CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION

CV date	07/09/2024

First name	Eugenio
Family name	Martínez Cámara

		Birth date (dd/mm/yyyy)	
Gender (*)			
Social Security, Passport, ID number			
e-mail		URL Web	
Open Research and Contributor ID (ORCID)(*)		0000-0002-5279-8355	

(*) Mandatory

A.1. Current position

Position	Associate Professor (Profesor Titular de Universidad)
Initial date	8/02/2024
Institution	University of Jaén
Departament/Center	Department of Computer Science
Country	Spain
Teleph. number	
Key words	Natural Language Processing

A.2. Previous positions (research activity interruptions, art. 45.2.c))

Period	Position/Institution/Country/Interruption cause
25/02/2023-07/02/2024	Assistant Professor. University of Jaén. Spain
01/02/2023-24/02/2023	Assistant Professor. University of Granada. Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Computer Science. Official PhD Program in Architecture and Engineering	University of Jaén	2015

Part B. CV SUMMARY *(max. 5000 characters, including spaces)*

Eugenio Martínez Cámara completed his degree and PhD in Computer Science at University of Jaén (Spain). His research line is focused on Natural Language Processing (NLP), standing out his works in sentiment analysis. Now, he studies the use of the last trends in LLMs, cybersecurity and trustworthy NLP, and the Federated Learning paradigm for machine learning. He is working as associate professor at the University of Jaén.

Scientific contributions. Dr. Martínez has published more than 80 papers, namely papers in JCR indexed journals (29) or with similar quality criteria (16). More than 50% of his papers in JCR journals are indexed in Q1 and he has an H-index score (ResearchID) of 19. He is the co-author of one book, he collaborates in the edition of the journal Procesamiento del Lenguaje Natural (10 issues), workshop (5) and seminar (1) proceedings, and he is a member of the scientific advisory committee of the Spanish Society for Natural Language Processing (SEPLN).

The contribution of his publications is centred on new methods for sentiment analysis in Spanish, as well as a large number of new linguistic resources for Spanish sentiment analysis, such as the COST corpus and the iSOL sentiment lexicon. These new linguistic resources have contributed to the furtherance of the research on sentiment analysis in Spanish. He has also contributed in new methods for Federated Learning, in particular to make this paradigm most robust against adversarial attacks, as well as its application in NLP use cases.

Internationalization. Dr. Martínez worked in the European project FIRST (FP7-287607) when he was conducting his PhD (University of Jaén). Then, he worked as a postdoctoral researcher in the international project (German-Israeli) Information Consolidation (GU 798/17-1) funded by the German Research Agency. The project tasks were performed in the research group Ubiquitous Knowledge Processing (UKP) of the Technische Universität Darmstadt (Germany) led by Prof. Iryna Gurevych. The main contributions were 4 papers in international NLP conferences and workshops.

He performed a doctoral research stay supervised by Prof. Ruslan Mitkov at University of Wolverhampton (United Kingdom). The main contribution was the generation of a new linguistic resource (the corpus COST) and the publication of a paper in a JCR journal.

Dr. Martínez collaborates with Dr. Jose Camacho-Collados who works at Cardiff University (United Kingdom). So far, the collaboration results in two papers in a top-tier conference.

Leadership. Dr. Martínez is the principal investigator of one research project of the call 2020 R+D+i projects of the Spanish Government, and he has participated in several research projects as member of the research team. He has co-directed six contracts with the following Spanish companies: Nemotec S.L., SHERPA EUROPE S.L., ISDEFE S.A., AXESOR S.A. He served as president of the organisation committee of the 36th international conference of SEPLN in 2020, and he has also participated in the organisation of 9 editions of the main workshop on Sentiment Analysis in Spanish (TASS) and in the organisation of two editions of IberLEF, an evaluation campaign of semantic processing tasks in the languages spoken in the Iberian Peninsula. He collaborates with scientific committees of conferences and workshops (AAAI, ACL and EMNLP), and he is reviewer in several JCR research journals. Dr. Martínez supervises 4 PhD students, and two of them work in the industry. He currently serves as Vice President of the SEPLN and he is also member of scientific advisory council of the SEPLN.

Awards. His PhD thesis was awarded with the Extraordinary Doctorate Award of the University of Jaén. Also, he has been honoured with: (1) award to the best starting research project; (2) best PhD thesis in NLP by the SEPLN and (3) best paper award by the journal Computer Speech & Language (Elsevier).

