Aurélien Sagnier

Curriculum vitae

32 rue de Versailles
91400 Orsay
France
✆ +33 6 86 70 77 89
✉ asagnier@lix.polytechnique.fr

Personal data

Name	Aurélien
Surname	Sagnier
Place and date of birth	L'Isle-Adam, France, 29th october 1989
Nationality	French
Languages	French, English (fluent, Toeic : 930/990), German (intermediate, Level B1)

Career-Studies

2017–now	Postdoctoral fellow at École Polytechnique (CMAP (applied mathematics laboratory) and LIX (informatics laboratory)) in the teams of Stéphane Gaubert and Eric Goubault
2016–2017	Demi-ATER at University Paris 7
2012–2017	PhD in mathematics at University Paris 7, advisors : Eric Leichtnam and Christopher Deninger
2011–2012	Agrégation de mathématiques (french competitive exam to become teacher in junior high and highschool)
2009–2012	Normalien, License and two Masters of mathematics (one for Research: speciality algebra and geometry, the other to prepare to teaching) at the ENS of Rennes and University Rennes 1
2007–2009	Classe préparatoire at Louis Le Grand highschool, Paris
2006–2007	Classe préparatoire at Clémenceau highschool, Reims
2006	Bac scientifique mention Très bien, Lycée Léon Bourgeois Épernay

---
Research

Themes	topos, characteristic one, zeta function, arithmetic geometry, non-commutative geometry, tropical algebra, directed algebraic topology, zeta function
PhD title	"An arithmetic site of Connes-Consani type for imaginary quadratic fields with class number 1"

Articles

- PhD published on ArXiV : ArXiv 1703.10521, submitted to the *Journal of Number Theory*
- Articles in preparation with the results of the postdoctoral fellowship (to appear soon on the Arxiv):

* ∗ "Tropical tensor products" with Stéphane Gaubert
* ∗ "Directed topological complexity and control" with Stéphane Gaubert, Eric Goubault and Michael Farber
* ∗ "A topos-theoretic view on directed topology" with Eric Goubault
* ∗ "An arithmetic site of Connes-Consani type for number fields with narrow class number 1"
* ○ Other research projects related to topos theory, arithmetic geometry, number theory, directed algebraic geometry, tropical algebra and geometry, homological and homotopical algebra (see research statement)

Conferences

April 2017	Invited speaker to the *international conference "Noncommutative Geometry 2017-Number Theory : A celebration of Alain Connes'70th birthday"* (Shanghai, China)
June 2017	Talk at *Ecole Polytechnique* (Palaiseau, France) for "Tropical days" on Connes and Consani approach of the Riemann zeta function through arithmetic sites
January 2018	Talk at *Ohio State University* (Colombus, US) at number theory seminar on "An arithmetic site of Connes-Consani type for $\mathbb{Z}[\imath]$"
January 2018	Talk at *Rutgers University* (Piscataway, US) at number theory seminar on "An arithmetic site of Connes-Consani type for $\mathbb{Z}[\imath]$"
January 2018	Talk at *John Hopkins University* (Baltimore, US) at number theory seminar on "An arithmetic site of Connes-Consani type for $\mathbb{Z}[\imath]$"
June 2018	Short communication at the *international conference "Toposes in Como"* (Como, Italy) on "An arithmetic site of Connes-Consani type for $\mathbb{Z}[\sqrt{2}]$"
August 2018	Short communication at the *International Congress of Mathematicians* (ICM 2018) (Rio, Brazil) on "An arithmetic site of Connes-Consani type for $\mathbb{Z}[\imath]$"
September 2018	Short communication at the *international conference "Tensors"* (Turin, Italy) on "Tropical tensor products"

Administrative duties

January 2018–now	Organizer of a learning seminar on topos theory at Ecole Polytechnique (Palaiseau, France)
November-December 2018	Preparation of a review of an article for *Journal of Number Theory*
October 2019	Member of the organizing committee of the forthcoming conference "Riemann-Roch in characteristic one and related topics" in John Hopkins University (Baltimore, US)

Referees to contact for my research work

* ○ *Alain Connes*, Professor at IHES (Bures sur Yvette, France) and at Ohio State University (Colombus, US); president of the jury at my PhD defense; alain@connes.org,
* ○ *Caterina Consani*, Professor at John Hopkins University (Baltimore, US); reviewer of my PhD; kc@chow.mat.jhu.edu,
* ○ *Stéphane Gaubert*, Directeur de recherche at INRIA, Head of Tropical research team joint to INRIA and Centre de Mathématiques Appliquées (CMAP) of École Polytechnique (Palaiseau, France); member of the jury at my PhD defense and supervisor of my postdoctoral fellowship; stephane.gaubert@inria.fr,

- *Eric Goubault*, Professor of Computer Science at École Polytechnique (Palaiseau, France) ; supervisor of my postdoctoral fellowship ; goubault@lix.polytechnique.fr,
- *Eric Leichtnam*, Directeur de recherche at CNRS in Université Paris 7 Diderot; my PhD advisor ; eric.leichtnam@imj-prg.fr,

Teaching duties

2016–2017	At University Paris 7 : L1 "Mathematical Project" and L2 Mathematics "Fundamental analysis and linear algebra 2"
2015–2016	At University Paris 6 : M1 Mathematics "Functional analysis"
2014–2015	At University Paris 6 : L2 Mathematics "Differential and integral calculus" and L2 Physics "Differential and integral calculus"
2013–2014	At University Paris 6 : L1 Mathematics "Sequences, integrals and linear algebra" and L1 Physics "Matrix calculus"