OLIVIER BOUËT-WILLAUMEZ

PhD Student ~ Computer Science

94010 Créteil
UPEC - P2 214
13/07/2001
[GitHub]
[WebSite]
[E-mail]

CURRENT POSITION

I am currently a PhD student in Computer Science at the University of Paris-Est Créteil (UPEC), in the Laboratory of Algorithms, Complexity, and Logic (LACL), under the supervision of *Nihal Pekergin*, *Adrien Le Coënt* and *Benoît Barbot*. My thesis is titled: "Machine Learning of Continuous Systems Based on Probabilistic Approximations."

SKILLS

Mathematics (Theoretical and Applied)	Machine Learning, High-Dimensional Statistics, Optimization, Differential Equations, Bayesian Networks, Markov Chains.
Programming Languages and Tools	Python, Julia, R, MATLAB, Git, Docker, BASH, LaTeX, HTML.

EDUCATION

2024 – · · · **PhD - Computer Science** / Université Paris-Est Créteil
Machine Learning of Continuous Systems Based on Probabilistic Approximations. Laboratory of Algorithms, Complexity, and Logic (LACL).

2022 - 2024 **Master's Degree - Mathematics, Modeling and Statistical Learning** / Université Paris Cité
Specialization: Modeling, Analysis, and Simulation. Graduated with High Honors.

2020 - 2022 **Bachelor's Degree - Fundamental and Applied Mathematics** / Université Paris Cité
Graduated with Honors.

2019 - 2020 **Double Bachelor's Degree - Mathematics and Computer Science** / Université Paris Cité
Completed first year with Honors.

TEACHING

2025-2026 **Website Design** / Université Paris-Est Créteil
First year of Computer Science Bachelor's Degree, 1st semester, 32h.

2025-2026 **Coding, Compression & Cryptography** / Université Paris-Est Créteil
Second year of Computer Science Bachelor's Degree, 2nd semester, 16h.

2025-2026 **Introduction to Complexity & Algorithms** / Université Paris-Est Créteil
Third year of Computer Science Bachelor's Degree, 2nd semester, 16h.

PUBLICATIONS

2026 **Conference - ECMS 2026** / Grimstad, Norway **[Paper]**
A Sensitivity-Driven Sampling Reduction Method For Probabilistic Approximations of ODEs, O. Bouët-Willaumez, A. Le Coënt, B. Barbot, N. Pekergin, *International Conference on Modelling and Simulation (ECMS), 2026.*

2026 **Conference - ROADEF 2026** / Tours, France **[Paper]**
Sampling Methods for Probabilistic Approximations of ODEs, O. Bouët-Willaumez, A. Le Coënt, B. Barbot, N. Pekergin, *French Society of Operations Research and Decision Support (ROADEF), 2026.*

2025 **Conference - QEST + FORMATS 2025** / Aarhus, Denmark **[Paper]**
Conservation Analysis and Discrete Probabilistic Approximations for Parameter Estimation of Biochemical Networks, O. Bouët-Willaumez, A. Le Coënt, B. Barbot, N. Pekergin, *Quantitative Evaluation of SysTems + Formal Modeling and Analysis of Timed Systems (QEST+FORMATS), 2025.*

EXPERIENCE

02 - 08/2024 **Research Engineer – Internship** / Dassault Systèmes
Research project on Deep Gaussian Processes for multi-fidelity simulation, with applications in thermal systems. Tasks included literature review, model development, experimentation, and results presentation via technical reports and seminars in the company's Research Division.

06 - 10/2023 **Administrative Assistant – University Contact Center** / Université Paris Cité
Assisted students with administrative procedures (enrollment, applications, diploma requests) through a contact center (phone and email support).

PROJECTS

2026 **ode2dbn-sensitivity** **[Source Code]**
A Python sensitivity-guided framework for constructing reduced Dynamic Bayesian Networks from ODE models with efficient sampling of key dynamical dependencies.

2025 **NebulaNet** **[Source Code]**
Python library for generating abstract SVG backgrounds using random point placement and proximity-based connectivity to produce constellation-like graph structures.

2025 **BayeSBML** **[Source Code]**
Python library for conservation analysis and discrete probabilistic approximations to estimate parameters in biochemical networks.

LANGUAGES

French - Native, **English** - Fluent, **Spanish** - Basics.