Paul Strang

github.com/abfariah strangpaul21@outlook.fr Paul C. Strang

Ph.D. candidate in RL passionate about machine learning and its applications, I long to contribute to ambitious scientific projects within a leading European tech organization. My Ph.D. defense is scheduled for April 2026.

Education

CNAM **2023 – 2026**
Doctor of Philosophy in Computer Science *Paris, France*

UNIVERSITÉ TOULOUSE III **2021 – 2022**
Master of Research in Applied Mathematics *Toulouse, France*

SCIENCES PO PARIS **2020 – 2022**
Master of Arts in International Affairs *Paris, France*

ISAE-SUPAERO **2018 – 2022**
Master of Science in Mathematics and Computer Science *Toulouse, France*

Experience

EDF R&D **2023 –**
Ph.D. in Artificial Intelligence *Paris, France*

Solving exact combinatorial optimization problems with model-based reinforcement learning. Application to large scale problem instances drawn from energy markets. Worked in parallel as a research engineer in the optimization team, designing and supervising research efforts to integrate machine learning algorithms into optimization pipelines.

EDF R&D **2022**
Research intern *Paris, France*

Development of reinforcement learning algorithms for the optimization of nuclear reactor cores's control strategy. Benchmarked deep Q-learning, actor–critic, and evolutionary algorithms.

Publications

Flow matching for conic optimization **2026**
P. Strang, A. Bambade, O. Juan *Work in progress*

Model-based reinforcement learning for exact combinatorial optimization **2026**
P. Strang, Z. Alès, C. Bissuel, O. Juan, S. Kedad-Sidhoum, E. Rachelson *Accepted at AAAI 2026*

A Markov decision process for variable selection in branch & bound **2025**
P. Strang, Z. Alès, C. Bissuel, O. Juan, S. Kedad-Sidhoum, E. Rachelson *Accepted at NeurIPS 2025*

Distinctions & honours

2^{nd} prize at the MIP Workshop Computational Competition **2023**
Influence branching for learning to solve mixed-integer programs online *Los Angeles, US*

1^{st} prize at the ISAE-SUPAERO ML hackathon **2022**
Forecasting sandy shoreline evolution with vision transformers *Toulouse, France*

Teaching

CNAM **2025**
Master of Research in Operations Research *Paris, France*
Linear programming – Duality – Mixed-integer linear programming – Metaheuristics

EDF R&D **2024 – 2025**
Reinforcement learning internal training program *Paris, France*
Approximate dynamic programming – Policy gradient algorithms – Actor-critic methods

Skills

Languages French native – English C2 (Cambridge Proficiency Exam) – German B2
Programming languages Python (advanced) – C / C++ (intermediate) – Julia –Rust (beginner)
Libraries Pytorch – Pytorch Geometric – NumPy – SciPy – Scikit-learn – Ray – Slurm – SCIP – Clarabel