JESSICA RODRÍGUEZ PEREIRA

PROFESSIONAL AFFILIATIONS

2023-present	**Department of Statistics and Operation Research, Universitat Politècnica de Catalunya. Barcelona, Spain.** Ramón y Cajal researcher.
2020-2022	**Department of Economics and Business, Universitat Pompeu Fabra. Barcelona, Spain.** Postdoctoral researcher.
2018-2019	**Canada Research Chair in Distribution Management, HEC Montrèal. Montrèal, Canada.** Postdoctoral researcher.
	Centre Interuniversitaire de Recherche sur les Réseaux d'Entreprise, la Logística et le Transport (CIRRELT). Montrèal, Canada. Postdoctoral researcher.
2014-2018	**Department of Statistics and Operation Research, Universitat Politècnica de Catalunya. Barcelona, Spain** Researcher (PhD Student)
2013	**Chair UPC-Endesa Red Victoriano Muñoz Oms, Universitat Politècnica de Catalunya. Barcelona, Spain** Internship.
2011	**Grupo Sacyr Vallehermoso. Val d'Aran, Spain.** Internship (civil engineer manager assistant)
2010	**Department and Environmental Engineering, Universitat Politècnica de Catalunya. Barcelona, Spain.** Internship.

EDUCATION

2018	**Ph.D. in Statistics and Operational Research.** Universitat Politècnica de Catalunya. Barcelona, Spain. Thesis: New models and algorithms for several families of Arc Routing Problems. Supervisors: Elena Fernández and Gilbert Laporte.
2013	**M.Sc. in Supply Chain, Transport and Mobility.** Universitat Politècnica de Catalunya. Barcelona, Spain.
2012	**Pg. in Management planning: planning, infrastructure, and environment.** Universitat Oberta de Catalunya. Spain.
2010	**B.Sc. Civil Engineering.** Universitat Politècnica de Catalunya. Barcelona, Spain.

PERSONAL FELLOWSHIPS AND AWARDS

Best Applied Contribution in Operations Research Award for the paper titled "A Cost-Sharing Mechanism for Multi-Country Partnerships in Disaster Preparedness", from the Spanish Society of Statistics and Operations Research (SEIO)-BBVA Foundation. 2023.

Ramón y Cajal Fellowship (Ayuda para contratos Ramón y Cajal (RYC) 2021). Spanish Ministry of Science and Innovation. 2023-2027.

Best Applied Contribution in Operations Research Award for the paper titled "Optimizing Access to Drinking Water in Remote Areas. Application to Nepal", from the Spanish Society of Statistics and Operations Research (SEIO)-BBVA Foundation. 2022.

YoungWomen4OR. Selected as one of the 12 emerging women working in Operations Research in Europe by the EURO WISDOM forum (Women in Society: Doing Operational Research and Management Science). 2020.

Sciences PhD Extraordinary Award, 2017-2018. Universitat Politècnica de Catalunya. 2020.

Finalist 2nd EUREKATHON: Challenging Data for Zero Hunger. Member of the BARG@UPF team who was a finalist in the 2nd Eurekathon, data-based competition. 2020.

SOLA Student Best Paper Award for the paper titled "Exact Solution of Several Families of Location-Arc Routing Problems", from the Location Analysis INFORMS Society (SOLA). 2019.

Postdoctoral. Canada Research Chair in Distribution Management. 2018-2019.

Mobility Fellowship (Ayuda a la movilidad predoctoral para la realización de estancias breves en centros de I+D durante el año 2017). Spanish Ministry of Economy and Competitiveness. 2017.

PUBLICATIONS

- ### BOOKS

[1]   (2019) M. Albareda-Sambola and J. Rodríguez-Pereira. Location-Routing and Location-Arc Routing in Location Science. Eds: G. Laporte, S. Nickel and F. Saldanha da Gama. Springer. 431-451. DOI: 10.1007/978-3-030-32177-2.

