

# MATHIS AZEMA

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## EDUCATION

- 2023 - present** **Double Master's degree**
- ENSTA-Paris – Palaiseau, France  
Optimization and Data Science
  - Conservatoire National des Arts et Métiers – Paris, France  
Operations Research (MPRO)
- 2020 - 2024** **Ecole Polytechnique – Palaiseau, France**  
In the top 5% of France's leading school of engineering.  
*Relevant courses:* Optimization, Operations Research, Monte Carlo Methods, Algorithms.
- 2018 - 2020** **Lycée Aux Lazaristes – Lyon, France**  
A two-year intensive program in mathematics and physics to prepare for highly competitive nationwide exam.

## PROFESSIONAL EXPERIENCE

- Apr. 2024 – now** **Ecole nationale des ponts et chaussées, CERMICS – Paris, France**  
*PhD Student*
- Distributionally Robust Optimization approaches for Unit Commitment under uncertainty.
- Apr. – Aug. 2023** **Polytechnique Montréal, GERAD – Montréal, Québec, Canada**  
*Research intern*
- Developed MILP and constraint programming models to solve an electric bus assignment planning problem.
  - Literature review and writing of two research papers.
- Nov – Dec. 2022** **French Ministry of Ecological and Solidarity Transition – Paris La Défense, France**  
**Extra-academic mission/ internship pursuit**
- Designed and implemented an hourly-optimization model of the supply of the energy sector with the demand satisfaction constraint.
  - Analyzed the hourly electricity demand of all sectors of the economy.
- Jun – Sep. 2022** **French Ministry of Ecological and Solidarity Transition – Paris La Défense, France**  
**Internship**
- Consolidated the new bottom-up technical-economic model TiTAN, which optimizes long-term trajectories towards a low-carbon French economy via a systemic approach (building, industry, land, transport, energy production).
  - Designed and implemented a daily-optimization model of the supply of the energy sector with the demand satisfaction constraint.

## SKILLS AND PUBLICATIONS

- Languages**
- French:* native proficiency.  
*English:* advanced.  
*Spanish:* beginner.
- Computer skills**
- Programming languages:* Julia, Python, SQL, Java.  
*Office software:* Office Suite, LaTeX.
- Publications**
- Azema, M., Desaulniers, G., Mendoza, J., Pesant, G.: “Electric Bus Assignment Problem with Parking Constraints”, in preparation.
  - Azema, M., Desaulniers, G., Mendoza, J., Pesant, G.: “A Constraint Programming Model for the Electric Bus Assignment Problem with Parking Constraints”, 21st International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research, 2024.
- Awards**
- RO/AD 2023 Master's Thesis Award: 2<sup>nd</sup> prize