Valentin Hanecart



About me Versatile

Meticulous Good public speaker Sense of initiative

Personal

Nationality: French 23 years old Driving licence

Contacts

9 13 rue du Muguet Appartement 19 25000 Besançon France +33 6 52 21 70 88 v.hanecart@orange.fr ValentinHanecart.github.io

Interests

Mathematics Physics & Chemistry History Reading Badminton, swimming, handball

EDUCATION

2024-Second year of Master in advanced mathematics, specialisation in algebra and number theory

UFR ST, Besançon, France

Third year of Magistère de Mathématiques (complementary university courses to the

master)

UFR ST, Besançon, France

2024 Agrégation externe de Mathématiques (competitive examination allowing to teach in

French education system), ranked 142nd over 315

Second year of Master in general mathematics, preparation to the "agrégation ex-2023-2024

terne de mathématiques", grade "Bien" (~ pass 70-80%)

UFR ST, Besançon, France

2022-2023 First year of Master in general mathematics, grade "Assez bien" (~ pass 60-70%)

UFR ST, Besançon, France

Second year of Magistère de Mathématiques (complementary university courses to

the master)

UFR ST, Besançon, France

2021-2022 Third year of Bachelor in fundamental mathematics, grade "Bien" (~ pass 70-80%)

UFR ST, Besançon

First year of Magistère de Mathématiques (complementary university courses to the

bachelor)

UFR ST, Besançon, France

Preparatory class (MPSI and MP*) (French Classes Préparatoires are two year courses, 2019 - 2021

> equivalent to the first two years of a bachelor's degree, designed to prepare students for competitive entrance examination to the Grandes Écoles (\sim engineering schools))

High school Henri Wallon, Valenciennes, France

2019 Baccalauréat Scientifique, spécialité Mathématiques (\sim high school diploma), grade

"Très bien" (\sim pass 80-100%)

High school Camille Claudel, Fourmies, France

Professional experiences

"Colleur" of Mathematics in MP/MPI and MP2I (~ oral interrogation of

first and second year preparatory class students in algebra, analysis and

probability)

High school Carnot, Dijon, France

"Colleur" of Mathematics in PSI/PSI* (~ oral interrogation of first year

preparatory class students in algebra, analysis and probability)

High school Victor Hugo, Besançon, France

2022 (3 months) **Trainee high school teacher** (~ classroom teaching observation, assisting a class teacher, taking charge of a class and teaching for a week)

Middle school Georges Pompidou, Pouilley-les-Vignes, France

2021-Private mathematical lessons (students in secondary school and high

school)

Besançon, France

2020-2022 (1 month/year) Versatile municipal employee (maintenance of public spaces and

cleanliness)

Town hall of Trélon, Trélon, France

Holiday camp activity leader (handling of children and creation of ac-2018 (1 month)

Activity center of Trélon, Trélon, France

2017-2023 (1 month/year) Worker (fixed-term contract) (maintenance of machines)

Glass factory Gerresheimer, Momignies, Belgique

Presentations & Projects

2025

Journée des jeunes chercheuses et des jeunes chercheurs en mathématiques de la fédération Bourgogne Franche-Comté, Brève introduction aux formes modulaires (~ A short introduction to modular forms) ((april 17, 2025))

UFR ST, Besançon, France

Master thesis Sur le théorème de l'image ouverte pour les représentations galoisiennes associées aux modules de Drinfeld (~ On the open image theorem for Galois representations attached to Drinfeld modules) (in progress), under the direction of CÉCILE ARMANA UFR ST. Besancon, France

2024

Third year project of Magistère, *Quelques cas particuliers de la conjecture de modularité de Serre* (~ *Some particular cases of Serre's modularity conjecture*), under the direction of CHRISTIAN MAIRE

FEMTO ST, Besançon, France

Second year project of Master, *Introduction aux formes modulaires* (~ *Introduction to modular forms*), under the direction of CÉCILE ARMANA

