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Einladung

zum

Mathematischen Kolloquium

Am Mittwoch, dem **30. Januar 2019**, um 16:30 Uhr im Hörsaal des Mathematischen Instituts (Raum 203), Weyertal 86–90, 50931 Köln.

Es spricht

Prof. Dr. Margherita Disertori
(Universität Bonn)

zum Thema

A model for liquid crystals in two and three dimensions

Abstract: In 1949, L. Onsager proposed a statistical theory for a system of elongated molecules interacting via repulsive short-range forces. Onsager's theory predicted the existence at intermediate densities of a nematic liquid crystal phase, in which the distribution of orientations of the particles is anisotropic, while the distribution of the particles in space is homogeneous and does not exhibit the periodic variation of densities that characterizes solid crystals (periodicity in all space dimensions).

I will introduce a toymodel for this problem consisting of long rods (in two dimensions) and anisotropic plates (in three dimensions). The rods/plates interact via purely hard core interactions and have a finite number of allowed orientations. For this model I will review some results and conjectures.

This is a joint work with A. Giuliani and I. Jauslin.

Tee um 16 Uhr in der Bibliothek des Mathematischen Instituts.

Alle Interessenten sind herzlich eingeladen.

Die Dozenten der Mathematik