Multipartite entanglement in Floquet Ising spin models

By
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Abstract
In this talk, I will discuss a method for generation of genuine multipartite entangled states in a kicked Ising spin chain. We consider an integrable and a nonintegrable Floquet system that is periodic in time and has constant quasienergy gaps with degeneracies. We start with all spins polarized along one direction and show that they evolve into states with high entanglement by calculating the average entanglement entropy and geometric measure of entanglement. We will also see the number of parties involved in the entanglement can be obtained by calculating the quantum Fisher information.

Short Biography
Dr. Mishra is working as an Assistant Professor in the Department of Physics, IIT (BHU) Varanasi India. His research interest is mainly focused on entanglement dynamics in quantum spin systems. He completed Ph.D. from Department of Physics, IIT Kanpur, India on the magnetization dynamics of antiferromagnetic nanoparticles. After Ph.D., he joined IIT Madras as a postdoctoral fellow and worked on the problems related to entanglement in Quantum spin systems. Subsequently, he worked as a Scientist at the Institute of Physics, Martin Luther University Halle-Wittenberg, Germany. He received a prestigious DST Inspire Fellowship from the Department of Science and Technology, India.