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TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS Seminar

Title : Nematic Liquid Crystals in Lipschitz domains

Speaker : Anupam Pal Choudhury, Johann Radon Institut (RICAM), Austria

Date : Wednesday, May 2, 2018

Time : 3:00 PM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : In this talk, we shall discuss the simplified Ericksen–Leslie model for nematic liquid crystals in three dimensional bounded Lipschitz domains. Applying a semilinear approach, we shall discuss the proof of local and global well-posedness (assuming a smallness condition on the initial data) in critical spaces for initial data in $L^3 \times \sigma$ for the fluid and $W^{1,3}$ for the director field. The analysis of such models, so far, has been restricted to domains with smooth boundaries.