



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	Feb 16 2024
First name	Pilar		
Family name	Bachiller Burgos		
Gender (*)	Female	Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail	pilarb@unex.es	URL Web	robolab@unex.es
Open Researcher and Contributor ID (ORCID) (*)	0000-0003-0690-7749		

(*) Mandatory

A.1. Current position

Position	Associate Professor		
Initial date	01/04/2019		
Institution	University of Extremadura		
Department/Center	Computer and Communication Technology		
Country	Spain	Teleph. number	+34927257555
Key words	Computer Vision, Robotics, Artificial Intelligence		

A.2. Previous positions (research activity interruptions, art. 14.2.b))

Period	Position/Institution/Country/Interruption cause
25/11/1997 – 29/01/2004	Profesor Asociado TC in University of Extremadura
30/01/2004 – 31/03/2019	Profesor Titular Escuela Universitaria in University of Extremadura

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Engineer in Computer Science	University of Extremadura	1997
PhD in Computer Science	University of Extremadura	2008

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

Pilar Bachiller Burgos is a Computer Engineer from the University of Extremadura (1997) and a PhD from the same University (2008). She is a Full Professor at UEx since 2003 and has 1 six-year research term. She has more than 65 publications of which 12 are international journals and 4 book chapters. She has participated in more than 25 research projects of various calls, whose competitive funds total more than 1,500,000 Euros, being the main researcher of some of these projects. She is a regular reviewer of international journals and conferences.

She is a member of the research group RoboLab (Robotics and Artificial Vision Laboratory of the University of Extremadura) since 2001. In addition, since June 2021 she is the coordinator of the research group. Within Robolab, she has actively participated in the design and construction of several robots of different types and functionalities, including mobile



platforms for research and teaching, robots for neuro-rehabilitation or expressive heads for social robots. She has also participated in the development of the robotic open-source framework RoboComp, which is currently used by several Universities and research groups. RoboComp has also been selected by Google to participate in its program Google Summer of Code during 9 editions (2013, 2015-2022), where she has participated as mentor and organization administrator.

In relation to her training capacity, she has supervised a doctoral thesis with an international doctorate mention. She has taught 12 subjects in Technical Engineering, Higher Engineering, Undergraduate and Master's degrees. She has also directed and participated as a tribunal in more than 70 end-of-degree projects and end-of-master's projects.

Regarding quality indicators of her research production, according to ResearchGate, her publications have been read 13545 times and have been cited 312 times. Her research interest is higher than 73% of researchers in ResearchGate and higher than 80% considering the discipline of "Artificial Intelligence". According to Scopus and Google Scholar, its h index is 7 and 11, respectively, with a total of 135 and 390 citations.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications

1. P.T. Singamaneni, **P. Bachiller**, L.J. Manso, A. Garrel, A. Sanfeliu, A. Spalanzani and R. Alami. A survey on socially aware robot navigation: Taxonomy and future challenges. The International Journal of Robotics Research. 2024;0(0). doi:10.1177/02783649241230562. Impact Factor: 9.2. Position: 4/30 (JCR)
2. **P. Bachiller**, D. Rodríguez-Criado, R.R. Jorvekar, D.R. Faria, P. Bustos and L.J. Manso. A graph neural network to model disruption in human-aware robot navigation. Multimedia, Tools and applications (2022). <https://doi.org/10.1007/s11042-021-11113-6>. Impact Factor: 2.757. Position: 29/110 (JCR)
3. L.J. Manso, P. Núñez, L.V Calderita., D.R. Faria and **P. Bachiller**. SocNav1: A Dataset to Benchmark and Learn Social Navigation Conventions. Data 2020, 5, 7. doi: <https://doi.org/10.3390/data5010007>
4. **P. Bachiller**, I. Barbecho, L.V. Calderita, P. Bustos, L.J. Manso. LearnBlock: A Robot-Agnostic Educational Programming Tool. IEEE Access, vol. 8, pp. 30012-30026, 2020, DOI: 10.1109/ACCESS.2020.2972410.. Impact Factor: 3.367. Position: 65/162 (JCR)
5. **P. Bachiller**, L.J. Manso and P. Bustos. A Spiking Neural Model of HT3D for Corner Detection. Frontiers in Computational Neuroscience 2018(12). pp. 1-21, June 2018. DOI: 10.3389/fncom.2018.00037. Impact Factor: 2.173. Position: 16/59 (JCR)
6. L.J. Manso, M.A. Gutiérrez, P. Bustos and **P. Bachiller**. Integrating Planning Perception and Action for Informed Object Search. Cognitive Processing 2017(1). pp. 1-12, Springer, August 2017. DOI: 10.1007/s10339-017-0828-3. Impact Factor: 0.974. Position: 78/84 (JCR)
7. **P. Bachiller**, L.J. Manso and P. Bustos. A Variant of the Hough Transform for the Combined Detection of Corners, Segments and Polylines. EURASIP Journal on Image and Video Processing 2017:32. pp. 1-26, Springer Open, May 2017. DOI: 10.1186/s13640-017-0180-7. Impact Factor: 1.742. Position: 123/262 (JCR)



