



## BERNARDO MARTIN-IRADI

27/09/1993 San Sebastián, Spain

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## EDUCATION

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### TECHNICAL UNIVERSITY OF DENMARK (DTU)

Copenhagen, Denmark

PhD in Operations Research at DTU Management

December 2019-January 2023

Title: Integration and collaboration in maritime logistics and other transportation areas

Supervisors: Prof. Dario Pacino and Prof. Stefan Røpke

- Design and implementation of OR methods in collaborative and integrated logistics with a focus on container terminal operations and passenger rail and road transport.

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT)

Cambridge, MA. USA.

Visiting PhD student at MIT Sloan School of Management

January-June 2022

Host: Prof. Alexandre Jacquillat

- Design and implementation of optimization methods for on-demand microtransit systems.

### TECHNICAL UNIVERSITY OF DENMARK (DTU)

Copenhagen, Denmark

MSc in Industrial Engineering and Management

2016-2018. 120 ECTS. **Avg grade 11/12**

- Specialized in Operations Research: Exact methods, Heuristics, Routing, Scheduling, etc.
- *Master thesis*: "Optimization in Railway Timetabling for regional and Intercity trains in Zealand" in collaboration with DSB.  
*Supervisors*: Prof. S. Røpke (DTU), Eng. F. Farina (DTU) and Eng. E. Linde (DSB). **Grade: 12/12 (A)**

### ETSEIB – POLYTECHNICAL UNIVERSITY OF CATALONIA (UPC-BarcelonaTech) Barcelona, Spain

MSc in Industrial Engineering

2015-2018. 120 ECTS. **Avg grade 8.75/10 - (top 2 of 247)**

- *Main Subjects*: Industrial Scheduling (awarded with honors), Transport systems, Quantitative Methods for Industrial Process Management, etc.

### TECHNISCHE UNIVERSITÄT BERLIN (TUB)

Berlin, Germany

Erasmus exchange semester

02-08/2015 including the fulfillment of the BSc thesis.

### ETSEIB – POLYTECHNICAL UNIVERSITY OF CATALONIA (UPC-BarcelonaTech) Barcelona, Spain

BSc in Industrial Technology Engineering

2011-2015. 240 ECTS. **Avg grade 7/10**

- *Main Subjects*: Mathematics, Mechanics, Computer Science, Statistics, Project Management, Electronics.
- *Bachelor Thesis*: Decision Support for sustainable product design based on an automatized FEM analysis.  
*Supervisors*: Prof. R. Stark (TUB) and Eng. A. Pförtner (TUB).

### INSTITUTE XABIER ZUBIRI MANTEO

San Sebastián, Spain

Technological High School

2009-2011

- Diploma awarded with honors

## RESEARCH INTERESTS

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Mathematical optimization, Public transportation, Network Optimization, On-demand mobility, Maritime Logistics, Vehicle Routing, Heuristics, Column Generation, Cooperative Game Theory,

## EXPERIENCE

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### SWISS FEDERAL INSTITUTE OF TECHNOLOGY IN ZÜRICH (ETH)

Zürich, Switzerland

Postdoctoral researcher

From August 2023

- Postdoctoral researcher in management and control of dynamic capacity in shared mobility networks

Teaching assistant

Fall semester 2023

- Assistance to Prof. Francesco Corman in *Transport Systems* and *Public Transport Design and Operations*.

### TECHNICAL UNIVERSITY OF DENMARK (DTU)

Copenhagen, Denmark

Postdoctoral researcher

February-July 2023

Doctoral researcher

December 2019-January 2023

Main lecturer

February-May 2023

- MSc course in *Supply Chain Analytics*. Number of students enrolled: ~150
  - 3<sup>rd</sup>-best teaching evaluation among 9 courses in the Management Science division.

Teaching Assistant

Four semesters during 2017-2021

- *Optimization using Metaheuristics*. Courses 2019-20 and 2020-21. Supporting Prof. Dario Pacino and Prof. Thomas Stidsen.
- *Large Scale Optimization using Decomposition Methods*. Course 2017-18. Supporting Prof. Stefan Røpke and Prof. Thomas Stidsen.
- *Introduction to Management Science*. Course 2017-18. Support to Prof. Richard Lusby and Prof. Martin Kidd.

### AMCS GROUP

Copenhagen, Denmark

Routing Consultant

October 2018- November 2019

- Leading company in software for route transport optimization. Consultancy work in the Operations department at the Routing division. Tasks involving implementation, customization and maintenance of static and dynamic route planning solutions.

## AWARDS & PRIZES

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### ETSEIB – POLYTECHNICAL UNIVERSITY OF CATALONIA (UPC-BarcelonaTech) Barcelona, Spain

October 2018

**Best academic record in the MSc of Industrial Engineering, specialized in Industrial Management.** Award sponsored by Accenture.

