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Personal

Born in Mumbai, December 27, 1950

Educational Qualifications

1970	B.Sc. (Physics and Mathematics) St. Xavier's College, University of Bombay
1974	Ph.D. (Physics) State University of New York at Stony Brook

Academic Positions

1974 – 76	Research Associate at Michigan State University
1976 – 77	Visiting Fellow at TIFR
1977 – present	On Academic Staff at TIFR; presently Distinguished Professor
2004 – 07	Chair, Department of Theoretical Physics, TIFR
2007 – present	Director, TIFR

Extended Visits

1982 – 84	Cornell University, U.S.A.
1991 – 92	Oxford University, U.K.

Areas of Specialization

Statistical Physics

— Dynamics of Nonequilibrium Systems, Phase Transitions, Disordered Systems

Fellowship of Academic Bodies

Fellow of the Indian Academy of Sciences, Bangalore.

Fellow of the Indian National Science Academy, New Delhi.

Fellow of the National Academy of Sciences, Allahabad.

Fellow of the Academy of Sciences for the Developing World (TWAS), Trieste, Italy.

Membership of Professional Societies

Member of the Indian Physics Association.

Member of the Indian Complex Systems Society.

Member of the Indian Science Congress.

Editorial Boards, Commissions and Juries

On Editorial Board of Pramana – Journal of Physics (1989 – 95).

On Editorial Working Committee of Physics News (1993 – 1999).

On Editorial Board of the Journal of Statistical Physics (1997 – 1999; 2003 – present).

Member, International Jury for the L’Oreal-UNESCO Award for Women in Science (2002 – 03).

Member, IUPAP C3 Commission on Statistical Physics (1999 – 2002).

Chairman, IUPAP C3 Commission on Statistical Physics (2002 – 2005).

Vice-President at large, International Union of Pure and Applied Physics (2009 onwards).

Academic Honours, Awards, Affiliations and Special Lectures

Young Scientist Award of the Indian National Science Academy (1980).

Associate of the Indian Academy of Sciences (1983 – 86).

Shanti Swarup Bhatnagar Prize for the Physical Sciences awarded by the CSIR (1995).

Honorary faculty member, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore (1998 – 2001).

DAE Raja Ramanna Prize Lecture in Physics (2004).

S.N. Bose Birth Centenary Award of the Indian Science Congress (2007).

J.C. Bose Fellowship of the Department of Science and Technology (2007).

Seventh Abdus Salam Memorial Lecture, Jamia Millia Islamia, New Delhi (2009).

R.S. Goyal Prize for Physics (2006), announced in 2009.

Other Professional Involvements

Member, Basic Sciences Committee of the Board of Research in Nuclear Sciences (1999-2002).

Member, Physical Sciences Research Committee, CSIR (2001-2004).

Member, Board and Executive Council of the Institute of Mathematical Sciences, Chennai (2001 onwards).

Member, Council of the Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune (2004-2006).

Member, Council of the S.N. Bose Centre for Basic Sciences, Kolkata (2008 onwards).

Member, Council of the Saha Institute of Nuclear Physics, Kolkata (2008 onwards).

Member, Scientific Advisory Committee to the Cabinet (2008 onwards).

Chair, INSA National Committee of the IUPAP (2008 onwards).

Organization of Conferences, Workshops and Schools

Workshop on Dynamics of Nonequilibrium Systems, ICTP, Trieste, August 1996 (Director, along with A. Maritan and R.B. Stinchcombe)

Workshop on Dynamics of Nonequilibrium Systems, ICTP, Trieste, August 1999 (Director, along with A. Maritan and R.B. Stinchcombe)

SERC School on Statistical Physics, TIFR, Mumbai, February 2004 (Director, along with D. Dhar)

22nd IUPAP International Conference on Statistical Physics (STATPHYS 22) Bangalore, July 2004 (Chair, Steering Committee)

Ph.D. Students Guided

V. Subrahmanyam (presently Faculty at I.I.T. Kanpur)
Thesis title: 'Finite Size Effects and Correlations in Fermi Systems' (1991).

