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Nota di contenuto	Dunes: Dynamics, Morphology, History; Copyright; Contents; List of Figures; Series Editors' Preface; Acknowledgements; Introduction; Reference; Part One <10 m2; <10 years; Chapter One Wind and Sand; Wind versus Bed; The Law of the Wall; Improving the wind/bed model; Lift-Off; Holding down by gravity; Holding down by cohesion; Raising by lift; Raising by drag; Raising by bombardment; Thresholds; Grain size; The slope of the bed; The dynamics of water content; Crusts; Pellets; Sand in Motion; Saltation; Streamers and other medium-scale patterns of saltating sand; Reptation; Creep Other near-surface activitySuspension; The vertical distribution of load and grain size; The saturation length; The fetch effect; The response of a loose bed to erosion by the wind; The Transport Rate; Shapes, densities and mixtures of size; Hard surfaces; Rough surfaces; Moisture, temperature and humidity; Rain; References; Chapter Two Ripples; Subtypes; Models; Flow response; Gravity wave; Saltation length; Shadow zone; Mathematical; Pattern; Chapter Three The Form and Behaviour of Free Dunes; Definitions; Early Stages; Start; Minimum

size; The Profile of a Fully Grown Dune; Toe
Windward slope (or 'stoss slope')Crest; Lee slope; Movement; Turnover time, bulk transport; Size; Flow-hierarchy models; Grain-size models; The time/supply model; References; Part Two 1000 to 10,000 m2; 100 to 1000 years; Chapter Four Pattern in Free Dunes; Definitions; Wind-Directional Regimes; Global winds; Local wind systems; The Classification of Wind-Directional Regimes; Wind-Directional Regimes and Dune Pattern; Transverse Dunes; Two-dimensional pattern: vertical and downwind; Two-dimensional pattern: horizontal and transverse to the wind; Self-organisation; Barchans
Quasi-transverse patternsLinear Dunes; Introduction; Models of formation; Sand Sheets; Dunes with Distinctive Sand; Gravel dunes; Zibars; Clay dunes; Lunettes; Gypsum dunes; Diatomite sands; Volcanic sands; Snow and ice dunes; Niveo-aeolian deposits; References; Chapter Five Forced Dunes; Dunes Built around Bluff Obstacles; Climbing and echo dunes; Flanking and lee dunes; Cliff-top and falling dunes; Dunes on Gently Sloping Terrain; Reference; Chapter Six Dunes and Plants; Wind, Sand and Plants; Rigid objects; Spatial pattern; Porosity; Flexibility; Plants as living things
The broader time/space frameworkDunes among Plants; Nebkhas; Blowouts; Parabolic dunes; References; Chapter Seven Coastal Dunes; Coastal Dunes and Climate; The Beach-Dune System; Exclusively Coastal Dunes; Embryo dunes; Fore-dunes ('frontal dunes' or 'retention ridges'); Tsunamis; Coastal sand sheets; References; Part Three >0.3 mm; <2,200,000,000 years; Chapter Eight Sand Seas; Terms; Large Sand Seas; Growth and Development; Sand Seas in Tectonic Basins; Topographically Unconfined Sand Seas; Transfer between Sand Seas; Chapter Nine A History of Dune Sand; Provenance; Recycling; Maturation
Mineralogy

Sommario/riassunto

Dunes is the first book in over a decade to incorporate the latest research in this active and fast-developing field. It discusses the shapes, sizes, patterns, distribution, history and care of wind-blown dunes, and covers all aspects of dunes, terrestrial and in the Solar System.The only book to cover all dunes, terrestrial and in the Solar System, in deserts, on coasts, and in the pastRepresents the most current update on the research of dunes for over a decadeIncorporates the latest research to come out of China where the field is most rapidly expanding<