SEMINARIO

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Relaxation Methods for non-equilibrium models in conservation laws with application in porous media

Abstract: Relaxation methods play a pivotal role in modeling various physical phenomena and analyzing the theoretical stability of hyperbolic systems. The concept of relaxation is closely tied to non-equilibrium conditions within a physical system. In such scenarios, relaxation techniques prove invaluable for capturing phenomena that emerge when distinct physical configurations coexist without being in equilibrium with each other.The purpose of this presentation is to provide a comprehensive overview of relaxation methods as applied to hyperbolic systems of conservation laws. Additionally, I will delve into the diverse array of applications that these methods offer, encompassing phenomena like phase transitions and hysteresis. These phenomena involve intricate non-equilibrium dynamics, which are of paramount importance for comprehending the intricate behavior exhibited by these physical processes.

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