ICTS Colloquium

Title : Modulation Spaces and Applications to Hartree-Fock Equations

Speaker : Divyang Bhimani (TIFR CAM, Bangalore)

Date : Monday, September 21, 2020

Time : 3:30 pm (IST)

Abstract : We discuss some ongoing interest (since last decade) in use of modulation spaces in harmonic analysis and its connection to nonlinear dispersive equations. In particular, we shall discuss results on Hermite multiplier and composition operators on modulation spaces. As an application to these, we shall point out that nonlinear Schro¨dinger equation (NLS) is locally wellposed in modulation spaces for the power-type nonlinearity $u|u|^{\alpha}$ ($\alpha \in 2\mathbb{N}$), and the standard method for the evolution of NLS cannot be considered for nonlinearity of the form $u|u|^{\alpha}, \alpha \in (0,\infty)\backslash 2\mathbb{N}$.
Finally, we will discuss the state of the art to establish global wellposedness for the Hartree-Fock equations of finite particles in modulation spaces. We shall also discuss similar results when harmonic potential is added to the equations.

Venue : Online Colloquium

Please click on the below link to join the zoom meeting
https://zoom.us/j/94334760957?pwd=REp5amthWUZtbERocGd3TXlEeC9hQT09
Meeting ID: 943 3476 0957
Passcode: 759034