Tinhinane Amina Azzouz

Curriculum vitae — Updated 30 October 2026

Assistant Professor of Mathematics
Beijing Institute of Mathematical Sciences and Applications (BIMSA)
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Married, one child.

Research interests

p-adic differential equations; non-Archimedean spectral theory; ultrametric functional analysis; Berkovich analytic geometry.

Academic appointments

Jan. 2024–present — **Assistant Professor**
Beijing Institute of Mathematical Sciences and Applications, Beijing, China.
Maternity leave: mid-March–September 2026.

2021–2023 — **Postdoctoral Researcher**
Yau Mathematical Sciences Center, Tsinghua University / BIMSA, Beijing, China.

Nov. 2018–Dec. 2020 — **Assistant Professor**
Université Alger 1, Algiers, Algeria.

Sept.–Nov. 2018 — **Postdoctoral Researcher**
Max Planck Institute for Mathematics, Bonn, Germany.

Oct. 2017–Aug. 2018 — **Temporary Teaching and Research Assistant (ATER)**
Université Grenoble Alpes, Grenoble, France.

Education

2014–2018 — **Ph.D. in Mathematics**
Université de Montpellier, Institut Montpelliérain Alexander Grothendieck, France.
Thesis: *Spectrum of p-adic differential equations.*
Supervisors: Andrea Pulita and Jérôme Poineau. Defended 11 June 2018.

2012–2014 — **M.Sc. in Mathematics and Applications**
Fundamental Mathematics, Université Pierre et Marie Curie, Paris, France. With honours.

2008–2011 — **B.Sc. in Mathematics and Computer Science**
Algebra and Cryptography, Université des Sciences et de la Technologie Houari Boumediene (USTHB), Algiers, Algeria. With honours.

Funding and awards

2023 — **Research Fund for International Young Scientists**, National Natural Science Foundation of China; YMSC, Tsinghua University.

2014–2017 — **Funded doctoral position with teaching**, Université de Montpellier.

2012–2014 — **Paris Graduate School of Mathematics international programme**, laureate; Fondation Sciences Mathématiques de Paris.

Academic service

Nov. 2019–June 2020 — **Deputy Director in charge of Teaching**, Department of Mathematics and Computer Science, Université Alger 1.

Publications

1. Tinhinane Amina Azzouz. *Spectrum of p-adic linear differential equations II: Variation of the spectrum.* **Journal of the London Mathematical Society 114**(4) (2026), e70718. doi:10.1112/jlms.70718. arXiv:2303.06014.
2. Tinhinane Amina Azzouz. *Spectrum of p-adic linear differential equations I: The shape of the spectrum.* **Selecta Mathematica 30**, article 13 (2024). doi:10.1007/s00029-023-00904-4. arXiv:2111.03548.
3. Tinhinane Amina Azzouz. *Spectrum of a linear differential equation over a field of formal power series.* **Journal of Number Theory 231** (2022), 139–157. doi:10.1016/j.jnt.2020.11.021. arXiv:1808.02382.
4. Tinhinane Amina Azzouz. *Spectrum of a linear differential equation with constant coefficients.* **Mathematische Zeitschrift 296** (2020), 1613–1644. doi:10.1007/s00209-020-02482-z. arXiv:1802.07306.

Preprints

Tinhinane Amina Azzouz, Mainak Ghosh and Sebastien Palcoux. *Local Ocneanu rigidity for separable algebra objects* (2026). arXiv:2609.10440.

Work in progress

- Wild finite étale coverings of p-adic annuli, with Andrea Pulita.
- Spectral methods and decompositions for p-adic differential modules.
- Techniques for computing the spectrum of an ultrametric operator.

Teaching

Courses at BIMSA

Oct. 2026–Jan. 2027	**Ramification Theory of Local Fields**.
Oct.–Dec. 2025	**Introduction to Berkovich spaces**.
Feb.–May 2025	**Introduction to p-adic differential equations III**.
Oct. 2024–Jan. 2025	**Introduction to p-adic differential equations II**.
Mar.–June 2024	**Introduction to p-adic differential equations**.

Earlier teaching

Aug. 2022	**Introduction to p-adic differential equations**, Sanya Mathematics Summer School, Tsinghua Sanya International Mathematics Forum, Sanya, China.
Oct. 2015–Aug. 2016	Teaching assignment, Université Grenoble Alpes, France.
Oct. 2014–Aug. 2015	Teaching assignment, Université de Montpellier, France.

Selected talks

14 Aug. 2026	*The spectrum of p-adic linear differential equations.* Invited lecture, International Congress of Basic Science (ICBS), Beijing, China.
6 & 13 Nov. 2025	*The variation of the radii of convergence of linear p-adic differential equation.* Number Theory Lunch Seminar, BIMSA, Beijing.
27 May 2024	*p-adic linear differential equations.* BIMSA Member Seminar, Beijing.
27 Sept. 2023	*p-adic differential equations and radii of convergence.* Number Theory Lunch Seminar, BIMSA, Beijing.
4 July 2023	*Spectrum of p-adic linear differential equations.* Tenth Congress of Romanian Mathematicians, Romania.
18 May 2023	*The spectral theory in the sense of Berkovich.* Number Theory Lunch Seminar, BIMSA, Beijing.
28 Oct. 2022	*Finite morphism and radii of convergence of a p-adic differential equation.* Number Theory Lunch Seminar, BIMSA, Beijing.
June 2022	*Spectrum of p-adic differential equations.* BIMSA–YMSC Tsinghua Number Theory Seminar, Beijing.
July 2017	*Spectral theory and ultrametric differential equations.* Students' Conference on Tropical and Non-Archimedean Geometry, University of Regensburg, Germany.
June 2016	*Spectre d'un système différentiel aux coefficients constants.* École jeunes chercheurs en théorie des nombres, Clermont-Ferrand, France.
2014–2018	Five talks in Ph.D. students' seminars.

Conference and school participation

July 2019	*Perfectoids*, Centre Henri Lebesgue, Rennes, France.
July 2018	*Berkovich Spaces 30 Years*, Institut Henri Poincaré, Paris, France.
July 2017	*Berkovich Spaces, Tropical Geometry and Model Theory*, Universidad de los Andes, Bogotá, Colombia.
Mar. 2017	*p-adic Analytic Geometry and Differential Equations*, CIRM, Marseille, France.
Aug. 2015	Students' Conference on Tropical and Non-Archimedean Geometry, University of Regensburg, Germany.
June 2015	*Géométrie et arithmétique sur les corps locaux et globaux*, Université de Caen, France.
June 2015	Conference in honour of Alexandre Grothendieck, Université de Montpellier, France.
June 2014	*Special Week: Berkovich Spaces and Applications*, Université de Strasbourg, France.

Languages

Arabic (native); French (fluent); English (fluent).