



Fabrice ETIENNE

I am currently a non-tenured teaching and research fellow in mathematics at the university of French Polynesia.

MATHEMATICAL INTERESTS/ KEY WORDS

Algorithmic number theory, Galois representations, Hecke operators of finite groups, Quasi-split tori, Mackey functors, Galois cohomology, Selmer groups, Computation (Pari/GP, Sagemath)

PUBLICATIONS

PhD thesis: "Algorithmic applications of Hecke operators of finite groups for Galois representations" (Jul. 2025)
<https://theses.hal.science/tel-05290378>

F. Etienne. "Computing class groups by induction with generalised norm relations" (Nov. 2024, preprint)
<https://hal.science/hal-04778100>
<https://arxiv.org/abs/2411.13124>

F. Etienne. "An algorithm to compute Selmer groups via resolutions by permutations modules" (Apr. 2025, preprint)
<https://hal.science/hal-05038206>
<https://arxiv.org/abs/2504.13506>

F. Etienne; Aurel Page and Floris Vermeulen. "Normed Mackey functors and applications." Article in preparation.
The goal is to extend the theory of Mackey functors to keep track of their possible lattice structure, and to explore some applications, in particular for curves on functions fields or for Sunada isospectral manifolds.

F. Etienne; Alex Bartel, Vladimir Dokshitser, Jean Gilibert, Pierre Gilibert, Alexander Konstantinou, Adam Morgan. "Galois covers and Mackey functors in geometry". Article in preparation.
The goal is to compile an inventory of the uses of Mackey functors in geometry and number theory, and find a more general formalism.

SEMINARS AND PRESENTATIONS

Presentation at the PARI/GP workshop, 11/01/2024, Lyon (France)
(<https://pari.math.u-bordeaux.fr/Events/PARI2024/>)

Presentation at the CANARI seminar, 04/16/2024, Bordeaux (France) (<https://canari.math.u-bordeaux.fr/seminar/2023.html>)

Information and contact

Born on 17-06-1997
fabrice.etienne@math.u-bordeaux.fr
06-95-12-64-60

languages

– English (TOEIC in 2020 with a score of 970 out of 990)
– French

Programming languages

– Python
– Sagemath
– Pari/GP
– Magma
– C
– Caml
– Syllab

Other

– Latex
– Linux
– Driver licence

Lightning Talk at ANTS, jully 2024, Boston Massachusetts (USA)
(<https://antsmath.org/ANTSXVI/lightning.html>)

Presentation at the CANARI seminar, 01/21/2025 à Bordeaux (
<https://canari.math.u-bordeaux.fr/seminar/2024.html>)

ACADEMIC POSITIONS

September 2026 - August 2027 non-tenured teaching and research fellow at the university of French Polynesia

September 2025 - August 2026 non-tenured teaching and research fellow at the university of Bordeaux

STUDIES

2022-2025 PhD in mathematics at the university of Bordeaux, under the supervision of Mr Aurel PAGE.

2021-2022 Master degree in mathematics for recherche, in the algebra section, at the university of Rennes 1, with distinctions. Internship at the Institut de Mathématiques de Bordeaux.

2020-2021: Master degree in mathematics for teaching, at the university of Rennes 1, with distinctions.
Diploma of the third year of the ENS Rennes.
Agrégation of mathematics, with the option "computer science".

2019-2020: First year of Master degree in fundamental mathematics, at the university of Rennes 1, with distinctions.
Diploma of the second year of the ENS Rennes.
Bachelor degree in computer science with distinctions.

2018-2019: Bachelor degree in mathematics, at the university of Rennes 1, with distinctions.
Diploma of the third year of the ENS Rennes.
Internship in the Marseille Mathematics Institute (I2M), in the group theory and geometry research group, during the month of June.

2018: Admission by competitive examination at the Ecole Normale Supérieure of Rennes, in the mathematics departement

2015-2018: Higher school preparatory class MP (mathematics and physics) in Lycée Thiers, in Marseille

2015: Scientific Baccalauréat S, with distinction