Oberseminar
Analysis und Theoretische Physik

Dr. Marcus Wunsch
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"The two-component Hunter-Saxton equation: Analytic and geometric aspects"

Abstract:
The Hunter-Saxton equation arises in the theoretical study of nematic liquid crystals. Its two-component generalization is a model for the dynamics of non-dissipative dark matter as well as for nonlinear ion-acoustic waves. Moreover, it describes the geodesic flow of a right-invariant Sobolev-type metric on a suitable Fréchet Lie group. We will show how this geometric interpretation not only leads to explicit solution formulae, but also to a weak formulation of the two-component Hunter-Saxton system, which enables us to construct conservative solutions. Finally, we will put these results into context with others recently obtained.

Dienstag, 01.11.2011, 15:15 Uhr, Raum G005
Hauptgebäude der Universität

Über Ihren Besuch würden sich freuen:

Prof. Dr. Joachim Escher
Prof. Dr. Bernhard Krötz
Prof. Dr. Olaf Lechtenfeld
Prof. Dr. Elmar Schrohe
Prof. Dr. Christoph Walker