

SIMON LOIN

PhD student

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Born on: 2nd July 2001 in Amiens, France

Area of reseach: ODEs and PDES analysis, Numerical analysis, Applied mathematics to life sciences and medecine

Summary

Currently a PhD student in applied mathematics, I am doing my thesis at LAMFA at the Université de Picardie Jules Verne in Amiens, France. My thesis is entitled ‘Mathematical modelling of the coagulome for head and neck cancers’. During my PhD thesis, I completed a three-month research visit working with Fernando da Costa, João Pinto, and Joaquim Correia, at the mathematics department in IST and at the CEMS of the University of Lisbon, where I collaborated on ongoing research projects. This PhD thesis follows on from my internship, also carried out at LAMFA, and funded by the CNRS.

Formation

PhD in Mathematics	2024 - Today
<i>University of Picardie Jules Verne, LAMFA, Amiens</i>	
<i>Supervisors: Paul Vigneaux and Erwan Hingant</i>	
Master’s Degree in Mathematics (2nd year) - Applied Analysis and Modelling	2023 - 2024
<i>University of Picardie Jules Verne, Amiens</i>	
<i>With highest honour</i>	
<i>Master’s thesis: Analysis of a coagulation-depolymerisation equation (Supervisor: Erwan Hingant)</i>	
Agrégation externe de mathématiques	2023
<i>Rank: 133/345</i>	
Master’s Degree in Mathematics (2nd year) - Preparation for ‘agrégation externe’	2022 - 2023
<i>University of Picardie Jules Verne, Amiens</i>	
<i>With highest honour</i>	
<i>Master’s thesis: Complex analysis (Supervisor: Gabriel Vigny)</i>	
Master’s Degree in Mathematics (1st year)	2021 - 2022
<i>University of Picardie Jules Verne, Amiens</i>	
<i>With highest honour</i>	
<i>Master’s thesis: Maximum principle and elliptic PDEs (Supervisor: Alberto Farina)</i>	
Bachelor’s degree in Mathematics	2019 - 2021
<i>University of Picardie Jules Verne, Amiens</i>	
<i>With highest honour</i>	
CPGE - MPSI	2018 - 2019
<i>Louis Thuillier Secondary School, Amiens</i>	
Scientific ‘Baccalauréat’	2018
<i>Madeleine Michelis Secondary School, Amiens</i>	
<i>With honour</i>	

Professional Experience

Intern	February 2024 – June 2024
<i>LAMFA - University of Picardie Jules Verne, Amiens - CNRS</i>	

Publications

Preprints

A Becker-Döring model with injection and irreversible fragmentation August 2025
HAL, arXiv

Presentations

A Becker-Döring model with injection and irreversible fragmentation March 2026
Lisbon young researchers seminar, Lisbon, Portugal

On the different notions of solution: from classical to renormalized solutions November 2025
PhD students' seminar, LAMFA, Amiens, France

A Becker-Döring model with injection and irreversible fragmentation November 2025
Journées Math Bio Santé 2025, Poster session, Montpellier, France

Coagulation-fragmentation equations: source and irreversible fragmentation January 2025
PhD students' seminar, LAMFA, Amiens, France

Numerical scheme for a coagulation equation with source and depolymerisation June 2024
41st Symposium of the 'Société Francophone de Biologie Théorique', Poitiers, France

Teaching

2025/2026

2nd year BS Mathematics: Sequences and series of functions

1st year BS Mathematics : Calculus II

2024/2025

2nd year BS Mathematics: Sequences and series of functions

1st year BS Mathematics: Parametric curves, Calculus I

Skills

Informatic

Programming: Python, FreeFem++

Other languages: L^AT_EX

Languages

French: Mother tongue

English: Fluent (C1 level)