- ### JOURNAL PUBLICATIONS

[1]   (2022) G. Laporte, M.È. Rancourt, J. Rodríguez-Pereira and S. Silvestri. Optimizing access to drinking water in remote areas. Application to Nepal. Computers and Operations Research 105669. DOI: 10.1016/j.cor.2021.105669.

[2]   (2021) J. Rodríguez-Pereira, B. Balcik, M.È. Rancourt and G. Laporte. A Cost-Sharing Mechanism for Multi-Country Partnerships in Disaster Preparedness. Production and Operations Management 30:12 4541-4565. DOI: 10.1111/poms.13403.

[3]   (2021) J. Rodríguez-Pereira and G. Laporte. The target visitation arc routing problem. TOP (Accepted, available online). DOI: 10.1007/s11750-021-00601-5.

[4]   (2021) J. de Armas, J. Rodríguez-Pereira, B. Vieira and H. Ramalhinho. Optimizing Assistive Technology Operations for Aging Populations. Sustainability 13:12. 6925. DOI: 10.3390/su13126925.

[5]   (2020) J. Rodríguez-Pereira, J. de Armas, L. Garbujo and H. Ramalhinho. Health Care Needs and Services for Elder and Disabled Population: Findings from a Barcelona Study. International Journal of Environmental Research and Public Health 17:21, 8071. DOI: 10.3390/ijerph17218071.

[6]   (2019) J. Rodríguez-Pereira, E. Fernández, G. Laporte, E. Benavent and A. Martínez-Sykora. The Steiner Traveling Salesman Problem and Its Extensions. European Journal of Operation Research 278:2,615-628. DOI: 10.1016/j.ejor.2019.04.047.

[7]   (2019) J. Rodríguez-Pereira, E. Fernández, G. Laporte, E. Benavent and A. Martínez-Sykora. Steiner Traveling Salesman Problems: when not all vertices have demand. Proceedings of the IX International Workshop on Locational Analysis and Related Problems.

[8]   (2019) E. Fernández, G. Laporte, and J. Rodríguez-Pereira. Exact Solution of Several Families of Location-Arc Routing Problems. Transportation Science 53:5, 1213-1499. DOI: 10.1287/trsc.2018.0881.

[9]   (2018) E. Fernández, G. Laporte, and J. Rodríguez-Pereira. A branch-and-cut algorithm for the multi-depot rural postman problem. Transportation Science 52:2, 353-369. DOI: 10.1287/trsc.2017.0783.

[10] (2017) E. Fernández and J. Rodríguez-Pereira. Multi-depot rural postman problems. TOP 25, 340-372. DOI: 10.1007/s11750-016-0434-z.

[11] (2016) E. Fernández, G. Laporte, and J. Rodríguez-Pereira. A branch-and-cut algorithm for the multi-depot rural postman problem. Proceedings of the 19th International Multiconference Information Society – IS 2016, Volume H, 51-53.

PRESENTATIONS AND INVITED LECTURES

- ### CONFERENCE CONTRIBUTIONS

2023   **Optimizing access to drinking water: Nepal case.** Optimization Workshop in Logistics (OWL, 2023). Lecce, Italy. (June).

2021   **Applied Network Design Problems to Support Social Good.** 31st European Conference on Operational Research (EURO, 2021). Athens, Grece. (July).

   Location of Water Taps and Design of a Water Distribution Network in Nepal. International Symposium on Locational Decisions (ISOLDE, 2021). Online. (July).

2020   **Cost Sharing Mechanisms for Multi-country Partnerships in Disaster Preparedness.** 2020 INFORMS Annual Meeting (INFORMS, 2020). Online. (November).

2019   **Exact Solution of Several Families of Location-Arc Routing Problems.** 2019 INFORMS Annual Meeting (INFORMS, 2019). Seattle, United States. (October).

New Steiner Travelling Salesman Problem Formulation and its Multi-Depot Extension. Workshop of the EURO Working Group on Vehicle Routing and Logistics Optimization (VeRoLog, 2019). Sevilla, Spain. (June).

