

# Sujoy Chakraborty

*Curriculum Vitae*

## PERSONAL DETAILS

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<i>Birth</i>	March 31, 1992
<i>Address</i>	Indian Institute of Science Education and Research Yerpedu Mandal, Tirupati District, Andhra Pradesh India – 517619
<i>Phone</i>	+91-8976266997
<i>e-mail</i>	<a href="mailto:sujoy.cmi@gmail.com">sujoy.cmi@gmail.com</a>
<i>Website</i>	<a href="https://sujoychakra.github.io/">https://sujoychakra.github.io/</a>

## EDUCATION

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**Ph.D in Mathematics** **2015 – 2021**

*Tata Institute of Fundamental Research, Mumbai, India*

**Thesis title:** *On Chow group of 1-cycles and Abel-Jacobi maps on the moduli space of parabolic bundles over a curve*

**Advisor:** Prof. Indranil Biswas

**MSc. in Mathematics** **2013 – 2015**

*Chennai Mathematical Institute (CMI), Chennai, India*

**BSc. (Honours) in Mathematics and Computer Science** **2010 – 2013**

*Chennai Mathematical Institute (CMI), Chennai, India*

## WORK EXPERIENCE

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**Post-Doctoral Research Fellow** **2023 – present**

*Indian Institute of Science Education and Research Tirupati, India*

**Institute Post-doctoral Fellow** **2021 – 2023**

*Indian Institute of Technology Madras, India*

## RESEARCH INTERESTS AND SKILLS

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<i>Research Interests</i>	Algebraic Geometry, more specifically: moduli space of vector bundles and related topics, parabolic vector bundles, Algebraic stacks.
<i>Languages</i>	Bengali (mother tongue) English (fluent) Hindi (fluent)
<i>Software</i>	C, C++, JAVA, L <sup>A</sup> T <sub>E</sub> X

## PUBLICATIONS AND PREPRINTS

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- (With I. Biswas) Brauer group of moduli stacks of parabolic principal bundles over a curve (submitted)
- (With I. Biswas and P. Das) A note on the existence of line bundles of indefinite curvature forms (*submitted*)
- (With I. Biswas and A. Dey) Brauer group of moduli of parabolic symplectic bundles (*submitted*)
- (With A. Paul) Equivariant parabolic connections and stack of roots (*submitted*)  
[arxiv link](#)
- (With S. Majumder) Orthogonal and symplectic parabolic connections and stack of roots  
*Bulletin des Sciences Mathématiques* Vol. 191 (2024)  
<https://doi.org/10.1016/j.bulsci.2024.103397>
- (With A. Paul) Real structures on root stacks and parabolic connections  
*Geometriae Dedicata* Vol. 218, No. 35 (2024)  
<https://doi.org/10.1007/s10711-023-00880-1>
- (With I. Biswas and A. Dey) Chen–Ruan cohomology and orbifold Euler characteristic of moduli spaces of parabolic bundles  
*Journal of Geometry and Physics* Vol. 202, no. 105236 (2024)  
<https://doi.org/10.1016/j.geomphys.2024.105236>
- (With I. Biswas and A. Dey) Brauer group of moduli stack of stable parabolic  $PGL(r)$ -bundles over a curve  
*International Journal of Mathematics* Vol. 35, No. 01 (2023)  
<https://doi.org/10.1142/S0129167X23500957>
- On Abel-Jacobi maps of moduli of parabolic bundles over a curve  
*Communications in Algebra* Vol. 49, No. 9 (2021)  
<https://doi.org/10.1080/00927872.2021.1903913>
- Chow group of 1-cycles of the moduli of parabolic bundles over a curve  
*Proceedings – Mathematical Sciences* Vol. 131, No. 22 (2021)  
<https://doi.org/10.1007/s12044-021-00616-9>
- (With A. Paul) Picard Group and Fundamental Group of the Moduli of Higgs Bundles on Curves  
*Complex Manifolds* Vol. 5, issue 1 (2018)  
<https://doi.org/10.1515/coma-2018-0009>

## AWARDS AND SCHOLARSHIPS

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- Recipient of **INSPIRE SHE Scholarship**, funded by the government of India, for the period 2010-2015.
- Selected for **NBHM Junior Research Fellowship** (2013).

