



# Samriddhi Sankar Ray

## *Curriculum Vitae*

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### Personal Information

Date of Birth 13 November, 1981  
Place of Birth Calcutta (now Kolkata), India  
Nationality Indian

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### Current Position

Associate International Center for Theoretical Sciences (ICTS-TIFR),  
Professor Tata Institute of Fundamental Research,  
Bangalore, India.

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### Contact Details

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### Correspondence

International Center for Theoretical Sciences,  
Tata Institute of Fundamental Research,  
Survey No. 151, Shivakote,  
Hesaraghatta Hobli,  
Bangalore 560089, India.

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## Education

2010 **PhD in Physics**

Department of Physics, Indian Institute of Science, Bangalore, India.

**Thesis Title:** *Statistical Studies of Fluid, Passive-Scalar, and Burgers Turbulence*

**Thesis Advisor:** *Professor Rahul Pandit*

2006 **MS in Physics**

Department of Physics, Indian Institute of Science, Bangalore, India.

2003 **BSc in Physics**

Presidency College, Calcutta University, Calcutta, India

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## Research Positions

January 2021 – **Associate Professor**

Present International Center for Theoretical Sciences (ICTS-TIFR)  
Tata Institute of Fundamental Research,  
Bangalore, India.

July 2015 – **Reader**

December 2020 International Center for Theoretical Sciences (ICTS-TIFR)  
Tata Institute of Fundamental Research,  
Bangalore, India.

January 2013 – **Junior Faculty**

June 2015 International Center for Theoretical Sciences (ICTS-TIFR)  
Tata Institute of Fundamental Research,  
Bangalore, India.

October 2010 – **Post-doctoral Fellow**

December 2012 Laboratoire Lagrange,  
Observatoire de la Côte d'Azur, CNRS,  
Nice, France.

**Mentors:** *Dr Jérémie Bec*

*Dr Uriel Frisch*

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## Principal Research Interests

- Fluid, magnetohydrodynamic, passive-scalar, and Burgers turbulence.
- Turbulent Transport.
- Cloud Microphysics.
- Truncated systems, thermalization, and statistical mechanics of turbulent flows.
- Singularities in the Euler equation.
- Multiphase Flows.
- Active Turbulence.
- Non-equilibrium Statistical Physics.

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## Professional Experience

- Visitor, **Isaac Newton Institute for Mathematical Sciences, Cambridge**, United Kingdom, January–February 2024.
- Visitor, **Isaac Newton Institute for Mathematical Sciences, Cambridge**, United Kingdom, April–June 2022.
- Visiting Professor, **Observatoire de la Côte d'Azur, CNRS, Nice**, France, May–June 2018.
- Visiting Professor, **Fédération Doeblin, University of Nice, Sophia-Antipolis** France, September–October 2017.
- Visitor to **University of Rome Tor Vergata, Rome**, France, May 2015.
- Visitor to **Observatoire de la Côte d'Azur, CNRS, Nice**, France, May 2015.
- Visitor to **NORDITA, Stockholm**, Sweden, June 2014.
- Visitor to **Observatoire de la Côte d'Azur, CNRS, Nice**, France, May–June 2014.
- Visitor to **Observatoire de la Côte d'Azur, CNRS, Nice**, France, May–June 2013.
- Visitor to **Max-Planck-Institute for Dynamics and Self-Organization, Göttingen**, Germany, October–November 2011.
- Visitor to **Max-Planck-Institute for Dynamics and Self-Organization, Göttingen**, Germany, May 2010.
- Visitor to **Laboratoire Poncelet, Moscow**, Russia, September 2008.
- Scientific Secretary, **Problems of Turbulence: 50 years after the Turbulence Colloquium Marseille 1961, Marseille**, France, September, 2011.
- Referees for several journals as well as grant proposals for Indian and foreign funding agencies.

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## Service on Editorial Boards

- Associate Editor, *Frontiers in Physics* [2022–]
- Guest Editor, *Philosophical Transactions of the Royal Society*, Special Issues on *Scaling the Turbulence Edifice* (2021).

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## Awards, Honours, & Membership

- *Best Publication of the Year 2023 Award* to Siddhartha Mukherjee at the *National Physicists' Conclave 2024* for the paper “*Intermittency, fluctuations and maximal chaos in an emergent universal state of active turbulence*”, **Nature Physics**, **19**, 891 (2023) by S. Mukherjee, R. K. Singh, M. James and S. S. Ray (2024).
- *STAR Prize*, Science and Engineering Research Board (SERB), Department of Science & Technology (DST), Government of India (2021).
- *Elected Member*, National Academy of Sciences India (2021).
- *Guest Editor*, *Philosophical Transactions of the Royal Society* Special Issues on *Scaling the Turbulence Edifice* (2021).
- *Regular Member*, Division of Condensed Matter Physics in Association of Asia Pacific Physical Societies (AAPPS) (2021–).
- *Life Member*, Indian Physics Association (2019–).
- *Cray Dr A P J Abdul Kalam HPC Award for Research* (2019).
- *Young Fellow*, Indian Institute of Science, Bangalore India (2000–2003).

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## Grants

1. *Centre Franco-Indien pour la Promotion de la Recherche Avancée – CEFIPRA*, Department of Science & Technology (DST), Government of India and Ministry for Europe & Foreign Affairs, Government of France (2022-2025).  
Project Title: “Polymers in turbulent flows: from single-molecule dynamics to continuum models” [Project No. 6704-1]
2. *Core Research Grant*, Science and Engineering Research Board (SERB), Department of Science & Technology (DST), Government of India (2022-2025).  
Project Title: “Anisotropic Particles in Turbulent Flows: From sub-Kolmogorov to Inertial Scales” [Grant No. CRG/2021/002766]
3. *SERB-STAR Grant*, Science and Engineering Research Board (SERB), Department of Science & Technology (DST), Government of India (2021-2024).  
Project Title: “How is Active Turbulence different from Inertial Turbulence?” [Grant No. STR/2021/000023]
4. *National Supercomputing Mission Grant*, National Supercomputing Mission, India (2021-2023).  
Project Title: “Collective behaviour in turbulent environment”
5. *MATRICES Grant*, Science and Engineering Research Board (SERB), Department of Science & Technology (DST), India (2020-2023). Project Title: “Understanding the Origins of Intermittency in Turbulent Flows” [Grant No. MTR/2019/001553]
6. *Indo-French Centre for Applied Mathematics (IFCAM)* (2018-2023).  
Project Title: “Theoretical and Numerical Studies of Turbulence in Classical and Quantum Fluids”
7. *Early Career Research Grant*, Science and Engineering Research Board (SERB), Department of Science & Technology (DST), India (2016-2019).  
Project Title: “Collisions, Coalescences and Fragmentation of Droplets in Turbulent Flows: The Role of Turbulence in Triggering Rain” [Grant No. ECR/2015/000361]
8. *Airbus Group Corporate Foundation Chair in Mathematics of Complex Systems* (2013-2016).  
Project Title: “Mathematics of Complex Systems”
9. *Indo-French Centre for Applied Mathematics (IFCAM)* (2014-2017).  
Project Title: “Theoretical and Numerical Studies of Turbulence in Fluids”
10. *European Cooperation in Science and Technology (COST)*, Member (2014-2018).  
Project Title: “Flowing Matter” [Project No. COST MP1305]
11. *European Cooperation in Science and Technology (COST)*, Member (2009-2013).  
Project Title: “Particles in Turbulence” [Project No. COST MP0806]
12. *Agence nationale de la recherche (ANR)*, Member (2007-2012).  
Project Title: “Optimal transport : Theory and Applications to cosmological Reconstruction and Image processing (OTARI)” [Project No. ANR-07-BLAN-0235]
13. *Partnership for Advanced Computing in Europe (PRACE) Project*, Member (2010-2011)

