

PERSONAL INFORMATION

Name: PUERTO ALBANDOZ, Justo

URL for web site: https://investigacion.us.es/sisius/sis_showpub.php?idpers=1063

SCOPUS H INDEX: 25.

GOOGLE SCHOLAR H INDEX: 35.

SCOPUS OVERALL CITATIONS: 2312

GOOGLE SCHOLAR CITATIONS: 4619

EDUCATION

1990 PhD Dpto. Estadística e Investigación Operativa (EIO), Facultad de Matemáticas, Univ. Sevilla, Spain

CURRENT POSITION(S)

2001 – 2020 Full Professor. Dpto. EIO, Facultad de Matemáticas, Univ. Sevilla, Spain

PREVIOUS POSITIONS

1986 – 1988 Pre-doctoral Grant

1989 – 1990 Teachingassistant, Facultad de Matemáticas, Univ. Sevilla, Spain.

1990 – 1992 T.E.U. Professor. Dpto. EIO. Fac. de Matemáticas, Univ. Sevilla, Spain

1993-2000 Associate Professor Dpto. EIO. Fac. de Matemáticas, Univ. Sevilla, Spain

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

1994 – 2020 5 Postdocs (Jörg Kalcsics, Federico Perea, Ana B. Ramos, D. Ponce, L. Amorosi)

15 PhDs (Eduardo Conde, Amparo Mármol, Manuel Muñoz-Marquez, Luisa Monroy, Antonio Rodríguez-Chía, Yolanda Hinojosa, Cristina Fernández, Federico Perea, Víctor Blanco, Safae El HajBenali, Miguel A. Pozo, Diego Ponce, Marina Leal) Dpto. EIO, Facultad de Matemáticas, Univ. Sevilla, Spain. José Miguel Gutierrez, Univ. La Laguna, Spain. Luis Guardiola, Univ. Miguel Hernandez de Elche, Spain.

TEACHING ACTIVITIES (if applicable)

1986 – 1990 Assistant; Biostatistics, Operations Research and Mathematical Programming. Facultad de Matemáticas, Univ. Sevilla, Spain

1990 – 1992 Assistant Professor (TEU): Operations Research, Queuing Theory, Biostatistics. Facultad de Matemáticas, Univ. Sevilla, Spain.

1993-1995 and 1997-2001 Associate Professor (TU): Operations Research and Queuing Theory. Facultad de Matemáticas, Univ. Sevilla, Spain.

1996. Location Theory. Univ. Kaiserslautern, Germany

2001-2011 and 2013-14 Linear Programming; Nonlinear Programming and Mathematical Methods for Operations Research. Facultad de Matemáticas, Univ. Sevilla, Spain

ORGANIZATION OF SCIENTIFIC MEETINGS (if applicable)

1998-2014 Scientific committee member for the EWGLA meetings.

2002 Scientific committee member V Spanish Meeting on Game Theory. Sevilla.

2006. Program Committee member of MOPGP'06. Tours (Francia).

2007, 2009. Program Committee member of SPO 2007, SPO 2009, Jaca, España.

2009. Chairman of "Modelling Summer at IMUS", Sevilla.

2010 Chairman of "Exploratory workshop on mixed-integer Non-Linear Programming", Sevilla.

2010. Program Committee member of "Behavioral and quantitative Game Theory: Conference on future directions", Newport Beach, CA (USA).

2007-2010. Scientific committee member of the annual meetings of SEIO.

2011 Scientific committee member of doc-course IMUS "New topics in Game Theory", Sevilla.

2011. Chairman of the meeting ORP3 – 2011, Cádiz.

2015. II Workshop on MINLP Seville.

2016. MSRI-IMUS Graduate Summer School on Mixed Integer Nonlinear Programming

2020. X International workshop on Locational Analysis (X IWOLOCA).

INSTITUTIONAL RESPONSIBILITIES (if applicable)

1995 Secretary of Dep. Estadística e Investigación Operativa, Univ. Sevilla, Spain

2007 – 2015 Secretary of Instituto de Investigación Matemática (IMUS), Univ. Sevilla, Spain

2010-2015 Chairman of the PhD Program of Mathematics of the University of Seville.

