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List of publications

1. *Dynamics of a Particle Moving in One Dimensional Lorentz Lattice Gas*, Sameer Kumar, Shradha Mishra, J Stat Phys, **176**, 1161 (2019).
2. *Dynamics of particle moving in a two dimensional Lorentz lattice gas*, Pranay B Sampat, Sameer Kumar, Shradha Mishra, J Stat Phys, **181**, 1986 (2020).
3. *Active nematics with quenched disorder*, Sameer Kumar, Shradha Mishra, Phys. Rev. E, **102**, 052609 (2020).
4. *Effect of polydispersity on the dynamics of active Brownian particles*, Sameer Kumar, Jay Prakash Singh, Debaprasad Giri, Shradha Mishra, Phys. Rev. E, **104**, 024601 (2021).
5. *Active nematics gel with quenched disorder*, Sameer Kumar, Shradha Mishra, arXiv:2201.08241 (2022).
6. *Bond disorder enhances the information transfer in the polar flock¹*, Jay Prakash Singh, Sameer Kumar, Shradha Mishra, J. Stat. Mech. **2021**, 083217 (2021).

¹This work is not a part of the thesis