Résumé

Dr. Prateep Chakraborty

Department of Mathematics, IIT Kharagpur

Positions:

- Assistant Professor (Dec'2018- present)
  Department of Mathematics, Indian Institute of Technology, Kharagpur [1]
- N.B.H.M. Postdoctoral Fellow (Nov'2016-Nov'2018)
  Department of Mathematics and Statistics,
  Indian Institute of Science Education and Research, Kolkata
- N.B.H.M. Postdoctoral Fellow (Nov'2015-Oct'2016)
  Stat-Math Unit, Indian Statistical Institute, Bangalore
- Visiting Scientist (Sep'2014-Oct'2015)
  Stat-Math Unit, Indian Statistical Institute, Bangalore

Education:

- PhD in Mathematics
  from Institute of Mathematical Sciences, Chennai (Aug'2008-Sep'2014)
  Thesis title : *Formality of certain CW complexes and applications*
  Thesis advisor: Prof. Parameswaran Sankaran
- M.Sc. in Mathematics (2006-2008)
  from University of Calcutta
- B.Sc. in Mathematics (2003-2006)
  from University of Calcutta

[1] Address: Department of Mathematics, IIT Kharagpur, West Bengal, India- 721302,
Email: chakraborty.prateep@gmail.com, prateep@maths.iitkgp.ac.in,
Phone: +919008385094

Areas of Interest:

Algebraic Topology (Rational homotopy theory, K - theory, Geometric group theory)

Publications:

Published:

1. Basu, S. and Chakraborty, P. (2020) **On the cohomology ring and upper characteristic rank of Grassmannian of oriented 3-planes**, *Journal of Homotopy and Related Structures* **15, (1)**, pp 27-60, arXiv: 1712.00284.
2. Chakraborty, P.(2019) **On the center of of the group of quasi-isometries of the real line**, *Indian Journal of Pure and Applied Mathematics* **50, (4)** pp 877-881, arXiv: 1807.09933.
3. Chakraborty, P. and Thakur A.S. (2018) **On Stiefel-Whitney classes of vector bundles over real Stiefel manifolds**, *Topology Proceedings* **52**, pp 309-319, arXiv: 1611.07662.
4. Chakraborty, P. and Masuti, S.K. (2018) **Rational homotopy of maps between certain complex Grassmann manifolds**, *Mathematica Slovaca* **68**, pp 181-196, arXiv:1504.07362.
5. Chakraborty, P. and Thakur A.S. (2016) **Nonexistence of almost complex structure on the product** $S^{2m} \times M$, *Topology and its Applications* **199**, pp 102-110, arXiv:1508.06458.
6. Chakraborty, P. and Sankaran, P. (2014) **Maps between certain complex Grassmann manifolds**, *Topology and its Applications* **170**, pp 119-123, arXiv:1508.06458.
7. Chakraborty, P. and Sankaran, P. (2014) **Errata: Formality of certain CW complexes and applications to Schubert varieties and torus manifolds**, J. Ramanujan Math. Soc. **29, (4)**, pp 459-463, arXiv:1301.5421.
8. Chakraborty, P. and Sankaran, P. (2013) **Formality of certain CW complexes and applications to Schubert varieties and torus manifolds**, J. Ramanujan Math. Soc. (Special Issue in honour of C. S. Seshadri) **28A**, pp 55-74.

Sponsored Project:-

Name of the Research Project	Name of the Sponsoring Agency	Duration	Status
Existence of Almost Complex Structure on a Fiber Bundle over Sphere	ISIRD,SRIC,IIT Kharagpur	3 Years	Approved
Topological Complexity of Lie Groups and Rationally Formal Spaces	Core Research Grant, SERB	3 Years	Approved

Teaching Experience:

Subject	Course	Institute	Semester
Measure Theory and Integration	M.Sc (2nd Year)	IIT Kharagpur	Autumn, 2020
Transform Calculus	B.Tech (2nd Year)	IIT Kharagpur	Autumn, 2019
Real Analysis	B.Tech (3rd Year)	IIT Kharagpur	Autumn, 2019
Mathematics-2	B.Tech (1st Year)	IIT Kharagpur	Spring, 2019, 2020
Preparatory Mathematics-2	B.Tech	IIT Kharagpur	Spring, 2019
Algebraic Topology (jointly with Somnath Basu)	BS-MS (4th Year)	IISER Kolkata	Spring, 2018
Geometry of Curves and Surfaces	BS-MS (3rd Year)	IISER Kolkata	Spring, 2017

Awards:

1. Qualified the UGC-CSIR National Eligibility Test (NET) (2008) conducted by Council of Scientific and Industrial Research.
2. Post Doctoral Fellowship by National Board for Higher Mathematics (2015).

Conference, Workshop & Seminar:

Invited Talk:

1. Conference on Topology, Geomtery and Related Topics, Institute of Mathematical Sciences, Chennai (May 27-28, 2019).
   Topic: *The group of quasi-isometries of the real line.*
2. Research Symposium, Indian Statistical Institute, Bangalore (August 4-5, 2016).
   Topic: *Characteristic rank of oriented Grassmann manifolds*.
3. Indian Statistical Institute, Bangalore (March 2nd and 9th, 2016).
   Topic: *Spectrum and cohomology theory.*
4. Topology Discussion Meeting, Institute of Mathematical Sciences, Chennai (May 03-04, 2013).
   Topic: *Formality of even dimensional CW complexes.*

Participated:

1. Algebraic Topology and Abelian Functions at Moscow State University, Moscow (June, 2013).
2. Topology Discussion Meeting at Institute of Mathematical Sciences, Chennai (May, 2013).
3. ATM school on Topology at Institute of Mathematical Sciences, Chennai (February, 2013).
4. MPLW Kervaire Invariant Problem and its solution at Indian Statistical Institute, Kolkata (May, 2012) .

5. Workshop on Geometry and Topology at Indian Institute of Technology Bombay (February, 2012).
6. Advanced Instructional school on Algebraic Topology at North-Eastern Hill University, Shillong (July, 2011).
7. Advanced Instructional School on Scheme and Cohomology at Kerala School of Mathematics, Calicut (June, 2010).
8. ATM school on Topology at Institute of Mathematical Sciences, Chennai (February, 2010).

References:

Prof. Parameswaran Sankaran
Institute of Mathematical Sciences, Chennai
IV cross road, CIT campus, Taramani
Chennai- 600113, Tamil Nadu, India
Email: sankaran@imsc.res.in

Aniruddha C. Naolekar
Indian Statistical Institute, Bangalore
8th Mile, Mysore Road, RVCE Post
Bangalore- 560059, Karnataka, India
Email: naolekar@gmail.com

Prof. Aleksy Tralle
University of Warmia and Mazury
Olsztyn, Poland
Email: tralle@matman.uwm.edu.pl

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