



## **ICTS Statistical Physics Journal Club Seminar**

- Title** : Rejection free cluster Wang Landau algorithm for hard core lattice gases
- Speaker** : R Rajesh (The Institute of Mathematical Sciences, Chennai)
- Date** : Thursday, 02<sup>nd</sup> September 2021
- Time** : 03:00 pm (IST)
- Abstract** : This journal club talk is based on our recent preprint [A. A. A. Jaleel [et.al.](#) arXiv:2108.01402]. I will give a brief introduction to flat histogram methods for determining the density of states of a statistical system. Hard core lattice gases are among the simplest systems to study critical phenomena. After motivating the need for a cluster-move based algorithm for studying hard core lattice gases, I will show how a rejection-free, flat histogram, cluster algorithm can accurately determine their density of states. Possible generalisations of the algorithm will also be discussed if time permits.
- Venue** : Please click on the below link to join the seminar  
<https://us06web.zoom.us/j/84308151155?pwd=RGVLTWNidWRhT3A2TmFNSFVjVGhwdz09>  
Meeting ID: 843 0815 1155  
Passcode: 008100