
SEMINARIO

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A Darcy-Forchheimer-Galbrun linear model for small perturbations of a flow in rigid porous materials

Abstract: The classic Galbrun model is extended in the case of a porous material with a rigid solid frame. The derivation uses a heuristic approach from the general (nonlinear) equations of continuum mechanics, adapted to take into account the dissipative effects of the porous material and the porosity and the isothermal character of its motion. This linear model is obtained by writing the model first in a time-dependent spatial reference configuration and then linearised by using the derivatives of the constitutive laws in an Arbitrary Lagrangian-Eulerian configuration.

Sala de Grados I, Facultad de Ciencias

Lunes 22 de Mayo de 2023 (13:00)

Organiza: G.I.R. ANEODA

