

CV Date	01/09/2023
---------	------------

Part A. PERSONAL INFORMATION

First Name	Juan Antonio		
Family Name	Recio García		
Sex	Male	Date of Birth	
ID number Social Security, Passport			
URL Web	http://gaia.fdi.ucm.es/people/juanan		
Email Address	jareciog@fdi.ucm.es		
Open Researcher and Contributor ID (ORCID)	0000-0001-8731-6195		

A.1. Current position

Job Title	Profesor Titular de Universidad		
Starting date	2021		
Institution	Universidad Complutense de Madrid		
Department / Centre	Ingeniería del Software e Inteligencia Artificial / Facultad de Informática		
Country		Phone Number	
Keywords			

Part B. CV SUMMARY

I have a PhD in Computer Science with a European Mention from the Complutense University of Madrid (UCM) where I have developed my teaching and research since 2005, obtaining my current position as Senior Lecturer (Titular de Universidad) in 2021. Additionally, I have been the Head of the Department of Software Engineering and Artificial Intelligence of the UCM between 2015 and 2019. Currently, I hold the BOSCH-UCM Chair on Artificial Intelligence applied to the Internet of Things.

My research has always been focused on Case-Based Reasoning (CBR), where I have obtained several relevant results and collaborated with international institutions. I've been working on Textual CBR at the Robert Gordon University (U.K.) and Recommender Systems at the University College Cork (Ireland). I've also directed 3 PhD thesis in the area of Recommender Systems. Currently, I'm working on the explanation of Intelligent Systems (XAI), leading three projects as Principal Investigator (TIN2014, TIN2017, and PID2020) and being the responsible of one work package in the iSee project (Intelligent Sharing of Explanation Experiences) founded by the Horizon 2020 Future and Emerging Technologies (FET) programme of the European Union. Previously, I have also participated as a researcher in 4 competitive R&D national projects and another European call.

I have also conducted several research projects with companies, receiving the official recognition of 2 six-year research periods and another six-year transfer period. The main technological result of my research is the COLIBRI platform for the building of CBR systems, which has more than 40,000 downloads, with an average of 3.000 per year from both academia and industry. I have the industrial and intellectual property of several results of my research, such as software frameworks and ontologies.

I'm the co-author of 80 publications, in international impact conferences and journals, 21 indexed in JCR. I have received one best paper award and an honorable mention by the International Conference on CBR (ICCBR). I organized several scientific events such as the XCBBR workshop or the special track on CBR at the FLAIRS conference, being a member of the review committee of numerous international conferences and journals. I'm also a Board Member of the IAAA Student Chapter in Mexico for the promotion of Artificial Intelligence.

Scientific production

H-index: 25, Citations: 2136 (<https://scholar.google.es/citations?user=eDG1rcAAAAAJ>).

Supervisor of 3 PhDs.

2 recognized six-year research periods + 1 six-year transfer period.

University Chair BOSCH-UCM in Artificial Intelligence applied to Internet of Things (since 13/11/2020)

Research projects:

Principal Investigator National projects (TIN): 3

Researcher national projects (TIN): 4

Researcher European projects: 1 FP7 + 1 CHIST-ERA.

National research networks: 3

Research projects with companies: 3 PI + 3 researcher.

Scientific publication:

Total: 80 publications.

Relevant publications in journals: 21 indexed in JCR. 8 (Q1), 7 (Q2), 5 (Q3), 1 (Q4).

Relevant publications in conferences: 1 publication in IJCAI (A++). 1 publication in ECAI (A).

26 publications in ICCBR (B). 8 publications in IEEE ICTAI (B). 2 publications in ACM RecSys (B).

R+D activities:

Scientific committee international conferences: 4

Organized Events: 8 (workshops y special tracks).

International research

Several research visits (both pre-doctoral and post-doctoral) to international research institutions.

Technological results:

Developer of the COLIBRI platform. Reference in the CBR community with more than 40,000 downloads (<http://gaia.fdi.ucm.es/research/colibri/>)

6 Intellectual property records.

Part C. RELEVANT ACCOMPLISHMENTS

C.1. Most important publications in national or international peer-reviewed journals, books and conferences

AC: corresponding author. (n° x / n° y): position / total authors. If applicable, indicate the number of citations

- 1 **Scientific paper**. Jorro-Aragoneses, Jose L.; Díaz-Agudo, Belén; Recio-García, Juan A.; Jiménez-Díaz, Guillermo. 2020. RecoLibry Suite: a set of intelligent tools for the development of recommender systems. Autom. Softw. Eng.27-1, pp.63-89.
- 2 **Scientific paper**. Caro-Martinez, Marta; Jiménez-Díaz, Guillermo; Recio-García, Juan. 2023. A graph-based approach for minimising the knowledge requirement of explainable recommender systems. Knowledge and Information Systems. 65, pp.1-31.
- 3 **Scientific paper**. Recio-García, Juan A. (AC); Díaz-Agudo, Belén; Acuaviva, Arturo. (1/3). 2023. Becalm: Intelligent Monitoring of Respiratory Patients. IEEE J. Biomed. Health Informatics. IEEE. 27-8, pp.3806-3817.
- 4 **Scientific paper**. Fernando Valdez{-}Ávila, Moisés; Bermejo{-}Sabbagh, Carlos; Díaz-Agudo, Belén; Gabriel Orozco{-}del{-}Castillo, Mauricio; Recio{-}García, Juan A.2023. CBR-fox: {A} Case-Based Explanation Method for Time Series Forecasting Models. Case-Based Reasoning Research and Development - 31st International Conference, ICCBR 2023. Springer. 14141, pp.200-214.

