

Mustansir Barma

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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

Current Professor Emeritus at Tata Institute of Fundamental Research, Hyderabad

Earlier

1974 – 1976 Research Associate at Michigan State University
1976 – 1977 Visiting Fellow at TIFR
1977 – 2015 Academic Member at TIFR (retired as Distinguished Professor)

2004 – 2007 Chair, Department of Theoretical Physics, TIFR
2007 – 2014 Director, TIFR

Extended Visits

1982 – 1984 Cornell University, U.S.A.
1991 – 1992 Oxford University, U.K.

Areas of Specialization

Statistical Physics

Dynamics of Nonequilibrium Systems, Phase Transitions, Disordered Systems

Academic Honours, Awards, Affiliations

Young Scientist Award of the Indian National Science Academy (1980).
Associate of the Indian Academy of Sciences (1983 – 1986).
Shanti Swarup Bhatnagar Prize for the Physical Sciences of the Council of Scientific and Industrial Research (1995).
S.N. Bose Birth Centenary Award of the Indian Science Congress (2007).
J.C. Bose Fellowship of the Department of Science and Technology (2007 – present).
R.S. Goyal Prize for Physics (2006), awarded in 2010.
Padma Shri award of the Government of India (2013).
G. M. Modi Award for Innovative Science and Technology (2015).

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.

Special Lectures

DAE Raja Ramanna Prize Lecture in Physics, Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru (2004).
Seventh Abdus Salam Memorial Lecture, Jamia Millia Islamia, New Delhi (2009).
Jawaharlal Nehru Lecture of the Indian National Science Academy, University of Hyderabad (2014).
First B.K. Mahanti Memorial Lecture, Ravenshaw University, Cuttack (2015).
DAE C.V. Raman Lecture of the Indian Physics Association, St. Xavier's College, Mumbai (2015).
Third Father Verstraeten Memorial Lecture, St. Xavier's College, Kolkata (2015).
Fourth S. S. Bhatnagar Anniversary Lecture, Panjab University, Chandigarh (2016).
Horizon Lecture, Tezpur University (2016).

Membership of Commissions, Juries and Advisory Bodies

Member, International Jury for the L'Oreal-UNESCO Award for Women in Science (2002 – 2003).
Member, IUPAP C3 Commission on Statistical Physics (1999 – 2002).
Chairman, IUPAP C3 Commission on Statistical Physics (2002 – 2005).
Vice-President at large, IUPAP (2009 – 2014).
Member, Scientific Advisory Committee to the Cabinet (2008-2012).
Member, Scientific Advisory Council to the Prime Minister (2010 – 2014).

Membership of Professional Societies and Editorial Boards

On Editorial Board of Pramana – Journal of Physics (1989 – 1995).
On Editorial Working Committee of Physics News (1993 – 1999).
On Editorial Board of the Journal of Statistical Physics (1997 – 1999; 2003 – 2009).
Member of the Indian Physics Association.
Member of the Indian Complex Systems Society.
Member of the Indian Science Congress.

Academic Affiliations and Membership of Boards

Honorary faculty member, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore (1998 – 2001).
Member, Board and Executive Council of the Institute of Mathematical Sciences, Chennai (2001 – present).
Member, Council of the Saha Institute of Nuclear Physics, Kolkata (2008 – present).
Member, Board of Management of Department of Physics, University of Mumbai (2014 – present).

Organization of Conferences, Workshops and Schools

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

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

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

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

Ph.D. Students Guided

V. Subrahmanyam (1991) Faculty at I.I.T. Kanpur.

Supriya Krishnamurthy (1998) Faculty at Royal Institute of Technology, Stockholm.

Goutam Tripathy (1999) Faculty at Institute of Physics, Bhubaneswar.

Dibyendu Das (2001) Faculty at I.I.T. Mumbai.

Kavita Jain (2004) Faculty at Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore.

Apoorva Nagar (2006) Faculty at Indian Institute of Space Science and Technology, Thiruvananthapuram.

Sakuntala Chatterjee (2007) Faculty at S.N. Bose Centre for Basic Sciences, Kolkata.

Shamik Gupta (2008) Faculty at Ramakrishna Mission Vivekananda University, Kolkata.

Himani Sachdeva (2014) Post-doctoral Fellow at Institute of Science and Technology, Vienna.

Invited Talks in Conferences, Workshops and Meetings (2011 onwards)

1. 'Transport in a Multispecies Model with Interconversion'
105th Statistical Mechanics Meeting, (Rutgers University, New Brunswick, May 2011).
2. 'Entropy and Order'
Mid-year meeting of the Indian Academy of Sciences (Bangalore, July 2011).
3. 'Phase Transition in a Multispecies Model'
5th Indo-Israeli Meeting on Condensed Matter Physics (Kochi, October 2011).
4. 'Phase Transition on an Open Aggregation-Fragmentation System'
International Workshop on Statistical Mechanics and Dynamical Systems (ITAP, Turunc, Turkey, September 2012).
5. 'Phase Transitions and Intermittency in Open Aggregation-Fragmentation systems'
Complex Systems: From Physics to Biology (JNU, New Delhi, October 2013).
6. 'Aggregation-Fragmentation Dynamics'
Nonequilibrium Statistical Physics and Nonlinear Dynamics (IACS, Kolkata, January 2014).
7. 'Condensation and Intermittency in an Aggregation-Fragmentation Model'
Advances in Nonequilibrium Statistical Mechanics (Galileo Galilei Institute, Florence, July 2014).
8. 'Order parameter scaling in fluctuation-dominated Phase Ordering'
Growing Length Scale Phenomena in Condensed Matter Physics (JNCASR, Bengaluru, October 2015)
9. 'Fluctuation-dominated Phase Ordering'
Workshop on Nonequilibrium Statistical Physics (ICTS-TIFR, Bengaluru, October 2015).
10. 'Aggregation, Fragmentation and Phase Transitions in 1D Systems'
Driven Stochastic Transport in Low-dimensional Systems (Institute for Research in Fundamental Sciences, Tehran, Iran, September 2016).
11. 'Degrees of Order in Coupled Driven Systems',
Statphys-Kolkata IX (Saha Institute of Nuclear Physics, Kolkata, December 2016)
12. 'Interfaces in Random Media: Extremal Dynamics and Passive Scalars'
Discussion Meeting on Percolation Phenomena (S. N. Bose Centre for Basic Sciences, Kolkata, January 2017)