## Group Members

### Post-doctoral Fellows

1. Prateek Anand, PhD [Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India] (ongoing)
2. Arun Kumar Varanasi, PhD [Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India] (ongoing)
3. Siddhartha Mukherjee, PhD [TU Delft, The Netherlands] (2020 – 2023)  
*Now: Assistant Professor, Department of Mechanical Engineering, Indian Institute of Technology Kanpur, Kanpur, India*
4. Priyanka Maiti, PhD [Indian Institute of Technology, Kharagpur, India] (2017 – 2020)  
*Now: Research & Development Scientist, UV Technik Speziallampen GmbH, Ilmenau, Germany*
5. Jason Picardo, PhD [Indian Institute of Technology, Chennai, India] (2017-2019).  
*Now: Assistant Professor, Department of Chemical Engineering, Indian Institute of Technology Bombay, Mumbai, India*
6. Divya Venkataraman, PhD [University of Genoa, Italy] (2014-2016).  
*Now: Assistant Professor, Department of Mathematics, Institute of Chemical Technology, Mumbai, India*

### PhD Students

1. Sandip Sahoo (ongoing)
2. Mrinal Jyoti Powdel (Ongoing) [Co-Advisor: Professor Anupam Kundu]
3. Ritwik Mukherjee (ongoing)
4. Harshit Joshi (ongoing) [Co-advisor: Professor Rama Govindarajan]
5. Shashank Roy (2024) [Co-Advisor: Professor Amit Apte]  
*Now: Deep Learning Researcher and Development Engineer, École des Mines Télécom Atlantique, France*
6. Sugan Durai Murugan (2023)  
*Now: Post-doctoral Fellow, Johns Hopkins University, USA*
7. Rahul Kumar Singh (2022)  
*Now: Post-doctoral Fellow, Okinawa Institute of Science and Technology (OIST), Japan*

### Masters' Students (MS thesis)

1. Aikya Banerjee [Indian Institute of Science Education and Research (IISER) Kolkata] (2024-2025).
2. Swapan Limbu [International Centre for Theoretical Sciences, Tata Institute of Fundamental Research, Bangalore] (2024-2025).
3. Mohit Gupta [International Centre for Theoretical Sciences, Tata Institute of Fundamental Research, Bangalore] (2017-2019).  
*Next: Graduate Student, University of Minnesota, USA.*
4. Lokahith Agasthya [Indian Institute of Science Education and Research, Pune] (2017-2018).  
*Next: Graduate Student, University of Rome, Tor Vergata, Rome, Italy.*
5. Amal Roy [Indian Institute of Science, Bangalore] (2016-2017).  
*Next: Graduate Student, Indian Institute of Science, Bangalore, India.*
6. Martin James [Indian Institute of Science, Bangalore] (2015-2016).  
*Next: Graduate Student, Max Planck Institute for Dynamics and Self-Organization, Göttingen, Germany.*
7. Akhil Sivakumar [Indian Institute of Science, Bangalore] (2015-2016).  
*Next: Graduate Student, International Centre for Theoretical Sciences, Bangalore, India.*

### Batchelors' Students (BS thesis)

1. Ritwik Tom [Indian Institute of Science, Bangalore] (2016-2017).  
Next: Graduate Student, Carnegie Mellon University, USA.

### Visiting Students

1. Rahul Agrawal [Next: Graduate Student, Stanford University, USA.]
2. Aneek Chakraborty [Next: Masters' Student, TU Delft, The Netherlands.]
3. Deeksha Adil [Next: Graduate Student, Toronto University, Canada.]
4. Aneek Chakraborty [Next: Masters' Student, Delft University of Technology, The Netherlands]
5. Purba Chatterjee [Next: Graduate Student, University of Illinois at Urbana-Champaign, USA.]
6. Ashok Choudhary [Next: Graduate Student, West Virginia University, USA.]
7. Ameya Haldipurkar [Next: Undergraduate Student, Birla Institute of Technology and Science (BITS) Pilani, Hyderabad Campus (under the Summer Research Fellowship Programme (SRFP) of Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore)]
8. Dheeraj Kumar [Next: Graduate Student, Sorbonne University, France.]
9. Siddhartha Saha [Next: Graduate Student, Rutgers University, USA.]
10. Ankur Sharma [Next: Graduate Student, Indian Institute of Technology Kanpur, India.]
11. Shreya Shukla [Next: Graduate Student, University of California, Irvine, USA.]
12. Himani Singhal [Next: Scientist, Shell Corporations, India.]
13. Ritwik Tom [Next: Graduate Student, Carnegie Mellon University, USA.]

### List of Publications

64. *The Onset of Intermittency in Active Turbulence*  
K. V. Kiran, K. Kumar, A. Gupta, R. Pandit and **Samriddhi Sankar Ray**.  
ArXiv: 2408.06950
63. *An upper critical dimension for dynamo action: A  $d$ -dimensional closure model study*  
S. D. Murugan, G. Krstulovic, D. Vincenzi and **Samriddhi Sankar Ray**.  
ArXiv: 2408.01266
62. *Pair statistics of anisotropic particles settling in a turbulent flow*  
P. Anand and **Samriddhi Sankar Ray**.  
ArXiv: 2404.09635
61. *Turbulent flows are not uniformly multifractal*  
S. Mukherjee, S. D. Murugan, R. Mukherjee and **Samriddhi Sankar Ray**.  
**Physical Review Letters** **132**, 184002 (2024)
60. *Genesis of thermalization in the three-dimensional, incompressible, Galerkin-truncated Euler equation*  
S. D. Murugan and **Samriddhi Sankar Ray**.  
**Physical Review Fluids** **8**, 084605 (2023)
59. *Intermittency, fluctuations and maximal chaos in an emergent universal state of active turbulence*  
S. Mukherjee, R. K. Singh, M. James and **Samriddhi Sankar Ray**.  
**Nature Physics**, **19**, 891 (2023)
58. *Turbulent route to two-dimensional soft crystals*  
M. Gupta, P. Chaudhuri, J. Bec and **Samriddhi Sankar Ray**.  
**Physical Review E (Letters)**, **106**, L062601 (2022)

