地球动力学数值模拟公

- Comments on Finite Differences for the flow problem
- Multiphase flow problems.
- Goals
 - Understand the numerical solution of a simplified heat equation using Finite Differences (FD)
 - Understand the concept of stability of a numerical scheme

Dec. 5th

Class 4 Physical properties

- Content
 - Physical properties of rocks.
 - Rheology. How rocks deform: Viscosity, Elasticity and Plasticity.
 - Density. Different models for density.
 - Dependence of viscosity and density on temperature, pressure, strain rate, etc.
 - Advanced topic: mineral physics and computational petrology.
- Goals
 - Get familiar with basic concepts of rheology
 - To understand the role of rheology in the computational cost of numerical simulations.
 - Models for other physical properties of rocks Density Thermal expansivity
 - Thermal conductivity

Dec. 6th

Class 5 Numerical Studies

- \circ Content
 - Thermal evolution of the Oceanic Lithosphere.
 - Subduction dynamics and the origin of Andean orogeny.
 - Coupled mantle dripping and lateral dragging controlling the lithosphere structure of the NW-Moroccan margin and the Atlas Mountains



