

# 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 University, 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, Australian National University (ANU)
  - We covered basics of Ricci flow and Hamilton's paper *Three-manifolds with positive Ricci curvature*
- Summer 2020 Research Project on Spectral Geometry under Prof. Sugata Mondal, Tata Institute of Fundamental Research (TIFR)
  - 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. Topics covered :
  - Riemannian Manifolds
  - Geodesics and curvature
  - Curvature - Topology theorems
- Summer 2018 Reading Project on Special Relativity under Prof. Alok Laddha. 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 University.
- Fall 2019 Basics of Homological Algebra in course Commutative Algebra, CMI.
- Fall 2018 An economic analogy to thermodynamics in course Thermal Physics, CMI.
- Spring 2018 Bohlin Transformations in course Classical Mechanics 2, CMI.

## 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. Volleyball captain in Intra college tournament

## Skills

Programming Languages Haskell, Python

Tools LaTeX

Languages Hindi (native), English (fluent), French (basic)