

CURRICULUM VITAE

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Institution : International Centre for Theoretical Studies (ICTS)

Date of Birth : December 5 1956

Gender : Female

Educational qualifications

1. B.Sc. (Physics), (First class with distinction), Maharaja Sayajirao University, Baroda (1977).
2. M.Sc. (Physics), (First class with distinction), Indian Institute of Technology, Bombay (1979).

PhD thesis, guide, institute :

PhD Thesis Title : $(B - L)$ violation in grand unified theories
(High Energy Physics)
PhD Supervisor : Prof. Robert Shrock
Institute : Stonybrook University, New York, U.S.A
Year : 1983.

Work experience :

1. Post-doctoral fellow, Fermilab, Chicago, U.S.A, 1983-1986.
2. Post-doctoral fellow, University of Wisconsin, Madison, U.S.A, 1986-1987.

3. Lecturer, Institute of Physics, Bhubaneswar, India, 1987-1992.
4. Assistant Professor, Institute of Physics, Bhubaneswar, India, 1992-1995.
5. Reader, Harish-chandra Research Institute, Allahabad, India, 1995-1998.
6. Associate Professor G Harish-chandra Research Institute, Allahabad, India, 1998-2002.
7. Professor H, Harish-chandra Research Institute, Allahabad, India, 2002 - 2005.
8. Senior Professor (H+), Harish-chandra Research Institute, Allahabad, India, 2005 - 2016.
9. Senior Professor (I), Harish-chandra Research Institute, Allahabad, India, 2016 - 2020.
10. Honorary Professor, Harish-chandra Research Institute, Allahabad, India, Jan 2021 - July 2021
11. Senior Visiting Professor, International Centre for Theoretical Studies, Bangalore, August 2021 - current

Awards/Special Recognitions

1. Ranked eighth in the state of Gujarat in the Senior School Certificate Examination, (1973).
2. National Science Talent Scholarship (1974-1979).
3. Ranked first in Pre-University Examination, Maharaja Sayajirao University, Gujarat, (1974).
4. Ranked first in B.Sc. (Physics), Maharaja Sayajirao University, Gujarat, (1977).
5. Associate of the International Centre for Theoretical Physics, Trieste, Italy, from 1990-1996.
6. Elected fellow of National Academy of Sciences, Allahabad, 2001.
7. Senior Associate, International Centre for Theoretical Studies, Tata Institute of Fundamental Research, Bangalore, August 2013-2019

8. Elected fellow of the Indian Academy of Sciences, 2017.
9. Selected as Outstanding Referee by the American Physical Society, 2017.
10. Selected as Divisional Associate Editor, Physical Review Letters, 2018-2021, 2022-current
11. Senior Associate of International Centre for Theoretical Physics, Trieste, Italy, 2018 - current
12. Adjunct faculty, Indian Institute of Science, Education and Research (IISER) Bhopal, 2021- current
13. Elected fellow of the American Physical Society, 2022.
14. Elected fellow of the World Academy of Sciences, 1 January, 2026.

Any other information

Experience as thesis supervisor :

- PhD students who have submitted and defended their PhD in the last few years: Aditya Banerji (postdoctoral fellow at Saha institute, Kolkata) Suman Jyoti De, (post-doctoral fellow at Mc Gill University, Canada), Md Faruk Abdulla, (postdoctoral fellow at Technion, Israel,) and Nirnoy Basak, (National Postdoctoral fellow at IIT Kanpur)
- Former PhD students include Udit Khanna (faculty in PRL, Ahmedabad, India), Dibyakanti Mukherjee (analyst with Ernest and Young), Ruchi Saxena (higher scientist in Quantum Electrical Metrology, NPL, London), Krashna Mohan Tripathi (faculty in Govt Polytechnic college in Kanpur), Arijit Saha (faculty at IOP, Bhubaneswar), Sourin Das (faculty at IISER, Kolkata), Tribikram Gupta (faculty at RV college, Bangalore) and Pradeep Mohanty (faculty at IISER, Kolkata).
- Students who have done part of their PhD with me: Saurabh Pradhan (postdoctoral fellow in Sweden), Arijit Kundu (faculty at IIT Kanpur), D. M. Gaitonde (faculty at BARC, Mumbai) and Dileep Jatkar (faculty at HRI, Allahabad).

Teaching experience : Have taught several courses (at least every other semester for the last 35 years or so) on quantum mechanics, quantum field theory, particle physics, condensed matter physics, statistical mechanics, and also advanced courses.

