

Sujoy Chakraborty

Curriculum Vitae

PERSONAL DETAILS

<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
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EDUCATION

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

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

<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 ^A T _E X

PUBLICATIONS AND PREPRINTS

- (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

- 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

- *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

- *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

- 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

- *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

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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