

## ICTS Seminar

- Title** : The universal spectral-form-factor for Many Body Localization
- Speaker** : Abhishodh Prakash (ICTS-TIFR, Bangalore)
- Date** : Tuesday, August 18, 2020
- Time** : 05:30 pm (IST)
- Abstract** : Spectral correlations have emerged as a powerful probe to understand non-equilibrium physics, especially thermalization and quantum chaos. Chaotic systems have recently been shown to exhibit universal signatures in their so-called spectral form (SFF) factor, which are reproduced by random matrix ensembles, such as a ‘linear ramp’. I will present results [1] where we derive an exact universal expression for the SFF for the many-body-localization (MBL) phase. We confirm the analytical result by matching with numerical calculations of two model physical systems exhibiting MBL (1) disordered quantum spin chains and (2) the phenomenological 1-bit model. This SFF form is distinct from and complementary to that of quantum chaotic systems obtained from random matrix ensembles. [1] Abhishodh Prakash (ICTS-TIFR), Jedidah Pixley (Rutgers), Manas Kulkarni (ICTS-TIFR), manuscript in preparation
- Online seminar** : Please click on the below link to join the zoom meeting  
<https://zoom.us/j/93443408383?pwd=b05tWXY0dEVpejFIQjVkJV9oWEkyQT09>  
Meeting ID: 934 4340 8383  
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