2014-2015 Representative of IMUS at the Academic Sponsor Committee of Mathematical Science Research Institute (MSRI), Berkeley.

COMMISSIONS OF TRUST (if applicable)

Since 2000 Review Board, ANEP, Spain

2007 – 2020 Editor in chief of TOP the Spanish Journal of Operational Research Journal, JCR in Operations Research. Springer.

2008 – 2012 Member of the Advisory Board for the National Program in Mathematics, Spanish Government, Spain

2012 – 2020 Member of the Editorial Board of Computers and Operations Research.Elsevier.

2010 – 2020 Associate Editor of Discrete Optimization.Elsevier.

MEMBERSHIPS OF SCIENTIFIC SOCIETIES (if applicable)

Since 1992 Member of SEIO, Spain (2005-2011: Executive Committee member)

MAJOR COLLABORATIONS (if applicable)

Collaborator: S. Nickel, Optimization with ordering (theoretical results), KIT, Karlsruhe, Germany.

Collaborator: Pier L. Papini, Optimization of Location Problems in Banach spaces (theoretical results), Univ. Bologna, Italy.

Collaborator: A. Tamir, Combinatorial Optimization and Algorithms (theoretical results), Univ. Tel Aviv, Israel.

Collaborator: F. Ricca and A. Scozzari, Optimization problems on networks, La Sapienza and Nicolo Cusano di Roma.

ON-GOING GRANTS

Project Title	Funding source	Amount (Euros)	Period	Role of the PI	Relation to current proposal
NUEVOS DESAFÍOS MATEMÁTICOS EN PROBLEMAS LOGÍSTICOS Y DE TRANSPORTE INTEGRADO SOBRE REDES COMPLEJAS: DISEÑO Y OPTIMIZACIÓN	FEDER-PLAN NACIONAL INVESTIGACIÓN MTM2016-74983	140.600	January 2017-December 2020	Chairman	Direct
Nuevos resultados sobre los problemas de diseño y optimización en redes complejas: Aplicaciones al diseño de ciudades inteligentes	FEDER-Junta Andalucía-US-1256951	75.500	February 2020-January 2022	Chairman	Direct
Complex networks meet data science	Proyectos Fundación "BBVA"	99.583	May 2020-April 2022	Chairman	Direct

	Complex Networks				
Un sistema automatizado de rutado de canalizaciones basado en aprendizaje automático y programación matemática	Subvenciones de Apoyo a la Investigación (Autonómico) CEI3	50.521	March 2020-September 2021	Chairman	Direct

TEN YEARS TRACK-RECORD: Fifteen representative publications in leading international peer-reviewed journals in (last ten years):

1. V. Blanco, A. Japón, J. Puerto. "Optimal arrangements of hyperplanes for multiclass classification". *Adv Data Anal Classif* 14, 175-199 (2020). <https://doi.org/10.1007/s11634-019-00367-6>
2. J. Puerto, M. Rodriguez-Madrena and A. Scozzari. Clustering and portfolio selection problems: A unified framework. *Computers and Operations Research* 17 (2020) 104891.
3. V. Blanco, J. Puerto, A.M. Rodriguez-Chia. On lp-support vector machines and multidimensional kernels. *Journal of Machine Learning Research*, (14):1-29, 2020.
4. G. Laporte; F.A. Ortega, M.A. Pozo, J. Puerto; "Multi-objective integration of timetables, vehicle schedules and user routings in a transit network", *Transportation Research Part B*, 98 (2017), 94--112.
5. E. Fernández, Y. Hinojosa, J. Puerto, F. Saldanha. "New algorithmic framework for conditional value at risk: application to stochastic fixed-charge transportation". *European Journal of Operational Research* 227:1, 215-226 (2019).
6. J. Puerto, F. Perea, "On minimax and Pareto optimal security payoffs in multicriteria games", *Journal of Mathematical Analysis and Applications*. 2016. <http://dx.doi.org/10.1016/j.jmaa.2017.01.002>
7. J. Puerto, A.M. Rodríguez-Chía, A. Tamir, "Revisiting k -sum Optimization", *Mathematical Programming* 2016. DOI: 10.1007/s10107-016-1096-1
8. V. Blanco, J. Puerto, D. Ponce, "Continuous location under the effect of refraction", *Mathematical Programming* 2016, DOI: 10.1007/s10107-016-1002-x.
9. E. Fernández, M. Pozo, J. Puerto, A. Scozzari, "Ordered Weighted Average Optimization in Multiobjective Spanning Tree Problems", *European Journal of Operational Research* 2016, DOI: 10.1016/j.ejor.2016.10.016.
10. J. Puerto, A.M. Rodriguez-Chia, C. Sanchez, A.B. Ramos, "Ordered Median Hub Location Problems with Capacity Constraints", Accepted in *Transportation Research Part C*, 2015. <http://dx.doi.org/10.1016/j.trc.2015.05.012>
11. V. Blanco, J. Puerto, "Short rational generating functions for solving some families of fuzzy integer programming problems", *Fuzzy Sets and Systems*, Volume 272, 1:30-46, (2015).
12. V. Blanco, S. El Haj Ben Ali, J. Puerto, "Revisiting several problems and algorithms in Continuous Location with l_p norms", *Computational Optimization and Applications* 58(3): 563-595, (2014).
13. F. Perea, J. Puerto, "Revisiting a game theoretic framework for the robust railway network design against intentional attacks", *European Journal of Operational Research*, 226(2), 286--292 (2013). 10.1016/j.ejor.2012.11.015.