- 5 **Scientific paper.** Sosa-Espadas, Cristian E.; Orozco-del-Castillo, Mauricio G.; Cuevas-Cuevas, Nora; Recio-Garcia, Juan A. 2023. IREX: Iterative Refinement and Explanation of classification models for tabular datasets. *SoftwareX*. 23, pp.101420-101420. ISSN 2352-7110.
- 6 **Scientific paper.** Caro-Martínez, Marta; Jiménez-Díaz, Guillermo; Recio-García, Juan A. 2023. Local Model-Agnostic Explanations for Black-box Recommender Systems Using Interaction Graphs and Link Prediction Techniques. *Int. J. Interact. Multim. Artif. Intell.* 8-2, pp.202-202.
- 7 **Scientific paper.** Parejas-Llanovarcid, Humberto; Darías, Jesus M.; Caro-Martínez, Marta; Recio-García, Juan A. 2023. Selecting Explanation Methods for Intelligent IoT Systems: A Case-Based Reasoning Approach. *Case-Based Reasoning Research and Development - 31st International Conference, ICCBR 2023*. Springer. 14141, pp.185-199.
- 8 **Scientific paper.** Caro-Martínez, Marta; Darías, Jesus M.; Díaz-Agudo, Belén; Recio-García, Juan A. 2023. *iSeeE3 - The Explanation Experiences* Editor. *SoftwareX*. 21, pp.101311-101311.
- 9 **Scientific paper.** Jesús Darías; Marta Caro Martínez; Belén Díaz Agudo; Juan Antonio Recio García. 2022. Using Case-Based Reasoning for Capturing Expert Knowledge on Explanation Methods. *Case-Based Reasoning Research and Development - 30th International Conference, ICCBR 2022*. Springer. 13405, pp.3-17.
- 10 **Scientific paper.** Recio-García, Juan A.; Humberto Parejas Llanovarcid; Mauricio Orozco del Castillo; Esteban Brito Borges. 2021. A case-based approach for the selection of explanation algorithms in image classification. *Case-Based Reasoning Research and Development - 29th International Conference, ICCBR 2021*, Salamanca, Spain, 2021, Proceedings. Springer.
- 11 **Scientific paper.** Recio-García, Juan A.; Díaz-Agudo, Belén; Kazemi, Alireza; Luis Jorro-Aragoneses, Jose. 2021. A data-driven predictive system using Case-Based Reasoning for the configuration of device-assisted back pain therapy. *J. Exp. Theor. Artif. Intell.* 33-4, pp.617-635.
- 12 **Scientific paper.** Marta Caro Martínez; Guillermo Jiménez Díaz; Juan A. Recio García. (3/3). 2021. Conceptual modeling of Explainable Recommender Systems: an ontological formalization to guide their design and development. *Journal of Artificial Intelligence Research*. AI ACCESS FOUNDATION. ISSN 1076 - 9757.
- 13 **Scientific paper.** Luis Jorro-Aragoneses, Jose; Caro-Martínez, Marta; Díaz-Agudo, Belén; Recio-García, Juan A. 2020. A User-Centric Evaluation to Generate Case-Based Explanations Using Formal Concept Analysis. *Case-Based Reasoning Research and Development - 28th International Conference, ICCBR 2020*, Salamanca, Spain, June 8-12, 2020, Proceedings. Springer. 12311, pp.195-210.
- 14 **Scientific paper.** Recio-García, Juan A.; Díaz-Agudo, Belén; Pino-Castilla, Victor. 2020. CBR-LIME: A Case-Based Reasoning Approach to Provide Specific Local Interpretable Model-Agnostic Explanations. *Case-Based Reasoning Research and Development - 28th International Conference, ICCBR 2020*, Salamanca, Spain, June 8-12, 2020, Proceedings. Springer. 12311, pp.179-194.
- 15 **Scientific paper.** Nkisi-Orji, Ikechukwu; Wiratunga, Nirmalie; Paliyawadana, Chamath; Recio-García, Juan A.; Corsar, David. 2020. Cloud CBR: Towards Microservices Oriented Case-Based Reasoning. *Case-Based Reasoning Research and Development - 28th International Conference, ICCBR 2020*, Salamanca, Spain, June 8-12, 2020, Proceedings. Springer. 12311, pp.129-143.
- 16 **Scientific paper.** Recio-García, Juan A.; Díaz-Agudo, Belén; Kazemi, Alireza; Luis Jorro, Jose. 2019. A data-driven predictive system using Case-Based Reasoning for the configuration of device-assisted back pain therapy. *Journal of Experimental & Theoretical Artificial Intelligence*. Taylor & Francis. 0-0, pp.1-19.
- 17 **Scientific paper.** Arroyo, Javier; Corea, Francesco; Jiménez-Díaz, Guillermo; Recio-García, Juan A. 2019. Assessment of Machine Learning Performance for Decision Support in Venture Capital Investments. *IEEE Access*. 7, pp.124233-124243. <https://doi.org/10.1109/ACCESS.2019.2938659>

