

## **Seminar**

### **Is energy conservation valid for high Reynolds number turbulence?**

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Experimental and numerical studies of incompressible turbulence suggest that energy is not conserved as the Reynolds number tends to infinity, i.e., the mean dissipation rate of kinetic energy remains constant as the non-dimensional viscosity tends to zero. This anomalous behaviour is central to many theories of high Reynolds number turbulence and has been termed the zeroth law of turbulence for this reason. Onsager's theorem relates the behaviour of the mean dissipation to the third-order scaling of the absolute velocity increment. In this talk, we will explore this relation and its consequences for the validity of the zeroth law using data from experiments and simulations of homogeneous and isotropic turbulence.

***Wednesday, Aug 6<sup>th</sup> 2025***

***16:00 Hrs (Tea / Coffee 15:45 Hrs)***

***Auditorium, TIFRH***