Experience as lecturer in schools/workshops :

- Lectures on ‘abelian and non-abelian anyons’, SERC school on Topology and Condensed Matter physics, organised by Ramakrishna Mission Vivekananda University, Kolkata, Nov 13-Dec 12, 2015.
- Lecturer (Resource Person) for quantum mechanics, Science Academies’ Refresher school on theoretical physics, Dept of Physics, Tezpur University, Assam, 6-20 Jan, 2015.
- Tutor for course on Anomalies in field theory, SERC Theoretical High Energy School, Hyderabad, Jan 19-27, 2007.
- Lectures on bosonisation and its applications, SERC school on ‘Field Theories in Condensed Matter systems’, Harish-Chandra Research Institute, Allahabad, Feb, 2001.
- Lectures on anyons, I SERC School in Statistical Mechanics, Puri, Feb 1994. item Lectures on anyons, VIII SERC School in High Energy Physics, Physical Research Laboratory, Ahmedabad, Jan 1992.

Experience as organiser of schools/workshops :

- Co-organised Summer school on women in physics 2024 (3-14 June), 2025 (16-27 June), SSWP 2026 (1-11 June 2026, Azim Premji University)
- Co-organised (with Yuval Gefen and Ganpathy Murthy), a workshop on ”Condensed matter meets quantum information” , 25 September 2023- October 6 2023.
- Co-organised (with Rob Pisarski, Soeren Schlichting and Sayantan Sharma) an online workshop at ICTS in Bangalore on “Topological aspects of strong correlations and gauge theories’ , in Sept 2021
- Co-organised (with Ganpathy Murthy and Yuval Gefen) a workshop at ICTS in Bangalore on ‘Edge dynamics in topological phases’, in June 2019.

- Organised an international school on ‘Topological quantum matter’ at HRI, Allahabad, Feb 9-21, 2015.
- Organised international school on ‘Low dimensional nanoscopic physics’, at HRI, Allahabad, Jan 28-Feb 9, 2008.
- Organised the working group session on ‘How to attract girls into physics’, in the IUPAP international conference on women in physics, Paris, March 7-9, 2002.
- Organised the SERC school on ‘Field Theories in Condensed Matter systems’, HRI, Allahabad, Feb 2001.

Experience in gender in physics activities

- Was one of the initiators of the International Union of Pure and Applied Physics (IUPAP) international conferences of women in physics, and attended the first three, in Paris, in Rio de Janeiro and in Seoul.
- Was one of the initiators of the first conference in India on the gender gap in physics, called ‘Pressing for Progress’ in 2019, in Hyderabad.
- Have given many talks and interviews both on the problems faced by women in physics and suggestions for amelioration,
- Have mentored many young women, including students and post-doctoral fellows.
- Some recent talks
 - Sikhsha o Anusandhan SOAFAL series of talks on Lilavati’s daughters : ‘Why you should’nt stand on a topological insulator to change a light bulb’, 10 May 2025, online.
 - ‘Gender diversity in the Indian landscape : a personal perspective’, 24th December 2025, IIT Gandhinagar.
 - Pavinari Talk : ‘Where symmetries become law: Emmy Noether’s legacy’, 9th March 2026, Jawaharlal University, New Delhi.

Experience as referee, etc :

- Regular referee for Phys. Rev. Lett., Phys. Rev. **B**, Phys. Rev. **D**, Phys. Rev. **E**, Nucl. Phys. **B**, EPL, Science Reports and Pramana.

- I have also examined more than a dozen theses from places like Kolkata University, IIT Kanpur, Jadavpur University, Delhi University, S. N. Bose and J. C. Bose institutes, Indian Institute of Science, TIFR, etc.
- Was Divisional Associate Editor in the condensed matter section in Physical Review Letters from 2018-2024.

Participation in national and international committees :

- Member of National Organising Committee, Statphys 22, July 2004.
- Member of the International Advisory board on Quantum Theory and Symmetry XI, was to be held in Montreal, July 2019.
- Co-opted member of the SERB Programme Advisory Committee under Physical Sciences, November 2015 -2018
- Member, Academic council, MNNIT (Allahabad), March 2013-2020.
- Member, Board of Studies, School of Physics, Jawaharlal Nehru University, New Delhi (2008 - 2010).
- Member of the IUPAP Working group on Women in Physics (2000-2008).

Administrative experience :

- I have been acting director, actually in charge of HRI from May 2011 - May 2012 and also from August 2003 - December 2003, besides the numerous times I have been temporarily acting director when the director was away.
- I have worked on many administrative committees of the institute including the local works committee, budget committee, purchase committee, faculty advisory committee, women's grievance cell, housing committee, etc, for many years.

Project experience : Was the Indian partner for a VAJRA project along with Prof. Ganpathy Murthy from University of Kentucky, from 2018 to 2025.