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## **Seminar**

### **Physics of long-range interacting systems**

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Systems with long-range interactions have an interparticle interaction potential that decays slower than  $1/r^d$  in  $d$  dimensions. Examples are widespread, from plasmas, dipolar ferroelectrics and ferromagnets, to gravitational systems. Long-range interacting systems are non-additive: the sum of energies of macroscopic subsystems is not equal to the energy of the whole system. This leads to many unusual and striking properties, both thermodynamic (e.g., negative microcanonical specific heat, inequivalence of statistical ensembles) and dynamic (e.g., slow relaxation, broken ergodicity). After a brief review, I will give an overview of my work on characterizing static and dynamic properties of long-range interacting systems.

***Tuesday, Feb 17<sup>th</sup> 2015***

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

***Seminar Hall, TCIS***