14. J. Puerto, A.M. Rodríguez-Chia, "On the structure of the solution set for the single facility location problem with average distances", *Mathematical Programming* 128:373-401, (2011).
15. V. Blanco, J. Puerto, Ana B. Ramos, "Expanding the Spanish high-speed railway network", *OMEGA*, 39, 138-150, (2011).

Books:

[S. Nickel](#), J. Puerto: Location Theory - A Unified Approach. Springer 2005: I-XX, 1-437 44

F.R. Fernández, J. Puerto. "Teoría de Juegos Multiobjetivo". ISBN: 84-689-6702-5. Depósito Legal MA-102-2006. Málaga (2006).

J. Puerto et al. (Eds.), "Proceedings of OR Peripatetic Post-Graduate Programme (ORP³-2011)". Servicio de Publicaciones de la Universidad de Cádiz, ISBN: 978-84-9828-348-8. 2011.

Juan A. Mesa, Francisco A. Ortega, Miguel A. Pozo and Justo Puerto (2014). Rescheduling Railway Timetables in Presence of Passenger Transfers Between Lines Within a Transportation Network. *Advances in Intelligent Systems and Computing* vol. 262. Computer-based Modelling and Optimization in Transportation. J. F. de Sousa and R. Rossi (eds.). Springer International Publishing Switzerland. ISBN: 978-3-319-04629-7 (Print), 978-3-319-04630-3 (Online) DOI: 10.1007/978-3-319-04630-3-26. Springer International Publishing Switzerland 2014.

S. Nickel, J. Puerto and A.M. Rodríguez-Chia (2015) "Location Problems with multiple criteria". In *Location Science*, G. Laporte, S. Nickel and F. Saldanha da Gama (Eds.). Springer. ISBN: 978-3-319-13110-8.

J. Puerto and A.M. Rodríguez-Chia (2015) "Ordered Median Location Problems". In *Location Science*, G. Laporte, S. Nickel and F. Saldanha da Gama (Eds.). Springer. ISBN: 978-3-319-13110-8.

J. Puerto (2017) "Sharing costs in some distinguished location problems". In *Spatial Interaction Models*, L. Mallozzi et al. (Eds.) Springer Optimization and Its Applications 118, DOI 10.1007/987-3-319-52654-6_14.

Puerto J., Rodríguez-Chía A.M. (2019) Ordered Median Location Problems. In: Laporte G., Nickel S., Saldanha da Gama F. (eds) *Location Science*. pp 215-260. Springer, Cham

Nickel S., Puerto J., Rodríguez-Chia A.M. (2019) Location Problems with Multiple Criteria. In: Laporte G., Nickel S., Saldanha da Gama F. (eds) *Location Science*. pp 261-302. Springer, Cham

FULL LIST OF ARTICLES SINCE 2011.