Supriya Krishnamurthy (presently Faculty at Royal Institute of Technology, Stockholm)
Thesis title: 'Dynamics of Driven Interface Growth: Spatiotemporal Correlations and Pattern Formation' (1998).

Goutam Tripathy (presently Faculty at Institute of Physics, Bhubaneswar)
Thesis title: ‘Nonequilibrium Dynamics in Random Media: Driven Diffusive Systems with Quenched Disorder’ (1999).

Dibyendu Das (presently Faculty at I.I.T. Mumbai)
Thesis title: ‘Dynamics of Quenched Systems and Coupled Driven Diffusive Systems’ (2001).

Kavita Jain (presently Faculty at Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore)
Thesis title: ‘Studies of Infinite Cluster Formation in Nonequilibrium Disordered Systems’ (2004).

Apoorva Nagar (presently Post-doctoral Fellow at Max Planck Institute of Colloids and Interfaces, Potsdam, Germany)
Thesis title: Steady States of Passive Particles Sliding on Fluctuating Surfaces (2006)

Sakuntala Chatterjee (presently Post-doctoral Fellow at Institut für Festkörperforschung, Forschungszentrum Jülich, Germany)
Thesis title: Dynamics of Passive Scalars and Probe Particles in Driven Diffusive Systems (2007)

Shamik Gupta (presently Post-doctoral Fellow at Weizmann Institute of Science, Rehovot, Israel)
Thesis title: Dynamics of Fluctuations in Driven Diffusive Systems: Finite-size effects (submitted 2008).

Invited Talks in Conferences (1995 onwards)

1. ‘Time-dependent Correlation Functions in Many-State Systems’
Meeting on Fundamentals of Physics and Astrophysics, (Ahmedabad, March 1995).
2. ‘Deposition-evaporation Systems: Broken Ergodicity, Conservation Laws and Slow Dynamics’
19th International IUPAP Conference on Statistical Physics – Statphys 19 (Xiamen, China, August 1995)
3. ‘Disordered Driven Systems’
International Colloquium on Theoretical Physics, SUJAYATA, TIFR (Mumbai, September 1996).
4. ‘Dynamics of Disordered Driven Systems’
DAE Solid State Physics Conference (Mumbai, December 1996).

5. ‘Spatial Structures that Move About: Pattern Formation in Self-organized Interface Depinning’
Discussion Meeting on Structure, Dynamics and Functions of Complex Systems (Bangalore, June 1997).
6. ‘Many-Sector Decomposable Systems: Dynamics with Infinitely Many Conservation Laws’
International Conference on Nonlinear Dynamics: Integrability and Chaos, Bharathidasan University (Tiruchirapalli, February 1998).
7. ‘Driven Diffusive System with Quenched Disorder: Steady States and Dynamics’
Meeting on Applications of Field Theory to Statistical Physics: Soft Condensed Matter Non-Equilibrium and Boundary Critical Phenomena (Bonn, Germany, July 1998).
8. ‘Random Walks and their Interactions’
Raman Memorial Conference (Pune University, December 1998).
9. ‘Activity in Arrested States’
International Conference on Statistical Physics (Statphys III) (Calcutta, January 1999).
10. ‘Polytype Kinetics and Quenching of Spin Chains with Competing Interactions’
Indo-Israeli Symposium on Current Issues of Condensed Matter and Materials Physics (New Delhi, January 1999).
11. ‘Strong Phase Separation’
Ninth Regional Conference on Mathematical Physics (Istanbul, Turkey, August 1999).
12. ‘Strong Phase Separation’
Meeting on Recent Trends in Nonequilibrium Statistical Physics (Bangalore, November 1999).
13. ‘Strong and Not So Strong Phase Separation’
Meeting on Slow Dynamics and Freezing in Condensed Matter Systems, (New Delhi, March 2000).
14. ‘Clustering in a System of Particles Sliding Down a Randomly Fluctuating Surface’
International Conference on Long Range Dependent Stochastic Processes (Bangalore, January, 2002).
15. ‘Phase Separation in Nonequilibrium Systems’
International Conference on Statistical Physics Statphys-Kolkata IV (Kolkata, January, 2002).
16. ‘Particles Sliding on Fluctuating Surfaces: Phase Separation and Clustering’
6th Taiwan International Symposium on Statistical Physics (Taipei, May 2002).

