

Samuel Tréton

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📄 Samuel-Treton

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PhD Student in Applied Mathematics

3rd year

Short biography

2021 – 2024 **PhD Student**, University of Rouen Normandy
Mathematical models for fast diffusion channels in population dynamics and epidemiology
Advisor: Matthieu Alfaro

2015 – 2021 **Bachelor's and Master's degrees**, University of Rouen Normandy

Publications

2024 S. TRÉTON,
Blow-up vs. global existence for a Fujita-type Heat exchanger system,
arXiv:2307.00843, published in *SIAM Journal on Mathematical Analysis (SIMA)*
(DOI:10.1137/23M1587440)

2023 M. ALFARO, R. DUCASSE, AND S. TRÉTON,
The field-road diffusion model: Fundamental solution and asymptotic behavior,
arXiv:2207.01859, published in *Journal of Differential Equations* (DOI:10.1016/j.jde.2023.05.002)

Teaching

2023 – 2024 **Analysis Tutorial (35h)**, *Bachelor's Degree in Computer Science, 1st year*, University of Rouen
Python Practical Work (32h), *Bachelor's Degree in Maths, 2nd year*, University of Rouen

2022 – 2023 **Mathematical Tools (24h)**, *Bachelor's Degree in Chemistry, 1st year*, University of Rouen
GeoGebra Practical Work (13h), *Bachelor's Degree in Mathematics, 1st year*, University of Rouen

Statistical Modeling for Biology (27h), *Master's Degree in Biology, 1st year*, University of Rouen

2021 – 2022 **Analysis Tutorial (37h)**, *Bachelor's Degree in Mathematics/Physics/Computer Science, 1st year*, University of Rouen

Statistical Modeling for Biology (27h), *Master's Degree in Biology, 1st year*, University of Rouen

Talks Given

Upcoming **Math-Bio-Health Seminar of the IMT**, *Toulouse* (presentation)

ReaDiNet 2024: International conference on parabolic and stochastic models in mathematical biology, *Clermont-Ferrand* (presentation)

Seminar PDE and Mathematical Physics at the IMB, *Bordeaux* (presentation)

2023 **15th Normandy Mathematics Federation Day**, *Le Havre* (poster and presentation)

RMR 2023: Mathematical models for biology and health, *Rouen* (presentation)

Research School organized by Polytechnique, *Aussois* (presentation)

2022 **Working Group on PDE at the Institut Denis Poisson**, *Orléans* (presentation)

Normandy BioMaths Working Group, *Le Havre* (presentation)

14th Normandy Mathematics Federation Day, Caen (poster)

Conferences and workshops

- Upcoming **Math-Bio-Health Seminar of the IMT**, *Toulouse*
ReaDiNet 2024: International conference on parabolic and stochastic models in mathematical biology, *Clermont-Ferrand*
Seminar PDE and Mathematical Physics at the IMB, *Bordeaux*
- 2023 **Normandy BioMaths Working Group**, *Rouen*
Cellular Automata, Particle Systems, and Self-Organization, *Rouen*
CIRM 3067 – Ecology, epidemiology and evolution, *Marseille*
Probability Meeting 2023 on Particle Systems, *Rouen*
15th Normandy Mathematics Federation Day, *Le Havre*
RMR 2023: Mathematical models for biology and health, *Rouen*
Research school organized by Polytechnique, *Aussois*
Normandy BioMaths Working Group, *Le Havre*
PDE and Applications Day, *Le Havre*
ReaDiNet 2023: International conference on parabolic and stochastic models in mathematical biology, *online*
- 2022 **Working Group on PDE at the Institut Denis Poisson**, *Orléans*
Normandy BioMaths Working Group, *Le Havre*
PDE and Applications Day, *Le Havre*
Parabolic and kinetic models in population dynamics, *Toulouse*
CANUM 2022, *Évian-les-Bains*
14th Normandy Mathematics Federation Day, *Caen*
CIRM Research School, *Marseille*
IHP Quarter – Mathematical models and organization of living matter, *Paris*
- 2021 **CIRM 2396 – Nonlocal Models in Biology**, *Marseille*
Normandy BioMaths Working Group, *Online and in Rouen*
PDE and Applications Day, *Online*
MBMC 2021: Mathematical Biology on the Mediterranean Coast, *Online*

Collective Responsibilities and Scientific Animations

- 2024 Presentation on mathematics research to Bachelor's and Master's students in mathematics at the University of Rouen (presentation)
- 2023 – 2024 University Coordinator for the Doctoral Workshop between the INSA Mathematics Laboratory (LMI) and Raphaël Salem Mathematics Laboratory (LMRS)
- 2023 – 2024 PhD student and ATER representative at the Mathematics Department Council of the University of Rouen
- 2021 – 2023 Facilitation of the LMRS Booth at the Science Festival

Other

- Code and Software** Bash – Python – Matlab – Scilab – R – FreeFem – AutoHotKey – HTML – Inkscape – L^AT_EX
- English** Scientific
- Interests** Hiking (Albâtre Coast in 2018: 130 km) and cycling (crossing Normandy in 2019: 300 km)