DEPARTAMENTO DE ANÁLISIS MATEMÁTICO Y MATEMÁTICA APLICADA

Facultad de Ciencias MATEMÁTICAS

Instituto de Matemática Interdisciplinar

SEMINARIO DE ANÁLISIS MATEMÁTICO Y MATEMÁTICA APLICADA

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Homogenization of linear kinetic equations with highly oscillating scattering terms

Abstract

This talk is devoted to the study of the homogenization problem for the linear Boltzmann equation in energy. Two approaches are considered. The first one is based on the two-scale convergence theory, which llows to prove the existence of a memory term in the structure of the homogenized equation. Because of this term, the semigroup property of the starting problem is lost in the limit. However, the semigroup structure of the limit equation can be preserved by working in a new framework based on an extended phase-space.

Organized by: Departamento de Análisis Matemático y Matemática Aplicada, Instituto de Matemática Interdisciplinar (IMI) y el grupo de investigación CADEDIF.

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