Contents

ix Preface

xi Brian Rust (1936–1990). In memoriam M.R. Gibling

Sediment Transport

3 Entrainment of spheres: an experimental study of relative size and clustering effects

C.S. James

- 11 A new bedform stability diagram, with emphasis on the transition of ripples to plane bed in flows over fine sand and silt J.H. van den Berg and A. van Gelder
- 23 In-transport modification of alluvial sediment: field evidence and laboratory experiments

P.A. Brewer and J. Lewin

- 37 Bed material and bedload movement in two ephemeral streams *M.A. Hassan*
- 51 Bedform migration and related sediment transport in a meander bend J. Kisling-Møller
- 63 Sediment ice rafting and cold climate fluvial deposits: Albany River, Ontario, Canada

I.P. Martini, J.K. Kwong and S. Sadura

77 Dynamics of bed load transport in the Parseta River channel, Poland Zb. Zwoliński

Alluvial Facies

91 Morphology and facies models of channel confluences C.S. Bristow, J.L. Best and A.G. Roy

vi Contents

- 101 Interpretation of bedding geometry within ancient point-bar deposits B.J. Willis
- 115 Geometry and lateral accretion patterns in meander loops: examples from the Upper Oligocene-Lower Miocene, Loranca Basin, Spain

 M. Díaz-Molina
- 133 Alluvial ridge-and-swale topography: a case study from the Morien Group of Atlantic Canada

 M.R. Gibling and B.R. Rust
- 151 Processes and products of large, Late Precambrian sandy rivers in northern Norway S.-L. Røe and M. Hermansen
- 167 Crevasse splay sandstone geometries in the Middle Jurassic Ravenscar Group of Yorkshire, UK
 R. Mjøs, O. Walderhaug and E. Prestholm
- 185 Grain-size distribution of overbank sediment and its use to locate channel positions *M.J. Guccione*
- 195 Geometrical facies analysis of a mixed influence deltaic system: the Late Permian German Creek Formation, Bowen Basin, Australia

 A.J. Falkner and C.R. Fielding
- 211 Computer modelling of flow lines over deformed surfaces: the implications for prediction of alluvial facies distribution

 P.J. Weston and J. Alexander

Geomorphic and Structural Controls on Alluvial Systems

- Geomorphic and structural controls on facies patterns and sediment composition in a modern foreland basin

 I.F. Damanti
- Quaternary alluvial fans in southwestern Crete: sedimentation processes and geomorphic evolution
 W. Nemec and G. Postma
- 277 Palaeogeomorphological controls on the distribution and sedimentary styles of alluvial systems, Neogene of the NE of the Madrid Basin (central Spain)
 A.M. Alonso Zarza, J.P. Calvo and M.A. García del Cura

Contents vii

- 293 Alluvial-fan sedimentation along an active strike-slip fault: Plio-Pleistocene Pre-Kaczawa fan, SW Poland K. Mastalerz and J. Wojewoda
- 305 Present-day changes in the hydrologic regime of the Raba River (Carpathians, Poland) as inferred from facies pattern and channel geometry B. Wyżga

Alluvial Stratigraphy

- 319 A revised alluvial stratigraphy model J.S. Bridge and S.D. Mackey
- 337 Quantified fluvial architecture in ephemeral stream deposits of the Esplugafreda Formation (Palaeocene), Tremp-Graus Basin, northern Spain *T. Dreyer*
- 363 Architecture of the Cañizar fluvial sheet sandstones, Early Triassic, Iberian Ranges, eastern Spain

 J. López-Gómez and A. Arche
- 383 Effects of relative sea-level changes and local tectonics on a Lower Cretaceous fluvial to transitional marine sequence, Bighorn Basin, Wyoming, USA E.P. Kvale and C.F. Vondra
- 401 Structural and climatic controls on fluvial depositional systems: Devonian, North-East Greenland
 H. Olsen and P.-H. Larsen
- 425 Alternating fluvial and lacustrine sedimentation: tectonic and climatic controls (Provence Basin, S. France, Upper Cretaceous/Palaeocene)

 I. Cojan
- 439 Control of basin symmetry on fluvial lithofacies, Camp Rice and Palomas Formations (Plio-Pleistocene), southern Rio Grande rift, USA G.H. Mack and W.C. James
- 451 Simultaneous dispersal of volcaniclastic and non-volcanic sediment in fluvial basins: examples from the Lower Old Red Sandstone, east-central Scotland *P.D.W. Haughton*

viii Contents

- 473 Siliciclastic braided-alluvial sediments intercalated within continental flood basalts in the Early to Middle Proterozoic Mount Isa Inlier, Australia K.A. Eriksson and E.L. Simpson
- 489 Sedimentological response of an alluvial system to source area tectonism: the Seilao Member of the Late Cretaceous to Eocene Purilactis Formation of northern Chile A.J. Hartley
- 501 Cyclicity in non-marine foreland-basin sedimentary fill: the Messinian conglomerate-bearing succession of the Venetian Alps (Italy)

 F. Massari, D. Mellere and C. Doglioni
- 521 The impact of incipient uplift on patterns of fluvial deposition: an example from the Salt Range, Northwest Himalayan Foreland, Pakistan

 T.J. Mulder and D.W. Burbank

Ores

- Principles of a sediment sorting model and its application for predicting economic values in placer deposits
 M. Nami and S.G.E. Ashworth
- 553 Alluvial basin-fill dynamics and gold-bearing aspect of Early Proterozoic strike-slip basins in French Guiana

 E. Manier, D. Mercier and P. Ledru
- 569 Index