

# Daniel Mimouni

PhD candidate Mines Paris  
Engineer Centrale / MSc Imperial College



15/10/1997 (27 year old.), french  
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## EDUCATION

### PHD CANDIDATE AT MINES PARIS PSL | 2022 - 2025

PhD in Applied Mathematics.

- **Industrial collaboration** with IFPEN : **Optimization, Optimal Transport, Stochastic Optimization, Computing Sciences**
- **Teaching assistant** for the *Data Science* course (Centre for Computational Biology)
- **MVA (MSc)** at ENS Paris (Ulm): Optimal Transport by Gabriel Peyré

### MSc AT IMPERIAL COLLEGE LONDON | 2019 - 2020

The Master's program in General Structural Engineering is ranked 3rd in the Shanghai ranking and is renowned for its focus on mathematics.

- Graduated with **distinction** (highest honor in the cohort).
- Relevant modules : Statistics (test theory, Monte Carlo, and quadrature methods), Reliability Theory (advanced probability, stochastic optimization), Nonlinear Mathematics (instability and equilibrium), Optimization of Equations, Finite Elements: Applied Mathematics and Numerical Integration.

### BSc AND MSc AT ECOLE CENTRALE DE LYON | 2017 - 2021

Engineer degree (Grande Ecole) – MSc in Applied Mathematics.

- Engineering school consistently ranked among the top 3 in France for academic excellence.
- Relevant modules : Mathematics and Optimization, Statistics and Probability, Signal Processing and Fourier Theory, Computer Science and Data, Social Sciences, Economics, and Management.

### PREPARATORY CLASSES FOR GRANDES ECOLES | LYCEE HENRI IV AND LYCEE LOUIS LE GRAND | 2015 - 2017

A well respected 2 years of intensive course for the highly competitive entrance exams to top French engineering schools: Mathematics, Physics and Engineering Sciences.

## RELEVANT EXPERIENCES

### Institut Français du Pétrole et des Energies nouvelles (IFPEN) | PhD STUDENT | 2022 – ONGOING | 2+ YEARS

Applied Mathematics Department.

- PhD : *Scenario Reduction and Stochastic Optimization for Energy Management in Distributed Systems*
- **Theoretical and applied contributions** published in **leading scientific journals** (SIAM, Annals of Operations Research, etc.).
- Participation in **international scientific conferences** (ISMP, PGMO, etc.).

Full list available at <https://dan-mim.github.io/publications/>

- Implementation and **industrial deployment** of efficient numerical resolution packages.

### ILE DE FRANCE MOBILITES | DATA SCIENTIST | JUNE 2021 – OCT 2022 | 1 YEAR and 4 MONTHS

Modeling and Studies Department.

- Development of **predictive models** to assess the long-term impact of future public transportation systems in the Île-de-France region.
- Implementation of advanced predictive models for forecasting ridership of future Île-de-France transit systems (advanced regression models, nested logistic models), leveraging geographic and socio-economic parameters as well as current validation databases—processing 14 million data points daily.

### VINCI CONSTRUCTION GRANDS PROJETS | ENGINEER | OCT 2020 – APRIL 2021 | 6 MONTHS

Research and Study Department.

- Optimization studies of Finite Element Equations through numerical integration (FEA).

### IMPERIAL COLLEGE LONDON | RESEARCH INTERN | MAY 2020 – OCT 2020 | 6 MONTHS

Master's Thesis in the Department of Nonlinearity and Structural Instabilities with Prof. Ahmer Wadee: Cost-effectiveness studies of bridge implementation methods.

- Optimization of nonlinear constrained equations using gradient methods (Finite Element Analysis, FEA),
- Analysis of scientific articles and optimization of physical and mathematical state-of-the-art models.

### ECOLE CENTRALE DE LYON | EXTRACURRICULAR ACTIVITIES | 2017 – 2019

- President of the school's football club, managing over 130 members.
- Corporate Sponsorship and Partnerships Manager for the Eclips Gala.

## COMPETENCES

### Languages

French, English: bilingual  
German: proficient (B2)  
Hebrew: learning

### Computer skills

Python (pandas, sklearn...)  
SQL  
Matlab  
C++

### Interests

Chess (Elo de 1575)  
Piano (10 years of experience)  
Judo (10 years of competition)  
Magic (performed 3 shows)