Impact. *SCI-ISI Journals*: 29: *Q1*: 19; *Q2*: 7; *Q3*: 2; *Q4*: 1. *Citations*: 3244 (Google Scholar), 1127 (ResearchID), 1875 (Scopus). *H Index*: 31 (Google Scholar), 19 (ResearchID), 24 (Scopus). *H-10 score*: 54 (Google Scholar). *Non-ISI Journals*: 16. *Conferences*: 15. *Workshops*: 40.

Part C. RELEVANT MERITS *(sorted by typology)*
C.1. Publications *(see instructions)*

More than 100 papers. Scientific production and citation information in Scholar Google: https://scholar.google.com/citations?user=HBpQRqwAAAAJ&hl=en.
1. Rodríguez-Barroso, N., **Martínez-Cámara, E.**, Camacho Collados, J., Luzón, V., Herrera, F. (2024). Federated Learning for Exploiting Annotators' Disagreements in Natural Language Processing. *Transactions of the Association for Computational Linguistics*, 12:630–648. Q2 (JCR). Cites: 1 (GS).
2. Zuheros, C., **Martínez-Cámara, E.**, Herrera-Viedma, E., Katib, I. A., Herrera, F. (2023). Explainable Crowd Decision Making methodology guided by expert natural language opinions based on Sentiment Analysis with Attention-based Deep Learning and Subgroup Discovery. *Information Fusion*, 101821. Q1 (JCR). Cites 8 (GS).
3. Rodríguez-Barroso, N., Jiménez-López, D., Luzón, M. V., Herrera, F., **Martínez-Cámara, E**. (2023). Survey on federated learning threats: Concepts, taxonomy on attacks and defences, experimental study and challenges. *Information Fusion*, *90*, 148-173. Q1 (JCR). Cites 163 (GS).
4. Rodríguez-Barroso, N., **Martínez-Cámara, E.**, Luzón, M. V., Herrera, F. (2022). Dynamic defense against byzantine poisoning attacks in federated learning. *Future Generation Computer Systems*, *133*, 1-9. Q1 (JCR). Cites 34 (GS).
5. Zuheros, C., **Martínez-Cámara, E.**, Herrera-Viedma, E., & Herrera, F. (2022). Crowd Decision Making: Sparse Representation Guided by Sentiment Analysis for Leveraging the Wisdom of the

Crowd. *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, *53*(1), 369-379. Q1 (JCR). Cites 19 (GS).

6. López, M., **Martínez-Cámara, E.**, Luzón, M. V, Herrera, F. 2021. ADOPS: Aspect Discovery OPinion Summarisation Methodology based on deep learning and subgroup discovery for generating explainable opinion summaries. *Knowledge-based Systems*, 231, 107455. Q1 (JCR). Cites: 11 (GS).

7. Zuheros, C., **Martínez-Cámara, E.**, Herrera-Viedma, E. and Herrera, F. 2021. Sentiment Analysis based Multi-Person Multi-Criteria Decision Making Methodology Using Natural Language Processing and Deep Learning for Smarter Decision Aid. Case Study of Restaurant Choice Using TripAdvisor Reviews. *Information Fusion*, 68 pp. 22-36. Q1 (JCR). Cites: 88 (GS).

8. Rodríguez-Barroso, N., Stipcich, G., Jiménez-López, D., Ruíz-Millán, J. A., **Martínez-Cámara, E.**, González Seco, G., Luzón, M. V., Veganzones, M. Á., Herrera, F. 2020. Federated Learning and Differential Privacy: Software Tools Analysis, the Sherpa.ai FL Framework and Methodological Guidelines for Preserving Data Privacy. *Information Fusion*, 64 pp. 270-292. Q1 (JCR). Cites: 121 (GS).

9. Hassan, S.-UI., Aljohani, N. R., Idrees, N., Sarwar, R., Nawaz, R., **Martínez-Cámara, E.**, Ventura, S., Herrera, F. 2020. Predicting Literature's Early Impact with Sentiment Analysis in Twitter. *Knowledge-Based Systems,* 192 pp. 105383. Q1 (JCR). Cites: 73 (GS).

