Contact
Information

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# Research Background

#### Algebraic Geometry

More specifically, I am studying parabolic bundles and d-holomorphic bundles on Klein surfaces. I have described gauge theoretic quotients of certain space of connections on parabolic bundles on Klein surface as embedded in real points of moduli of parabolic bundles on compact Riemann surface. Presently, I am studying some invariants associated to moduli spaces. I am also exploring Tropical geometry.

	2017–2023	Indian Institute of Technology, Gandhinagar(IITGn), India
		• Ph.D. in Discipline of Mathematics, CPI: <b>7.94</b> – via 44 credits.
Education		• Thesis: On d-holomorphic connections and gauge theoretic aspects of parabolic bundles over Klein surface
		• Advisor: Prof. Sanjaykumar Amrutiya.
	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", arXiv preprint arXiv : 2208:04354; 2022(to be appear in Proceedings Mathematical Sciences).
- ✓ Sanjay Amrutiya, Ayush Jaiswal, "A gauge theoretic aspects of parabolic bundles over Klein surfaces", arXiv preprint arXiv: 2202:06210; 2022.

Professional Achieve- ments/Awards Scholarships	2010–2011	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)
Scholarships	2015	Graduate Aptitude Test for Engineering (GATE) organised by Indian Institute of Technology, $Kanpur(IITK)$
	2016	Graduate Aptitude Test for Engineering(GATE) organised by Indian Institute of Science, Bangalore(IISC)
	2015,2016	Junior Research Fellow(JRF) organised by Council of Scientific and Industrial Research(CSIR)
Workshops/ Conferences attended	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.
Delivered Talks/Poster Presentations	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 presentation)  Vector bundles in Chennai  Department of mathematics, IIT Madras, Chennai, 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