefly emphasise his teaching related contributions, with the publication of three text books. "[Conceptual Programming with Python](#)" (2019), "[Large Scale Data Analytics with Python and Spark](#)" (Cambridge, 2023), "[Análisis de datos a gran escala con Python y Spark](#)" (Anaya, 2025)

Part C. RELEVANT MERITS

C.1. Publications

For a full list of publications, we refer to [Google Scholar](#).

1. D. Molina, J. Poyatos, J. Del Ser, S. García, H. Ishibuchi, I. Triguero, B. Xue, X. Yao, and F. Herrera. (2025). "Evolutionary Computation for the Design and Enrichment of General-Purpose Artificial Intelligence Systems: Survey and Prospects." *IEEE Transactions on Evolutionary Computation*. doi: 10.1109/TEVC.2025.3530096. (IF: 12)
2. H.P. Fainberg, Y. Moodley, I. Triguero, et al. (2024). "Cluster analysis of blood biomarkers to identify molecular patterns in pulmonary fibrosis: assessment of a multicentre, prospective, observational cohort with independent validation." *The Lancet Respiratory Medicine*, 12(10), 783-796. doi: 10.1016/S2213-2600(24)00147-4. (IF: 32.8)
3. I. Triguero, D. Molina, J. Poyatos, J. Del Ser, and F. Herrera. (2024). "General Purpose Artificial Intelligence Systems (GPAIS): Properties, Definition, Taxonomy, Open Challenges and Implications." *Information Fusion*, 103, 102135. (IF: 38.6)
4. T. Cargan, D. Landa-Silva, and I. Triguero. (2024). "Local-global methods for generalised solar irradiance forecasting." *Applied Intelligence*, 54(9), 8341-8359. doi: 10.1007/s10489-024-05273-9. (IF: 5.3)
5. N. Alkhulaifi, A.L. Bowler, D. Pekaslan, N.J. Watson, and I. Triguero. (2024). "AutoEnergy: An automated feature engineering algorithm for energy consumption forecasting with AutoML." *Knowledge-Based Systems*, 291, 111545. (IF: 7.2)
6. H. Meng, C. Wagner, and I. Triguero. (2023). "Explaining time series classifiers through meaningful perturbation and optimisation." *Information Sciences*, 645, 119334. (IF: 8.1)
7. H. Song, B. Deng, M. Pound, E. Ozcan, and I. Triguero. (2022). "A fusion spatial attention approach for few-shot learning." *Information Fusion*, 81, 187-202. (IF: 18.6)
8. H.L. Le, F. Neri, and I. Triguero. (2022). "SPMS-ALS: A Single-Point Memetic structure with accelerated local search for instance reduction." *Swarm and Evolutionary Computation*, 69, 100991. (IF: 10.0)
9. H. Song, M.T. Torres, E. Özcan, and I. Triguero. (2021). "L2AE-D: Learning to aggregate embeddings for few-shot learning with meta-level dropout." *Neurocomputing*, 442, 200-208. (IF: 5.5)
10. H.L. Le, D. Landa-Silva, M. Galar, S. Garcia, and I. Triguero. (2021). "EUSC: A clustering-based surrogate model to accelerate evolutionary undersampling in imbalanced classification." *Applied Soft Computing*, 101, 107033. (IF: 8.78)

C.2. Congress

Isaac has published more than 40 conference papers. Here we highlight 5 publications related to his latest research on AutoML and data preprocessing:

- Angarita-Zapata, J.S., Masegosa, A.D., Triguero, I. (2020). General-Purpose Automated Machine Learning for Transportation: A Case Study of Auto-sklearn for Traffic Forecasting. In: Lesot, M.J., et al. *Information Processing and Management of Uncertainty in Knowledge-Based Systems. IPMU 2020. Communications in Computer and Information Science*, vol 1238
- Angarita-Zapata, J.S., Triguero, I., Masegosa, A.D. (2018). A Preliminary Study on Automatic Algorithm Selection for Short-Term Traffic Forecasting. In: Del Ser, J., Osaba, E., Bilbao, M., Sanchez-Medina, J., Vecchio, M., Yang, X.S. (eds) *Intelligent Distributed Computing XII. IDC 2018. Studies in Computational Intelligence*, vol 798. Springer, Cham.
- Angarita-Zapata, J.S., Masegosa, A.D., Triguero, I. (2020). Evaluating Automated Machine Learning on Supervised Regression Traffic Forecasting Problems. In: Llanes Santiago, O., Cruz Corona, C., Silva Neto, A., Verdegay, J. (eds) *Computational Intelligence in Emerging Technologies for Engineering Applications. Studies in Computational Intelligence*, vol 872. Springer, Cham
- H. L. Le, D. Landa-Silva, M. Galar, S. Garcia and I. Triguero, "A Hybrid Surrogate Model for Evolutionary Undersampling in Imbalanced Classification," 2020 IEEE Congress on Evolutionary Computation (CEC), Glasgow, UK, 2020.
- Neri, F., Triguero, I. (2020). A Local Search with a Surrogate Assisted Option for Instance Reduction. In: Castillo, P.A., Jiménez Laredo, J.L., Fernández de Vega, F.

