

Seminar

Zeroth law in non-equilibrium - a hot needle in water

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We ask what happens when two non-equilibrium systems are kept in contact and allowed to exchange a quantity, say mass or energy. Will the systems eventually evolve to a stationary state where a certain intensive thermodynamic variables, like chemical potential or temperature, equalizes? If so, under what conditions is it possible?

I will give a short introduction to non-equilibrium systems (how it differ from their equilibrium counterparts?) and argue that for conserved systems with short range correlations one can always write a free energy like function.

Ref:

- [1] S Chatterjee, P Pradhan, PK Mohanty, PRL112 (3), 030601 (2014)
- [2] S Chatterjee, P Pradhan, PKM, PRE 91 (6), 062136 (2015)
- [3] A Das, S Chatterjee, P Pradhan, PKM PRE 92 (5), 052107 (2015)

Tuesday, May 3rd 2016

11:30 AM (Tea/Coffee at 11:15 AM)

Seminar Hall, TCIS