Magali Jay

I am interested in interval exchange transformations with or without flips, in connection with the Teichmüller flow in the moduli space of translation and half-translation surfaces. These objects are particularly relevant to study tiling billiards and are linked to Novikov's conjecture.

EDUCATION

Aix-Marseille Université Math PhD, supervised by Pascal Hubert and Olga Paris-Romaskevich	Marseille 2021–
- PhD students' representative on the doctoral school board	
- Co-organizor of the PhD seminar on campus Saint-Charles	2022-2023
- Co-organizor of the PhD day 2021 (creation), 2022 and 2023	
- Three papers in preparation	
Université Grenoble Alpes	Grenoble
Master Groups and geometries - with Honors	2020-2021
 Internship (5 months) supervised by Erwan Lanneau, Institut Fourier, Grenoble One paper accepted by Geometriae dedicata : Relations with a fixed interval exchange transformation 	
École Normale Supérieure de Paris-Saclay	Cachan
Agrégation de mathematiques, option D (computer science) - awarded	2019 - 2020
École Normale Supérieure de Rennes	Rennes
Math departement - double degree in computer science - with Honors	2017 - 2019
– Internship (2 months) supervised by Tobias Hartnick, Justus-Liebig-Universität, Gießen, Allemagne	e 2019
– Optional teaching internship (2 weeks) at High School Évariste Galois in Sartrouville, France	Mai 2019
– Internship (6 weeks) supervised by Laurent Bougrain and Radu Ranta at INRIA and CRAN, Nano	ey 2018
- Polynoms iterations and Julia's set, work in group with Clémentine Laurens, supervised by Franck	Loray 2018
Classes Préparatoires aux Grandes Écoles Lycée Saint-Louis	
MPSI - MP* - MP*	2014 - 2017

TRAINING COURSES

- Doctoral school's courses, of 24 hours each Overview of Paul Erdös' math - Differential geometry and Gauss-Bonnet's theorem
- Doctoral school's training courses Developing students' reflexivity (4h) - Teaching in flipped classrooms (8h) - Assessing your students' learning (8h) -The effects of gender stereotypes in academic and professional environments (1h) - Science didactics (4h) - Using cognitive science to facilitate student learning (12h)
- MOOC : Research ethics (10h), Integrity in scientific professions (10h)

TEACHING

Teaching contract at Aix-Marseille University 2	2021-
Preparation to Agrégation, option C (Algebra and Formal Calculation) - Modelling on SAGE (30h) 2021-	-2024
3rd year - Math in English (16h) 2023-	-2024
3rd year of Computer science - Practical courses and training on Databases (18h) 2023-	-2024
2nd year of Math, Physics, Chemistry and Computer science (MPCI) - Tutoring on Databases (16h) 2022-	-2023
1st year of Computer science - Practical training How computers work (18h) 2022-	-2023
2nd year MPCI - Tutoring on Analysis and Algebra (34h) 2021-	-2022

Conferences and Schools

• Surfaces, MAnifolds and Related Topics, Luxembourg - Speaker	March 2024
• School on flat surfaces and interactions, Le Teich - Speaker	March 2024
• Sagedays, computer programming workshop, Le Teich	January 2024
• Weinachtsworkshop, Karlsruhe - Speaker	December 2023
- Renormalization and Visualization in Geometry, Dynamics and Number Theory, at $\ensuremath{\mathrm{CIR}}$	M December 2023
• Maths and art: creating together at CIRM	November 2023
• Young researchers in geometry and dynamics, GDR Platon - Speaker	November 2023
- Workshop Renormalization, Computation and Vizualization ${\rm at\ CIRM}$	September 2023
- Renormalization and Visualization for packing, Billiard and Surfaces at CIRM - $\it Poster$	July 2023
• Geometry and dynamic Spring School of GDR Platon, Lille - Speaker	March 2023
Aussois' Winter School - Speaker	December 2022
• Young researchers in geometry and dynamics, GDR Platon - 5 min lightening talk	November 2022
Big Mapping Class Group and Diffeomorphism Groups at CIRM	October 2022
Combinatorics, Dynamics and Geometry on Moduli Spaces at CIRM - Poster	September 2022
• Winter school on billiards, Autrans - Speaker	January 2022
Aussois' Winter School	December 2021
• Young researchers in geometry and dynamics, GDR Platon - Poster	November 2021

I regularly give talks at doctoral seminars (Marseille, Grenoble, Rennes, Dijon, Montpellier), and have presented my work at the **Rauzy seminar in Marseille** on February 3, 2023, at the **Grenoble topology seminar** on April 7, 2023 and at the **Anna Wienhard's group's seminar** in Leipzig on December 19. I will talk at the **Rennes dynamic seminar** in April 2024 and at the **Ergodic theory and dynamical systems seminar** in Zurich in May 2024.

OUTREACH

• Co-organizor of events	
Π Day, talks and pie contest in Marseille	March 2023
French Young Mathematicians Tournament (TFJM2), in Rennes	April 2018
Meeting of young mathematician girl (RJM), first edition in Rennes	2017
• Tageting girls in particular	
Week Les Cigales at CIRM: Supervision of a group (two sessions)	April and November 2022
Week Les Cigales at CIRM: Talk How does a kaleidoscope work ?	April 2022
Days Girls and math: Speed-dating	Mai 2020 and April 2022

٠	Geometrists' gaze, a project combining art and mathematics in schools	
	Workshop on the theme of light and colors (2h) in a middle school's class	2023
	Talk and workshop How many types of freize patterns exist? for public from 10 to 16 years old	2022 and 2023
	Workshops on the theme of kaleidoscope $(2h)$ in classes of middle and high schools	2022 and 2023
•	Other interventions for middle and high school students	
	Presentation of my PhD work to a high school class	Decembre 2022
	Workshops on the theme of mirors for classes of primary and middle schools Science festi	ival 2022 and 2023
	Day for high school students at CIRM: running a stand	2021 and 2022
•	For the general public	
	WECAM at MMI, Lyon: Creation of outreach activities on the theme of cooking	January 2023
	Science festival in Marseille: Running the CIRM's stand Octo	ber 2022 and 2023
	Mathematical culture and games fair, in Paris: Running the stand Imaginary	June 2022
	Mandan State Trend Mathematical Society links with the committee of its antes the set	···

• Member of the French Mathematical Society: links with the community and its outreach activities

VOLUNTEERING

•	In charge of the Improvisation Club of ENS Rennes	2018-2019
•	Excellence pathway tutor at La Binquenais secondary school in Rennes	2018-2019
•	Woofing(volunteer work on an organic farm) in Ribnitz-Damgarten, Germany	July 2015

LANGUAGES	Hobbies
Lemma mark Error h (metica) Errolich (D2) Commen (D1/D2)	Maria anislina ana dara ahain sinaing

- Languages: French (native) English (B2) German (B1/B2)
- **Programing languages:** Python, Sage, C, CamL, LaTeX

Music : violin, accordeon, choir singing Aikido, Dance, Hiking