

Arnab Kundu

Postdoc researcher, Age: 28 years

Simion Stoilow Institute of Mathematics
of the Romanian Academy (IMAR), Bucharest

✉ akundu.math@gmail.com

<https://www.arnabkundu.com>

Research Interests: Arithmetic Geometry and Motivic Homotopy Theory.

Employment

- August - Dec 2026 **Viterbi Postdoctoral Fellow**, *SLMath (formerly MSRI)*, Berkeley, USA, in the [Motivic Homotopy Theory: Connections and Applications](#) program.
- Sept 2025-June 2026 **Postdoctoral Researcher**, *Simion Stoilow Institute of the Romanian Academy (IMAR)*, Bucharest, Romania, in the group of [Olivier Schiffmann](#).
- Sept 2023 – Aug 2025 **Post-Doctoral Fellow**, *University of Toronto*, Toronto, Canada, in the group of [Elden Elmanto](#).

Education

- Sept 2020 – Aug 2023 **PhD in Mathematics**, *Université Paris-Saclay*, Orsay, France, under the supervision of [Kęstutis Česnavičius](#).
Thesis: Torsors on Smooth Algebras over Valuation Rings ([Official Version](#))
- Sept 2018 – Aug 2020 **Master : Mathématiques Fondamentales**, *Sorbonne Université*, Paris, France, Score - 18.9/20.
Mention: Très Bien
- Aug 2015 – July 2018 **B.Sc.(Hons.)**, *Chennai Mathematical Institute*, Chennai, India, *CGPA - 9.83*.
Mathematics and Computer Science Undergraduate

Official Visits

- Feb-March 2026 **LMSI, Mumbai**, [Thematic Programme on Rational Points, Algebraic Cycles and the Local-Global Principle](#).

Preprints

- [arXiv link](#) **Flat cohomological purity for syntomic schemes over valuation rings**, submitted, 2026.

- [HAL link](#) **Compactification des groupes parahoriques via leurs réductifications**, *submitted*, (in French), 2026.
- [arXiv link](#) **Reductification of parahoric group schemes**, *submitted*, 2026.
- [arXiv link](#) **\mathbb{A}^1 -connectivity of motivic spaces**, *submitted*, 2025, with [Tess Bouis](#).
- [arXiv link](#) **Beilinson–Lichtenbaum phenomenon for motivic cohomology**, *submitted*, 2025, with [Tess Bouis](#).
- [arXiv link](#) **Isotropic torsors on smooth algebras over Prüfer rings**, *submitted*, 2025.
- [arXiv link](#) **Gersten’s injectivity for smooth algebras over valuation rings**, *submitted*, 2024.

Publications

- [jrms:2023-038...](#) **Tilting Correspondences of Perfectoid rings**, *J. Ramanujan Math. Soc.* **38**, No. 1 (2023) 23–32.

Thesis

- [Official Version](#) **Torsors on smooth algebras over valuation rings**, *Thesis*.

Achievements:

- Received the **Viterbi Endowed Postdoctoral Fellowship** at SLMath (formerly MSRI) Berkeley in the Motivic Homotopy Theory: Connections and Applications program in 2026.
- Received **FSMP** (Fondation Sciences Mathématiques de Paris) PSGM Masters 2018-2020 scholarship.
- Received a **Gold Medal** for the best undergraduate academic record of the 2018 batch.
- Attended the Indian **IMO training camp** in '13, '14 and '15 at HBCSE, Mumbai.

Colloquium Talks

- November 2025 **Mathematics Colloquium**, *IMSc*, Chennai, Motivic Cohomology in mixed-characteristic.
- October 2025 **Mathematics Seminar**, *CMI*, Chennai, Motivic Cohomology in mixed-characteristic.

Conference Talks

- April 2026 **Commutative Algebra Day**, *IMAR, Bucharest*, Relative cohomological purity via ramification theory of valuation rings.

- January 2026 **Motives in Montpellier**, *Montpellier, France*, How to apply motivic cohomology in p -adic Hodge theory?.
- September 2025 **Algebraic and Arithmetic Geometry Week(AAG 2025)**, *Iasi, Romania*, Reductifications of parahoric groups.
- November 2024 **Special Session on Algebraic Geometry**, *CMS Meeting, Vancouver*, Motivic Cohomology in mixed-characteristic.
- June 2024 **K-theory and Brauer Groups**, *Oaxaca*, \mathbb{A}^1 -invariance of Motivic Cohomology, ([video](#)).
- December 2023 **Special Session on Homotopy Theory**, *CMS Meeting, Montréal*, Gersten's injectivity in the non-Noetherian world.