UFR ST. Besancon, France

2023

Day of Magistère, presentation of the first year project of Master

UFR ST, Besançon, France

First year project of Master, *About solvable groups and some applications*, under the direction of AGNÈS DAVID

UFR ST, Besançon, France

2022

Day of Magistère, presentation of the third year project of Bachelor

UFR ST, Besançon, France

Third year project of Bachelor, *Theorema Egregium de Gauss* (\sim *Gauss's Theorema Egregium*), under the direction of LYSIANNE HARI

UFR ST, Besançon, France

SEMINARS & ADDITIONAL COURSES ATTENDED

2025

33èmes Journées Arithmétiques (from June 30 to July 4, 2025)

University of Luxembourg, Esch-sur-Alzette, Luxembourg

Algebraic geometry and number theory in Bourgogne Franche-Comté

IMB, Dijon

School of introduction to the research of the Laboratoire de Mathématiques de Besançon (What is the contemporary version of Hilbert's program ?, Representations of $\operatorname{GL}_2(\mathbb{F}_p)$ and (some) representations of $\operatorname{GL}_2(\mathbb{Q}_p)$, Khintchine inequalities, Conservation laws and applications, Mathematics and artificial intelligence, Tensor products)

Pierrefontaine-les-Varans

2024-2025

Weekly seminar with Algebra and Number Theory group

Weekly workgroup with Algebra and Number Theory group (prismatic cohomology)

UFR ST, Besançon, France

2024

Functional analysis course (duality in Banach spaces, linear structure of Banach spaces and spaces $\mathcal{C}^0(K)$)

UFR ST, Besançon, France

Lie groups and algebras course

UFR ST, Besançon, France

Lectures Sophie Kowalevski (Introduction to modular group, Introduction to hydrodynamic

Centre Henri Lebesgue, Angers, France

School of introduction to the research of the Laboratoire de Mathématiques de Besançon (Harmonic functions, Differential geometry, Non commutative integration, Introduction to modular forms, Riemann surface, Fixed-point theorems and amenable abelian groups, Ramsey theory)

Pierrefontaine-les-Varans, France

2023

Masterclass (On convex functions and sets)

UFR ST. Besancon, France

Lectures Sophie Kowalevski (Some aspects (probabilistic, algebraic and algorithmic) of random permutations, To the discovery of the representations modulo p of p-adic groups) Centre Henri Lebesgue, Angers, France

Differential geometry course (introduction)

UFR ST, Besançon, France

Inferential statistics course

UFR ST, Besançon, France

2022

Discretisation of PDEs course

UFR ST, Besançon, France

2021

Mathematical epistemology course

UFR ST, Besançon, France

DEGREES & CERTIFICATES

2024 Agrégation externe de mathématiques
 2024 Master General Mathematics
 2022 Licence Fundamental Mathematics
 2022 Certificate of competence in English (level B2)
 2019 Baccalauréat Scientifique
 2017 Certificate of competence in Spanish

COMPUTER SKILLS

LaTeX Very good command Python Very good command Good command Word Excel Good command PowerPoint Good command HTML & CSS Some basics PARI/GP Some basics Scilab Some basics **OCaml** Some basics SQL Some basics

LANGUAGE SKILLS

(level B1)

French C2 Native language
English C1
Spanish B1
German A1

REFERENCES

Armana Cécile | Associate Professor

UFR ST, Besançon - Algebra and Number Theory team

cecile.armana@univ-fcomte.fr

+33 3 81 66 63 35

David Agnès Associate Professor

UFR ST, Besançon - Algebra and Number Theory team

☑ David.Agnes@math.cnrs.fr

+33 3 81 66 63 35

Fouquet Olivier | Professor

UFR ST, Besançon - Algebra and Number Theory team

✓ olivier.fouquet@univ-fcomte.fr

+33 3 81 66 63 21

Lancien Gilles Professor

UFR ST, Besançon - Functional Analysis team

☑ gilles.lancien@univ-fcomte.fr

+33 3 81 66 63 76

Mansuy Mathieu Teacher in preparatory class

High school Carnot, Dijon