SEMINÁRIO
ANÁLISE E EQUAÇÕES DIFERENCIAIS

25 de Julho | 13h30 | sala 6.2.33

Small data global regularity for Ericksen-Leslie's hyperbolic liquid crystal model in dimensions three

Lifeng Zhao
(University of Science and Technology of China)

Abstract:
In the original Ericksen-Leslie's model for liquid crystals, the balance laws include second order material derivatives. The system is a nonlinear coupling of Navier-Stokes equations with wave map to $\Bbb S^2$. In this talk, I will introduce the small data global regularity in both incompressible and compressible cases. The main strategy relies on the interplay between the control of high order energies and decay estimates, which is inspired by the method of space-time resonance. This talk is based on the joint works with Jiaxi Huang, Ning Jiang and Yi-Long Luo.

FCT Fundação para a Ciência e a Tecnologia