

Amadou Bah

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Positions

- 09/2021-06/2025 *Joseph F. Ritt Assistant Professor*, Department of Math., Columbia University
07-08/2022 *Postdoctoral fellow*, Max-Planck Institute for Mathematics, Bonn (Germany)

Areas of specialisation

Arithmetic geometry, Ramification theory of ℓ -adic sheaves

Education

- 2014-2015 Licence Mathématiques Fondamentales et Appliquées, Université Paris-Sud, Orsay.
2015-2017 Master 2 Arithmétique et Géométrie Algébrique, Université Paris-Saclay.
2018-2021 PhD in Mathematics, Université Paris-Saclay, under the supervision of Ahmed Abbes (CNRS-IHÉS).

Teaching

- 2018-2019 T.A. for Calculus (1st year) & Linear Algebra (2nd year), Université Paris-Saclay.
2019-2020 T.A. for Calculus (1st year) & Linear Algebra (2nd year), Université Paris-Saclay.
2020-2021 T.A. for Calculus (1st year) & Algebraic structures (2nd year), Université Paris-Saclay.
2021-2022 Instructor for Calculus I, Fall 2021 & Instructor for Linear Algebra, sections 1 and 2, Spring 2022, Columbia University.
2022-2023 Instructor for Calculus I, Fall 2022 & Instructor for Linear Algebra, sections 1 and 2, Spring 2023, Columbia University.

- 2023-2024 Instructor for Modern Algebra II, Fall 2023 & Instructor for Linear Algebra, sections 1 and 2, Spring 2024, Columbia University.
- 2024-2025 Instructor for Linear Algebra, sections 3 and 4, Fall 2023 & Instructor for Analytic Number Theory, Spring 2024, Columbia University.

Columbia University Junior Faculty Recognition Award for Excellence in Teaching for the academic year 23/24.

Mentoring

- Chang YS: *Representations of finite groups, Fall 2023.*
- Z. Liu: *Commutative algebra and (Galois) descent, Spring 2024.*
- Chang YS: *Swan conductors of Galois representations, Summer 2024.*

(Pre-)Publications

- 10 / 2020 *Variation of the Swan conductor of a \mathbb{F}_ℓ -sheaf on a rigid disc,* <https://arxiv.org/abs/2010.14843>, To appear in *Algebra & Number Theory*.
- 01 / 2022 *Variation of the Swan conductor of a \mathbb{F}_ℓ -sheaf on a rigid annulus,* <https://arxiv.org/abs/2201.12820>, To appear in *Tohoku Math. Journal*.

Some Talks

- 9/15/2020 Séminaire d'Arithmétique et de Géométrie Algébrique (SAGA), Institut de Mathématiques d'Orsay.
- 11/23/2020 Paris-London Number Theory Seminar.
- 12/18/2020 Automorphic forms and Arithmetic Seminar, Columbia University.
- 1/11/2021 RTG seminar on Number theory, University of Michigan.
- 12/16/2021 Arithmetic geometry seminar, Vietnam Institute of Advanced Study.
- 02/11/2022 Automorphic forms and Arithmetic Seminar, Columbia University.
- 08/03/2022 Algebra and Number Theory Oberseminar, Universität Ulm.
- 11/04/2024 Group, Lie, and Number Theory (GLNT) seminar, University of Michigan.

Invited Conferences

03/4-16/2024 *Algebraic Days in Gabon*: Lectures series on the Weil conjectures.

09/16-20/2024 *D-modules, local systems and applications*, CRM Montreal.

Expository Talks

1/11/2021 RTG seminar on Number theory, University of Michigan.

11/10/2021 Undergraduate Math Society, Columbia University.

4/19/2022 Michael Zhao Memorial Student Colloquium, Columbia University.

Service to Community

- Co-organizer of Columbia's *Automorphic Forms and Arithmetic* seminar, 2022-2023 & 2023-2024.
- Referee for math journal (Compositio, Journal de l'Institut Math. de Jussieu, Journal of Number Theory,...).
- Member of qualifying exam committees for some grad students at Columbia.