Indian institute of science education and research, Information

Tirupati

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Research Background

Contact

Algebraic Geometry

More specifically, I am studying parabolic bundles on real algebraic curves and d-holomorphic bundles on Klein surfaces. I have described certain gauge theoretic quotients of certain space of connections for parabolic bundles on real algebraic curve as embedded in real points of moduli of parabolic bundles on compact Riemann surface along with criteria for existence of d-holomorphic connection for dholomorphic bundle on Klein surface. Presently, I am studying some algebro geometric properties associated to some moduli spaces.

2023(ongoing
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2017-2023

Indian institute of science education and research, Tirupati(IISER T), India

Education

• Postdoc in Department of Mathematics

Indian Institute of Technology, Gandhinagar(IITGn), India

- Ph.D. in Discipline of Mathematics, CPI: 7.94 via 44 credits.
 - Thesis: On d-holomorphic connections and gauge theoretic aspects of parabolic bundles over Klein surface
- Advisor: Prof. Sanjaykumar Amrutiya.
- Ph.D. Degree: 29 July 2023

2013 - 2015

Indian Institute of Technology, Kanpur(IITK), India.

• M.Sc., Mathematics. CPI: 7.2 – via 80 credits

Technical Skills

- Programming Languages: C, Python
- Technical Softwares: MATLAB, Git-hub, Latex

Research Interests

Algebraic Geometry

- Parabolic bundles
- d-holomorphic bundles

Selected Publications/Preprints

- Sanjay Amrutiya, Ayush Jaiswal, "On d-holomorphic connections", Proceedings-Mathematical Sciences 133, no. 2 (2023): 21.
- 🖾 Sanjay Amrutiya, Ayush Jaiswal, "A qauge theoretic aspects of parabolic bundles over Klein surfaces", arXiv preprint arXiv: 2202:06210; 2022 (to be appear in Rocky mountain journal of mathematics)

Professional Achievements/Awards/ Scholarships

2010-2011

2013

2015

Secured 2nd position(merit based) in during B.Sc.(IInd year) Joint Admission Test for Masters (JAM) organised by Indian Institute

of Technology, Delhi(IITD)

Graduate Aptitude Test for Engineering(GATE) organised by Indian Institute of Technology, Kanpur(IITK)

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	2016	Graduate Aptitude Test for Engineering(GATE) organised by Indian Institute of Science, Bangalore(IISC)
Workshops/Conferences attended Delivered Talks/Poster Presentations	2015,2016	Junior Research Fellow(JRF) organised by Council of Scientific and Industrial Research(CSIR)
	10 Feb – 14 Feb, 2020	Moduli of bundles and related structures ICTS, Bangalore, India.
	4 Mar – 15 Mar, 2019	Workshop Characteristic classes and cobordism IIT Bombay, Powai, Maharashtra, India.
	24 June–13 July 2019	AIS(Advanced Instructional School) Linear Algebraic Groups IIT Bombay, Powai, Maharashtra, India.
	2 January – 2 May, 2021	AIC(Advanced Instructioncal Course) Commutative Algebra online mode.
	25 June – 14 July, 2018	AIS(Advanced Instructional School) Basic Algebraic Geometry IISER Pune, Pune, Maharashtra, India.
	12 Dec – 16 Dec, 2022	On d-holomorphic connections (Talk) Conference on Algebraic Geometry Harish Chandra Research Institute, Prayagraj, India.
	6 Feb – 11 Feb, 2023	On d-holomorphic connections (Poster) Vector bundles in Chennai Department of mathematics, IIT Madras, Chennai, India.
	16 Aug – 18 Aug, 2023	Orientability and Poincare duality theorem (Poster) Occassion of Pi-Day Department of mathematics, IIT Gandhinagar, Gujarat, India.
	16 Aug – 18 Aug, 2023	On d-holomorphic connections (Talk) Discussion meeting on algebra and geometry Department of mathematics, IISER Bhopal, Madhya Pradesh, India.
Teaching Experience	Autumn 2017 – 2018	Teaching Fellow MA 101, Mathematics I(Real Analysis and Several Variable Calculus) at IIT Gandhinagar, Gujarat, India
	Spring 2018 – 2019	Graduate Teaching Fellow MA 102, Mathematics II(Linear Algebra and Differential Equations) at IIT Gandhinagar, Gujarat, India
	Autumn 2019 – 2020	Graduate Teaching Fellow MA 504, Linear Algebra at IIT Gandhinagar, Gujarat, India
	Spring 2019 – 2020	Graduate Teaching Fellow MA 102, Mathematics II(Several Variable Calculus and Complex Analysis) at IIT Gandhinagar, Gujarat, India
	Spring 2022–2023	Teaching assitant MTH 121, Linear algebra and applications at IISER Tirupati, Tirupati, Andhra Pradesh, India
	Summer 2022–2023	Instructor MTH 122, Linear algebra and applications at IISER Tirupati, Tirupati, Andhra Pradesh, India
	Summer 2022–2023	Instructor MTH 211, Multivariable Calculus at IISER Tirupati, Tirupati, Andhra Pradesh, India
	Autumn 2023–2024	Teaching assitant MTH 211, Probability theory and statistics at IISER Tirupati, Tirupati, Andhra Pradesh, India