

Seminar

Rheology of dense active non-Brownian suspensions

Bhanu Prasad Bhowmik

IISER, Pune

In this talk, I will present some of our recent findings on the rheology of dense active suspensions. Dense suspensions are systems in which solid particles are suspended in a viscous fluid. A natural example is a bacterial suspension, while suspensions of Janus particles and Quincke rollers are examples of artificial active systems belonging to the same class. I will show how the rheological response of such systems changes with particle activity, including an increase in the jamming volume fraction and a reduction of shear thickening at high stresses. Finally, I will present a constitutive law that provides a unified description of the rheology of dense active non-Brownian suspensions.

Wednesday, Jul 15th 2026

14:30 Hrs (Tea / Coffee 14:15 Hrs)

Auditorium, TIFRH