57. *Sedimenting Elastic Filaments in Turbulent Flows*  
R. K. Singh, J. R. Picardo and **Samriddhi Sankar Ray**.  
**Physical Review Fluids**, **7**, 084502 (2022).
56. *Dynamic Scaling in Rotating Turbulence: A Shell Model Study*  
S. K. Rathor, S. Chakraborty and **Samriddhi Sankar Ray**.  
**Physical Review E (Letters)**, **105**, L063102 (2022).
55. *Lagrangian Manifestations of Anomalies in Active Turbulence*  
R. K. Singh, S. Mukherjee and **Samriddhi Sankar Ray**.  
**Physical Review Fluids**, **7**, 033101 (2022).
54. *Editorial: Scaling the Turbulence Edifice*  
J. Bec, G. Krstulovic, T. Matsumoto, **Samriddhi Sankar Ray** and D. Vincenzi.  
**Philosophical Transactions of the Royal Society A** **380**, 2219 (2022).  
Editorial for the **second** part of a special issue “Scaling the Turbulence Edifice” of the Philosophical Transactions of the Royal Society.
53. *Editorial: Scaling the Turbulence Edifice*  
J. Bec, G. Krstulovic, T. Matsumoto, **Samriddhi Sankar Ray** and D. Vincenzi.  
**Philosophical Transactions of the Royal Society A** **380**, 2219 (2022).  
Editorial for the **first** part of a special issue “Scaling the Turbulence Edifice” of the Philosophical Transactions of the Royal Society.
52. *Many-body Chaos in Thermalised Fluids*  
S. D. Murugan, D. Kumar, S. Bhattacharjee, and **Samriddhi Sankar Ray**.  
**Physical Review Letters**, **127**, 124501 (2021).
51. *Anomalous diffusion and Lévy walks distinguish active turbulence from inertial turbulence*  
S. Mukherjee, R. K. Singh, M. James and **Samriddhi Sankar Ray**.  
**Physical Review Letters**, **127**, 118001 (2021) **Editors' Suggestion**.  
**APS Physics Magazine Synopsis: Bacteria That Shove Harder, Move Further, Physics**, **14**, s116 (2021).
50. *Polymer scission in turbulent flows*  
D. Vincenzi, T. Watanabe, **Samriddhi Sankar Ray** and J. R. Picardo.  
**Journal of Fluid Mechanics**, **912**, A18 (2021)
49. *Statistics of the Kinetic Energy of Heavy, Inertial Particles in Weakly Rotating Turbulence*  
P. Maity and **Samriddhi Sankar Ray**.  
**Indian Academy of Sciences Conference Series**, **3:1** (2020)
48. *Bridging Inertial and Dissipation Range Statistics in Rotating Turbulence*  
S. K. Rathore, M. K. Sharma, **Samriddhi Sankar Ray** and S. Chakraborty.  
**Physics of Fluids**, **32**, 095104 (2020).
47. *Orientation dynamics of spheroids settling in turbulent flow*  
P. Anand, **Samriddhi Sankar Ray**, and G. Subramanian.  
**Physical Review Letters**, **125**, 034501 (2020).

46. *Suppressing thermalization and constructing weak solutions in truncated inviscid equations of hydrodynamics: Lessons from the Burgers equation*  
S. D. Murugan, U. Frisch, S. Nazarenko, N. Besse and **Samriddhi Sankar Ray**.  
**Physical Review Research**, **2**, 033202 (2020).
45. *Dynamics of a long chain in turbulent flows: Impact of vortices*  
J. R. Picardo, R. Singh, **Samriddhi Sankar Ray** and D. Vincenzi.  
**Philosophical Transactions of the Royal Society A**, **378** 20190405 (2020).
44. *Elasto-inertial Chains in a Two-dimensional Turbulent Flow*  
R. Singh, M. Gupta, J. R. Picardo, D. Vincenzi, and **Samriddhi Sankar Ray**.  
**Physical Review E**, **101**, 053105 (2020).
43. *Flocking of active particles in a turbulent flow*  
A. Gupta, A. Roy, A. Saha, and **Samriddhi Sankar Ray**.  
**Physical Review Fluids (Rapids)**, **5**, 052601(R) (2020).
42. *Lagrangian Irreversibility and Dissipation Statistics in Fully-Developed Turbulence*  
J. R. Picardo, A. Bhatnagar, and **Samriddhi Sankar Ray**.  
**Physical Review Fluids (Rapids)**, **5**, 042601(R) (2020).
41. *Fluid dynamics in clouds: The sum of its parts*  
S. Ravichandran, J. R. Picardo, **Samriddhi Sankar Ray** and R. Govindarajan.  
**Encyclopedia of Complexity and Systems Science**, Springer, Berlin, Heidelberg (2020).
40. *Analytic structure of solutions the one-dimensional Burgers equation with modified dissipation*  
W. Pauls and **Samriddhi Sankar Ray**.  
**Journal of Physics A: Mathematical and Theoretical**, **53**, 115702 (2020).
39. *Statistics of Lagrangian Trajectories in Rotating Turbulence*  
P. Maity, R. Govindarajan, and **Samriddhi Sankar Ray**.  
**Physical Review E**, **100**, 043110 (2019).
38. *Droplet Collisions in Turbulence: Insights from a Burgers Vortex*  
L. Aghasthya, J. R. Picardo, S. Ravichandran, R. Govindarajan, and **Samriddhi Sankar Ray**.  
**Physical Review E**, **99**, 063107 (2019).
37. *Flow structures govern particle collisions in turbulence*  
J. R. Picardo, L. Aghasthya, R. Govindarajan, and **Samriddhi Sankar Ray**.  
**Physical Review Fluids (Rapid)**, **4**, 032601(R) (2019).
36. *Preferential Sampling of Elastic Chains in Turbulent Flows*  
J. R. Picardo, D. Vincenzi, N. Pal, and **Samriddhi Sankar Ray**.  
**Physical Review Letters**, **121**, 244501 (2018).
35. *Inertial Ellipsoids in Homogeneous, Isotropic Turbulence*  
A. Roy, A. Gupta, and **Samriddhi Sankar Ray**.  
**Physical Review E (Rapid)**, **98**, 021101(R) (2018).
34. *Light-cone spreading of perturbations and the butterfly effect in a classical spin chain*  
A. Das, S. Chakrabarty, A. Dhar, A. Kundu, D. A. Huse, R. Moessner, **Samriddhi Sankar Ray**,

