

PUBLICATIONS (BY YEAR)

DIBYENDU DAS

2022

57. “Exact Distribution of Threshold Crossing Times for Protein Concentrations: Implication for Biological Timekeeping”
Krishna Rijal, Ashok Prasad, Abhyudai Singh and Dibyendu Das, *Phys. Rev. Lett.* **128**, 048101 (2022).

2020

56. “Capture of a diffusive prey by multiple predators in confined space”
Indrani Nayak, Amitabha Nandi, and Dibyendu Das, *Phys. Rev. E* **102**, 062109 (2020).

55. “Protein hourglass: Exact first passage time distributions for protein thresholds”
Krishna Rijal, Ashok Prasad, and Dibyendu Das, *Phys. Rev. E* **102**, 052413 (2020).

54. “Role of dimensions in first passage of a diffusing particle under stochastic resetting and attractive bias”
Saeed Ahmad and Dibyendu Das, *Phys. Rev. E* **102**, 032145 (2020).

53. “First passage of an active particle in the presence of passive crowders”
Animesh Biswas, J. M. Cruz, P. Parmananda, and Dibyendu Das, *Soft Matter* **16**, 6138 (2020).

52. “Regulation of microtubule disassembly by spatially heterogeneous patterns of acetylation”
Aparna J. S., Ranjith Padinhateeri, and Dibyendu Das, *Soft Matter* **16**, 3125 (2020).

51. “Rotational synchronization of camphor ribbons in different geometries”,
Jyoti Sharma, Ishant Tiwari, Dibyendu Das, and P. Parmananda, *Phys. Rev. E* **101**, 052202 (2020).

50. “Coarsening dynamics in the Vicsek model of active matter”,
Nisha Katyal, Supravat Dey, Dibyendu Das and Sanjay Puri, *Eur. Phys. J. E* **43**, 10 (2020).

49. “Comparison of mechanisms of kinetochore capture with varying number of spindle microtubules”,
Indrani Nayak, Dibyendu Das, and Amitabha Nandi, *Phys. Rev. Research* **2**, 013114 (2020).

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48. “Velocity distribution of driven granular gases”,
V V Prasad, Dibyendu Das, Sanjib Sabhapandit and R Rajesh, *J. Stat. Mech.*, 063201 (2019).

47. “First passage of a particle in a potential under stochastic resetting: A vanishing transition of optimal resetting rate”,
Saeed Ahmad, Indrani Nayak, Ajay Bansal, Amitabha Nandi, and Dibyendu Das, *Phys. Rev. E* **99**, 022130 (2019).

46. “Kinetics of polymer tumbling in shear flow: a coarse-grained description”,
Sadhana Singh, R. K. Singh, Dibyendu Das, and Sanjay Kumar, *Phys. Rev. E (Rapid. Com.)* **99**, 030501 (2019).

45. “Oscillatory activity regulation in an ensemble of autonomous mercury beating heart oscillators”,
Animesh Biswas, Pawan Kumar, Dibyendu Das, and P. Parmananda, *Phys Rev. E* **99**, 032223 (2019).

44. “Rotational synchronization of camphor ribbons”,
Jyoti Sharma, Ishant Tiwari, Dibyendu Das, Punit Parmanada, V. S. Akella, and Veronique Pimienta, *Phys Rev. E* **99**, 012204 (2019).

2018

43. “Coupling of replisome movement with nucleosome dynamics can contribute to the parent-daughter information transfer”,
Tripti Bameta, Dibyendu Das, Ranjith Padinhateeri, *Nucleic Acids Research* **46**, 4991 (2018).

42. “Diffusion dynamics and steady states of systems of hard rods on a square lattice”,
Sugata Patra, Dibyendu Das, R. Rajesh, and Mithun K. Mitra, *Phys. Rev. E* **97**, 022108 (2018).