T. Schnepfer, K. Klamroth, J. Puerto, M. Stiglmayr. Local Analysis to Determine All Optimal Solutions of p-k-max Location Problems on Networks. *Discrete Applied Mathematics*. 2020. <https://doi.org/10.1016/j.dam.2020.05.013>

Marín, D. Ponce, J. Puerto. A fresh view on the Discrete Ordered Median Problem based on partial monotonicity. *European Journal of Operational Research* 286(3): 839-848, 2020.

J. Puerto, M. Rodríguez-Madrena and A. Scozzari. Clustering and portfolio selection problems: A unified framework. *Computers and Operations Research* 17 (2020) 104891.

V. Blanco, J. Puerto, A.M. Rodríguez-Chia. On ℓ_p -support vector machines and multidimensional kernels. *Journal of Machine Learning Research*, (14):129, 2020.

Leal, D. Ponce and J. Puerto. Portfolio problems with two levels decision-makers: Optimal portfolio selection with Pricing decisions on transaction costs. *European Journal of Operational Research* (2020) 284: 712-727.

S. Deleplanque, M. Labbé, D. Ponce, J. Puerto. "A Branch-Price-and-Cut Procedure for the Discrete Ordered Median Problem". On line 2020. *Informatics Journal on Computing* <https://doi.org/10.1287/ijoc.2019.0915>.

V. Blanco, A. Japón, J. Puerto. "Optimal arrangements of hyperplanes for multiclass classification". *Adv Data Anal Classif* 14, 175-199 (2020). <https://doi.org/10.1007/s11634-019-00367-6>

F. Perea, J. Puerto. "A heuristic procedure for computing the nucleolus". *Computers and Operations Research*, Volume 112, December 2019, 104764. <https://doi.org/10.1016/j.cor.2019.104764>

H. Maravillo, J.F. Camacho, J. Puerto. M. Labbé. "A market regulation bilevel problem: a case study of the Mexican petrochemical industry". *OMEGA*. 2019. <https://doi.org/10.1016/j.omega.2019.08.012>

Victor Blanco, Eduardo Conde, Yolanda Hinojosa, Justo Puerto. An optimization model for line planning and timetabling in automated urban metro subway networks. A case study. *OMEGA* Volume 92, April 2020, 102165

J. Puerto. An exact completely positive programming formulation for the Discrete Ordered Median Problem: An extended version. *Journal of Global Optimization*, 77(2), 341-359. DOI 10.1007/s10898-019-00863-1

Lina Mallozzi, Justo Puerto, Moisés Rodríguez-Madrena. "On location-allocation problems for dimensional facilities". *Journal of Optimization Theory and Applications*. *Journal of Optimization Theory and Applications*, 182(2), 730-767. DOI: 10.1007/s10957-018-01470-y, 2019.

E. Fernández, Y. Hinojosa, J. Puerto, F. Saldanha. "New algorithmic framework for conditional value at risk: application to stochastic fixed-charge transportation". *European Journal of Operational Research* 227:1, 215-226 (2019).

M. Labbé, M. Leal, J. Puerto. "New models for the location of controversial facilities: A bilevel programming approach". *Computers and Operations Research* Volume 107, July 2019, Pages 95-106.

M. Labbé, M.A. Pozo, J. Puerto. "Computational comparisons of different formulations for the Stackelberg Minimum Spanning Tree Game". *International Transactions in Operations Research*. 2019. <https://doi.org/10.1111/itor.12680>

S. Benati, F. López-Blázquez, J. Puerto. "A stochastic approach to approximate values in cooperative games". *European Journal of Operational Research*. 2019. Volume 279, Issue 1, 16 November 2019, Pages 93-106. <https://doi.org/10.1016/j.ejor.2019.05.027>

L. Mallozzi, J. Puerto. "The geometry of optimal partitions in location problems". *Optimization Letters*, vol. 12(1), 203--220. 2018.

F. Ortega, M.A. Pozo, J. Puerto. "On-line timetable rescheduling in a transit line". *Transportation Science*, 52:5, 1035-1296, 2018.