17. ‘Phase Separation in Passive Scalar Problems’
Discussion meeting on Statistical mechanics of threshold activated systems, (Chennai, March 2003).
18. ‘What do we mean by an Ordered State?’
National Conference on Nonlinear Systems and Dynamics (Kharagpur, December 2003)
19. ‘Clustering of Passive Scalars in a Burgers Fluid’
Meeting on Pattern Formation in Nonequilibrium Systems (Kolkata, July 2004).
20. ‘Clustering in the Passive Scalar Problem’
Indo-French Workshop on Anomalous Scaling in Statistical Physics and Turbulence (Nice, France, July 2005).
21. ‘Driven Diffusive Systems with Disorder’
International Workshop on Common Trends in Traffic Systems: Physics and Computational Models in Transportation Engineering and Biological Sciences (Kanpur, February 2006).
22. ‘Disordered Equilibrium and Nonequilibrium Systems’
Symposium on Frontiers of Condensed Matter and Statistical Physics (New Delhi, March 2006).
23. ‘Deposition-Evaporation of Needles: Gradient-induced Ordering’
International Conference on Recent Advances in the Interdisciplinary Applications of Statistical Physics (Beijing, China, September 2006).
24. ‘Statistical Mechanics of Equilibrium and Nonequilibrium Systems’
Workshop on Frontiers of Physics (University of Mumbai, October 2006).
25. ‘Clustering of sliding passive scalars driven by fluctuating surfaces’
23rd IUPAP International Conference on Statistical Physics – Statphys 23 (Genova, Italy, July 2007).
26. ‘Driven Dimers’
Fluctuation and Dissipation Phenomena in Driven Systems Far from Equilibrium (Dresden, July 2007).
27. ‘Coupled Nonequilibrium Systems’
The 10th Asia Pacific Physics Conference (APPC10), (Pohang, Korea, August 2007).
28. ‘Periodic Forcing of a Brownian Particle in Classical and Quantum Mechanics’
Nonequilibrium Phenomena in Condensed Matter (New Delhi, February 2008)
29. ‘Coupled Nonequilibrium Systems’
Current Trends in Physics (IIT Madras, Chennai, February 2008).

30. 'Diffusing Reconstituting k-mers'
TIFR-Weizmann Institute Interaction Meeting (Rehovot, Israel, June 2008).
31. 'Particles in Fluctuating Potentials'
Nonlinear Dynamics and Turbulence (IISc, Bangalore, July 2008).
32. 'Simple Models of Complex Behaviour'
Indian Academy of Sciences (IIT Delhi, New Delhi, October 2008).
33. 'Statistical Physics and Everyday Life'
Andhra Akademi of Sciences (Osmania University, November 2008).
34. 'Statistical Physics: Historical Developments and Current Trends'
52nd DAE Solid State Physics Symposium (Mumbai, December 2008).
35. 'Driven Dimers'
Disorder, Complexity and Biology II (Banaras Hindu University, January, 2009).
36. 'Interacting Random Walkers with Fluctuating Bias'
Non-Hermitian Hamiltonians in Quantum Physics (BARC-TIFR, Mumbai, January 2009).
37. 'Random Walks in Physics'
Abdus Salam Memorial Lecture (Jamia Millia Islamia, New Delhi, February 2009).
38. 'Drift and Diffusion in Random Media'
Indo-French Discussion Meeting on Diffusion in Nanoporous and Dense Media (Bangalore, April 2009).