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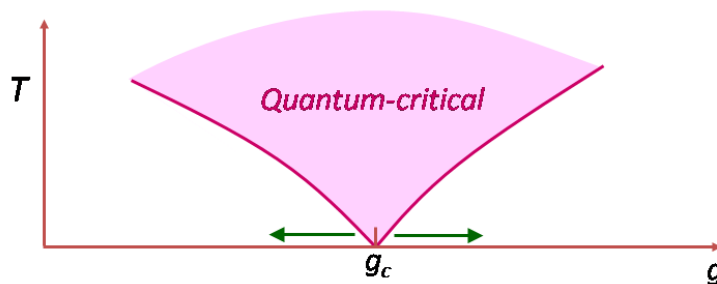


#### Research Interests

- Nonequilibrium quantum dynamics
- Quantum Phase Transitions
- Quantum Information

#### Brief Summary of Research:

I have been working in the field of non-equilibrium dynamics in systems undergoing quantum phase transitions. The non-equilibrium dynamics can be induced by either suddenly changing a parameter of the Hamiltonian, taking the system into some excited state or by adiabatic dynamics (slow variation) such that the system crosses quantum critical point leading to excitations in the system due to diverging relaxation time at the critical point. Recently, I have started working in the interesting field of quantum thermodynamics.



#### Projects:

- INSPIRE Faculty Award (2013-2018)

#### Recent Publications :

1. Sudden quenches in quasiperiodic Ising model, Uma Divakaran, Phys. Rev. E 98, 032110 (2018)
2. Effect of double local quenches on Loschmidt echo and entanglement entropy of a one-dimensional quantum system, Atanu Rajak and Uma Divakaran, J. Stat. Mech. 043107 (2016).
3. Slow quenches in a quantum Ising chain; dynamical phase transitions and topology, hraddha Sharma, Uma Divakaran, A. Polkovnikov and Amit Dutta, Phys. Rev. B 93, 144306 (2016).