

# GASPARD ABEL

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## CURRENT POSITION

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**Ecole Normale Supérieure de Paris-Saclay, Gif-sur-Yvette** *Sept. 2023 - Now*  
PhD student in Mathematics at Interfaces at the Centre Borelli.  
Supervision: Julien Randon-Furling, Jean-Pierre Nadal, Argyris Kalogeratos  
Hadamard Mathematics Doctoral School (EDMH)  
*Structural and semantic analysis of information flows in social networks  
networks: modeling its underlying mechanisms and its influence on public opinion*

## ACADEMIC BACKGROUND

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**Ecole Normale Supérieure de Paris-Saclay, Gif-sur-Yvette** *Sept. 2019 - Sep. 2023*  
Physics of complex Systems M2, Sorbonne, Université Paris-Cité,  
Université Paris-Saclay. Courses included: advanced statistical physics,  
stochastic processes, out-of-equilibrium physics, machine learning...

**François-René de Chateaubriand high school, Rennes** *Sept. 2017 - Sept. 2019*  
Intensive program preparing for the National competitive exams  
for entry to top schools in Mathematics and Physics

**Alain-René Lesage high school, Vannes** *Sept. 2014 - Sept. 2017*  
High school diploma in Science with the highest honors

## SKILLS

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<b>Computer Science</b>	Python, LaTeX, Matlab
<b>Software &amp; Tools</b>	OpenMole (ABM exploration software)
<b>Language</b>	English : C2 Spanish : B1 Italian : A2

## SCIENTIFIC PRODUCTION

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*Dual-Criterion Curriculum Learning: Application to Temporal Data,* *Mar. 2026*  
(submitted to ECML PKDD 2026). Gaspard Abel, Eloï Campagne,  
Mohamed Benloughmari, Argyris Kalogeratos.

*Uncovering social network activity using joint user and topic interaction,* *Jan. 2026*  
Gaspard Abel, Argyris Kalogeratos, Jean-Pierre Nadal, Julien Randon-Furling  
Accepted in *IEEE Transactions on Computational Social Systems*

*Beyond ReLU: Bifurcation, Oversmoothing, and Topological Priors,* *Jan. 2026*  
(submitted to ICML 2026). Erkan Turan, Gaspard Abel, Maysam Behmanesh,

Emery Pierson, Maks Ovsjanikov.

*Reducing Recurrent Competitive Epidemics via Dynamic Resource Allocation* Dec. 2025  
Argyris Kalogeratos, Gaspard Abel, Stefano Sarao Mannelli  
Submitted in *IEEE Transactions on Network Science and Engineering*

*MultiLayerNetViz : A Multi-Layered Visualization Module for Information Diffusion in Social Networks.* Python module for multi-layered networked data.  
(available on Github) Nov. 2025

## TALKS

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**frCSS 2025** French Local Chapter - Conference on Complex Systems/Sunbelt Apr. 2024

**CSS 2025** International Conference on Complex Systems, Siena Sept. 2025

**ARCOM international day for Social Media research** Nov. 2025  
(French Authority for the Regulation of Communication in Media)

**Conference for Young Applied Maths scientists.** Mar. 2026  
Champs-sur-Marne

## TEACHING EXPERIENCE

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### **Descriptive and Inferential Statistics**

1st year of Cycle Pluridisciplinaire en Enseignement Supérieur (CPES), 2024-2026  
Paris-Saclay University. Creation of the syllabus, teaching courses,  
exercise sessions and exams. Total: 192 hours of teaching.

## ACADEMIC EXPERIENCE

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### **Internship Supervision:**

**Mahdi HADJ-TAIEB**, M1 ENSTA student June - Aug. 2025  
Sequential learning for Temporal Point Process models

**Mohamed BENLOUGHMARI**, M1 ENSTA student Oct. - Dec. 2025  
Density-based sequential learning for Temporal Point Processes

### **Sub-reviewing:**

Journal article. *IEEE Transactions On Computation Social Systems*, Oct. 2025

Conference paper. *International Conference on Machine Learning (ICML)* Feb. 2026