

Tanisha Talekar

📍 Canberra, Australia ✉ tanishamandar.talekar@anu.edu.au in LinkedIn

SUMMARY

An aspiring mathematician with a keen interest in Algebra and Topology. Particularly interested in the combinatorics of certain objects arising from Categorical and Geometric Representation Theory. Specific objects of interest include Bridgeland stability conditions, pseudoline arrangements and subword complexes

EDUCATION

Doctor of Philosophy: Mathematical Sciences 2025 - Present

Australian National University, Canberra, Australia

- *Supervisor:* Dr. Asilata Bapat, Senior Lecturer, Mathematical Sciences Institute

Masters in Science: Mathematics 2023 - 2025

IISER Thiruvananthapuram, Kerala, India

- CGPA: 9.79/10
- *Supervisor:* Dr. Sarbeswar Pal, Associate Professor, IISER Thiruvananthapuram
- *Thesis:* Root Systems of Linear Algebraic Groups

Bachelors in Science: Mathematics 2020 - 2023

Ramnarain Ruia Autonomous College, Mumbai, India

- CGPA: 10/10

INTERNSHIPS & PROJECTS

Reading project on Algebraic Groups Jul - Aug 2025

TIFR, Mumbai, India

- *Supervisor:* Dr. Tanmay Deshpande, Professor, School of Mathematics, TIFR
- Explored texts on Harish-Chandra theory and the Existence theorem for algebraic groups

ANU Future Research Talent 2024 May - Jul 2024

Australian National University, Canberra, Australia

- *Supervisor:* Dr. Asilata Bapat, Senior Lecturer, Mathematical Sciences Institute
- Worked on the categorical representation theory of braid groups and associated calculations via computer algebra systems.
- Studied zigzag algebras and stable objects under Bridgeland stability conditions.
- Developed a code in SageMath to find stable objects under different stability conditions.

Reading project on Algebraic Geometry Jan 2024 - Oct 2024

IISER, Thiruvananthapuram

- *Supervisor:* Dr. Sarbeswar Pal, Associate Professor, IISER Thiruvananthapuram
- Explored texts on algebraic curves and varieties

TEACHING EXPERIENCE

- **1115 Advanced Mathematics and Applications**, Workshop demonstrator, Semester 1 2026, ANU MSI
- **2322 Algebra 1**, Workshop demonstrator, Semester 2 2026, ANU MSI

SCHOLARSHIPS & GRANTS

- **ANU PhD Scholarship**, ANU Mathematical Sciences Institute, 2025 - 2029

AWARDS & HONOURS

- **Gold medal, School of Mathematics**, IISER Thiruvananthapuram, July 2025
- **Certificate of Distinction**, IISER Thiruvananthapuram, July 2025
- **ANU FRT Award**, Australian National University, 2024
- **The Late Mrs. Sushama Purushottam Dandekar Prize**, Ramnarain Ruia Autonomous College, February 2024
- **Alumni Award**, Ramnarain Ruia Autonomous College, February 2024
- **Professor K. Shrikumar Trophy**, Ramnarain Ruia Autonomous College, March 2023
- **Most Promising Coordinator**, Ramnarain Ruia Autonomous College, April 2022

WORKSHOPS/ CONFERENCES

- **Kioloa Algebra Conference**, ANU Kioloa Campus, December 2025
- **Frontier Symposium in Mathematics**, IISER Thiruvananthapuram, January 2025
- **Representation Theory of Quivers and BGG Category $\mathcal{O}$ for Semisimple Lie Algebras**, IIT Kanpur (Online), India (December 2024)
- **Frontier Symposium in Mathematics**, IISER Thiruvananthapuram, February 2024
- **Real Analysis** (Follow-up course to OFCM), Mathematics Training and Talent Search Program, India (January 2022)
- **OFCM 2021** - Online Foundation Course in Mathematics, Mathematics Training and Talent Search Program, India (September 2021)

TALKS

- **Algebraic Groups and Root Systems**, Graduate Seminar, ANU Mathematical Sciences Institute
- **Representation Theory of Quivers**, CMIT - Club of Mathematics IISER Thiruvananthapuram, March 2025
- **Zig-zag Algebras and Braid Actions**, CMIT - Club of Mathematics IISER Thiruvananthapuram, August 2024

EXTRA CURRICULARS

- Residential Mentor for student accommodation
- Organising the Graduate student colloquium, ANU MSI, 2026
- Coordinator, Club of Mathematics of IISER Thiruvananthapuram (CMIT), 2023-25
- Organised *Tangent Tuesdays*, a talk series under CMIT
- Class Representative for MSc Mathematics batch, 2023-25
- Coordinator, Ruia Student Council (RSC VPM), 2021-23
- Volunteer, Ruia Student Council (RSC VPM), 2020-21

SKILLS

Computational

SageMath, Python

Typesetting

$\text{\LaTeX}$

Languages

- **English:** Professional proficiency
 - IELTS: Overall – 8.5
Reading – 8.5, Writing – 7.5, Speaking – 8.0, Listening – 9.0.
- **French:** Elementary proficiency
- **Marathi:** Native language
- **Hindi:** Native language

INTERESTS

Baking, Reading, Roller-skating, Motorcycle riding

REFERENCES

References available upon request.