1. Record Nr. UNINA9910634063503321

Titolo	Mechanics of sediment transport / / edited by B. Mutlu Sumer, A. Muller
Pubbl/distr/stampa	Abingdon, Oxon : , : Taylor & Francis, , [1983]
ISBN	1-00-307901-6 1-000-15141-7 1-003-07901-6 1-000-10826-0
Descrizione fisica	1 online resource (296 pages) : illustrations
Disciplina	551.3/03 551.303
Soggetti	Sediment transport
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Proceedings of EUROMECH 156 / Mechanics of sediment transport Istanbul / 12-14 July 1982."
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Flow structure as related to sediment transport 1. The influence of boundary layer turbulence on the mechanics of sediment transport 2. Turbulent structure in an open-channel flow 3. Sediment entrainment by a turbulent spot: A progress report 4. Boundary shear stress distributions in open channel and closed conduit flows 5. Visualization of the mixing layer behind dunes Single - particle dynamics 6. Resolution of equations governing the saltation motion in the air (Reparticles < 1) 7. On the relation between size and distance travelled for wind-driven sand grains - Results and discussion of a pilot experiment using coloured sand 8. On the mathematical modeling of aeolian saltation 9. Forces on a single sediment grain and their dependence on the surrounding flow field 10. Migration of spherical particles suspended in shear flows 11. Particle dynamics equations for turbulent suspensions Initiation, formation and behaviour of ripples and dunes 12. Shape and dimensions of ripples and dunes 13. Ripple formation on a bed of fine, cohesionless, granular sediment 14. Sand wave formation due to irregular bed load motion 15. The formation of dunes in open channel flow on an initially flattened erodible bed 16. Turbulent flow over ripples and their effective roughness 17. The

prediction of bedforms and alluvial roughness 18. The mechanism of sediment transport on bed forms 19. An experimental study of bed-load transport with non-uniform sediment 20. Bedforms in relation to hydraulic roughness and unsteady flow in the Rhine branches (the Netherlands) Transport of sediment in suspension 21. Turbulent diffusion of solid particles in open channel flow 22. Stochastic model for particle movement in turbulent open channel flow 23. Numerical modelling of sediment transport in open channel flows 24. Improved numerical calculation of sedimentation for different bed-roughness and various turbulence models 25. Some phenomena associated with hyperconcentrated flow Sediment transport in steep channels 26. Flow structure and sediment transport mechanics in steep channels 27. Initiation of sediment transport in steep channels with coarse bed material 28. Bedforms and flow resistance in steep gravel-bed channels 29. First experiences measuring coarse material bedload transport with a magnetic device Other sediment-transport problems 30. Longitudinal sorting of grain sizes in alluvial rivers 31. Degradation of river beds and associated changes in the composition of the sediments 32. Laboratory and insitu bed shear stress measurements 33. Transition in oscillatory boundary layers

Sommario/riassunto

This book presents the studies on sediment transport in suspension and sediment transport in steep channels. It discusses the degradation and particle sorting processes.