- and S. Bhattacharjee.  
**Physical Review Letters**, **121**, 024101 (2018)
33. *Non-intermittent Turbulence: Lagrangian Chaos and Irreversibility*  
**Samriddhi Sankar Ray**.  
**Physical Review Fluids (Rapid)**, **3**, 072601(R) (2018).
  32. *Droplets in isotropic turbulence: deformation and breakup statistics*  
**Samriddhi Sankar Ray** and D. Vincenzi.  
**Journal of Fluid Mechanics**, **852**, 313 (2018).
  31. *Revisiting the SABRA Model: Statics and Dynamics*  
R. Tom and **Samriddhi Sankar Ray**.  
**Europhysics Letters**, **120**, 34002 (2018).
  30. *Exotic multifractal conductance fluctuations in graphene*  
K. R. Amin, **Samriddhi Sankar Ray**, N. Pal, R. Pandit, and A. Bid.  
**Communications Physics**, **1**, 1 (2018).
  29. *An Overview of the Statistical Properties of Two-dimensional Turbulence in Fluids with Particles, Conducting Fluids, Fluids with Polymer Additives, Binary-Fluid Mixtures, and Superfluids*  
R. Pandit, D. Banerjee, A. Bhatnagar, M.-E. Brachet, A. Gupta, D. Mitra, N. Pal, P. Perlekar, **Samriddhi Sankar Ray**, V. Shukla, and D. Vincenzi.  
**Physics of Fluids**, **29**, 111112 (2017)
  28. *Enhanced droplet collision rates and impact velocities in turbulent flows: The effect of polydispersity and transient phases*  
M. James and **Samriddhi Sankar Ray**.  
**Scientific Reports**, **7**, 12231 (2017)
  27. *The Onset of Thermalization in Finite-Dimensional Equations of Hydrodynamics*  
D. Venkataraman and **Samriddhi Sankar Ray**.  
**Proceedings of the Royal Society**, **473**, 20160585 (2017).
  26. *Semi-flexible particles in isotropic turbulence*  
A. Ali, E. L. C. M. Plan, **Samriddhi Sankar Ray**, and D. Vincenzi.  
**Physical Review Fluids (Rapid)**, **1**, 082402(R) (2016).
  25. *Lagrangian Statistics for Navier-Stokes Turbulence under Fourier-mode reduction: Fractal and Homogeneous Decimations*  
M. Buzzicotti, A. Bhatnagar, L. Biferale, A. S. Lanotte, and **Samriddhi Sankar Ray**.  
**New Journal of Physics**, **18**, 113047 (2016).
  24. *Dynamic multiscaling in magnetohydrodynamic turbulence*  
**Samriddhi Sankar Ray**, G. Sahoo, and R. Pandit.  
**Physical Review E**, **94**, 053101 (2016).
  23. *Elastic turbulence in a shell model of polymer solution*,  
**Samriddhi Sankar Ray** and D. Vincenzi.  
**Europhysics Letters**, **114**, 44001 (2016).

22. *Intermittency in Fractal Fourier Hydrodynamics: Lessons from the Burgers Equation*, M. Buziccotti, L. Biferale, U. Frisch, and **Samriddhi Sankar Ray**. **Physical Review E**, **93**, 033109 (2016).
21. *Abrupt growth of large aggregates by correlated coalescences in turbulent flow*, J. Bec, **Samriddhi Sankar Ray**, E.-W. Saw, and H. Homann. **Physical Review E (Rapid)**, **93** 031102(R) (2016).
20. *Effect of Inertia on Model Flocks in a Turbulent Environment*, A. Choudhary, D. Venkataraman and **Samriddhi Sankar Ray**. **Europhysics Letters**, **112**, 24005 (2015) **Editor's Choice**.
19. *Thermalised solutions, statistical mechanics and turbulence: An overview of some recent results*, **Samriddhi Sankar Ray**. **Perspectives in Nonlinear Dynamics, Pramana - Journal of Physics**, **84**, 395 (2015).
18. *Extreme fluctuations of the relative velocities between droplets in turbulent airflow*, E.-W. Saw, G. P. Bewley, E. Bodenschatz, **Samriddhi Sankar Ray**, and J. Bec. **Physics of Fluids Letters**, **26**, 111702 (2014).
17. *Transition from dissipative to conservative dynamics in equations of hydrodynamics*, D. Banerjee and **Samriddhi Sankar Ray**. **Physical Review E (Rapid)**, **90**, 041001(R) (2014).
16. *Gravity-driven enhancement of heavy particle clustering in turbulent flow*, J. Bec, H. Homann, and **Samriddhi Sankar Ray**, **Physical Review Letters**, **112**, 184501 (2014).
15. *Multiscaling in Hall-Magnethydrodynamic Turbulence: Insights from a Shell Model*, D. Banerjee, **Samriddhi Sankar Ray**, G. Sahoo, and R. Pandit, **Physical Review Letters**, **111**, 174501 (2013).
14. *Sticky elastic collisions*, J. Bec, S. Musacchio, and **Samriddhi Sankar Ray**, **Physical Review E**, **87**, 063013 (2013).
13. *Real-space Manifestations of Bottlenecks in Turbulence Spectra*, U. Frisch, **Samriddhi Sankar Ray**, G. Sahoo, D. Banerjee, and R. Pandit, **Physical Review Letters**, **110**, 064501 (2013).
12. *Turbulence in Noninteger Dimensions by Fractal Fourier Decimation*, U. Frisch, A. Pomyalov, I. Procaccia, and **Samriddhi Sankar Ray**, **Physical Review Letters**, **108**, 074501 (2012).
11. *Nelkin scaling for the Burgers equation and the role of high-precision calculations*, S. Chakraborty, U. Frisch, W. Pauls, and **Samriddhi Sankar Ray**, **Physical Review E (Rapid)**, **85**, 015301(R) (2012).
10. *Dynamic Multiscaling in Two-dimensional Turbulence*, **Samriddhi Sankar Ray**, D. Mitra, P. Perlekar, and R. Pandit, **Physical Review Letters**, **107**, 184503 (2011).