S. Benati, S. Garcia-Quiles, J. Puerto. "Mixed Integer Linear Programming and Heuristic Methods for Feature Selection in Clustering". *Journal of the Operational Research Society*, 69(9) 1379-1395, 2018. doi: 10.1080/01605682.2017.1398206. url: <http://www.tandfonline.com/doi/abs/10.1080/01605682.2017.1398206>

V. Blanco, J. Puerto, R. Salmerón. "Locating hyperplanes to fitting set of points: A general framework". *Computers and Operations Research*. Volume 95, July 2018, Pages 172-193.

E. Conde, M. Leal, J. Puerto. "A minmax regret version of the time-dependent shortest path problem". *European Journal of Operational research* 270:3, 968-981 (2018).

J. Puerto, F. Ricca, A. Scozzari. "Extensive Facility Location problems on Networks: An updated review". *TOP*, 26:2, 187-226 (2018).

J. Puerto, F. Ricca, A. Scozzari. "REJOINER ON: EXTENSIVE FACILITY LOCATION PROBLEMS ON NETWORKS: AN UPDATED REVIEW". 26:2, 236-238, 2018.

D.Ponce, J.Puerto, F.Ricca, A. Scozzari. "Mathematical Programming formulations for the efficient solution of the k-sum approval voting problem". *Computers and Operations Research*, 98, 127-136, 2018.

I. Lari, J.Puerto, F.Ricca, A. Scozzari. "Uniform and most uniform partitions of trees", *Discrete Optimization*, 30, 96-107, 2018.

T. Schnepfer, K. Klamroth, M. Stiglmayr, J. Puerto. "Exact Algorithms for Handling Outliers in Center Location Problems on Networks Using k-max Functions". *European Journal of Operational Research*, 273: 2, 441-451, 2018.

F.A. Ortega, J.A. Mesa, M.A. Pozo, J. Puerto. "Railway traffic disturbance management by means of control strategies applied to operations in the transit system". *International Journal of Transport Development and Integration*, 2 (4), 362-372, 2018.

S. Benati, J. Puerto, A.M. Rodríguez-Chía; "Clustering data that are graph connected", *EJOR* 261:1 43--53, 2017. <https://doi.org/10.1016/j.ejor.2017.02.009>

G. Laporte; F.A. Ortega, M.A. Pozo, J. Puerto; "Multi-objective integration of timetables, vehicle schedules and user routings in a transit network", *Transportation Research Part B*, 98 (2017), 94--112.

J. Puerto, F. Perea, "On minimax and Pareto optimal security payoffs in multicriteria games", *Journal of Mathematical Analysis and Applications*. 2016. <http://dx.doi.org/10.1016/j.jmaa.2017.01.002>

Lari, I., Puerto, J., Ricca, F., Scozzari; "A. Algorithms for uniform centered partitions of trees", *Electronic Notes in Discrete Mathematics*. 55, pp. 37-40. 2016.

J. Alcaraz, E.M. García-Nove, M. Landete, F.J. Monge, J. Puerto. "Rank aggregation in cyclic sequences", *Optim Lett* 1:4, 667--678, (2017). doi:10.1007/s11590-016-1047-z.

Labbé, M., Ponce D., Puerto J. "A Comparative Study of Formulations and Solution Methods for the Discrete Ordered p -Median Problem", *Computers and Operations Research*, [Volume 78](#), 2017, 230–242. DOI: 10.1016/j.cor.2016.06.004

E. Fernández, M. Pozo, J. Puerto, A. Scozzari, "Ordered Weighted Average Optimization in Multiobjective Spanning Tree Problems", *European Journal of Operational Research* 2016, DOI: 10.1016/j.ejor.2016.10.016.

J. Puerto, A.M. Rodríguez-Chía, A. Tamir, "Revisiting k -sum Optimization", *Mathematical Programming* 2016. DOI: 10.1007/s10107-016-1096-1

V. Blanco, J. Puerto, D. Ponce, "Continuous location under the effect of refraction", *Math. Program.* (2016). doi:10.1007/s10107-016-1002-x.

V. Blanco, J. Puerto, S. El Haj, "Continuous multifacility ordered median location problems", *European Journal of Operational Research* 250(1): 56-64, 2016, DOI 10.1016/j.ejor.2015.10.065

I. Lari, J. Puerto, F. Ricca, A. Scozzari, "Partitioning a graph into connected components with fixed centers and optimizing different criteria", *Networks* 67(1): 69-81, 2016. DOI: 10.1002/net.21661.

