



CURRICULUM VITAE (CVA)

Part A. PERSONAL INFORMATION

CV date	11/01/2024
---------	------------

First name	Anna		
Family name	Martínez Gavara		
Gender (*)	Female	Birth date (dd/mm/yyyy)	
ID number			
e-mail		URL Web www.uv.es/gavara	
Open Researcher and Contributor ID (ORCID) (*)		0000-0001-9995-010X	

(*) Mandatory

A.1. Current position

Position	Associate Professor (Titular Universidad)		
Initial date	September, 2018		
Institution	Universidad de Valencia		
Department/Center	Estadística e Invest. Operativa	Facultad de Matemáticas	
Country	Spain	Phone	963544354
Key words	Mathematical Programming; Heuristics; Optimization		

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

Period	Position/Institution/Country/Interruption cause
2016 - 2018	Associate Professor (Contratado Doctor)/ Universidad de Valencia/ Spain
2011 - 2016	Assistant Professor (Ayudante Doctor)/ Universidad de Valencia/ Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Licensed in Mathematical Sciences	Universidad de Valencia / Spain	2001
Licensed in Statistical Science and Technology	Universidad de Valencia / Spain	2002
PhD in Mathematical Science	Universidad de Valencia / Spain	2008

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

Anna Martínez-Gavara is graduated in Mathematical Sciences and Statistical Sciences and Techniques in 2001 and 2002, respectively. She received the doctoral degree in Mathematics in 2008 from the University of Valencia, funded with a FPU grant. She is currently Professor of Statistics and Operations Research at the University of Valencia, Spain. Her scientific contributions range from Applied Mathematics to Operation Research. In the former area, she worked on the approximation and numerical simulation of shallow water equations which are widely used in the modeling of a number of real-life applications ranging from ocean and hydraulic engineering to the modeling of tidal flows in estuary and coastal areas, among others. Development of models for simulating the behavior of water contributes to improving and protecting environment. Since 2012, her main research area of scientific contribution is framed within the study of heuristic and metaheuristic methods for solving hard optimization problems. Their applications have been widely relevant in fields such as social network analysis, management science, facility location, mobility network, and supply chain, among others. Her scientific contributions in this field help to strengthen the competitiveness and technological environment of companies and, to enhance the welfare of population. She conducts

interdisciplinary research in the area of mathematical modeling and metaheuristics, applied to the study of real problems.

Prof. Martínez-Gavara has published 21 articles in indexed journals (JCR), 17 of them in the first quartile and 4 in the second quartile. It should be noted that she has published in top operation research and computer science journals, such as Information Science, European Journal of Operational Research, Expert Systems with Applications, Memetic Computing, or Computers and Operations Research. She has also published four book chapters in internationally renowned publishers, a national book chapter, as well as more than thirteen articles included in Conference Proceedings, four of them with peer review, and one paper indexed in the scientific journal ranking (SJR). She has contributed to more than 30 congress (national and international), as well as ten invited talks in seminars and summer schools of national and international universities such as University of Seville, Nottingham, University of Catania, University College of Dublin. Throughout her professional career, she has made five research stays with renowned experts: 3 months at the University of Marseille with Dr. G. Chiavassa in 2006, 4 months at the École Polytechnique de Paris with Professor F. Coquel in 2012, 2 months in 2014 and 1 month in 2016 and 1 more month in 2022 with Professor M. Laguna at the University of Boulder Colorado, and finally, 4 months in 2015 at the University of Nottingham with Dr. D. Landa Silva.

Prof. Martínez-Gavara has participated in several research projects, two funded by the European Union, seven funded by the corresponding Ministry in a state call, one by the Generalitat Valenciana and one by the Office for the Transfer of Research Results from the University of Seville. Finally, she was the principal investigator in 2014 of a Precompetitive Project of the University of Valencia based on Metaheuristic Procedures for the optimization of selection problems. She has been in the Organizing Committee of two national conferences.

According to the Spanish national evaluation system, Prof. Anna Martínez-Gavara has three positive teaching periods (quinquenios docentes): 2002-2006, 2009-2014, 2015-2019; and two positive research periods (sexenios de investigación): 2004-2012, 2013-2018. She has an h-index of: 11 (Scopus), 13 (Google Scholar) and 10 (Web of Science).

