CONTENTS

Preface	
Part I: Transport properties of porous media Transport in porous media: upscaling by multiscale asymptotic	1
expansions by JL. Auriault	3
Micromechanical analysis of saturated porous media with local mass exchange phenomenon	
by D. Lydzba	57
Diffusive transport in disordered media. Application to the determination of the tortuosity and the permeability of cracked	
materials by L. Dormieux and D. Kondo	83
Poroelasticity and strength of fully or partially saturated porous	107
materials by L. Dormieux	109
Poroelasticity and damage theory for saturated cracked media by L. Dormieux and D. Kondo	153
Modeling of plastic deformation of saturated porous materials: effective stress concept	
by D. Lydzba and J. F. Shao	187
I at t III. Matchais Applications	205
Experimental Microporomechanics by FJ. Ulm, A. Delafargue and G. Constantinides	207
Microelasticity of Bone by Ch. Hellmich	289