

**Part A. PERSONAL INFORMATION**

**CV date** 21/04/2022

First and Family name	Martínez Merino, Luisa Isabel		
Social Security, Passport, ID number	32082180D	Age	31
Researcher codes	WoS Researcher ID	C-2899-2018	
	SCOPUS Author ID	57193897795	
	Open Researcher and Contributor ID (ORCID)	0000-0002-3386-9648	

**A.1. Current position**

Name of University/Institution	Universidad de Cádiz		
Department	Estadística e Investigación Operativa		
Address and Country	Facultad de Ciencias Campus Universitario de Puerto Real s/n. 11510 Puerto Real, Cádiz		
Phone number	628571212	E-mail	<a href="mailto:Luisa.martinez@uca.es">Luisa.martinez@uca.es</a>
Current position	Postdoctoral Researcher (Junta de Andalucía and European Social Fund)	From	September 2021
Key words	Operations Research, location, Combinatorics Optimization, Integer Optimization		

**A.2. Education**

Bachelor/Master/PhD	University	Year
PhD in Mathematics	Universidad de Cádiz	2018
Master in Mathematics	Universidad de Cádiz	2014
Bachelor in Mathematics	Universidad de Cádiz	2013

**A.3. JCR articles, h Index, thesis supervised...**

h Index: 5 (Scopus), 5 (Google Scholar)

Total citations: 52 (Scopus), 76 (Google Scholar)

4 papers in Q1 of area Operations Research and Management Science (WOS)

1 paper in Q1 of area Computer Science, Artificial Intelligence (WOS)

1 paper in Q2 of area Operations Research and Management Science (WOS)

1 paper in Q3 of area Applied Mathematics (WOS)

**Part B. CV SUMMARY** (max. 3500 characters, including spaces)

Dr. Martínez obtained her PhD Degree in Mathematics in 2018 by the Universidad de Cádiz (UCA). She has been a postdoctoral researcher at UCA for nine months. Then, she served as lecturer at US and UCA for approximately a year. She was a Juan de la Cierva Formación researcher at the US until September 2021. Currently, she is a postdoctoral researcher in Universidad de Cádiz.

Dr. Martínez research area is Operations Research. Particularly, she has focused on location problems under uncertainty and classification methods.

She has worked on several extensions of the discrete p-center problem and she has contributed in the development of a general multi-period stochastic covering location model. Besides, she has studied some Support Vector Machine models with feature selection and ramp loss.