### 5<sup>th</sup> AIRO Young workshop Naples, Italy

February 2021

**Prize for best presentation.** Grant for participation in the next AIRO Young 2022 workshop.

## PUBLICATIONS & TECHNICAL REPORTS (alphabetical author order, first authorships are bolded)

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- [1] Cummings, K., Jacquillat, A., **Martin-Iradi, B.**, 2024. Deviated Fixed-route Microtransit: Design and Operations. Under review in *Operations Research*.
- [2] **Martin-Iradi, B.**, Pacino, D., Røpke, S., 2024. An adaptive large neighborhood search for the multi-port continuous berth allocation problem. Accepted in *European Journal of Operational Research*.
- [3] **Martin-Iradi, B.**, Ropke, S., 2022. A column-generation based matheuristic for periodic and symmetric train timetabling with integrated passenger routing. *European Journal of Operational Research*, 297(2), 511-531. <https://doi.org/10.1016/j.ejor.2021.04.041>
- [4] **Martin-Iradi, B.**, Pacino, D., Røpke, S., 2022. The Multiport Berth Allocation Problem with Speed Optimization: Exact Methods and a Cooperative Game Analysis. *Transportation Science*, 56(4), 972-999. <https://doi.org/10.1287/trsc.2021.1112>

- [5] **Martin-Iradi, B.**, Pacino, D., Røpke, S., 2022. The Multi-port Continuous Berth Allocation Problem with Speed Optimization. In: *de Armas, J., Ramalhinho, H., Voß, S. (eds) Computational Logistics. ICCL 2022. Lecture Notes in Computer Science, vol 13557. Springer, Cham.* [https://doi.org/10.1007/978-3-031-16579-5\\_3](https://doi.org/10.1007/978-3-031-16579-5_3)

## CONFERENCES

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Contributed presentations at:

- **5<sup>th</sup> AIRO Young Workshop** - February, 2021 in Naples, Italy (Virtual)
- **EURO 2021** - July, 2021 in Athens, Greece (Session chair)
- **IFORS 2021** - August, 2021 in Seoul, South Korea (Virtual)
- **ICCL 2021** - September, 2021 in Twente, Netherlands (Virtual)
- **2021 INFORMS Annual Meeting** - October, 2021 in Anaheim, CA, United States (Virtual)
- **TRISTAN XI** - June, 2022 in Mauritius.
- **EURO 2022** - July, 2022 in Espoo, Finland.
- **ICCL 2022** September, 2022 in Barcelona, Spain
- **2022 INFORMS Annual Meeting** - October, 2022 in Indianapolis, IN, United States
- **2023 INFORMS Annual Meeting** - October, 2023 in Phoenix, AR, United States

## REVIEWER (journals in alphabetical order)

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Annals of Operations Research; Journal of Heuristics; Naval Research Logistics, Networks; Transportation Research Part B: Methodological; Transportation Research Part C: Emerging technologies; Transportation Science

## GRANTS & SCHOLARSHIPS

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Grants to support the external research stay during the PhD studies:

- **Reinholdt W. Jorck og Hustrus Fond** November, 2021. Amount: **20.000 DKK (2700 €)**
- **Stibofonden** December, 2021. Amount: **30.000 DKK (4000 €)**
- **Otto Mønstedts Fond** February, 2022. Amount: **20.000 DKK (2700 €)**

Grant to support dissemination of research at international conferences:

- **Otto Mønstedts Fond** June, 2022. TRISTAN XI conference in Mauritius. Amount: **7.500 DKK (1000 €)**

## LANGUAGES

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**SPANISH, BASQUE:** Native.

**ENGLISH:** Fluent. TOEFL (107/120) in 2016 and Cambridge CAE certificate in 2011.

**GERMAN:** Intermediate. Attended B2 level courses during my Erasmus exchange semester in Berlin.

**FRENCH, SWEDISH, DANISH:** Basic understanding.

## IT AND PROGRAMMING SKILLS

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**PROGRAMMING:** Julia (+++), Python (++), GAMS (++), Java (++), SQL (++), C# (++), MatLab (++), XSL (++), R (+).

**SOFTWARE:** Microsoft Office, LaTeX, CAD Software, Simulink, Minitab,

## INTERESTS

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**SPORTS:** Active basketball player, daily cyclist and occasional squash player. Way of Saint James (800km France-Spain) by bike in 9 days (2012).

**LEISURE:** Cinema enthusiast, modern art and architecture admirer, avid reader, curious traveler, occasional dancer and former clarinetist.

**OTHERS:** Member of INFORMS, and the Danish (DORS) and Spanish (SEIO) societies of Operations Research.