

# Samuele Ferri

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## Education

- 2024–now **PhD in Computer science and Mathematics of Computation**, *University of Insubria*, Como
- 2020–2022 **Master degree in mathematics**, *University of Insubria*, Como  
Graduation grade: 104/110
- 2022 **Teaching qualification (Italy)**, *University of Insubria*, Como  
24 cfu qualification
- 2017–2020 **Bachelor degree in mathematics**, *University of Insubria*, Como  
Graduation grade: 93/110
- 2013–2017 **High school diploma**, *Liceo Lugano 1*, Lugano

## Research interests

Numerical linear algebra, Numerical methods for PDEs

## Master thesis

- Title *De exoticis 7-sphaeris*
- Supervisor Giovanni Bazzoni
- Description In this paper, we retrace Milnor's studies aimed at finding homeomorphic but not diffeomorphic manifolds on the 7-sphere, through the study of 3-sphere bundles on the 4-sphere and their characteristic classes.

## Bachelor thesis

- Title *Mixing time for Glauber dynamics*
- Supervisor Andrea Posilicano
- Description This thesis work is aimed at studying the time required for the Markov chain describing the Glauber dynamics for the Ising model to reach its stationary distribution.

## Experiences

- 2026 **Internship**, *Università della Svizzera Italiana*, Lugano  
From January to July.
- 2025-2026 **Tutoring**, *University of Insubria*, Como  
Covered the role of disciplinary tutor for the first year of the bachelor's degree in mathematics.
- 2025 **Internship**, *Institute for applied mathematics "Mauro Picone"*, National Research Council of Italy, Rome  
From January to July.
- 2024-2025 **Tutoring**, *University of Insubria*, Como  
Covered the role of disciplinary tutor for the first year of the bachelor's degree in mathematics.
- 2024 **Tutoring**, *University of Insubria*, Como  
Covered the role of tutor for the "Analisi 2" course of the bachelor's degree in mathematics.

- 2024 **Tutoring**, *University of Insubria, Como*  
Covered the role of tutor for the "*Matematica 2*" course of the bachelor's degree in chemistry.
- 2023 **Data analyst**, *Tools for Smart Minds, Castel Mella (BS)*  
Covered this role from June to December.
- 2023 **Substitution**, *Canobbio Middle School, Canobbio*  
Substitute for maths lessons for a first grade.
- 2023 **Substitution**, *Centro Professionale di Trevano, Canobbio*  
Substitute three teachers for mathematics for vocational baccalaureate classes.
- 2023 **Substitution**, *Liceo Lugano 1, Lugano*  
Substitute for two teachers for mathematics and computer science.
- 2022 **Substitution**, *Canobbio Middle School, Canobbio*  
Substitute for basic maths lessons for a third and a fourth grade.
- 2021–2022 **Tutoring**, *University of Insubria, Como*  
Covered the role of tutor for the "*Geometria 2*" course of the bachelor's degree in mathematics.

## Languages

- Mother t. Italian  
Advanced English  
Basic German, French

## Computer skills

- Advanced Python,  $\LaTeX$ , C++, Matlab  
Intermediate HTML, CSS, C#, SQL, LabView  
Basic Javascript, Java

## Publications

- N. Barakitis, M. Donatelli, S. Ferri, V. Loi, S. Serra-Capizzano, R. Sormani. (2025). "*Blocking structures, approximation, and preconditioning*". *Numerical Algorithms*. 1-35. 10.1007/s11075-025-02157-y
- S. Ferri, C. Giraud, V. Loi, M. Kuchta, S. Serra-Capizzano. "*Spectral analysis of the stiffness matrix sequence in the approximated Stokes equation*". (preprint, doi.org/10.48550/arXiv.2510.25252)

March 8, 2026

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