## Part C. RELEVANT MERITS

### C.1. Publications (including books)

- **Scientific paper:** Alfredo Marín; Luisa I. Martínez-Merino; Justo Puerto; Antonio M. Rodríguez-Chía. 2022. The soft-margin Support Vector Machine with ordered weighted average Knowledge-Based Systems. Elsevier. 237, pp.107705. DOI: <https://doi.org/10.1016/j.knosys.2021.107705>
- **Scientific paper:** Marta Baldomero-Naranjo; Luisa I. Martínez-Merino; Antonio M. Rodríguez-Chía. 2021. A robust SVM-based approach with feature selection and outliers detection for classification problems Expert Systems with Applications. 178, pp.115017. ISSN 0957-4174. DOI: <https://doi.org/10.1016/j.eswa.2021.115017>
- **Scientific paper:** Marta Baldomero-Naranjo; Luisa I. Martínez-Merino; Antonio M. Rodríguez-Chía. Tightening big Ms in integer programming formulations for support vector machines with ramp loss. European Journal of Operational Research 286 (1), pp. 84-100, 2020. ISSN 0377-2217. DOI: <https://doi.org/10.1016/j.ejor.2020.03.023>
- **Scientific paper:** Maria Albareda Sambola; Luisa I. Martínez Merino; Antonio M. Rodríguez Chía. The Stratified p-center problem. Computers & Operations Research. 108, pp. 213 – 225, 2019. ISSN 0305-0548. DOI: <https://doi.org/10.1016/j.cor.2019.04.013>.
- **Scientific paper:** Martine Labbé; Luisa I. Martínez Merino; Antonio M. Rodríguez Chía. Mixed Integer Linear Programming for Feature Selection in Support Vector Machine. Discrete Applied Mathematics. 261, pp. 246 – 304, 2019. ISSN 0166-218X. DOI: <https://doi.org/10.1016/j.dam.2018.10.025>
- **Scientific paper:** Alfredo Marín; Luisa I. Martínez Merino; Antonio M. Rodríguez Chía; Francisco Saldanha da Gama. Multi-period Stochastic Covering Location Problems: modeling framework and solution approach. European Journal of Operational Research. 268 - 2, pp. 432 – 449, 2018. ISSN 0377-2217. DOI:<https://doi.org/10.1016/j.ejor.2018.01.040>
- **Scientific paper:** Luisa I. Martínez Merino; Maria Albareda Sambola; Antonio M. Rodríguez Chía. The probabilistic p-center problem: Planning service for potential customers. European Journal of Operational Research. 262 - 2, pp. 509 – 520, 2017. ISSN 0377-2217  
DOI: <https://doi.org/10.1016/j.ejor.2017.03.043>
- **Book chapter:** Luisa Isabel Martínez Merino; Maria Albareda Sambola; Antonio Manuel Rodríguez Chía. Location of emergency facilities with uncertainty in the demands. Trends in differential equations and applications. 8, pp. 339 - 356. Springer, 2016. ISBN 978-3-319-32012-0
- **Proceedings edition:**
  - Editors: M. Albareda-Sambola, M. Baldomero-Naranjo, L.I. Martínez-Merino, D. Ponce, M.A. Pozo, and J. Puerto. Proceedings of the X International Workshop on Locational Analysis and Related Problems (2020). ISBN: 978-84-09-17797-4
  - Editors: M. Baldomero-Naranjo, I. Espejo-Miranda, L.I.Martínez-Merino, J.M. Muñoz-Ocaña, A.M. Rodríguez-Chía. Proceedings of the IX International Workshop on Locational Analysis and Related Problems (2019). ISBN: 978-84-09-07742-7
  - Editors: M. Baldomero-Naranjo, I. Espejo-Miranda, L.I.Martínez-Merino, A.M. Rodríguez-Chía, D. Ruiz-Hernández. Proceedings of the VIII International



Workshop on Locational Analysis and Related Problems (2017). ISBN: 978-84-697-5263-0

- Editors: M. Albareda-Sambola, L.I. Martínez-Merino, A.M. Rodríguez-Chía. Proceedings of the VI International Workshop on Locational Analysis and related Problems (2015). ISBN: 978-84-944229-8-0, doi:<http://dx.doi.org/10.3926/redloca15>

## C.2. Research projects and grants

**1. Research project:** Retos de la optimización combinatoria en los nuevos modelos de redes complejas y ciencia de datos (P18-FR-1422)

Financial entity: Junta de Andalucía (Consejería de Economía y Conocimiento)

Period: 01/06/2020- 31/05/2024.

Main researchers: Justo Puerto Albandoz / Antonio Manuel Rodríguez Chía

**2. Research project:** Complex networks meet data science (NETMEETDATA)

Financial entity: Fundación BBVA

Period: 01/05/2020 - 30/04/2022

Main researcher: Justo Puerto.

**3. Research project:** BIDCLAMP Big data classification via mathematical programming (FEDER-UCA18-106895)

Financial entity: FEDER funds

Period: 01/04/2020 - 31/03/2022.

Main researcher: Antonio Manuel Rodríguez-Chía.

**4. Research project:** Nuevos desafíos matemáticos en problemas logísticos y de transporte integrado sobre redes complejas: diseño y optimización (MTM2016-74983-C2-2-R)

Financial entity: Ministerio de Economía y Competitividad.

Period: 30/12/2016 - 29/12/2020.

Main researcher: Antonio Manuel Rodríguez-Chía.

**5. Research project:** Red Temática: Localización y Problemas Afines (MTM2016-81874-REDT).

Financial entity: Ministerio de Economía y Competitividad.

