

Devesh Rajpal

Curriculum Vitae

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Education

- 2021–2023 **Masters in Mathematics**, *Chennai Mathematical Institute, Chennai, India*, (Ongoing).
Thesis title : Mean Curvature Flow
- 2020–2021 **Masters 2 in Mathématiques fondamentales**, *Sorbonne Université, Paris, France*.
Thesis title : Ricci flow on Surfaces and Cross Curvature Flow
- 2017–2020 **B.Sc.(Hons) in Mathematics and Physics**, *Chennai Mathematical Institute, Chennai, Tamil Nadu, India*.
- 2015–2017 **Higher Secondary Education**, *Dronacharya Public School, Raipur, Chhattisgarh, India*.

Reading Projects

- Summer 2022 Reading Project on Ricci flow under Prof. Ben Andrews, ANU as part of ANU-FRT.
• We covered basics of Ricci flow and Hamilton's paper *Three-manifolds with positive Ricci curvature*.
- Summer 2020 Reading Project on Spectral Geometry under Prof. Sugata Mondal, TIFR as part of VSRP.
• We covered parts of the paper *Berger's Isometric problem and minimal immersion of surfaces* by N. Nadirashvili.
- Summer 2019 Reading Project on Riemannian Geometry under Prof. Harish Seshadri, IISc. Topics covered :
• Riemannian Manifolds
• Geodesics and curvature
• Curvature - Topology theorems
- Summer 2018 Reading Project on Special Relativity under Prof. Alok Laddha, CMI. Topics covered :
• Principles of Special Relativity
• Relativistic Mechanics
• Geodesics and Schwarzschild Geometry

Talks and Presentations

- Fall 2022 Mean Curvature Flow of Hypersurfaces, CMI.
- Spring 2021 Ricci flow on Surfaces and Cross Curvature Flow, Sorbonne Université.
- Fall 2019 Basics of Homological Algebra for the course Commutative Algebra, CMI.
- Fall 2018 An economic analogy to thermodynamics for the course Thermal Physics, CMI.
- Spring 2018 Bohlin Transformations for the course Classical Mechanics 2, CMI.

Teaching Duties

Fall 2022 Teaching assistant for course B.Sc.(Hons) Analysis 1
Spring 2023 Teaching assistant for NPTEL course Rings and Fields
Spring 2023 Teaching assistant for B.Sc.(Hons) Differential Equations

Lectures and Workshops attended

Nov 2019 "Curvature, torsion, and the quadrilateral gaps" by Nitin Nitsure, CMI.
July 2019 Advanced Instructional Schools on Riemannian Geometry, IISc.

Scholarships

2020 - 2021 PGSM Masters Scholarship
2017 - 2020 CMI Institutional Fee Waiver
2017 - 2020 CMI Scholarship

Other Achievements

1. Third rank in Regional Mathematics Olympiad 2015.
2. Qualified JEE Mains and Advanced.

Extracurriculars

1. Class representative for the academic term 2018-2019.
2. Physics Head of STEMS 2019, 2020, an annual math contest organized by CMI students.
3. Coordinator for Tessellate 2019, 2020, the annual CMI fest.
4. Team captain in the Intra college Volleyball tournament, Fall 2022.

Skills

Programming Languages Haskell, Python
Tools LaTeX
Languages Hindi (native), English (fluent), French (basic)