Daniel Mimouni

PhD Mines Paris
Engineer from 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, Reinforcement Learning**, **Stochastic Optimization**
- **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.

- **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: RL and Stochastic Optimization.

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.

FREELANCE | DEVELOPER | 2021 – 2022| 1 YEAR

Developed machine learning packages, web automation, and web scraping (Selenium) for various startups.

VINCI CONSTRUCTION GRANDS PROJETS | ENGINEER INTERN | 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.

COMPETENCES

Languages

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

Computer skills

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

Interests

Chess (Elo rating of 1575)
Piano (10 years of experience)
Football (team captain in Centrale)
Judo (10 years of competition)
Magic (performed shows)