New Steiner Travelling Salesman Problem Formulation and its Location Extension. Optimization Days 2019 (OPTD, 2019). Montrèal, Canada. (May).

Steiner Travelling Salesman Problems: when not all vertices have demand. IX International Workshop on Locational Analysis and Related Problems (IWOLOCA, 2019). Cadiz, Spain. (January).

2018 **Models and solution algorithms for Location-Arc Routing Problems.** 7th International Workshop on Freight Transportation and Logistics (ODYSSEUS, 2018). Cagliari, Italy. (June).

Exact solution of Location-Arc Routing Problems. XXXVII Congreso Nacional de Estadística e Investigación Operativa (SEIO, 2018). Oviedo, Spain. (May).

The Clustered Target-Visitation Arc-Routing Problem. Optimization Days 2018 (OPTD, 2018). Montrèal, Canada. (May).

2017 **Formulations for Location-Arc Routing Problems.** 21st Conference of the International Federation of Operational Research (IFORS, 2017). Quebec City, Canada. (July).

2016 **A Branch-and-Cut algorithm for the Multi-Depot Rural Postman Problem.** Middle-European Conference on Applied Theoretical Computer Science (MATCOS, 2016). Koper, Slovenia. (September).

Formulation and exact solution of the Multi-Depot Rural Postman Problem. 2nd Workshop on Arc Routing Problems (WARP, 2016). Lisboa, Portugal. (May).

Undirected Multi-Depot Rural Postman Problem. Optimization Days 2016 (OPTD, 2016). Montrèal, Canada. (May).

2015 **Multi-Depot Rural Postman Problem.** Workshop on Combinatorial Optimization, Routing and Location (CORAL, 2015). Salamanca, Spain. (September)

Multi-Depot Rural Postman Problem. XXXV Congreso Nacional de Estadística e Investigación Operativa (SEIO, 2015). Pamplona, Spain. (May)

- **INVITED KEYNOTES**

2019 **Applied network design problems to support humanitarian operations**. II Symposium on Humanitarian Logistics & Disruptive Supply Chains. Chia, Colombia. (November).

- **SEMINARS**

2021 **Restoration of drinking water supply system in rural areas. Application to Nepal**. WISDOM Webinar: YoungWomen4OR "Sustainable Supply Chain and Supply Systems" (online).

2017 **Target-Visitation Arc-Routing Problems.** Universität Heidelberg. (Germany).

PARTICIPATION IN FUNDED RESEARCH PROJECTS

Modelling and Optimization of StruCtured problems and Applications. Spanish Ministry of Science and Innovation (PID2022-139219OB-I00), 2023-2026.

Healthcare Mobility - an optimization approach. UPF Planetary Wellbeing grant, 2021-2022.

Humanitarian Supply Chain Analytics. Apogée Canada (IVADO fundamental research projects grants), 2020-2022.

OptCareServices: Logistics Optimization for the Home Health and Social Care Services. Spanish Ministry of Economy and Competitiveness (RTI2018-095197-B-I00), 2020-2022.

Analytics and optimization in a digital humanitarian context. Apogée Canada (IVADO fundamental research projects grants), 2018-2020.

Distribution Management: Canada Research Chair in Distribution Management, 2018-2020.

Humanitarian Logistics. Natural Sciences and Engineering Research Council of Canada (Discovery Grants Program) (2014-03945), 2018-2019.

Red Temática: Localización y Problemas Afines. Spanish Ministry of Economy and Competitiveness. (MTM2016-81874-REDT), 2017-2019.

DO-ILT: Discrete Optimization for Integrated Logistics and Transportation Problems. Spanish Ministry of Economy and Competitiveness. (MTM2015-63779-R), 2016-2019.

Red Temática: Localización y Problemas Afines. Spanish Ministry of Economy and Competitiveness. (MTM2014-53828-REDT), 2014-2016.

OPTIMOS3: Mathematical Programming models and methods and their applications. Spanish Ministry of Economy and Competitiveness. (MTM2012-36163-C06-05), 2013-2015.