We would also like to highlight other conference activities.

- He was a keynote speaker in the Belgian-Dutch Conference on Machine Learning (2016). He was Program Co-Chair in 2016 IEEE Conference on Smart Data, 2017 IEEE Conference on Big Data Science and Engineering, and the 2018 IEEE International Congress on Big Data.
- He has delivered tutorials on Large-Scale data analytics (WCCI 2016, 2018, IEEE CEC 2017, 2025, FUZZ-IEEE 2017, FUZZ-IEEE 2021)

C.3. Research projects

Throughout his research career, Isaac has participated in numerous projects as co-investigator and/or external collaborator. Some of the most relevant are PID2020-119478GB-I00, PID2020-118224RB-I00, TIN2017-89517-P, TIN2016-81113-R, TIN2014-57251-P, P18-FR-4961, TIN2011-28488, P11-TIC-7765, P10-TIC-6858, C-ING-250-UGR23.

In addition to those, we highlight the following project in which Isaac took a leading role:

- 1) AIRA: Andalusian Digital Innovation Hub in AI and Robotics, HE-DIGITAL-2025-EDIH-EU-EEA-08. Isaac Triguero and Daniel Peralta, 644651,46€ (Feb 2026 – Jan 2029)
- 2) KnoWare: Knowledge Nexus for Oversight of Wavefronts & Advancing Risky Emergent-Capabilities of General-Purpose AI. I. Triguero, 270375 € (June 2026 – May 2029)
- 3) Ethical, Responsible and General Purpose Artificial Intelligence: Applications In Risk Scenarios (IAFER), Exp.:TSI-100927-2023-1 funded through the Creation of university-industry research programs (ENIA Programs) in collaboration with REPSOL. I. Triguero and F. Herrera. €1.6M (Sept 2024 – July 2027).
- 4) Accelerating AI Adoption with General-Purpose Artificial Intelligence Systems (A3GPAIS), PID2023-149128NB-I00, Knowledge Generation Project, funded by the Ministry of Science, Innovation and Universities of Spain. €122,000. I Triguero (PI), DMolina (Co-PI). (January 2025 – Dec 2028).
- 5) Data-driven Energy Management Systems. KTP Scheme under Project No. KTP011094 - Innovate UK and E.ON UK plc. £219,492, I. Triguero (PI), D Landa-Silva. £219,492. (Feb 2018 -Nov 2021).
- 6) Interpretable Big Data Models for Business Operations. KTP13113 - Innovate UK and Unilever. I. Triguero (PI), D Landa-Silva. £191,388. (Jan 2022 -Nov 2024).

C.4. Contracts, technological or transfer merits

Isaac has participated in various research contracts with companies as co-investigator (OTRI3871-00, OTRI3056, OTRI3042). The following details are for those projects he has led as principal investigator.

- 1) DONES-AXIA: Integrated multi-agent system to improve the operation, safety and energy efficiency of unique scientific facilities such as IFMIF-DONES. 220,400€ ININTERCONECTA-STEP. PI: I. Triguero, (Starting Sept 2026).
- 2) SmBuilding-X. GPAIS for efficient buildings management. Principal Investigators: I. Triguero y E. Herrera-Viedma.147620€ (November 2025- October 2026).
- 3) ARCELOR-GPAI: General multi-task intelligent systems to improve industrial processes. OTRI 791. Principal investigators: I Triguero and J. Luengo. 95000€. (December 2023-November 2024)
- 4) Design of deep learning algorithms for the automation of comprehensive supplier analysis. OTRI 5970. Principal investigators: F. Herrera and I. Triguero. 99800.€ (June 2023 – April 2024)
- 5) Interpretable Decision-Support Systems for Business Operations. Funded by Unilever. Isaac Triguero (Principal Investigator) £118,045.77. (October 2021 – September 2022)