10. Valdivia, A., **Martínez-Cámara, E.**, Chaturvedi, I., Luzón, M. V., Cambria, E., Ong, Y. S., Herrera, F. 2020. What do People Think about this Monument? Understanding Negative Reviews via Deep Learning, Clustering and Descriptive Rules. *Journal of Ambient Intelligence and Humanized Computing*, 11 pp. 39-52. Q1 (JCR). Cites: 34 (GS).

11. Vairetti, C., **Martínez-Cámara, E.** Maldonado, S., Luzón, M. V., Herrera, F. 2020. Enhancing the Classification of Social Media Opinions by Optimizing the Structural Information. *Future Generation Computer Systems*, 102, pp. 838-846. Q1 (JCR). Cites: 17 (GS).

12. Zuheros, C., Tabik, S., Valdivia, A., **Martínez-Cámara, E.**, Herrera, F. 2019. Deep Recurrent Neural Network for Geographical Entities Disambiguation on Social Media Data. *Knowledge-Based Systems*, 173, pp.117-127. Q1 (JCR). Cites: 23 (GS).

13. López, M., Valdivia, A., **Martínez-Cámara, E.**, Luzón, M. V., Herrera, F. 2019. E2SAM: Evolutionary ensemble of sentiment analysis methods for domain adaptation. *Information Sciences*, 480 pp. 273-286. Q1 (JCR). Cites: 38 (GS).

14. Jiménez-Zafra, S. M., Martín-Valdivia, M. T., **Martínez-Cámara, E.**, Ureña-López, L. A. 2019. Studying the Scope of Negation for Spanish Sentiment Analysis on Twitter. *IEEE Transactions on Affective Computing*, 10(1): 129-141. Q1 (JCR). Cites: 69 (GS).

C.2. Congress

Presentation modalities (Mod): invitation talk (I), oral (O) or poster (P). Most relevant congress papers:
1. Gutiérrez-Megías, A. J., Ureña-López, L. A., **Martínez-Cámara, E.**. 2024. The influence of the perplexity score in the detection of machine-generated texts. In *Proc. Of the 1st International Conference on NLP & AI for Cyber Security (NLPAICS'2024)*. *Date*: 29-30/07/2024. *Place*: Lancaster (UK). *Mod*: O.

2. Grijalba, J. O., Ureña López, L. A., **Martínez-Cámara, E.**, Camacho-Collados, J. 2024. Question Answering over Tabular Data with DataBench: A Large-Scale Empirical Evaluation of LLMs. In *Proc. of the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING 2024)*. *Date*: 20-25/05/2024. *Place*: Turin. *Mod*: P.

3. Camacho-Collados, J., Rezaee, K., Riahi, T., Ushio, A., Loureiro, D. Antypas, D., Boisson, J. Espinosa-Anke, L., Liu, F., **Martínez-Cámara, E.,**… Medina, G., Buhrmann, T. Neves, L., Barbieri, F. 2022. Tweetnlp: Cutting-edge natural language processing for social media. In *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing: System Demonstrations*, pp. 38-49. *Conference*: EMNLP 2022. *Date*: 09/12/2022. *Place*: Abu Dhabi (UAE). *Mod*: O.

4. Ruiz-Millán, J. A., **Martínez-Cámara, E.**, Victoria Luzón, M., Herrera, F. 2022. Personalised Federated Learning with BERT Fine Tuning. Case Study on Twitter Sentiment Analysis. In *Proceedings of the 2nd International Conference on Deep Learning, Artificial Intelligence and Robotics*, pp. 193-202. Springer. *Conference*: ICDLAIR 2020. *Date*: 07-18/12/2020. *Place*: Salermo (Italy) *Mod*: O.

C.3. Research projects

One project as principal investigator (PI) and 15 as member of the research team (RT). Most recent ones:

1. **Moderación de Contenidos en redes Sociales usando Tecnologías del Lenguaje** (TED2021-130145B-I00). *Status*: RT. *Call*: Proyectos Estratégicos TED 2021. *Funder*: Ministerio de Ciencia e Innovación. *Period*: 01/12/2022-30/11/2024. *Budget*: 295.205€. *PI*: L. Alfonso Ureña López.

2. **FedDAP: Federated Learning for Preserving Data Privacy** (PID2020-116118GA-I00). *Status*: PI. *Call*: R+D Projects 2020. *Funder*: Ministerio de Ciencia e Innovación. *Period*: 01/09/2021-1/08/2024. *Budget*: 26,620.00€. *PI*: **Eugenio Martínez Cámara**.