9. *Universality of scaling and multiscaling in turbulent symmetric binary fluids*,  
**Samriddhi Sankar Ray** and A. Basu,  
**Physical Review E**, **84**, 036316 (2011).
8. *Resonance phenomenon for the Galerkin-truncated Burgers and Euler equations*,  
**Samriddhi Sankar Ray**, U. Frisch, S. Nazarenko, and T. Matsumoto,  
**Physical Review E**, **84**, 016301 (2011).
7. *The Persistence Problem in Two-Dimensional Fluid Turbulence*,  
P. Perlekar, **Samriddhi Sankar Ray**, D. Mitra, and R. Pandit,  
**Physical Review Letters**, **106**, 054501 (2011).
6. *Extended Self Similarity works for the Burgers equation and why*,  
S. Chakraborty, U. Frisch, and **Samriddhi Sankar Ray**,  
**Journal of Fluid Mechanics**, **649**, 275 (2010).
5. *Statistical Properties of Turbulence: An Overview*,  
R. Pandit, P. Perlekar, and **Samriddhi Sankar Ray**,  
**Pramana - Journal of Physics**, **73**, 157 (2009).
4. *Entire solutions of hydrodynamical equations with exponential dissipation*,  
C. Bardos, U. Frisch, W. Pauls, **Samriddhi Sankar Ray**, and E. S. Titi,  
**Communications in Mathematical Physics**, **293**, 2, 519 (2009).
3. *Hyperviscosity, Galerkin truncation and bottlenecks in turbulence*,  
U. Frisch, S. Kurien, R. Pandit, W. Pauls, **Samriddhi Sankar Ray**, A. Wirth, and J-Z Zhu,  
**Physical Review Letters**, **101**, 144501 (2008).
2. *The Universality of Dynamic Multiscaling in Homogeneous, Isotropic Navier-Stokes and Passive-Scalar Turbulence*,  
**Samriddhi Sankar Ray**, D. Mitra, and R. Pandit,  
**New Journal of Physics**, **10**, 033003 (2008).
1. *Dynamic Multiscaling in Turbulence*,  
R. Pandit, **Samriddhi Sankar Ray**, and D. Mitra,  
**European Physics Journal B** **64**, 463 (2008).

## Workshops, Conferences and Meetings Organised

23. *Indian Statistical Physics Community Meeting 2024*  
International Centre for Theoretical Sciences, Bangalore, India, April 2024.  
**Organisers:** R. Bandyopadhyay, A. Dhar, K. Jain, R. Pandit, **Samriddhi Sankar Ray**, S. Sabhapandit, and P. Sharma.
22. *Turbulence and Vortex Dynamics in 2D Quantum Fluids*  
International Centre for Theoretical Sciences, Bangalore, India, February – March 2024.  
**Organisers:** D. Ballarini, I. Carusotto, A. S. Lanotte, **Samriddhi Sankar Ray**, and D. Sanvitto.
21. *Indian Statistical Physics Community Meeting 2023*  
International Centre for Theoretical Sciences, Bangalore, India, February 2023.

- Organisers:** R. Bandyopadhyay, A. Dhar, K. Jain, R. Pandit, **Samriddhi Sankar Ray**, S. Sabhapandit, and P. Sharma.
20. *Complex Lagrangian Problems of Particles in Flows*  
International Centre for Theoretical Sciences, Bangalore, India, March 2022.  
**Organisers:** M. Cencini, K. Gustafsson, F. De Lillo, and **Samriddhi Sankar Ray**
  19. *Stochastic Approaches to Turbulence in Hydrodynamical Equations: New Challenges at the Mathematics-Physics Interface*  
Banff International Research Station, Alberta, Canada, February-March 2022.  
**Organisers:** U. Frisch, K. Khanin, R. Pandit and **Samriddhi Sankar Ray**
  18. *ICTS Distinguished Lecture by Giorgio Parisi*  
International Centre for Theoretical Sciences, Bangalore, India, December 2021 [Online].  
**Organisers:** C. Dasgupta, A. Dhar, S. Karmakar, and **Samriddhi Sankar Ray**
  17. *Celebrating The Science of Giorgio Parisi*  
International Centre for Theoretical Sciences, Bangalore, India, December 2021 [Online].  
**Organisers:** C. Dasgupta, A. Dhar, S. Karmakar, and **Samriddhi Sankar Ray**
  16. *Indian Statistical Physics Community Meeting 2020*  
International Centre for Theoretical Sciences, Bangalore, India, February 2020.  
**Organisers:** R. Bandyopadhyay, A. Dhar, K. Jain, R. Pandit, **Samriddhi Sankar Ray**, S. Sabhapandit, and P. Sharma.
  15. *Fluids Day*  
International Centre for Theoretical Sciences, Bangalore, India, January 2020.  
**Organisers:** R. Govindarajan, **Samriddhi Sankar Ray** and G. Tomar
  14. *Symposium on Turbulence in Conference on Nonlinear Systems and Dynamics*  
Indian Institute of Technology, Kanpur, India, December 2019.  
**Organiser and Chair:** **Samriddhi Sankar Ray**.
  13. *Indian Statistical Physics Community Meeting 2019*  
International Centre for Theoretical Sciences, Bangalore, India, February 2019.  
**Organisers:** R. Bandyopadhyay, A. Dhar, K. Jain, R. Pandit, **Samriddhi Sankar Ray**, S. Sabhapandit, and P. Sharma.
  12. *Indian Statistical Physics Community Meeting 2018*  
International Centre for Theoretical Sciences, Bangalore, India, February 2018.  
**Organisers:** R. Bandyopadhyay, A. Dhar, K. Jain, R. Pandit, **Samriddhi Sankar Ray**, S. Sabhapandit, and P. Sharma.
  11. *Indian Statistical Physics Community Meeting 2017*  
International Centre for Theoretical Sciences, Bangalore, India, February 2017.  
**Organisers:** R. Bandyopadhyay, A. Dhar, K. Jain, R. Pandit, **Samriddhi Sankar Ray**, S. Sabhapandit, and P. Sharma.
  10. *CompFlu - 2016*  
University of Hyderabad, **Hyderabad**, 2016.  
**Chair, Turbulence.**

