

Students' Annual Seminar

Pleat formations in sheets (2-D and quasi 3-D)

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We show that a 2 dimensional network of connected vertices when stretched may deform plastically by producing pleats. Pleats are system spanning linear structures where the network overlaps on itself. We have tried to understand in detail the pleating process in two systems: 2-D network and a quasi-3-D sheet confined between 2 rigid layers. It is seen that pleats occur as a result of equilibrium first order phase transition. In 3-D, such deformations through pleats may result in formation of "ripplocations", usually seen in layered materials.

Thursday, Apr 5th 2019

12:00 PM (Tea/Coffee at 11:30 AM)

Seminar Hall, TIFR-H