# INDRAJIT GHOSH

Stat-Math Unit, Indian Statistical Institute ⋄ 8th Mile, Mysore Road ⋄ RVCE Post ⋄ Bangalore 560 059

rs_math1902@isibang.ac.in ⋄ indrajitghosh912@gmail.com

## EDUCATION

**Philosophiae Doctorate in Mathematics**,     *Jul 2019 - Present*
*Stat-Math Unit, Indian Statistical Institute Bangalore*     *Bangalore, India*

**Master of Science in Pure Mathematics**,     *2016 - 2018*
*Department of Pure Mathematics, University of Calcutta*     *Kolkata, India*

**Bachelor of Science in Mathematics (Hons.)**,     *2013 - 2016*
*Barasat Government College*     *Barasat, India*

## RESEARCH INTERESTS

Operator Algebras: von-Neumann Algebras, Type $II_1$ Factors, $C^*$-algebras. Operator Theory, Topology.

## PUBLICATIONS

**Algebraic aspects and functoriality of the set of affiliated operators**     *2023*
*with S. Nayak*

· arXiv: arXiv:2311.16170

## FELLOWSHIPS AND ACHIEVEMENTS

· Selected for **NBHM JRF** fellowship, *National Board for Higher Mathematics*, Dept. Of Atomic Energy, Govt. of India, 2019, Ref No. 0203/11/2019-R&D-II/9261.
· Selected as JRF at Indian Statistical Institute, 2019
· Selected as JRF at IIT Madras, 2019
· Selected as JRF at IISER Bhopal, 2019
· Qualified **GATE** in Mathematics(MA), 2019
· Qualified Joint **CSIR-UGC NET JRF** fellowship, Dec 2018

## CONTRIBUTED TALKS

**International Conference on Spectral and Approximation Theory**     *Nov 27-30, 2023*
*Cochin University of Science And Technology*     *Kerala, India*

· Place: Dept. of Mathematics, Cochin University of Science And Technology
· Website: https://sites.google.com/view/icsat-23/

## PROJECTS & OTHER ACTIVITIES

**Workshop on Completely Positive Maps**     *Jan, 15 - Apr 29, 2024*
*Indian Statistical Institute*     *Bangalore, India*

· Speaker(s): Prof. Soumyashant Nayak, Gahin Maity (JRF) and **Indrajit Ghosh** (SRF)
· Course Webpage: link here

**Directed Reading Project**     *Jan 2021 - May 2021*
*Indian Statistical Institute*     *Bangalore, India*

- Supervisor: Prof. Soumyashant Nayak
- Topics studied: $C^*$-Algebras, States and Representations, SOT and WOT on $\mathcal{B}(\mathcal{H})$, von-Neumann Algebras.

### Graduate Course Work: Operator Theory
*Indian Statistical Institute*

*Sep 2020*
*Bangalore, India*

- Instructor: Prof. Rajaram Bhat
- Topics Studied: Locally Convex Spaces, Operators on Hilbert Spaces, Banach Algebras, Basic $C^*$-Algebra Theory.

## CONFERENCES AND WORKSHOPS ATTENDED

### International Conference on Spectral and Approximation Theory
*Cochin University of Science And Technology*

*Nov 27-30, 2023*
*Kerala, India*

- Place: Dept. of Mathematics, Cochin University of Science And Technology
- Website: https://sites.google.com/view/icsat-23/

### Conference on Functional Analysis and Related Topics
*Indian Institute of Technology*

*Feb 21-25, 2023*
*Bombay, India*

- Place: Victor Menezes Convention Centre(VMCC), IIT Bombay
- Website: https://sites.google.com/view/cfart-2023-iitb/

### ERGODIC THEORY AND DYNAMICAL SYSTEMS
*International Centre for Theoretical Sciences*

*Dec 05-16, 2022*
*Bangalore, India*

- Place: Ramanujan Lecture Hall (ICTS) and Online
- Website: https://www.icts.res.in/program/ETDS2022

### Baby Steps Beyond the Horizon - school for students
*Institute of Mathematics Polish Academy of Science*

*Aug 29-Sep 02, 2022*
*Warszawa, Poland*

- Place: Online Mode
- Website: https://www.impan.pl/en/activities/banach-center/conferences/22-babysteps

### A conference on ergodic theory and von Neumann algebra
*National Institute of Science Education and Research*

*Aug 04-06, 2022*
*Odisha, India*

- Place: Online mode
- Website: https://www.niser.ac.in/etvna/

### IFCAM Summer School - Mathematical Aspects of Quantum Mechanics
*Indian Institute of Science*

*Jun 1-12, 2022*
*Bangalore, India*

- Place: Indian Institute of Science, Bangalore
- Website: https://ifcam.sciencesconf.org/

### Advanced Instructional School - Advanced Linear Algebra
*Indian Statistical Institute*

*May 2022*
*Bangalore, India*

- Organisers: Prof. Jaydeb Sarkar (Indian Statistical Institute, Bangalore), Prof. Rajesh Sharma (Himachal Pradesh University)
- Website: https://www.atmschools.org/school/2022/AIS/ala

### Conference on Quantum Probability and Infinite Dimensional Analysis
*Indian Statistical Institute*

*Jan 17-20, 2022*
*Bangalore, India*

· Local organisers: Prof. Rajaram Bhat (Indian Statistical Institute, Bangalore), Prof. Jaydeb Sarkar (Indian Statistical Institute, Bangalore)
· Website: https://www.isibang.ac.in/~statmath/conferences/QPIDA-2022.html

**IWM Mini Course on Approximate Solutions of Operator Equations and Eigenvalue Problems**                                                                *Nov 2021*

· Place: Online mode
· Organisers: Indian Women and Mathematics
· Website: IWM-MiniCourse-2021

**Online Workshop on Algebraic Number Theory**                                                       *Sep 2020*
*Assam University*                                                                                    *Silchar, India*
· Place: Online mode
· Organiser: Prof. Samira Behera (Assam University, Silchar)

## TEACHING EXPERIENCE

**Teaching Assistant**                                                           *Aug 1, 2023 - Nov 25, 2023*
*Indian Statistical Institute*                                                              *Bangalore, India*
· Course: Analysis of Several Variables (B. Math. II)
· Instructor: Mathew Joseph

**Teaching Assistant**                                                                *Aug 2022 - Nov 2022*
*Indian Statistical Institute*                                                              *Bangalore, India*
· Course: Complex Analysis I (BMath III Year)
· Instructor: Mathew Joseph

**Teaching Assistant**                                                                *Jan 2022 - May 2022*
*Indian Statistical Institute*                                                              *Bangalore, India*
· Course: Functional Analysis I (MMath I Year)
· Instructor: Soumyashant Nayak

**Teaching Assistant**                                                                *Sep 2021 - Jan 2021*
*Indian Statistical Institute*                                                              *Bangalore, India*
· Course: Optimization (BMath II Year)
· Instructor: Soumyashant Nayak