

Defects in nematic colloids and surface anchoring

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When foreign particles are immersed into nematic liquid crystal, the nematic alignment is distorted, creating topological defects and long-range interactions. I will describe the defect structures induced by one spherical particle using Landau—de Gennes theory, in some asymptotic regimes (*joint work with S. Alama and L. Bronsard*). Surface anchoring plays an important role there, and is an interesting issue in many other nematic systems. This motivates the investigation of the vanishing elastic constant limit under general weak anchoring conditions (*joint work with A. Contreras and R. Rodiac*).

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