Period: 01/12/2016 - 30/11/2018.

Main researcher: Antonio Manuel Rodríguez-Chía.

**6. Research project:** Red Temática: Localización y Problemas Afines (MTM2014-53828-REDT).

Financial entity: Ministerio de Economía y Competitividad.

Period: 01/12/2014 - 30/11/2016.

Main researcher: Antonio Manuel Rodríguez-Chía.

**7. Research project:** Desafíos Matemáticos en el Diseño y Optimización de Redes Complejas: Aplicaciones. (MTM2013-46962-C2-2-P).

Financial entity: Ministerio de Economía y Competitividad.

Period: 01/01/2014 - 31/12/2017.

Main researcher: Antonio Manuel Rodríguez-Chía.



## C.5 Research stays

- Predoctoral research stay in Faculdade de Ciências de Lisboa, Lisboa (Portugal)  
Period: 01/03/2017 - 31/05/2017  
Objective: analysis of models and methodologies for stochastic multi-period covering location models.
- Postdoctoral research stay in Concordia University, Montreal (Canada)  
Period: 01/03/2019 – 11/09/2019  
Objective: development of cutting plane algorithms for solving strong primal relaxations for the well-known Traveling Salesman Problem and related problems.

## C.6 Member of Organizing committees

- X Workshop on Locational Analysis and Related Problems. Sevilla, January 23- 24, 2020.
- IX Workshop on Locational Analysis and Related Problems. Cádiz, January 30- February 1, 2019.
- VIII Workshop on Locational Analysis and Related Problems. Segovia, September 27-29, 2017.
- VI Workshop on Locational Analysis and Related Problems. Barcelona, November 25-27, 2015.

## C.7. Conference contributions

- Title: On extensions of the discrete p-center problem.  
Authors: L.I. Martínez-Merino, M. Albareda-Sambola, A.M. Rodríguez-Chía.  
Conference: V Congreso de Jóvenes investigadores RSME.  
Place and date: Castellón, January 27-31, 2020.
- Title: General covering location model including time-dependent and stochastic features  
Authors: A. Marín, L.I. Martínez-Merino, A.M. Rodríguez Chía, F. Saldanha da Gama  
Conference: Journées de l'Optimisation  
Place and date: Montreal, May 13-15,2019
- Title: An extension of the p-center problem considering stratified demand  
Authors: M. Albareda-Sambola, L.I. Martínez-Merino, A.M. Rodríguez Chía  
Conference: IX International Workshop on Locational Analysis and Related Problems  
Place and date: Cádiz, January 30- February 1, 2019
- Title: The Stratified p-center problem  
Authors: M. Albareda-Sambola, L.I. Martínez-Merino, A.M. Rodríguez Chía  
Conference: XXXVII Spanish conference on Statistics and Operations Research (SEIO)  
Place and date: Oviedo, May 29- June 1, 2018.
- Title: A general model for discrete covering location problems  
Authors: A. Marín; L.I. Martínez Merino; A.M. Rodríguez Chía; F. Saldanha da Gama.  
Conference: XXIV EURO Working Group on Locational Analysis Meeting  
Place and date: Edinburgh, May 23-25, 2018
- Title: New heuristic approaches for the Probabilistic p-center problem.  
Authors: M. Albareda-Sambola, L.I. Martínez-Merino, A.M. Rodríguez-Chía.  
Conference: 1st Spanish young statisticians and operational researchers meeting.  
Place and date: Granada, November 13-15, 2017.
- Title: A stochastic multi-period covering model.  
Authors: A. Marín, L.I. Martínez-Merino, A.M. Rodríguez Chía, F. Saldanha da Gama  
Conference: VIII International Workshop on Locational Analysis and Related Problems  
Place and date: Segovia, September 27-29, 2017.
- Title: Analysis of a SVM model with feature selection  
Authors: M. Labbé, L.I. Martínez-Merino, A.M. Rodríguez-Chía  
Conference: International Symposium on Locational Decisions (ISOLDE XIV).  
Place and date: Toronto-Huntsville, July 9-14, 2017.