

## **Seminar**

### **Velocity fields of non-Newtonian liquids from magnetic resonance microscopy**

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The human cardiovascular system provides our body with nutrients and oxygen, removes by-products and maintains homeostasis. Blood as the main carrier medium of these functions is a correspondingly complex fluid with interesting rheological properties. Accordingly, precise modelling of blood flow relies on detailed knowledge of its properties. Magnetic resonance imaging is a highly flexible technique for non-invasive measurements not only of geometrical data, but also of dynamic properties like the spatial distribution of velocity vectors under a wide range of boundary conditions. We use magnetic resonance microscopy to determine the velocity profile of blood and other liquids with similar properties with high spatial and temporal resolution. The results of these measurements can be used, e.g., to improve the predictions of surgical interventions in cases of cardiovascular disorders, such as aneurysms.

***Wednesday, Feb 21<sup>st</sup> 2018***

***11:30 AM (Tea/Coffee at 11:00 AM)***

***Auditorium, TIFR-H***