## Contents

Dedication vii

Acknowledgements viii

SEARLE, M. P. & TRELOAR, P. J. Introduction to Himalayan tectonics: a modern synthesis 1

### Timings and stratigraphy

SEARLE, M. P. Timing of subduction initiation, arc formation, ophiolite obduction and India–Asia collision in the Himalaya 19

MYROW, P. M., HUGHES, N. C. & McKENZIE, N. R. Reconstructing the Himalayan margin prior to collision with Asia: Proterozoic and lower Paleozoic geology and its implications for Cenozoic tectonics 39

GARZANTI, E. The Himalayan Foreland Basin from collision onset to the present: a sedimentary–petrology perspective 65

### NW Himalaya

PETTERSON, M. G. The plutonic crust of Kohistan and volcanic crust of Kohistan–Ladakh, north Pakistan/India: lessons learned for deep and shallow arc processes 123

JAGOUTZ, O., BOUILHOL, P., SCHALTEGGER, U. & MÜNTENER, O. The isotopic evolution of the Kohistan Ladakh arc from subduction initiation to continent arc collision 165

O’BRIEN, P. J. Eclogites and other high-pressure rocks in the Himalaya: a review 183


TRELOAR, P. J., PALIN, R. M. & SEARLE, M. P. Towards resolving the metamorphic enigma of the Indian Plate in the NW Himalaya of Pakistan 255

### Nepal Himalaya


CAROSI, R., MONTOMOLI, C., IACCARINO, S. & VISONÀ, D. Structural evolution, metamorphism and melting in the Greater Himalayan Sequence in central-western Nepal 305

WATERS, D. J. Metamorphic constraints on the tectonic evolution of the High Himalaya in Nepal: the art of the possible 325


JESSUP, M. J., LANGILLE, J. M., DIEDESCH, T. F. & COTTLE, J. M. Gneiss Dome Formation in the Himalaya and southern Tibet 401
**Geophysics**

Bilham, R. Himalayan earthquakes: a review of historical seismicity and early 21st century slip potential 423

Priestley, K., Ho, T. & Mitra, S. The crustal structure of the Himalaya: A synthesis 483

**Karakoram – Pamir – Tibet**

Metcalf, K. & Kapp, P. History of subduction erosion and accretion recorded in the Yarlung Suture Zone, southern Tibet 517

Searle, M. P. & Hacker, B. R. Structural and metamorphic evolution of the Karakoram and Pamir following India–Kohistan–Asia collision 555

Zhu, D.-C., Wang, Q., Chung, S.-L., Cawood, P. A. & Zhao, Z.-D. Gangdese magmatism in southern Tibet and India–Asia convergence since 120 Ma 583

He, J., Kapp, P., Chapman, J. B., DeCelles, P. G. & Carrapa, B. Structural setting and detrital zircon U–Pb geochronology of Triassic–Cenozoic strata in the eastern Central Pamir, Tajikistan 605

**Monsoon system**

Clift, P. D. & Webb, A. A. G. A history of the Asian monsoon and its interactions with solid Earth tectonics in Cenozoic South Asia 631

Index 653