- 18 Scientific paper.** Vázquez-Morales, Gabriel R.; Martínez-Monterrubbio, Sergio M.; Moreno-Ger, Pablo; Recio-García, Juan A. 2019. Explainable Prediction of Chronic Renal Disease in the Colombian Population Using Neural Networks and Case-Based Reasoning. IEEE Access. 7, pp.152900-152910. <https://doi.org/10.1109/ACCESS.2019.2948430>
- 19 Scientific paper.** Jorro-Aragoneses, Jose L.; Recio-García, Juan A.; Díaz-Agudo, Belén; Jiménez-Díaz, Guillermo. 2019. RecoLibry-core: A component-based framework for building recommender systems. Knowledge-Based Systems. 182. <https://doi.org/10.1016/j.knosys.2019.07.025>
- 20 Scientific paper.** Quijano Sánchez, Lara; Sauer, Christian; Recio-García, Juan A.; Díaz-Agudo, Belén. 2017. Make it personal: A social explanation system applied to group recommendations. Expert Systems with Applications. 76, pp.36-48. <https://doi.org/10.1016/j.eswa.2017.01.045>

C.3. Research projects and contracts

- 1 Project.** PERXAI: Personalización de Inteligencia Artificial Explicable mediante Conocimiento Experimental. Ministerio de Ciencia e Innovación. Universidades (PID2020-114596RB-C21). Juan Antonio Recio García. (Universidad Complutense de Madrid). 01/09/2021-31/08/2024. 49.489 €.
- 2 Project.** iSee: Intelligent Sharing of Explanation Experience by Users for Users. CHIST-ERA 2019 - HORIZON 2020 (CHIST-ERA-19-XAI-008 - PCI2020-120720-2). Belén Díaz Agudo. (Universidad Complutense de Madrid). 01/03/2021-28/02/2024. 846.318 €.
- 3 Project.** CBRex. Razonamiento basado en casos para la explicación de sistemas inteligentes. Ministerio de Economía, Industria Y Competitividad (TIN2017-87330-R). Juan Antonio Recio García. (Universidad Complutense de Madrid). 01/01/2018-31/12/2020. 79.618 €.
- 4 Project.** PERSO: Personalización Social en Sistemas de Recomendación. Ministerio de Economía y Competitividad (TIN2014-55006-R). Juan Antonio Recio García. (Universidad Complutense de Madrid). 01/01/2015-31/12/2017. 81.070 €.
- 5 Project.** TELL US: Technology Enhanced Learning Leading to Unique Stories. Unión Europea (FP7 CSA-619462). Pedro Antonio González Calero. (Universidad Complutense de Madrid). 01/12/2013-30/11/2015. 51.539 €. Entidades participantes: inno TSD, Cap Digital, Fraunhofer Institute, Momentum, Cluster Audiovisual de Madrid
- 6 Contract.** Proyecto técnico para la valoración de start-ups utilizando técnicas de aprendizaje automático e inteligencia artificial FOUR TREES MERCHANT PARTNERS SPAIN SL. JAVIER ARROYO GALLARDO. 26/06/2018-26/09/2018. 12.512,5 €.
- 7 Contract.** KBS. Razonamiento Basado en Casos Aplicado al Control de Sesiones de Fisioterapia Kazemi Back Health S.L.. JUAN ANTONIO RECIO GARCÍA. 18/04/2016-18/04/2017. 55.000 €.
- 8 Contract.** Sistemas de detección en tiempo real de fraude en telecomunicaciones mediante patrones de comportamiento, análisis estadístico y aprendizaje automático STONEWORK SOLUTIONS. GUILLERMO JIMÉNEZ DÍAZ. 01/01/2016-01/01/2017. 20.000 €.

C.4. Activities of technology / knowledge transfer and results exploitation

- 1** Juan Antonio Recio García; Marta Caro Martínez; Humberto Parejas Llanovarcé. M-457-23. XAIoT: una ontología para modelar Inteligencia Artificial Explicable (XAI) en el Internet de las Cosas (IoT) Spain. 20/01/2023.
- 2** Marta Caro Martínez; Guillermo Jiménez Díaz; Juan A. Recio García. M-007198/2019. ExRecOnto 18/10/2019.
- 3** Jose L. Jorro Aragoneses; Belén Díaz Agudo; Juan A. Recio García. M-007197/2019. RecOnto: An ontology to model recommender systems and its components 18/10/2019.
- 4** Jose L. Jorro Aragoneses; Belén Díaz Agudo; Juan A. Recio García. M-007196/2019. RecoLibry: una plataforma inteligente para la creación de sistemas recomendados 18/10/2019.