J. Puerto, A.M. Rodríguez-Chia, C. Sanchez, A.B. Ramos, "Ordered Median Hub Location Problems with Capacity Constraints", Accepted in *Transportation Research- Part C* 2015. <http://dx.doi.org/10.1016/j.trc.2015.05.012>

J. Gago-Vargas, I. Hartillo, J. Puerto and J.M. Ucha; "An improved test set approach to nonlinear integer problems with applications to engineering design", *Computational Optimization and Applications*. DOI 10.1007/s10589-015-9739-3, 2015.

M. Albareda, Y. Hinojosa, J. Puerto, "The reliable p -median problem with at-facility service", *European Journal of Operational Research*, 245(3) 656-666. 2015. DOI 10.1016/j.ejor.2015.03.049.

M. Albareda, Y. Hinojosa, A. Marin, J. Puerto, "When centers can fail: A close second opportunity", *Computers and Operations Research*, 62 (2015), pp. 145-156. DOI information: 10.1016/j.cor.2015.01.002

E. Fernandez, M.A. Pozo, J. Puerto, "Ordered Weighted Average Combinatorial Optimization: Formulations and their properties", *Discrete Applied Mathematics*, 169:31, 97-118, 2014..

V. Blanco, S. El Haj Ben Ali, J. Puerto, "Revisiting several problems and algorithms in Continuous Location with p - norms", *Computational Optimization and Applications* 58(3) 2014: 563-595. DOI: 10.1007/s10589-014-9638-z

J. Puerto, F. Ricca, A. Scozzari, "Reliability problems in multiple path-shaped facility location on networks", *Discrete Optimization* DOI. 10.1016/j.disopt.2014.01.003

Y. Hinojosa, J. Puerto, F. Saldanha, "A two-stage stochastic transportation problem with fixed handling costs and a priori selection of the distribution channels", TOP, 2014. DOI 10.1007/s11750-014-0321-4

J. Kalcsics, S. Nickel, J. Puerto, A.M. Rodriguez-Chia, "Several 2-Facility Location Problems on Networks with Equity Objectives", Networks, 65(1), 1-9, 2015.

V. Blanco, J. Puerto, "Short rational generating functions for solving some families of fuzzy integer programming problems", Fuzzy Sets and Systems, Volume 272, 1:30-46, (2015).

F. Ortega, M.A. Pozo, J. Puerto, "Modelling and planning public cultural schedules for efficient use of resources" Computers & Operations Research 58: 9-23, 2015.

J. Gago-Vargas, I. Hartillo, J. Puerto and J.M. Ucha; "An improved test set approach to nonlinear integer problems with applications to engineering design", Computational Optimization and Applications. DOI 10.1007/s10589-015-9739-3, 2015.

J. Kalcsics, S. Nickel, M.A. Pozo, J. Puerto, A.M. Rodriguez-Chia, "The multi-criteria p-facility median location problem on networks", European Journal of Operational Research 235 (2014), pp. 484-493. DOI information: 10.1016/j.ejor.2014.01.003

J. Puerto, F. Ricca, A. Scozzari, "Unreliable point facility location problems on networks", Discrete Applied Mathematics, Volume 166, 31 March 2014, Pages 188-203.

J. Puerto, D. Pérez-Brito, C.G. Garcia-González, "A Modified Variable Neighborhood Search for the Discrete Ordered Median Problem", European Journal of Operational Research, Volume 234, Issue 1, 1 April 2014, Pages 61-76.

J. Puerto, A.B. Ramos, A.M. Rodriguez-Chia, "A specialized Branch & Bound & Cut for Single-Allocation Ordered Median Hub Location problems", Discrete Applied Mathematics, 10.1016/j.dam.2013.05.035, 2013.

J. Gago, M.I. Hartillo, J. Puerto, J.M. Ucha, "Exact cost minimization of a series-parallel reliable system with multiple component choices using an algebraic method", Computers and Operations Research, 11/2013 40(11):2752-2759.

F. Perea, J. Puerto, "Finding the Nucleolus of any n-Person Cooperative Game by a Single Linear Program", Computers and Operations Research, 40(10), 2308-2313 (2013). 10.1016/j.cor.2013.03.011.