Seminar Talks

- May 2026 **LAGA Seminar**, *Paris, France*, Purity of motivic cohomology over deeply-ramified bases.
- April 2026 **Séminaire d'arithmétique à Lyon**, *ENS Lyon, France*, Purity of motivic cohomology over deeply-ramified bases.
- **Seminar "Arithmétique"**, *Lille, France*, Purity of motivic cohomology over deeply-ramified bases.
- February 2026 **Seminar: Thematic Programme on Rational Points, Algebraic Cycles and the Local-Global Principle**, *LMSI, Mumbai*, Purity of Motivic Cohomology in mixed-characteristic.
- **Seminar Variétés Rationnelles**, *Paris*, Reductification of Parahoric Group Schemes.
- January 2026 **Number Theory Seminar**, *Caen, France*, Purity of Motivic Cohomology in mixed-characteristic.
- November 2025 **Mathematics Seminar**, *CMI, Chennai*, \mathbb{A}^1 -connectivity of Motivic Spaces.
- February 2025 **Topology Seminar**, *Columbia University, New York*, Beilinson–Lichtenbaum Conjecture in Mixed-characteristic.
- January 2025 **Algebraic Geometry Seminar**, *Toronto*, Motivic Cohomology in mixed-characteristic.
- December 2024 **Algebraic Geometry Seminar**, *CMI, Chennai*, Grothendieck–Serre Conjecture for Parahoric Group Schemes.
- November 2024 **UBC Algebraic Geometry Seminar**, *Vancouver*, Motivic Cohomology in mixed-characteristic.
- October 2024 **Number Theory Seminar**, *Toronto*, Grothendieck–Serre Conjecture for Parahoric Group Schemes, ([video](#)).
- November 2023 **Algebraic Geometry Seminar**, *Toronto*, Gersten's injectivity in the non-Noetherian world.
- **Arithmetic and Algebraic Geometry Seminar**, *Allahabad*, Gersten's injectivity in the non-Noetherian world.

- April 2023 **Algebra and Geometry Seminar**, *Stockholm*, Tilting Correspondences of Perfectoid Rings.
- January 2023 **Algebraic Geometry Seminar**, *Purdue*, Torsors on Valuation Rings.
- **Algebra and Geometry Seminar**, *Stockholm*, Torsors on Valuation Rings.
 - **Stacks Seminar**, *Essen*, Torsors on Valuation Rings.
 - **Arithmetic and Algebraic Geometry Seminar**, *Amsterdam*, Torsors on Valuation Rings.
- December 2022 **Arithmetic Geometry Seminar**, *Heidelberg*, Torsors on Valuation Rings.
- **Seminar on Arithmetic Geometry**, *Darmstadt*, Torsors on Valuation Rings.
- November 2022 **Preprint Seminar**, *Paris*, Torsors on the Complement of a Smooth Divisor.
- October 2022 **Seminar Mathjeunes**, *Paris*, Torsors on Valuation Rings.
- June 2022 **Seminar SAGA**, *Orsay*, Tilting Correspondences of Perfectoid Rings.
- December 2021 **Seminar RéGA**, *Paris*, Tilting Correspondences of Perfectoid Rings.

Organisation of Seminar

- 2024-2025 **Algebraic Geometry Seminar**, *University of Toronto*, Toronto, Canada, with E. Elmanto, Daniel Litt, Nick Rozenblyum, Sebastián Olano, [Website](#).
- **Number Theory Seminar**, with Florian Herzig, [Website](#).
- Fall 2024 **Seminar on the Unramified Cohomology**, with E. Elmanto.
- Fall 2023 **Seminar on the Grothendieck–Serre Conjecture**, with E. Elmanto, [Website](#).
- 2022-2023 **Seminaire Réseau des étudiants en Géométrie Algébrique (RéGA)**, *Institut Henri Poincaré (IHP)*, Paris, France, [Website](#).

Teaching Experience

- Spring 2025 & Fall 2023 **MAT223 Linear Algebra I**, *Course Instructor*, University of Toronto, Canada.
- Spring 2025 **MAT224 Linear Algebra II**, –.
- Spring 2024 **MAT344 Intro to Combinatorics**, –.
- Fall 2022, 2021 & 2020 **Mathematics - 1**, *Teacher*, Institut Universitaire de Technologie (IUT), Cachan, France.
- Fall 2016 **Analysis 1**, *Teaching Assistant*, Chennai Mathematical Institute (CMI), Chennai, India.
- January 2016 **Indian National Mathematical Olympiad Training Camp**, *Instructor*, The Institute of Mathematical Sciences (IMSc), Chennai.

Languages

Bengali (Native), English, French, Hindi

German (Learning)

 **Computer skills**

Programming Python, Haskell, C++, Java

Web design HTML, CSS