

Name: Satya Narayan Majumdar

Work Address:

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Home Address:

43, rue Hallé,
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Date of Birth: 01-01-1966

Education:

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| 8/87 – 9/92 | Tata Institute of Fundamental Research
Ph.D. in Physics, September 1992.
Thesis: Self-organized Criticality in Sandpiles and Driven Diffusive Lattice Gases.
<i>Advisor:</i> Prof. Deepak Dhar, Tata Institute, Bombay, India. | Bombay, India |
| 9/85 – 7/87 | University of Calcutta
M.Sc in Physics, 1987 (ranked 1st among approx. 200) | Calcutta, India |
| 9/81 – 8/85 | Presidency College
B.Sc in Physics, University of Calcutta, 1985 (ranked 1st among approx. 2500) | Calcutta, India |

Employment:

- 09/03 – present: Directeur de Recherche (DR2) at **Laboratoire de Physique Théorique et Modèles Statistiques, Université Paris-Sud, Orsay, France.**
- 01/00 – 09/03: Chargé de Recherche (CR1) at **UMR 5626 du CNRS, IRSAMC, Université Paul Sabatier, Toulouse, France.**

11/96 – 12/99 Reader at **Tata Institute of Fundamental Research, Bombay, India.**

10/94 – 10/96 Post Doctoral Associate at **Yale University, USA.**

10/92 – 09/94 Post Doctoral fellow at **AT&T Bell Labs, USA.**

08/87 – 09/92 Thesis student and Research Assistant at **Tata Institute of Fundamental Research, Bombay, India.**

Honors and Awards:

1. 'Prime d'excellence Scientifique' (PES) (2009) awarded by CNRS.
2. 'Excellence Award' (2009) awarded by the Tata Institute Alumni Association.
3. Paul Langevin medal for theoretical physics (2005) awarded by the French physical society.
4. Young Scientist Medal awarded by the Indian National Science Academy, 1998.
5. Geeta Udgaonkar Award, 1992 for outstanding thesis in the school of Physics (Tata Institute, Bombay, India).
6. Calcutta University Gold Medal for securing first position in M.Sc (Calcutta University, India, 1987).
7. Jubilee Merit Prize for securing first position in B.Sc (Calcutta University, 1985).
8. Best Graduating Student in Physics Award (Presidency College, Calcutta, India, 1985).
9. National Scholarship, India (1980-1987).

Honorary Positions:

- Adjunct faculty at Tata Institute, Bombay (India) since 2005.
- Visiting professor at the Indian Association for the Cultivation of Science, Calcutta (India) since 2002.
- Long-term visiting professor at the School of Physics and Astronomy (University of Edinburgh) since 2007.

Publications and Invited Talks:

- 146 publications in reviewed journals, 4 conference proceedings and 6 invited reviews and book chapters. Total number of citations: 3150 (source: ISI web of Science, dated 22/12/2009) with an h -index: 28.
- 48 invited talks in international conferences/workshops/summer schools since (1996).

Supervision of students and postdocs:

10 Ph.D students (supervision and co-supervision), 4 M.Sc students and two postdocs.

Editor of Journals:

- Member of the editorial board of JSTAT (since 2003).
- Member of the editorial board of Journal of Statistical Physics (since 2008).
- Member of the editorial board of Journal of Physics A: Math. Theor. (since 2010).

Referee of Journals and Grants:

Since 1992, papers were regularly reviewed for several international journals including Physical Review Letters, Physical Review, Nature Physics, Journal of Physics-A, Journal of Statistical Physics, JSTAT, Physica-A, European Journal of Physics-B etc. The grant proposals for the NSF (USA) and the Israel Science Foundation (ISF) were also reviewed.

Administrative Responsibilities:

I have been a member of various scientific commissions in and outside France. These include the following:

- Member of the commission de spécialistes (section 29) at the Université Paul Sabatier, Toulouse, France (2004-present).
- Member of the ‘Comité d’évaluation’ of the Laboratoire de Physique Théorique (LPTENS) at Ecole Normale Supérieure, January (2005).
- Elected member of the ‘Conseil de laboratoire LPTMS’ since November, 2005.
- Member of the ‘Comité d’évaluation’ (AERES) of the Laboratoire de Physique Théorique (LPTENS) at Ecole Normale Supérieure, January (2009).

Research Topics :

My research interests cover various problems in equilibrium and nonequilibrium statistical physics with applications ranging from granular medium to computer science. Some of the past and present projects include

- Extreme Value Statistics of Correlated Variables in (i) Brownian Motion and other Stochastic Processes (ii) Random Matrices and (iii) Fluctuating Interfaces.
- Applications of Statistical Physics in Computer Science: Sorting and Search Algorithms.
- Persistence and first-passage properties in Nonequilibrium Systems: Spin Models, Diffusion and Random Walks, Non-Markov Processes etc.
- Stress Propagation and Compaction in Granular Medium.
- Real-space Condensation in Nonequilibrium Steady-States: Aggregation and fragmentation processes, Zero-range processes, Random Average processes etc.
- Quantum Phase Transitions in Disordered Spin Chains.
- Coarsening and Phase Ordering Dynamics in Spin Systems.
- Transport Properties of Vortices in High- T_c Superconductors.
- Interacting Particle Systems: Symmetric and Asymmetric Exclusion Processes, Zero Range Processes, Vicious Walkers, Trapping problems etc.
- Polymers and Self-Avoiding Walks.
- Self-organized Criticality in Sandpile Models (Ph.D. Thesis).