

Bear, Jacob

Dynamics of fluids in porous media. (English) Zbl 1191.76001

New York, NY: Elsevier. xvii, 764 p. (1972).

Publisher's description: Comprehensive classic text presents the theory of dynamics of fluids in porous media, and its interdisciplinary applications. Detailed topics include: fluids and porous matrix properties; continuum approach to porous media; pressure and piezometric head; fundamental fluid transport equations in porous media; equation of motion of a homogeneous fluid; continuity and conservation equations for a homogeneous fluid; solving boundary and initial value problems; unconfined flow and Dupuit approximation; flow of immiscible fluids; hydrodynamic dispersions; models and analogs.

MSC:

76-01 Introductory exposition (textbooks, tutorial papers, etc.) pertaining to fluid mechanics Cited in **765** Documents

76S05 Flows in porous media; filtration; seepage

Keywords:

pressure; piezometric head; transport equations; conservation equations; Dupuit approximation; hydrodynamic dispersion