

Colloquium

Study of Electromagnetic Wave Emissions from Intense Laser – Plasma Interactions

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Interaction of intense femtosecond laser with matter is a major source of electromagnetic emissions spanning the full electromagnetic spectrum. In this talk, I will present two recent works, which have forced a rethink of some of the conventional notions in the field of ultrafast studies and high energy density science. In the first half of the talk, I will discuss the counter-intuitive generation of high-power, ultra-broadband terahertz generation via femtosecond laser filamentation in liquids. In the second half, a novel way of mapping the temporal dynamics of relativistic electron transport in solids via ultrafast gating of Cherenkov emission will be presented. The impact and applications of both the work in furthering the understanding in the respective fields will be discussed.

Monday, Apr 2nd 2018

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

Auditorium, TIFR-H