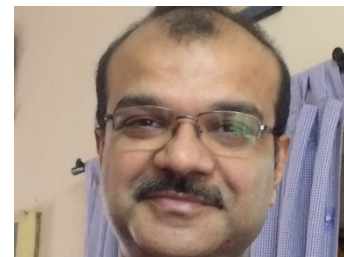


Tirthankar Bhattacharyya, FASc 2016, FNA 2021

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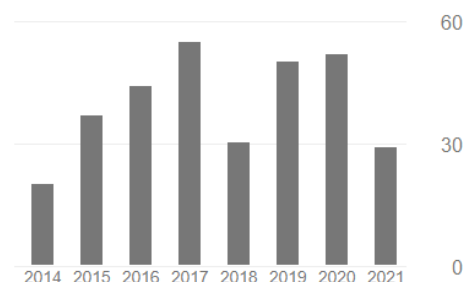
Selected grants and awards:

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

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
- 2000-2012 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

	All	Since 2016
Citations	502	260
h-index	13	9
i10-index	16	9



Selected talks:

Major role as a special session organizer in IWOTA 2020 at Lancaster University, UK, postponed to August 2021. IWOTA is the largest and the most important annual international conference in operator theory.

Invited speaker in several international conferences –

1. A main speaker in IWOTA 2008, Berlin,
2. Session speaker in several IWOTAs,
3. Invited speaker at Oberwolfach conference “Hilbert Modules and Complex Geometry”, 2014,
4. Invited speaker at ICMS (Edinburgh) twice,
5. Invited speaker at OT 28, Romania in 2020, postponed to 2022.
6. Recent speakers at two online conferences - one organized by the Univ. of Florida, Gainesville and the other by the Jagiellonian University, Krakow.

Recent talks are available here: [PDF files of talks](#).

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>. The recent contribution to complex algebraic geometry in 2 dimensions is noteworthy for relating the geometry of algebraic varieties to joint spectrum of matrices which is analytic in nature, see here: <https://arxiv.org/abs/2001.01410>. 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 best known work is 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>.

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.

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.

Top 5 most cited publications Citation data source: Google Scholar ([The full list is here: Publications](#)) :

Title	Cited by	Year
<input type="checkbox"/> Dilations of Γ-contractions by solving operator equations T Bhattacharyya, S Pal, SS Roy <i>Advances in Mathematics</i> 230 (2), 577-606	63	2012
<input type="checkbox"/> Characteristic function of a pure commuting contractive tuple T Bhattacharyya, J Eschmeier, J Sarkar <i>Integral Equations and Operator Theory</i> 53 (1), 23-32	52	2005
<input type="checkbox"/> Characterization of Birkhoff–James orthogonality T Bhattacharyya, P Grover <i>Journal of Mathematical Analysis and Applications</i> 407 (2), 350-358	46	2013
<input type="checkbox"/> A learning algorithm for risk-sensitive cost A Basu, T Bhattacharyya, VS Borkar <i>Mathematics of operations research</i> 33 (4), 880-898	41	2008
<input type="checkbox"/> A functional model for pure Γ-contractions T Bhattacharyya, S Pal <i>Journal of Operator Theory</i> , 327-339	31	2014

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

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