C.2. Congress

1. A. Kapoor, S. Swamy, L. Manso, **P. Bachiller**. "SocNavGym: A Reinforcement Learning Gym for Social Navigation". In: IEEE International Conference on Robot and Human Interactive Communication (RO-MAN'2023), Busan, Korea, 2023.
2. D. Rodríguez-Criado, **P. Bachiller** and L.J. Manso. Generation of Human-Aware Navigation Maps using Graph Neural Networks. In: 41 st SGAI - International Conference on Artificial Intelligence. AI 2021. Cambridge, UK, December 14-16, 2021. doi: 10.1007/978-3-030-91100-3_2
3. D. Rodriguez-Criado, **P. Bachiller**, P. Bustos, G. Vogiatzis and L. J. Manso, "Multi-camera Torso Pose Estimation using Graph Neural Networks," In: 29th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN), Naples, Italy, 2020, doi: 10.1109/RO-MAN47096.2020.9223542.
4. L.J. Manso, R. Jorvekar, D.R. Faria, P. Bustos and **P. Bachiller**. Graph Neural Networks for Human-Aware Social Navigation. In: 21st International Workshop of Physical Agents (WAF 2020), November 19-20, 2020, Alcalá de Henares, Madrid, Spain. doi: 10.1007/978-3-030-62579-5_12
5. R. Baghel, A. Kapoor, **P. Bachiller**, R. Jorvekar, D. Rodríguez-Criado and L.J. Manso . A Toolkit to Generate Social Navigation Datasets. In: 21st International Workshop of Physical Agents (WAF 2020), November 19-20, 2020, Alcalá de Henares, Madrid, Spain. doi: 10.1007/978-3-030-62579-5_13
6. C. Mendoza, **P. Bachiller**, A. Bandera and P. Bustos. Visual Attention Mechanisms Revisited. In: 19th International Workshop of Physical Agents (WAF 2018), November 22-23, 2018, Madrid, Spain. doi: 10.1007/978-3-319-99885-5_8
7. P. Bustos, L.J. Manso, **P. Bachiller** and P. Núñez. Navigation among people with Cortex. In: REACTS workshop at the International Conference on Computer Analysis and Patterns, CAIP, August 25, 2017, Ystad, Sweden.

C.3. Research projects

1. INSIGHT: Simulación Interna para Razonamiento Epistémico en Robótica. Proyectos De Generación De Conocimiento, Ministerio de Ciencia e Innovación. PID2022-137344OB-C31. 09/2023 to 09/2026. PR: Pablo Bustos García de Castro, Pilar Bachiller Burgos. Amount of funding: 133.750,00 €
2. ExtendAGE: Extensión de la autonomía personal y promoción del envejecimiento activo con robots asistenciales en residencias y hogares inteligentes. Plan regional de investigación. IB18056. 03/2019 to 03/2022. PR: Pedro Miguel Núñez Trujillo. Amount of funding: 149.970,70 €
3. Life Landscape fire project – New Methodologies for Forest Fire Prevention – LIFE Project, European Commission 2019/00483/001. 07/2019 to 06/2022. PR: Sebastián Justo Hidalgo de Trucios. Amount of Funding: 1.307.328,00€
4. Cognitive architecture for socially aware robots. National Research Program – RTI2018-099522-B-C42. 01/2019 to 12/2021. PR: Pablo Bustos and Pedro Miguel Núñez Trujillo. Amount of funding: 98.010 €



5. EMOROBOTIC: Gestión emocional a través de la programación en robots en educación primaria. Plan regional de investigación. IB16090. 06/2017 to 06/2020 PR: Victor López Ramos. Amount of funding: 145.599,30 €

6. EuroAGE: Iniciativas innovadoras para el impulso del envejecimiento activo en la región EUROACE. Programa INTERREG V-A España-Portugal (POCTEP) 0043- EUROAGE-4-E. Participantes: Universidad de Extremadura, CCMI-JU, Instituto Politécnico de Castelo Branco, Instituto Politécnico de Guarda, Universidad de Coimbra. 10/2015 to 30/06/2019. PR: Pedro Miguel Núñez Trujillo. Amount of funding (UEx): 327.564,93 €.

7. Fusión de Habilidades de Navegación y Manipulación para Robots Sociales en Smart Homes (Fusion of Navigation and Manipulation Skill for Social Robots in SmartHomes) Ministry of Economy and Competivity. National Research Program – TIN2015-65686-C5-5-R 1/2016 to 12/2018 PR: Pablo Bustos. Amount of funding: 45.375 €

7. Arquitectura de un robot interactivo para terapias de neurorehabilitación . Plan Nacional – Proyecto Coordinado TIN2012-38079-C03-01 . 01/2013 to 12/2015. PR: Pablo Bustos García de Castro. Amount of funding: 67.500€ .

C.4. Contracts, technological or transfer merits

1. Title: transporte autónomo y colaborativo en un sistema ciberfísico y control remoto de un vehículo conectado en tiempo real. Piloto 5G. (red.es). 22/10/2020-21/10/2022 . P.R.: Pedro Miguel Núñez Trujillo. Funding Entity: Gamma Solutions. Contract amount: 60.000€.

2. EYESMAP . Sistema de captura 3D, navegación y replanteo topográfico. 01/09/2013 to 31/03/2015. PR: José Moreno del Pozo. Funding Entity: CDTI. Contract amount: 90.000€.