



DEPARTMENT OF MATHEMATICAL SCIENCES

Colloquium

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Variational Models for Phase Transitions in Liquid Crystals Based Upon Disparate Values of the Elastic Constants

ABSTRACT: Some of the morphology of different phases in liquid crystals can be well-explained by taking into account the wide disparity between values of the elastic constants associated with the energetic cost of various types of deformations—splay, twist and bend. In this talk, I will describe an attempt to capture some aspects of this story through the introduction and asymptotic analysis of variational models arising as 'toy' versions of the Landau de Gennes energy for nematic liquid crystals. This work represents collaborations with Dmitry Golovaty (Akron), Michael Novack (UT Austin) and Raghav Venkatraman (Carnegie Mellon).

Friday, November 13, 2020

11:00AM-12:00PM

For Zoom info please contact Qingshuo Song at qsong@wpi.edu