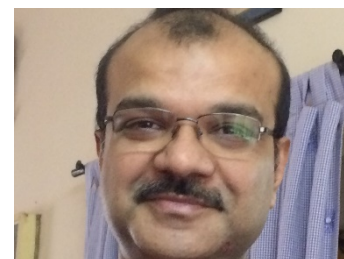


Tirthankar Bhattacharyya, FASc 2016, FNA 2021, FNASc 2021

Department of Mathematics, Indian Institute of Science

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Selected grants and awards:

1. Fellow of the Indian National Science Academy, 2021.
2. Fellow of the National Academy of Sciences, India, 2021.
3. Fellow of the Indian Academy of Sciences, 2016.
4. UKIERI Research Funding, British Council, 2007-2012.
5. Raja Ramanna Fellowship, DST, 2006-2010.
6. India-UK network program, DST-Royal Society, 2004.
7. BOYSCAST fellowship of Department of Science and Technology, India, 2002.

Education and Appointments:

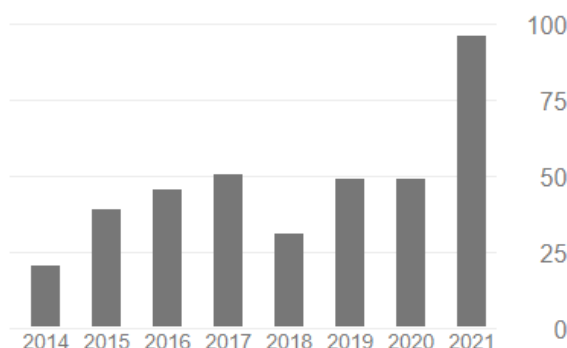
- 2017-present Analysis and Probability Research Group: Member
- 2012-present Indian Institute of Science: Professor
- 2006-2012 Indian Institute of Science: Associate Professor
- 2000-2006 Indian Institute of Science: Assistant Professor
- 1999-2000 Poorna Prajna Post Doctoral Fellow at the Indian Statistical Institute, Bangalore
- 1998-1999 PIMS Post Doctoral Fellow, University of Victoria
- 1997-1998 Killam Post Doctoral Fellow at University of Calgary
- 1997 – Ph.D. Indian Statistical Institute, Delhi Centre with [Rajendra Bhatia](#)

Selected talks:

1. Special session organizers in IWOTA 2020 at Lancaster University, UK, postponed to August 2021 and in IWOTA 2012 at UNSW, Sydney.
2. One of the main speakers in IWOTA 2008, Berlin.
3. Session speaker in several IWOTAs.
4. Invited speaker at Oberwolfach conference “Hilbert Modules and Complex Geometry”, 2014.
5. Invited speaker at ICMS (Edinburgh) in 2011 and 2014.
6. Invited speaker at OT 28, Romania in 2020, postponed to 2022.
7. Recent speakers at two online conferences - one organized by the Univ. of Florida, Gainesville and the other by the Jagiellonian University, Krakow.
8. One of the main speakers at IWOTA 2022, Krakow.

Recent talks are available here: [PDF files of talks](#). IWOTA is the largest and the most important annual international conference in operator theory.

	All	Since 2016
Citations	569	321
h-index	15	10
i10-index	16	10



A snapshot of visits:

- I. Australian National University, **Canberra**, Australia – long visits in 2001 and 2012.
- II. University of **Calgary**, Canada, BOYSCAST fellow of DST, 01-05-2002 to 30-07-2002.
- III. University of **Ljubljana**, Slovenia, many times.
- IV. University of **Saarbrücken**, Germany, many times.
- V. University of **York, UK**, DST - Royal Society program, 11 Oct - 08 Dec., 2004.
- VI. **Newcastle** University, UK, many times including a long visit of nine months in 2007.
- VII. Concordia University, **Montreal**, Canada, in 2009 and 2010.
- VIII. Jagiellonian University, **Krakow**, in April and July, 2017.
- IX. Universidad Autónoma de **Madrid**, in 2017 and 2018.

Theme of work:

Spectral theory and dilation for a tuple of commuting bounded operators on a Hilbert space and its relations with complex geometry, see for example <https://doi.org/10.1093/imrn/rnz333>. Further, studying the geometry of a 2 complex dimensional domain has led to classical hypersurfaces which first appeared in E. Cartan's work, see <https://www.iumj.indiana.edu/IUMJ/Preprints/8896.pdf>. The two best known works are about explicit construction of dilation of a pair of commuting bounded operators related to the symmetrized bidisc: <https://doi.org/10.1016/j.aim.2012.02.016> and the recent contribution to complex algebraic geometry in 2 dimensions relating the geometry of algebraic varieties to the joint spectrum of matrices which is analytic in nature (to appear in Analysis & PDE), see here: <https://arxiv.org/abs/2001.01410>.

Ph. D. students

1. Jaydeb Sarkar, Professor at ISI, finished his Ph.D. in 2006.
2. J. P. Mohandas, Assistant Professor at the Government College, Kasaragod, finished his Ph.D. in 2007.
3. Sourav Pal, Assistant Professor at IIT, Bombay, finished his Ph.D. in 2012.
4. Santanu Sarkar, Assistant Professor at IIT Ropar, finished his Ph.D. in 2014.
5. Haripada Sau, INSPIRE faculty fellow at TIFR Bangalore, finished his Ph.D. in 2016.
6. Anindya Biswas, Research Associate at IISc, finished his Ph.D. in 2021.

Four Ph.D. students are working now with Tirthankar Bhattacharyya.

Conference organization:

Many, most notably the following three.

1. AMS-India Conference of December 2003 with co-ordination between two institutes IISc and ISI. This meeting was a precursor to ICM 2010, testing infrastructure, facilities and temperament.
2. Matrices and Operators of December 2012, an international conference on Hilbert space operators and matrices in honour of the sixtieth birth-year of Rajendra Bhatia. Widely participated by many Indian and foreign mathematicians working in the broad area of mathematical analysis.

3. IWOTA at Indian Institute of Science, in December, 2013. IWOTA is the biggest annual global event in operator theory. This was the twenty-third IWOTA and the only one in India. Responsible for bringing this conference to India as well as the entire ground level management. This conference was a great success with participation of the best analysts of the world as well as a large Indian contingent, thus benefiting many Indian mathematicians.

Miscellaneous:

[The full list of publications](#)

Profile on the website of Mathematical Reviews of the American Mathematical Society:

<https://mathscinet.ams.org/mathscinet/search/author.html?mrauthid=216266>

Top strength: Human Resource Development. Tirthankar Bhattacharyya, in his research and teaching career has taught with sensitivity, has done research with and has mentored young minds many of whom have gone on to become independent researchers and firm benevolent human beings.