9. *Indian Statistical Physics Community Meeting 2016*  
International Centre for Theoretical Sciences, Bangalore, India, February 2016.  
**Organisers:** A. Dhar, K. Jain, R. Pandit, **Samriddhi Sankar Ray**, and S. Sabhapandit.
8. *Soft-matter: Young Investigators Meet*  
Goa, India January 2016.  
**Mentor**
7. *Geodynamo Research (GDR) 2015*  
International Centre for Theoretical Sciences, Bangalore, India, June 2015.  
**Organisers:** E. Dormy, S. Fauve, **Samriddhi Sankar Ray**, B. Sreenivasan, and M. Verma.
6. *The Nonlinear Physics of Complex Flows and Amorphous Solids*  
International Centre for Theoretical Sciences, Bangalore, India, April 2015.  
**Organiser:** **Samriddhi Sankar Ray**.
5. *Chandrasekhar Lectures by Itamar Procaccia*  
International Centre for Theoretical Sciences, Bangalore, India, April 2015.  
**Organiser:** **Samriddhi Sankar Ray**.
4. *Indian Statistical Physics Community Meeting 2015*  
International Centre for Theoretical Sciences, Bangalore, India, February 2015.  
**Organisers:** A. Dhar, K. Jain, R. Pandit, **Samriddhi Sankar Ray**, and S. Sabhapandit.
3. *Soft-matter: Young Investigators Meet*  
Pondicherry, India, December 2015.  
**Organisers:** P. Chaudhury, **Samriddhi Sankar Ray** and S. Roy.
2. *Indian Statistical Physics Community Meeting 2014*  
International Centre for Theoretical Sciences, Bangalore, India, February 2014.  
**Organisers:** A. Dhar, K. Jain, R. Pandit, **Samriddhi Sankar Ray**, and S. Sabhapandit.
1. *Transport of Particles in Turbulent Flows: Experimental, Computational and Theoretical Investigations*  
International Centre for Theoretical Sciences, Bangalore, India, October 2013.  
**Organisers:** J. Bec, R. Pandit, and **Samriddhi Sankar Ray**.

### (Selected) Invited Talks

114. *Active Turbulence*  
**CompFlu-2024,**  
**Hyderabad, India 2024**
113. *Why is Turbulence still so Fascinating?*  
**Bangalore Science Gallery** — Public Talk,  
**Bangalore, India 2024**
112. *The Onset of Thermalisation and its Implications*  
**Indo-French workshop on Classical and quantum dynamics in out of equilibrium systems,**  
**Bangalore, India 2024**

111. *The Onset of Thermalisation and its Implications*  
**Physics of Complex Systems 2024,**  
**Hyderabad, India 2024**
110. *How different are the worlds of high (inertial) and low (active) Reynolds number turbulence?*  
**Colloquium,** Department of Physics, Indian Institute of Technology Kanpur  
**Kanpur, India 2024**
109. *Spottiness and Scaling: Universality in Turbulence*  
**Physics of wave turbulence and beyond,**  
**Les Houches, France 2024**
108. *High and Low Reynolds Number Turbulence*  
**Frontiers of Theoretical Condensed Matter Physics,**  
**Chernogolovka, Russia 2024**
107. *How different are the worlds of high (inertial) and low (active) Reynolds number turbulence?*  
**Colloquium,** Department of Physics, Presidency University  
**Kolkata, India 2024**
106. *How different are the worlds of high (inertial) and low (active) Reynolds number turbulence?*  
**Seminar,** Isaac Newton Institute  
**Cambridge, United Kingdom 2024**
105. *Understanding solutions of finite-dimensional, inviscid equations of hydrodynamics and why it matters for turbulence*  
**Colloquium,** Laboratoire Jean Alexandre Dieudonné, Université Côte d'Azur  
**Nice, France 2024**
104. *Low Reynolds Number Active Suspensions: An Inertial Turbulence Approach*  
**Frontiers in Statistical Physics,**  
**Bangalore, India 2023**
103. *Low Reynolds Number Active Suspensions: An Inertial Turbulence Approach*  
**Active Matter in Complex Environments,**  
**Bangalore, India 2023**
102. *Why is turbulence still interesting and what we owe to A. N. Kolmogorov?*  
**Colloquium,** Kazi Nazrul University  
**Asansol, India 2023**
101. *Why Physicists care about Bacterial Suspensions?*  
**Colloquium,** Presidency University  
**Kolkata, India 2023**
100. *Is Turbulence Uniformly Multifractal?,*  
**International Congress on Industrial and Applied Mathematics [Minisymposia: Problems in incompressible fluid flows: Stability, Singularity, and Extreme Behavior],**  
**Tokyo, Japan 2023**

99. *Can Living Fluids be Turbulent?*  
**Seminar**, Department of Physics, Kyoto University,  
**Kyoto**, Japan 2023
98. *A turbulent bacterial suspension*  
**Seminar**, Chinese Academy of Sciences, Institute of Physics  
**Beijing**, China 2023
97. *The Fluid Mechanics of Dense Bacterial Suspensions*  
**Asian Congress of Fluid Mechanics [Keynote Lecture]**,  
**Beijing**, China 2023
96. *Is Turbulence Uniformly Multifractal?*,  
**Perspectives in Nonlinear Dynamics**,  
**Chennai**, India 2023
95. *Universality and Anomalous Scaling in Bacterial Suspensions*  
**Indo-Israeli meeting on Frontiers in Condensed Matter Physics**,  
**Tel Aviv**, Israel 2023
94. *Many-body Chaos and Thermalised Fluids*  
**Colloquium**, Department of Physics, Calcutta University,  
**Kolkata**, India 2023
93. *Can Living Fluids be Turbulent?*  
**Colloquium**, Harish-Chandra Research Institute,  
**Prayagraj**, India 2023
92. *What Turbulence Owes to A. N. Kolmogorov*  
**ICTS-Kolmogorov Symposium**,  
**Bangalore**, India 2023
91. *Sedimenting Anisotropic Particles: Filaments and Ice Crystals*  
**Particle growth in turbulence**,  
**Stockholm**, Sweden 2023
90. *Can Living Fluids be Turbulent?*  
**Tessellate**  
**Chennai**, India 2023
89. *Intermittency and Scaling in Active Turbulence*  
**Steady State Phenomena in Soft Matter, Active and Biological Systems**  
**Kolkata**, India 2023
88. *Low Reynolds number Turbulence*  
**Turbulence: Problems at the Interface of Mathematics and Physics**  
**Bangalore**, India 2023
87. *Intermittency and Scaling in Active Turbulence*  
**Frontiers in Non-equilibrium Physics**  
**Chennai**, India 2023