Prof. Martínez-Gavara teaches in various degrees, and since 2017 in the Data Science master's degree. She has directed more than 10 final degree projects in mathematics, and she has been an academic tutor of students in company practices. Furthermore, she has participated in three teaching innovation projects, being principal investigator in two of them. In addition, she has also been a speaker at various conferences and courses related to the training and quality of university teaching. Since 2017, she is the coordinator of a program called "Entre Iguales" to support new students in the mathematics degree. The last three years, she has performed advisory services and collaboration with Universitat Oberta de Catalunya (UOC) in their master's degree in computational engineering and mathematics. Finally, she is currently supervising a doctoral thesis.

Part C. RELEVANT MERITS (*sorted by typology*)

C.1. Publications (10 most recent Q1-JCR)

- Lu Z., Martínez-Gavara A., Hao J.K., Lai X. (2023), Solution-based tabu search for the capacitated dispersion problem, **Expert System with Applications** 223, 119856.
- Martí, R., Martínez-Gavara, A., Sánchez-Oro, J., and Pérez-Peló, S. (2022), S. A review on discrete diversity and dispersion maximization from an OR perspective, **European Journal of Operational Research**, 299 (3), 795-813.

- Lozano-Orsorio, I., Martínez-Gavara, A., Martí R., Duarte, A. (2022). Max-min dispersion with capacity and cost for a practical location problem, **Expert System with Applications**, 200, 116899.
- Sánchez-Oro, J, López-Sánchez, A.D., Martínez-Gavara, A., Hernández-Díaz, A., Duarte, A. (2021). A Hybrid Strategic Oscillation with Path Relinking Algorithm for the Multiobjective k-Balanced Center Location Problem, **Mathematics**, 9-8.
- Martínez-Gavara, A., Corberán, T., Martí, R. (2021), GRASP and Tabu Search for the Generalized Dispersion Problem, **Expert Systems with Applications**, 173, 114703.
- Martí, R., Martínez-Gavara, A., Sánchez-Oro, J. (2021) The Capacitated Dispersion Problem: A mathematical model and a scatter search metaheuristic, **Memetic Computing** 13, 131-146.
- Napoletano, A., Martínez-Gavara, A., Festa, P., Pastore, T., Martí, R. (2019) Heuristics for the Constrained Incremental Graph Drawing Problem. **European Journal of Operational Research**. 274 (2), 710 - 729.
- Martí, R., Martínez-Gavara, A., Sánchez-Oro, J., Duarte, A. (2018). Tabu Search for the Dynamic Bipartite Drawing Problem. **Computers and Operations Research**, 91, 1 - 12.
- Martínez-Gavara, A., Landa-Silva, D., Campos, V., Martí, R. (2017). Randomized heuristics for the Capacitated Clustering Problem. **Information Sciences**, 417, 154 - 168.
- Martínez-Gavara, A.; Campos, V., Laguna, M., Martí, R. (2017) Heuristic solution approaches for the maximum minsum dispersion problem. **Journal of Global Optimization**, 67(3), 671 - 686.

C.2. Conferences (10 most recent oral communications and invited talks)

- Martí, R. and Martínez-Gavara, A. *GRASP with Path Relinking for Optimization*, University College of Dublin, July 10th, 2023 (invited)
- Martí, R. and Martínez-Gavara, A. *The Maximum Diversity Problem*, University College of Dublin, July 19th, 2023 (invited)
- Martínez-Gavara, A. Scatter Search for the Capacitated Dispersion Problem, XIX Conference of the Spanish Association for Artificial Intelligence (CAEPIA), September 22-24, 2021. Málaga, Spain.
- Martínez-Gavara, A. Discrete diversity and dispersion maximization, 31st European Conference on Operational Research (EURO 2021), July 2021. Athens, Greece.
- Martí, R. and Martínez-Gavara, A., Optimization in Graph Drawing, Metaheuristics Summer School, June 15-18, 2021, Catania, Italy. (invited)
- Martí, R. and Martínez-Gavara, A., Models and Heuristics in Discrete Diversity Maximization, Metaheuristics Summer School, June 15-18, 2021, Catania, Italy. (invited)
- Martínez-Gavara, A. Optimizing diversity and equity: Mathematical models and heuristic methods, Euro working group on Metaheuristic conference EU/Meeting 2019 SINTEF. May 2019, Oslo, Norway.
- Martínez-Gavara, A. Tabu Search for Min-Max Edge Crossing in Graphs. XXXVIII Congreso Nacional de Estadística e Investigación Operativa. Universidad Politécnica de Valencia. 2019. Alcoy, España.
- Martínez-Gavara, A., Multi-Start Methods for the Capacitated Clustering Problem. 12th Metaheuristics International Conference (MIC 2017) and XII Congreso Español de Metaheurísticas, Algoritmos Evolutivos y Bioinspirados. Universitat Pompeu Fabra. July 2017. Barcelona, Spain.
- Martínez-Gavara, A., Heuristic algorithms for the maximum minsum dispersion problem. X Congreso Español de Metaheurísticas, Algoritmos Evolutivos y Bioinspirados. MAEB 2015. Universidad de Extremadura. February 2015. Mérida, Spain.
- Martínez-Gavara, A., Tabu Search and GRASP for the Capacitated Clustering problem. International Workshop on Locational Analysis and Related Problems. Universidad de Sevilla. October 2014. Sevilla, Spain.