## TALKS GIVEN

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- *Brauer groups of moduli spaces of parabolic  $PGL(r)$  and  $Sp(2r)$ -bundles over a curve*  
HRI Prayagraj (December 3, 2024)
- *Real Structures on Root Stacks and Parabolic Connections*  
Invited lecture at the the Discussion meeting on Algebra and Geometry,  
IISER Bhopal (August 16, 2023)
- *Chen–Ruan cohomology for the moduli space of parabolic vector bundles over a curve*  
IISER Kolkata (December 19, 2022)
- *Brauer group of the moduli stack of stable parabolic  $PGL(r)$ -bundles over a curve*  
Invited lecture at SRM university Amaravathi, India (July 19, 2022)
- *Moduli of parabolic bundles over a curve and its first rational Chow group*  
Algebraic Geometry Seminar, IIT Bombay (September 7, 2020)
- *Picard Group and Fundamental Group of the Moduli of Higgs Bundles on Curves*  
CIRM Luminy, France (January 31, 2019)
- *Stable and semistable vector bundles*  
Geometry seminar, TIFR Mumbai (January 19, 2018)
- *Kodaira vanishing theorem on compact complex manifolds*  
TIFR Mumbai (December 26, 2017)

## WORKSHOPS/CONFERENCES ATTENDED

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- *Workshop and Conference on Algebraic Geometry*, HRI Prayagraj (December 2024)
- *NCM Workshop on derived categories and semi-orthogonal decompositions*, CMI Chennai, India (June 2024)
- *BIRS-CMI workshop on New directions in rational points*, CMI Chennai, India (January 2024)
- *Workshop on Spherical Varieties and Related Topics*, IIT Madras, India (December 2023)
- *Topics in Hodge Theory*, ICTS Bangalore, India (February 2023)
- *Vector Bundles in Chennai*, Indian Institute of Technology Chennai, India (February 2023)

- *Topics in Algebraic Geometry and Commutative Algebra*, SRM university Amara-vathi, India (July 2022)
- *Vector Bundles 2022*, TIFR Mumbai (March 2022)
- *Lecture Series in Algebraic Geometry*, (online) IIT Madras (November 2021)
- *Moduli Of Vector Bundles And Related Structures*, ICTS Bangalore (February 2020)
- *Winter School Master Class: Complex Geometry: A Modern Viewpoint*, CIRM (Centre International de Rencontres Mathématiques), Marseille, France (January 2019)
- *ATMW Geometric Invariant Theory*, Kerala School of Mathematics, Kerala (May 2018)
- *Discussion Meeting On Analytic And Algebraic Geometry*, ICTS Bangalore (March 2018)
- *National Conference On Commutative Algebra and Algebraic Geometry (CAAG)*, IISER Pune (December 2017)
- *AIS Workshop on Differential Geometry*, IISER Pune (September 2017)
- *Advanced Instructional School on Schemes and Cohomology*, Kerala School of Mathematics, Kerala (December 2014)

## **COURSES TAUGHT**

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- Teaching assistant for *Introduction to Abstract Algebra*, IISER Tirupati (Spring 2025)
- Instructor for *Basic Mathematics*, IISER Tirupati (Fall 2024)
- Co-instructor for *Commutative Algebra*, IISER Tirupati (Spring 2024)
- Teaching assistant for *Probability and Statistics*, IISER Tirupati (Fall 2023)
- Teaching assistant for *Series and Matrices*, IIT Madras (Spring 2023)
- Principal instructor for *Algebra II*, IIT Madras (Fall 2022)

## **EVENTS ORGANIZED**

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- *Graduate College Seminar on Moduli Spaces and Geometric Invariant Theory*, IISER Tirupati [website link](#)
- *Lecture Series in Algebraic Geometry* (online seminar), IIT Madras (2021) [website link](#)

## REFERENCES

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1. Indranil Biswas  
**Affiliation:** Professor  
**Address:** Department of Mathematics, Shiv Nadar University, NH91, Tehsil Dadri, Greater Noida, Uttar Pradesh 201314, India  
*email:* indranil.biswas@snu.edu.in , indranil29@gmail.com
  
2. Arijit Dey  
**Affiliation:** Professor  
**Address:** Department of Mathematics, Indian Institute of Technology Chennai, Chennai-600036, Tamil Nadu, India  
*email:* arijit@iitm.ac.in , arijitdey@gmail.com
  
3. D. S. Nagaraj  
**Affiliation:** Visiting Professor  
**Address:** Department of Mathematics, Indian Institute of Science Education and Research Tirupati, Chittoor-517619, Andhra Pradesh, India  
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