86. *Many-body Chaos in Thermalised Fluids*,  
**Seminar**, Rudolf Peierls Centre for Theoretical Physics, University of Oxford,  
**Oxford**, United Kingdom 2022
85. *Sedimentation in Turbulence*,  
**Seminar**, Isaac Newton Institute for Mathematical Sciences,  
**Cambridge**, United Kingdom 2022
84. *Dynamic Scaling in Rotating Turbulence: A Shell Model Study*,  
**Waves, Instabilities and Mixing in Rotating and Stratified Flows**,  
**Virtual** 2022
83. *Many-body Chaos in Thermalised Fluids*,  
**Mathematical aspects of turbulence: where do we stand?**  
**Hybrid**, Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom 2022
82. *Flow structures govern particle collisions in turbulence*,  
**Euromech Colloquium: Extreme Dissipation and Intermittency in Turbulence**  
**Virtual** 2021
81. *The Fascinating World of Turbulent Flows*,  
**SEDS, BITS Goa**  
**Virtual** 2021
80. *The Fascinating World of Turbulent Flows*,  
**Association of Indian Physics Students**  
**Virtual** 2021
79. *Many-body Chaos in a Thermalised Fluid*,  
**Turbulence: Problems at the Interface of Mathematics and Physics**,  
**Virtual** 2020
78. *Turbulent Transport: Beyond the Point Particle Approximation*,  
**Fluctuations in Nonequilibrium Systems: Theory and applications**,  
**Bangalore**, India 2020
77. *Thermalisation and Many-Body Chaos: Lessons from Truncated Hydrodynamics*,  
**Conference on Nonlinear Systems and Dynamics**,  
**Kanpur**, India 2019
76. *Thermalisation, Many-Body Chaos, and Weak Solutions in Truncated Hydrodynamics*,  
**Thermalization, Many body localization, and Hydrodynamics**,  
**Bangalore**, India 2019
75. *Cross-correlators: Probing Many-Body Chaos*,  
**Universal features of hydrodynamical, optical and wave turbulence**,  
**Nice**, France 2019
74. *Turbulent Advection of Elastic Chains*,  
**Discrete Simulations of Fluid Dynamics (DSFD 2019)**,  
**Bangalore**, India 2019

73. *Lagrangian Intermittency, Irreversibility, and Flight Crashes,*  
**Perspectives in Nonlinear Dynamics,**  
**São Paulo, Brazil 2019**
72. *Interacting Particles in a Turbulent Flow: From Crystals to Flocks,*  
**Seminar, Indian Institute of Technology, Kharagpur, Department of Physics,**  
**Kharagpur, India 2019.**
71. *Interacting and Non-interacting Particles in a Turbulent Flow,*  
**Seminar, Jawaharlal Nehru University, Department of Physics,**  
**New Delhi, India 2019.**
70. *What makes the motion of small particles in turbulence special?*  
**Colloquium, Ashoka University, Department of Physics,**  
**Sonapet, India 2019**
69. *Particles in a Turbulent Flow: How Rain Drops Form?*  
**Colloquium, Presidency University, Department of Physics,**  
**Kolkata, India 2019**
68. *Interacting and Non-interacting Particles in a Turbulent Flow,*  
**Colloquium, Indian Institute of Science, Department of Physics,**  
**Bangalore, India 2019**
67. *Elastic Chains and Crystals in Turbulent Flows,*  
**Emerging Trends in Computational Fluid Dynamics,**  
**Bangalore, India 2019**
66. *The Decimated Navier-Stokes Equation,*  
**Seminar, Service de Physique de l'Etat Condensé, CEA Saclay,**  
**Paris, France 2019**
65. *Understanding Intermittency through TriadSuppressions,*  
**Colloquium, Ecole Normale Supérieure,**  
**Paris, France 2019**
64. *Turbulent Transport: Beyond the Spherical Particle Approximation,*  
**Seminar, Laboratoire Jean Perrin, Sorbonne University,**  
**Paris, France 2019**
63. *Interacting Particles in Turbulence: Chains, Crystals, and Flocking,*  
**Seminar, Laboratoire de Physique et Mécanique des Milieux Hétérogènes,**  
**Paris, France 2019**
62. *Interacting and Non-interacting Particles in a Turbulent Flow,*  
**Colloquium, NORDITA,**  
**Stockholm, Sweden 2019**
61. *New Approaches to Understand Intermittency,*  
**Seminar, University of Gothenburg, Department of Physics,**  
**Gothenburg, Sweden 2019**

60. *OTOC in Classical Models*,  
**Seminar, NORDITA,**  
**Stockholm, Sweden 2019**
59. *Interacting and Non-interacting Particles in a Turbulent Flow*,  
**Indo-French Workshop for Scientific Cooperation,**  
**Nice, France 2019**
58. *The Effect of Generalised Fourier Galerkin Projections on Equations of Hydrodynamics*,  
**International Conference on Mathematical Modelling in Science and Engineering**  
**Coimbatore, India 2019.**
57. *Understanding Turbulence through Computer Simulations*,  
**National Workshop,**  
**Thanjavur, India 2018**
56. *The Fascinating World of Turbulent Flows*  
**Einstein Lectures**  
**Bangalore, India, August, 2018**
55. *Decimated Navier-Stokes Turbulence*  
**Dynamics of Complex Systems**  
**Bangalore, India, June 2018**
54. *Non-spherical Particles and Chains in Turbulence*  
**Dynamics of Complex Systems**  
**Bangalore, India, June 2018**
53. *Droplets in Isotropic Turbulence: Deformation and Break-up Statistics*  
**Indian Statistical Physics Community Meeting 2018**  
**Bangalore, India, February 2018**
52. *Decimated Navier-Stokes Turbulence: Intermittency, Chaos, and an Emergent Reversibility*  
**Turbulence from Angstroms to Light Years**  
**Bangalore, India, January 2018**
51. *Decimated Navier-Stokes Turbulence: Intermittency, Chaos, and an Emergent Reversibility*  
**Journal of Fluid Mechanics Symposia**  
**Bangalore, India, December 2017**
50. *Decimated Navier-Stokes Turbulence*  
**Institute of Mathematical Sciences (IMSc)**  
**Chennai, India, May 2017**
49. *Onset of thermalisation in hydrodynamic equations: Insights from the Burgers equation*  
**Indian Statistical Physics Community Meeting 2017**  
**Bangalore, India, February 2017**
48. *Droplets in Turbulent Flows: Lessons for the Microphysics of Clouds*  
**Summer Research Program on Dynamics of Complex Systems**  
**Bangalore, India, July 2016**

47. *Intermittency in Turbulent Flows: Time to Look in Fourier Space?*  
**Indian Statistical Physics Community Meeting 2016**  
**Bangalore, India, February 2016**
46. *Settling, collisions, coalescences of inertial particles in turbulent flows*  
**CSAS - 2016**  
**Chennai, February 2016**
45. *Abrupt Growth of Large Aggregates by Correlated Coalescences in a Turbulent Flow: Short Time Results*  
**CompFlu - 2016**  
**Pune, January 2016**
44. *Abrupt growth of large aggregates by correlated coalescences in turbulent flow*  
**Growing Length Scale Phenomena in Condensed Matter Physics**  
**Bangalore, India, October 2015.**
43. *Enhanced Settling and Droplet Growth in Inertial Particles in a Turbulent Flow*  
**Colloquium**  
**Theoretical Sciences Unit, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India, September 2015.**
42. *Bottlenecks in Turbulence: Signatures in Physical Space*  
**European Turbulence Conference 15**  
**Delft, The Netherlands, August 2015**
41. *Settling and Coalescences of Inertial Particles in Turbulence*  
**Seminar**  
**Department of Physics, Indian Institute of Technology Bombay, Mumbai, India, August 2015**
40. *Inertial Particles: Implication for Clouds*  
**Colloquium**  
**Interdisciplinary Programme (IDP) in Climate Studies, Indian Institute of Technology Bombay, Mumbai, India, August 2015.**
39. *Settling, Collisions, and Coalescences: Droplets in a Turbulent Flow*  
**Seminar**  
**University of Rome, Tor Vergatta, Rome, Italy, May 2015**
38. *Gravitational Settling of Heavy Particles*  
**Indian Statistical Physics Community Meeting 2015**  
**Bangalore, India, February 2015**
37. *The dynamics of finite-sized particles in turbulent airflows*  
**Colloquium**  
**International Center for Theoretical Sciences (ICTS-TIFR), Bangalore, India, February 2015**