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41. “Signatures of a macroscopic switching transition for a dynamic microtubule”,
Aparna J S, Ranjith Padinhateeri and Dibyendu Das, *Scientific Reports* **7** : 45747 (2017).

40. “Binding of DNA-bending non-histone proteins destabilizes regular 30-nm chromatin structure”, Gaurav Bajpai, Ishutesh Jain, Mandar M. Inamdar, Dibyendu Das, Ranjith Padinhateeri, *PLoS Comput. Biol.* **13**(1): e1005365 (2017).

39. “Sufficient conditions for the additivity of stall forces generated by multiple filaments and motors”, Tripti Bameta, Dipjyoti Das, Dibyendu Das, Ranjith Padinhateeri and Mandar M. Inamdar, *Phys. Rev. E* **95**, 022406 (2017). [*Editor’s suggestion*]

38. “Scaling dependence and synchronization of forced mercury beating heart system”, Animesh Biswas, Dibyendu Das, and Punit Parmanada, *Phys Rev. E* **95**, 042202 (2017).

37. “Shock propagation in locally driven granular systems”, Jilmy P. Joy, Sudhir N. Pathak, Dibyendu Das, and R. Rajesh, *Phys. Rev. E* **96**, 032908 (2017).

36. “Velocity distribution of a driven inelastic one-component Maxwell gas”, V.V. Prasad, Dibyendu Das, Sanjib Sabhapandit and R. Rajesh, *Phys. Rev. E* **95**, 032909 (2017).

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35. “Theoretical estimates of exposure timescales of protein binding sites on DNA regulated by nucleosome kinetics”, Jyotsana J. Parmar, Dibyendu Das, and Ranjith Padinhateeri, *Nucleic Acids Research* **44**, 1630 (2016).

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34. “Collective effects in force generation by multiple cytoskeletal filaments pushing an obstacle”, Aparna J S, Dipjyoti Das, Ranjith Padinhateeri and Dibyendu Das, *J. Phys.: Conf. Ser.* **638** 012012 (2015).

33. “Confinement-dependent localisation of diffusing aggregates in cellular geometries”, Mahdi Rezaei Keramati, Vaihbav Wasnik, Liyan Ping, Dibyendu Das, and Eldon Emberly, *Phys. Rev. E* **91**, 012705 (2015).

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32. “Force-Induced dynamical properties of Multiple Cytoskeletal filaments are distinct from that of Single filaments”, Dipjyoti Das, Dibyendu Das, Ranjith Padinhateeri, *PLoS ONE* **9**(12): e114014 (2014).

31. “Collective force generated by multiple biofilaments can exceed the sum of forces due to individual ones”, Dipjyoti Das, Dibyendu Das and Ranjith Padinhateeri, *New J. Phys.* **16**, 063032 (2014).

30. “Energy decay in Three-dimensional freely cooling granular gas”, Sudhir N. Pathak, Zahera Jabeen, Dibyendu Das and R. Rajesh, *Phys. Rev. Lett.* **112**, 038001 (2014).

29. “Inhomogeneous Cooling of the Rough Granular Gas in Two Dimensions”, Sudhir N. Pathak, Dibyendu Das and R. Rajesh, *Europhys. Lett.* **107**, 44001 (2014).

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28. “Spatial Structures and Giant Number Fluctuations in Models of Active Matter”, Supravat Dey, Dibyendu Das and R. Rajesh, *Phys. Rev. Lett.* **108**, 238001 (2012).

27. “Giant number fluctuations in microbial ecologies”, Dipjyoti Das, Dibyendu Das, and Ashok Prasad, *Jr. Theo. Biol.* **308**, 96 (2012).

26. “Broad-tailed force distributions and velocity ordering in a heterogeneous membrane model for collective cell migration”, Tripti Bameta, Dipjyoti Das, Sumantra Sarkar, Dibyendu Das, and Mandar Inamdar, *Europhys. Lett.* **99**, 18004 (2012).

