

# Anne Fayolle

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CONTACT INFORMATION	Department of Mathematics University of Utah , LCB 317.				fayolle@math.utah.edu
RESEARCH INTERESTS	Algebraic geometry and commutative algebra.				
EDUCATION	<b>University of Utah</b> PhD in mathematics ( 2022 - Present)  <b>École Polytechnique Fédérale de Lausanne (EPFL)</b> MSc. Mathematics, July 2022  <b>McGill University</b> BSc. First class honours in mathematics, minor in computer science, May 2020  <b>Université de Montréal</b> Certificate Philosophy, with mention of excellence, May 2020				
SCHOLARSHIPS AND AWARDS	2025 2023 2023 2023 2022 2019 2019 2017	Simons Dissertation Fellowship Graduate Student Travel award, NSERC PGS-D (held), NSERC CGS-D (offered), EDGES fellowship University of Utah, FRQNT supplement to the NSERC award, NSERC USRA, McGill University, Alma Mater entrance scholarship, McGill University			
PAPERS	Anne Fayolle, <i>Centers of perfectoid purity</i> . Arxiv preprint 2504.15569. J. Carvajal-Rojas, Anne Fayolle, <i>On tame ramification and centers of <math>F</math>-purity</i> . Journal of the London Mathematical Society. DOI: jlms.12993				
TEACHING	S 2025 W 2025 W 2024 W 2023	MATH 1210 MATH 1030 MATH 1220 MATH 1320	<i>Calculus 1</i> <i>Quantitative reasoning</i> <i>Calculus II</i> <i>Calculus II for engineers</i> (TA)	Utah Utah Utah Utah	
SERVICE	2025-2026 2024-2025 2024  2023-2024 2023-2024 2021-2022  2020-2022  2019-2020	AWM outreach cochair AWM mentor BRIDGES co-organizer (AWM conference aimed towards early graduate students and advanced undergraduates) Student commutative algebra seminar organizer Graduate Student Advisory Committee EDI representative Polyquity committee member (Polyquity is the association that promotes gender equality on the EPFL campus)  EPFL mentor Mentoring a group of first year students to help them navigate the EPFL and math. Vice-President SUMM SUMM is the largest undergraduate math conference in Canada with over a hundred participants annually.			

## TALKS

*TBD* Special session on commutative algebra, JMM, Winter 2026  
*TBD*, Workshop on Notions of Singularity in Different Characteristics, Banff International Research Station, Fall 2025  
*TBD*, 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. (August 2019)  
*Representations of  $SL_2(\mathbb{R})$* , Undergraduate reading seminar on automorphic forms, McGill. (July 2019)

## POSTERS

*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.