

Asilata Bapat | Curriculum Vitae

Mathematical Sciences Institute, The Australian National University

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Education

The University of Chicago <i>PhD in Mathematics.</i> Advisor: Victor Ginzburg.	Chicago, IL 2010–2016
The University of Chicago <i>MS in Mathematics.</i>	Chicago, IL 2010–2012
Massachusetts Institute of Technology <i>SB (Bachelor of Science) in Mathematics with Computer Science.</i> GPA 4.9 out of 5.	Cambridge, MA 2006–2010

Employment

Australian National University (ANU) <i>Senior Lecturer (Level C), Mathematical Sciences Institute</i>	Canberra 2024–present
Australian National University (ANU) <i>Lecturer (Level B), Mathematical Sciences Institute</i>	Canberra 2018–2023
University of Georgia (UGA) <i>Assistant Professor (Limited Term), Department of Mathematics</i>	Athens, GA 2016–2017

Papers and preprints

- Wigglyhedra (with Vincent Pilaud)
Preprint.
- q -deformed rational numbers and the 2-Calabi–Yau category of type A_2 (with Louis Becker, Anthony Licata)
Forum of Mathematics, Sigma, 11, e47 (2023).
- Spherical objects and stability conditions on 2-Calabi–Yau quiver categories (with Anand Deopurkar, Anthony Licata)
Mathematische Zeitschrift 303, 13 (2023).
- Computing the matching distance of 2-parameter persistence modules from critical values (with Robyn Brooks, Claudia Landi, Celia Hacker, Barbara Mahler, Elisabeth Stephenson)
Preprint.
- Morse-based fibering of the persistence rank invariant (with Robyn Brooks, Claudia Landi, Celia Hacker, Barbara Mahler)
Research in Computational Topology 2 (2022), pp. 27–62
- A Thurston compactification of the space of stability conditions (with Anand Deopurkar, Anthony Licata)
Submitted.
- Recollement for perverse sheaves on real hyperplane arrangements
Journal of Algebra, 568 (2021), pp. 61–90
- The strong topological monodromy conjecture for Coxeter hyperplane arrangements (with Robin Walters)
Mathematical Research Letters 24 (2017), no. 4, 947–954
- Torus actions and tensor products of intersection cohomology
Pacific Journal of Mathematics 276 (2015), pp. 19–34
- Lower central series of free algebras in symmetric tensor categories (with David Jordan)
Journal of Algebra, 373 (2013), pp. 299–311

Grants

The geometry of braids and triangulated categories ARC DECRA grant DE240100447 (AUD 468000)	ANU 2024–2026
Stability conditions: their topology and applications ARC Discovery Project grant DP240101084 (AUD 419421) Jointly held with Anand Deopurkar and Anthony M. Licata.	ANU 2024–2026
AMS-Simons travel grant Grant for research travel (USD 4000)	UGA 2016–2018

Academic and teaching awards

- Anne Penfold street award, 2023
- Dean's Commendation for Excellence in Education (for Teaching Excellence), ANU, 2021.
- Nadine Kowalsky Fellowship, University of Chicago, 2016.
- Jerry Rao Fellowship, University of Chicago, 2014–2015.
- Young Researcher at the 2nd Heidelberg Laureate Forum, Heidelberg, Germany, 2014.
- Lawrence and Josephine Graves Teaching Prize, University of Chicago, 2014.
- Amick Fellowship, University of Chicago, 2010–2012.
- Phi Beta Kappa, MIT, 2010.
- Rogers Prize for best paper, Summer Program in Undergraduate Research, MIT, 2009.
- Indian National Mathematical Olympiad (INMO) scholarship, 2005.
- International Astronomy Olympiad, Silver medal (2005) and Gold medal (2003).

Teaching

Australian National University.....

- **2023 Semester 2:** Games, Graphs, and Machines (MATH2301)
- **2022 Semester 2:** Games, Graphs, and Machines (MATH2301)
- **2021 Spring Semester:** Mathematics and Applications 2 (MATH1014)
- **2021 Semester 2:** Games, Graphs, and Machines (MATH2301)
- **2021 Summer Session:** Representation theory (IBL reading course)
- **2020 Spring Semester:** Mathematics and Applications 2 (MATH1014)
- **2020 Semester 1:** Perverse Sheaves (half of a special topics course on Perverse Sheaves and Deligne–Lusztig theory)
- **2020 Semester 2:** Games, Graphs, and Machines (MATH2301)
- **2019 Semester 1:** Advanced Studies Extension for Analysis I (MATH2320).
- **2018–2019 Summer Session:** Introduction to the theory of Computation (reading course)
- **2018 Semester 2:** Mathematical Foundations for Actuarial Studies (MATH 1113), Linear Algebra.
- **2018 Semester 1:** Advanced Studies Extension for Analysis I (MATH2320).

University of Georgia.....

- **Fall 2017:** Precalculus (Math 1113).
- **Fall 2017:** Graduate Algebra (Math 8000).
- **Spring 2017:** Calculus II for Science and Engineering (Math 2260).
- **Fall 2016:** Calculus I for Science and Engineering (Math 2250).

University of Chicago.....

- **2015–2016:** IBL Honors Calculus I and II (Math 161 and 162).
- **2014–2015:** Studies in Mathematics I and II (Math 112 and 113).
- **Summer 2014:** Linear Algebra (Math 196).
- **2013–2014:** Calculus I, II, and III (Math 151, 152, and 153).
- **2012–2013:** Calculus I, II, and III (Math 151, 152, and 153).
- **2011–2012:** College fellow for Honors Algebra I, II, and III (Math 257, 258, and 259).

Canada/USA Mathcamp.....

- **Summer 2015:** Academic coordinator and mentor. Coordinated the academic schedule, invited visiting speakers, and taught several undergraduate-level courses.
- **Summer 2013:** Mentor. Taught several undergraduate-level courses.
- **Summer 2012:** Mentor. Taught several undergraduate-level courses.

Talks and presentations