36. *Extreme fluctuations of the relative velocities between droplets in turbulent airflow*  
**CompFlu - 2014**  
**Bangalore**, December 2014
35. *Inertial particles in turbulent flows*  
**Colloquium**  
**TIFR Center for Inter-disciplinary Sciences, Hyderabad**, India, August 2014
34. *Gravity-driven enhancement of heavy particle clustering in turbulent flow*  
**Dynamic Days Asia Pacific 08**  
**Chennai**, India, July 2014.
33. *The dynamics of finite-sized particles in turbulent flows*  
**Seminar**  
**Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore**, India, July 2014
32. *Gravity-driven enhancement of heavy particle clustering in turbulent flow*  
**Dynamics of Particles in Flows**  
**Stockholm**, Sweden, June 2014
31. *Are thermalised solutions meaningful in the equations of hydrodynamics?*  
**Seminar**  
**Indian Association for the Cultivation of Science Kolkata**, India, April 2014
30. *Turbulence: The Grand Challenge*  
**Seminar**  
**Department of Physics, Indian Institute of Technology, Kanpur**, India, March 2014.
29. *Turbulence in Fractal Dimensions: The Critical Dimension*  
**Indian Statistical Physics Community Meeting 2014**  
**Bangalore**, India, February 2014
28. *Sticky Elastic Collisions*  
**Soft-matter: Young Investigators Meet**  
**Pondicherry**, India, January 2014
27. *Are thermalised solutions meaningful in the equations of hydrodynamics?*  
**Colloquium**  
**Tata Institute of Fundamental Research – Centre for Applicable Mathematics, Bangalore**, India, October 2013
26. *Sticky Elastic Collisions*  
**Monthly StatPhys Meeting**  
**International Centre for Theoretical Sciences — Tata Institute of Fundamental Research, Bangalore**, India, September 2013
25. *Can Truncated Systems Help Us Understand Turbulence?*  
**Perspectives in Nonlinear Dynamics**  
**Hyderabad**, July 2013

24. *Sticky elastic collisions and the effect of hydrodynamic interactions*  
**Seminar**  
**International Centre for Theoretical Sciences — Tata Institute of Fundamental Research,**  
**Bangalore, India, June 2012**
23. *Statistical Mechanics and Turbulence*  
**Colloquium**  
**International Centre for Theoretical Sciences — Tata Institute of Fundamental Research,**  
**Bangalore, India, June 2012**
22. *Resonance phenomenon for the Galerkin-truncated Burgers and Euler equations*  
**Mathematics of particles and flows**  
**Vienna, Austria, May–June 2012**
21. *Sticky elastic collisions*  
**Particles in Turbulence**  
**Leiden, Holland, May 2012**
20. *Statistical Mechanics and Turbulence*  
**Seminar**  
**Department of Physics, Indian Institute of Technology, Kanpur, India, January 2012**
19. *Inertial Particles in Turbulent Flows and the Effect of Collisions*  
**Seminar**  
**Department of Physics, Indian Institute of Technology, Kanpur, India, January 2012**
18. *Statistical Mechanics and Turbulence*  
**Colloquium**  
**Satyandra Nath Bose National Center for Basic Sciences, Kolkata, India, January 2012**
17. *Statistical Mechanics and Turbulence*  
**Seminar**  
**Saha Institute of Nuclear Physics, Kolkata, India, December 2011**
16. *Statistical Mechanics and Turbulence*  
**Seminar**  
**Indian Institute of Technology, Kharagpur, India, December 2011**
15. *Resonant phenomenon for the Galerkin-truncated Burgers and Euler equations*  
**ICTS–TIFR Discussion Meeting on High Precision Computing**  
**Bangalore, India, December 2011**
14. *Sticky elastic collisions*  
**Rencontre Nicoise de Mecanique des Fluides**  
**Nice, France, November 2011**
13. *Gravitational settling of heavy particles*  
**Seminar**  
**Max Planck Institute for Dynamics and Self-Organization, Göttingen, Germany, November 2011**

12. *Gravitational settling of heavy particles*  
**Meeting of the ANR**  
 Nice, France, October 2011
11. *The tyger phenomenon for the Galerkin truncated Burgers and Euler equations*  
**The solar course, the chemic force, and the speeding change of water**  
 Stockholm, Sweden, October, 2011
10. *The Persistence Problem in Turbulence*  
**Fundamental Problems of Turbulence: 50 years after the Turbulence Colloquium Marseille 1961**  
 Marseille, France, September, 2011
9. *Turbulence in Fractal Dimensions*  
**Seminar**  
 Saha Institute of Nuclear Physics, Kolkata, India, July 2011
8. *Time Scales in Turbulent Flows in Two Dimensions*  
**Seminar**  
 Max-Plank-Institute for Dynamics and Self-Organization, Göttingen, Germany, May, 2010
7. *The Universality of Dynamic Multiscaling*  
**Seminar**  
 Saha Institute of Nuclear Physics, Kolkata, India, July 2009
6. *Thermalisation*  
**Turbulence and Statistical Mechanics**  
 Les Houches, France, March 2009.
5. *Bottlenecks, thermalization and surprises in the Galerkin-truncated Burgers Equation,*  
**Seminar**  
 Satyendra Nath Bose National Centre for Basic Sciences, Kolkata, India, October, 2008
4. *Surprises in the Galerkin-truncated Burgers Equation*  
**Transport in Hydrodynamical Flows: Numerical and Analytical Approaches**  
 Moscow, Russia, September, 2008
3. *Dynamic Multiscaling in Turbulence*  
**Seminar**  
 Max-Plank-Institute for Dynamics and Self-Organization Göttingen, Germany, July, 2008
2. *Galerkin-truncated Burgers Equation and Bottlenecks*  
**Rencontres Nicoises de Mecanique des Fluides**  
 Nice, France, May 2008
1. *Burgers Equation and Hyperviscosity*  
**GdR Turbulence: Fundamental Aspects of Turbulence**  
 Lyon, France March - April 2008