Anne Fayolle

CONTACT INFORMATION	Department of Mathematics fayolle@math.utah.edu University of Utah , LCB 317.

RESEARCH
INTERESTS

Algebraic geometry and commutative algebra.

EDUCATION

University of Utah

PhD in mathematics (2022 - Present)

École Polytechnique Fédérale de Lausanne (EPFL)

MSc. Mathematics, July 2022

McGill University

BSc. First class honours in mathematics, minor in computer science, May 2020

Université de Montréal

Certificate Philosophy, with mention of excellence, May 2020

SCHOLARSHIPS AND
AWARDS

2025	Simons Dissertation Fellowship *40 fellowships awarded annually to 3rd year Ph.D students in mathematics by the Simons foundation, \$38,400 over 2 years.*
2023	Graduate Student Travel Assistance Award, University of Utah *Funds from the department of Mathematics to support travel to a conference.*
2023	NSERC CGS-D, *Fellowship awarded by the Canadian government to the top 20% of doctoral students applying in the sciences, 105,000 CAD over 3 years.*
2022	EDGES fellowship University of Utah *Funds awarded by the college of Science at the University of Utah to recruit, retain, and promote the success of outstanding graduate students, \$10,000 over 5 years.*
2019	FRQNT supplement to the NSERC award, *Fellowship awarded by the Quebec government to undergraduate students to pursue research for a Summer.*
2019	NSERC USRA, McGill University, *Fellowship awarded by the Canadian government to undergraduate students to pursue research for a Summer.*
2017	Alma Mater entrance scholarship, McGill University *Merit-based entrance scholarship to first-time university students entering a full-time undergraduate degree program.*

PUBLICATIONS

2. Anne Fayolle, *Centers of perfectoid purity.* Journal de l'École Polytechnique Mathématique. DOI:jep.313 2025.

1. J. Carvajal-Rojas, Anne Fayolle, *On tame ramification and centers of F-purity.* Journal of the London Mathematical Society. DOI: jlms.12993 2024.

TEACHING

S 2025	MATH 1210	*Calculus 1*	Utah
W 2025	MATH 1030	*Quantitative reasoning*	Utah
W 2024	MATH 1220	*Calculus II*	Utah
W 2023	MATH 1320	*Calculus II for engineers* (TA)	Utah

SERVICE		
	2025-2026	AWM (Association for Women in Mathematics) outreach cochair
	2024-2025	AWM mentor *Mentoring multiple mathematics undergraduates.*
	2024	BRIDGES co-organizer *This is an AWM conference aimed towards early graduate students and advanced undergraduates*
	2023-2024	Student commutative algebra seminar organizer
	2023-2024	Graduate Student Advisory Committee EDI representative
	2021-2022	Polyquity committee member *Polyquity is the association that promotes gender equality on the EPFL campus*
	2020-2022	EPFL mentor *Mentoring a group of first year students to help them navigate the EPFL and math.*
	2019-2020	Vice-President SUMM. *This is the largest undergraduate math conference in Canada with over a hundred participants annually.*

TALKS

Centers of perfectoid purity, Special session on commutative algebra, JMM, Winter 2026

Centros de pureza perfectoide, Seminario Chichimeca de Álgebra, UA-Aguascalientes, Fall 2025

Centers of perfectoid purity, Algebra seminar, University of Missouri, Fall 2025

Centers of perfectoid purity, Workshop on Notions of Singularity in Different Characteristics, Banff International Research Station, Fall 2025

Centers of perfectoid purity, Fall Southeastern AMS sectional, Tulane University, Fall 2025

Centers of perfectoid purity, CIMAT Algebra seminar, Fall 2024

Centers of perfectoid purity, Congreso nacional de la sociedad matemática mexicana, Fall 2024

Mixed characteristic compatible ideals, Upcoming Researchers in Commutative Algebra, University of Nebraska Lincoln, Summer 2024

Tame ramification and centers of F-purity, CIMAT Commutative Algebra Learning Seminar, CIMAT, Spring 2024

Tame ramification and centers of F-purity, Commutative Algebra Seminar, University of Utah, Fall 2023

On tame ramification and compatible ideals, BIKES, the Graduate Student Seminar at the University of Utah, Fall 2023

Compatible ideals and their behavior under finite covers, Commutative Algebra Reading Seminar, University of Nebraska, Fall 2023

An introduction to compatible ideals, Commutative Algebra Graduate Student Seminar at U Michigan, Spring 2023

An introduction to compatible ideals, BIKES, the Graduate Student Seminar at the University of Utah, Spring 2023

Algorithms on lattices, Undergraduate research seminar, McGill. Summer 2019.

Representations of $\mathrm{SL}_2(\mathbb{R})$, Undergraduate reading seminar on automorphic forms, McGill, Summer 2019.

POSTERS

Centers of perfectoid purity, KUMUNU, University of Missouri, Fall 2025

Centers of perfectoid purity, SRI Bootcamp, University of Colorado Fort Collins, Summer 2025

Centers of perfectoid purity, Singularities in Algebra and Geometry, CIMAT, Summer 2025

Tame ramification and centers of F-purity, Western Algebraic Geometry Symposium, Washington University in St. Louis, Fall 2023.