



Fabio Sartori

OPERATIONS RESEARCH
TRANSPORT SYSTEMS · DATA SCIENCE

CONTACT

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LANGUAGES

Portuguese ●●●●●●●
English ●●●●●●●
French ●●●●●○
Italian ●●●●●○
Spanish ●●●●○
Dutch ●●○○○
German ●○○○○

FOCUS

- ◆ Flexible & demand-responsive mobility
- ◆ Transport optimization & operations
- ◆ Data science & decision support

METHODS

Mixed-integer programming
Benders decomposition
Constraint programming
Memetic & genetic algorithms
Variable neighbourhood search
Scheduling & dispatch models
Hierarchical planning
Scenario & cost modelling
Simulation
Experimental design
Statistical modelling
Regression & ANOVA
Gradient boosting
Clustering & PCA
Nearest-neighbour methods
Signal processing
Spatial analysis
Traffic signal design

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EXPERIENCE

**Postdoctoral Researcher**2025 – now
Université Gustave Eiffel · eMobLab · Lyon · FR
Fleet sizing, scheduling and charging for automated electric shuttle services
MLP · Benders decomposition · constraint programming

**Data Analyst Consultant**2024 – 2025
European Commission · Joint Research Centre · Ispra · IT
Real-world vehicle energy data; inference of unobserved photovoltaic yield
Python · XGBoost · signal processing

**Doctoral Researcher**2019 – 2024
KU Leuven · Leuven Institute for Mobility · Leuven · BE
Semi-flexible demand-responsive feeder systems; teaching assistant in decision models
Memetic algorithm · VNS · CPLEX

**Deputy Secretary of Transport, Traffic and Mobility**2017 – 2019
Porto Velho City Hall · State capital · BR
Bus concession studies, urban mobility plan, app-based transport and taxi regulation
Operating-cost models · scenario analysis

**Municipal Secretary of Transport and Traffic**2017
Vilhena City Hall · BR
Led the municipal transport department; road-safety delivery and crash-data indicators
Team of ~10 · monitoring routines

**University Lecturer**2016 – 2019
UNICEP · FIMCA · BR
Transportation engineering, GIS, calculus, mechanics, telecommunications
Engineering undergraduate courses

**Business Analyst Intern**2012
Deloitte Consulting · São Paulo · BR
Hospital operations diagnostics: inventory, replenishment and staff-commuting analysis
Excel models · BI · PMO

EDUCATION

**PhD · Mechanical Engineering**2019 – 2024
KU Leuven
Operations research applied to transportation

**MSc · Transportation Engineering**2014 – 2016
University of São Paulo
Driver behaviour and road safety · Cátedra Abertis Prize

**BSc · Computer Engineering**2006 – 2013
University of São Paulo
Algorithms, software, systems

TRAINING

**Delft Road Safety Course for Latin America**2018
TU Delft · Fortaleza

**Machine Learning for Earth Systems Modelling**2026
ECMWF · three-course series

**Cátedra Abertis Prize**
Best master's dissertation in transportation, 2016

PUBLICATIONS

**Optimization of a semi-flexible demand-responsive feeder bus system using variable neighborhood search**
International Transactions in Operational Research 2025

**Optimization of a semiflexible demand-responsive feeder system in suburban areas using a memetic algorithm**
Journal of Advanced Transportation 2023

**A survey on demand-responsive public bus systems**
Transportation Research Part C 2022

**Drivers' speed profile at curves under distraction task**
Transportation Research Part F 2017

Conference contributions and full record on [Google Scholar](#)

TOOLS

Python Pyomo CPLEX CP Optimizer C++ C pandas NumPy
scikit-learn XGBoost Jupyter Matplotlib Git · GitHub MongoDB GIS
Google Earth Engine Excel & VBA R SPSS Driving simulator