- Martínez-Gavara, A. Tabu Search and GRASP for the Capacitated Clustering problem. 20th Conference of the International Federation of Operational Research Societies. IFORS. Universitat Politècnica de Catalunya. July 2014. Barcelona, Spain.

C.3. Research projects

Title / Code / Funded by / Participants / Start – End / Budget / Project director / Number of researchers

- Red en Transporte, Inteligencia Artificial y Analítica de Datos / RED2022-134703-T / Ministerio de Ciencia e Innovación / 2021-2023 / Ángel Juan (UPV) / 12
- Heuristics for Supply Chain Optimization Problems / PID2021-125709OB-B-C21 (proyecto coordinado) / Ministerio de Ciencia e Innovación/ Sept 2022 – Sept 2025 / 116.886 / Rafael Martí y Anna Martínez-Gavara / 6 (Universidad de Valencia)
- Algoritmos inteligentes para la toma de decisiones en la localización de servicios / CIAICO-2021-224-MA / Generalitat Valenciana/ Universidad de Valencia, Universidad Rey Juan Carlos / 2022-24/ 87.000/ Rafael Martí y Anna Martínez-Gavara / 6
- Red en Ciencia de Datos y Nuevas Tecnologías Aplicadas al Deporte y la Salud / 05-UPR-19 / Ministerio de Cultura y Deporte / 2019-2020 / 8.000 euros / Ángel Juan (UOC) / 25
- Optimización Inteligente en Grafos / PGC2018-095322-B-C21 (proyecto coordinado) / Ministerio de Ciencia, Innovación y Universidades / Universidad de Valencia, Universidad Rey Juan Carlos / 2019 – 2021 / 50.000 euros (Univ. Valencia) + 60.000 euros (Univ. RJC) / Rafael Martí / 11
- Optimización Combinatoria II: Métodos y Estrategias / TIN2015-65460-C02 (proyecto coordinado) / Ministerio de Economía y Competitividad / Universidad de Valencia, Universidad Rey Juan Carlos, Colorado University / 2016 – 2018 / 45.000 euros (Univ. Valencia) + 50.000 euros (Univ. RJC) / Rafael Martí / 11
- Optimización Combinatoria: Modelos y Aplicaciones / TIN2012-35632-C02 (proyecto coordinado) / Ministerio de Economía y Competitividad / Universidad de Valencia, Universidad Rey Juan Carlos, Colorado University, AT&T Research Laboratories / 2013 – 2015 / 21.000 euros (Univ. Valencia) + 36.000 euros (Univ. RJC) / Rafael Martí / 11
- Alta resolución y adaptatividad en modelos hiperbólicos y procesamiento de imágenes / MTM2011-22741 / Ministerio de Economía y Competitividad / Universidad de Valencia / 2012 – 2015 / 90000 euros / Pep Mulet / 9
- Procedimientos metaheurísticos para la optimización de problemas selección / UV-INV-PRECOMP13-115334/ Universidad de Valencia / 01.09.2013-30.09.2014 / 9000 euros / Anna Martínez-Gavara / 1

C.4. Contracts, technological or transfer merits

Advisory services and collaboration with Universitat Oberta de Catalunya (UOC). Periods: 01.09.2019-28.02.2020, 01.09.2020-28.02.2021, 01.09.2021-28.02.2022, and 01.09.2022-30.08.2023.

Latest research stays:

- University of Colorado. Leeds School of Business. Boulder (CO) USA — 1 month of visit (2022).
- University of Colorado. Leeds School of Business. Boulder (CO) USA — 1 month of visit (2016).
- University of Nottingham. School of Computer Science. Nottingham, UK — 4 months of visit (2015).
- University of Colorado. Leeds School of Business. Boulder (CO) USA — 2 months of visit (2014).
- Ecole Polytechnique. Centre de Mathématiques Appliquées. Paris, France — 4 months of visit (2012).