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25. “Coarse grained dynamics of the freely cooling granular gas in one dimension”, Mahendra Shinde, Dibyendu Das, and R. Rajesh, *Phys. Rev. E* **84**, 031310 (2011).

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22. “Dynamics of a flexible polymer in planar mixed flow”, Dipjyoti Das, Sanjib Sabhapandit, and Dibyendu Das, *J. Phys.: conf. ser.* **297**, 012007 (2011).

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Mahendra Shinde, Dibyendu Das, and R. Rajesh, *Phys. Rev. E* **79**, 021303 (2009).

20. “Predicting the coherence resonance curve using a semi-analytical treatment”,
Santidan Biswas, Dibyendu Das, P. Parmananda, Anirban Sain, *Phys. Rev. E* **80**, 046220 (2009).

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19. “Accurate statistics of a flexible polymer chain in shear flow”,
Dibyendu Das and Sanjib Sabhapandit, *Phys. Rev. Lett.* **101**, 188301 (2008).

18. “Critical behavior of loops and biconnected clusters on fractals of dimension $d < 2$ ”,
Dibyendu Das, Supravat Dey, Jesper Lykke Jacobsen and Deepak Dhar,
J. Phys. A: Math. Theor. **41**, 485001 (2008).

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17. “Violation of Porod law in a freely cooling granular gas in one dimension”,
Mahendra Shinde, Dibyendu Das, and R. Rajesh, *Phys. Rev. Lett.* **99**, 234505 (2007).

16. “Persistence of a Rouse polymer chain under transverse shear flow”,
Somnath Bhattacharya, Dibyendu Das, and Satya N. Majumdar, *Phys. Rev. E* **75**, 061122 (2007).

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15. “Motion of a random walker in a quenched power law correlated velocity field”,
Soumen Roy and Dibyendu Das, *Phys. Rev. E* **73**, 026106 (2006).

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14. “Persistence of Randomly Coupled Fluctuating Interfaces”,
Satya N. Majumdar and Dibyendu Das, *Phys. Rev. E* **71**, 036129 (2005).

13. “Critical Dynamics of Dimers: Implications for the Glass Transition”,
Dibyendu Das, Greg Farrell, Jané Kondev and Bulbul Chakraborty, *J. Phys. Chem. B* **109**, 21413 (2005).

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12. “Landau-like theory of glassy dynamics”,
Satya N. Majumdar, Dibyendu Das, Jané Kondev, and Bulbul Chakraborty,
Phys. Rev. E **70**, 060501 (Rapid communications) (2004).

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10. “Activated dynamics at a non-disordered critical point”,
Dibyendu Das, Jané Kondev and Bulbul Chakraborty, *Europhys. Lett.* **61**(4), 506 (2003).

9. “Jamming in a model glass: Interplay of dynamics and thermodynamics”,
Bulbul Chakraborty, Dibyendu Das, and Jané Kondev, *Physica A* **318**, 23 (2003).

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8. “Topological jamming and the glass transition in a frustrated system”,
Bulbul Chakraborty, Dibyendu Das, and Jané Kondev, *Eur. Phys. J. E* **9**, 227 (2002).

7. “Aggregate formation in a system of coagulating and fragmenting particles with mass-dependent diffusion rates”,
R. Rajesh, Dibyendu Das, Bulbul Chakraborty, and Mustansir Barma,
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6. “Phase diagram of a two-species lattice model with a linear instability”,
Sriram Ramaswamy, Mustansir Barma, Dibyendu Das and Abhik Basu,
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5. “Fluctuation dominated phase ordering driven by stochastically evolving surfaces: depth models and sliding particles”,

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4. “Weak and strong dynamic scaling in a one-dimensional driven coupled-field model: effects of kinematic waves”,
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2. “Arrested states formed on quenching spin chains with competing interactions and conserved dynamics”,
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1. “Polytype kinetics and quenching of spin chains with competing interactions using trimer-flip dynamics”,
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