F. Perea, J. Puerto, "Revisiting a game theoretic framework for the robust railway network design against intentional attacks", European Journal of Operational Research, 226(2), 286--292 (2013). 10.1016/j.ejor.2012.11.015.

V. Blanco, J. Puerto, S. El Haj, "A Semidefinite Programming Approach for Solving Multiobjective Linear Programming", Journal of Global Optimization, 58(3):465-480, 2014.

V. Blanco, S. El Haj, J. Puerto, "Minimizing ordered weighted averaging of rational functions with applications to Continuous Location", Computer and Operations Research 40 (2013), pp. 1448-1460.

V. Blanco, J. Puerto, S. El Haj-Ben-Ali, "Optimizing ordered median functions with applications to single facility location", *Operations Research Proceedings 2011* ISBN. 978-3-642-29209-5, (2012), pp 329-334.

V. Blanco, J. Puerto, "An application of integer programming to the decomposition of numerical semigroups", *SIAM J. Discrete Mathematics* Vol. 26, No. 3, 1210–1237, 2012.

J. Puerto, F. Ricca, A. Scozzari, "Range minimization problems in path-facility location on trees" *Discrete Applied Mathematics*, 160(15), 2294-2305, 2012. doi:10.1016/j.dam.2012.05.020 (2012).

M.C. López-de-los-Mozos, J. Puerto, A.M. Rodríguez-Chía, "Robust Mean Absolute Deviation Problems on Networks with Linear Vertex Weights", *NETWORKS* Vol. 61(1), 76-85 2013.

F. Perea, J. Puerto, F.R. Fernandez, "Avoiding unfairness of Owen allocations in linear production processes". *Accepted European Journal of Operational Research* 220 (2012), pp. 125-131.

F.R. Fernández, J. Puerto, "The minimum cost shortest-path tree game", *Annals of Operations Research* DOI: 10.1007/s10479-011-1043-8 (2011).

E. Fernández, J. Puerto, A.M. Rodriguez-Chia, "On Discrete Optimization with Ordering", *Annals of Operations Research* (2011).

M. Albareda, E. Fernandez, Y. Hinojosa, J. Puerto, "The Single Period Coverage Facility Location Problem: Lagrangean heuristic and column generation approaches". *TOP* DOI 10.1007/s11750-009-0102-7.

J. Puerto, A.M. Rodriguez-Chia, "On the structure of the solution set for the single facility location problem with average distances", *Mathematical Programming* 128:373-401, (2011).

V. Blanco, J. Puerto, Ana B. Ramos, "Expanding the Spanish high-speed railway network", *OMEGA*, 39, 138-150, (2011).

V. Blanco, J. Puerto, "Some algebraic methods for solving multiobjective polynomial integer programs", *Journal of Symbolic Computation* 46, 511-533, (2011).

V. Blanco, P.A. García-Sánchez, J. Puerto, "Counting Numerical Semigroups with short generating functions", *International Journal of Algebra and Computation*, 21:7, 1-18, 2011.

M. Clemente, F.R. Fernández, J. Puerto, "Pareto-optimal security strategies in matrix games with fuzzy payoffs", *Fuzzy Sets and Systems*. 10.1016/j.fss.2011.03.006.

F. Castro, J. Gago, I. Hartillo, J. Puerto, J.M. Ucha. "An algebraic approach to Integer Portfolio problems". *EJOR* 210 , 647-659, (2011).

V. Blanco, J. Puerto, "A new complexity result on multiobjective linear integer programming using short rational generating functions". *Optimization Letters*, Volume 6, Issue 3 (2012), Page 537-543.

J. Puerto, F. Ricca, A. Scozzari, "Minimax Regret path location on Trees", *Published On Line Networks* (2011).

J. Puerto, A. Tamir, F. Perea, "A Cooperative Location Game Based on the 1-Center Location Problem", *European Journal of Operational Research*, vol 214:2 317-330, 2011.

J. Puerto, A. Tamir, F. Perea, "Cooperative Location Games Based on the Minimum Diameter Spanning Steiner Subgraph Problem". *Discrete Applied Mathematics*, 160 (2012) 970-979.