3. **CIVIC: Intelligent characterization of the COVID-19 information veracity** (PCAI2061220327). *Status*: RT. *Call*: Ayudas Fundación BBVA a Equipos de Investigación Científica SARS-CoV-2 y COVID-19. *Funder*: BBVA Foundation. *Period*: 10/10/2020-10/10/2022. *Budget*: 98,325.00€. *PI*: Alejandro Martín García.

4. **Deep Learning and Smart data for Complex Problems (DeepSCOP)** (BBVA2018-1). *Status*: RT. *Call*: BBVA Foundation Grants to Research Groups. *Funder*: BBVA Foundation. *Period*: 01/04/2019-30/04/2021. *Budget*: 100,000.00€. *PI*: Francisco Herrera.

5. **SMART-DASCI: Data Science and Computational Intelligence Models: Bridging the gap from Big Data and Smart Data** (TIN2017-89517-P). *Status*: RT. *Call*: R+D Projects 2017. *Funder*: Ministerio de Ciencia e Innovación. *Period*: 01/01/2018-31/12/2020. *Budget*: 202,191.00€. *PI*: Francisco Herrera and Salvador García.

6. **Information Consolidation: A New Paradigm in Knowledge Search** (GU 798/17-1). *Status*: RT. *Call*: Round of the German-Israeli project co-operation. *Funder*: German Research Foundation. *Period*: 01/01/2014-31/12/2018. *Budget*: 1,654,750.00€. *PI*: Iryna Gurevych (Technishe Universität Darmstadt) and Ido Dagan (Bar-Ilan University).

7. **First: A Flexible Interactive Reading Support Tool** (FP7-ICT-287607). *Status*: RT. *Call*: Seventh Framework Programme - FP7. *Funder*: European Commission. *Period*: 01/10/2011-30/09/2014. *Budget*: 2,009,684.00€. *PI*: Ruslan Mitkov (University of Wolverhampton).

C.4. Contracts, technological or transfer merits

1. **Scientific Advice for the Use of Natural Language Processing Methods** (OTRI-2023107). *Company*: Software Nemotec S.L. *Time*: 01/11/2023-31/10/2024. *Budget*: 22.222,22€. *PI*: L. A. Ureña López y **E. Martínez Cámara**.

2. **Scientific Advice for the design and development of Digital Assistant** (OTRI-4137b). *Company*: Sherpa Europe, S.L. *Time*: 04/02/2020-31/01/2022. *Budget*: 211,992.0€. *PI*: F. Herrera, **E. Martínez Cámara**.

3. **Scientific Advice for the design and development of Digital Assistant** (OTRI-4137a). *Company*: Sherpa Europe, S.L. *Time*: 04/02/2020-04/02/2021. *Budget*: 196,020.00€. *PI*: F. Herrera and **E. Martínez Cámara**.

4. Trend analysis on the use of Artificial Intelligence in the military domain and its application on the 2035 future terrestrial operational environment (OTRI-4394). *Company*: Ingeniería de Sistemas para la Defensa de España, S.A. *Time*: 01/04/2020-31/10/2020. *Budget*: 15,125.00€. *PI*: F. Herrera, **E. Martínez Cámara**.

5. Scientific Advice for the design and development of Digital Assistant (OTRI-4137). *Company*: Sherpa Europe, S.L. *Time*: 04/02/2019-04/02/2020. *Budget*: 89,490.00€. *PI*: F. Herrera, **E. Martínez Cámara**.

6. Training. Introduction to Neural Networks, Deep learning and their application (OTRI-4238). *Company*: Axesor Risk Solutions. *Time*: 10/09/2019-11/09/2019. *Budget*: 1,124.44€. *PI*: **E. Martínez Cámara**, S. Tabik.

7. Transforming unstructured information from clinical analytics into structured information (OTRI-4057). *Company*: MAPFRE Spain. *Time*: 15/10/2018-31/12/2018. *Budget*: 10,890.00€. *PI*: F. Herrera and **E. Martínez Cámara**.

8. Study on the engineering as facilitator of the SGDs: AI and other disruptive digital technologies (OTRI-4408). *Company*: Real Academia de la Ingeniería. *Time*: 24/04/2020-31/12/2020. *Budget*: 54,450.00€. *PI*: F. Herrera.