

Springer Geology Field Guides

Soumyajit Mukherjee *Editor*

Structural Geology and Tectonics Field Guidebook—Volume 1

This book helps a novice to explore the terrain independently. Geoscience fieldwork with a focus on structural geology and tectonics has become more important in the last few years from both academic and industrial perspectives. This book also works as a resource material for batches of students or geological survey professional undergoing training as parts of their course curriculum. Industry persons, on the other hand, can get a first-hand idea about what to expect in the field, in case no academic person is available with the team. This book focused on structural geology and tectonics compiles for the very first time terrains from several regions of the globe.

ISBN 978-3-030-60142-3



9 783030 601423

► springer.com



| | |
|--|-----|
| Creating Geologic Maps in the Twenty-First Century: A Case Study from Western Ireland | 1 |
| W. R. Swanger and S. J. Whitmeyer | |
| Strain Softening in a Continental Shear Zone: A Field Guide to the Excursion in the Ferrière-Mollières Shear Zone (Argentera Massif, Western Alps, Italy) | 19 |
| M. Simonetti, R. Carosi, and C. Montomoli | |
| The Geometry and Kinematics of the Southwestern Termination of the Pyrenees: A Field Guide to the Santo Domingo Anticline | 49 |
| E. L. Pueyo, B. Oliva-Urcia, E. M. Sánchez-Moreno, C. Arenas, R. Silva-Casal, P. Calvín, P. Santolaria, C. García-Lasanta, C. Oliván, A. Gil-Imaz, F. Compaired, A. M. Casas, and A. Pocoví | |
| Miocene-Quaternary Strain Partitioning and Relief Segmentation Along the Arcuate Betic Fold-and-Thrust Belt: A Field Trip Along the Western Gibraltar Arc Northern Branch (Southern Spain) | 103 |
| Alejandro Jiménez-Bonilla, Manuel Díaz-Azpiroz, Inmaculada Expósito, and Juan Carlos Balanyá | |
| The Southern Iberian Shear Zone (SW Spain): Inclined Transpression Related to Variscan Oblique Convergence in a HT/LP Metamorphic Belt | 137 |
| Manuel Díaz-Azpiroz and Carlos Fernández | |
| A Field Guide to the Spectacular Salt Mines of the Transylvanian Basin and Romanian Carpathians | 167 |
| Dan Mircea Tămaş, Alexandra Tămaş, Alexander Magnus Jüstel, Martijn Passchier, Nils Chudalla, Lina Gotzen, Luis Alberto Pizano Wagner, Teodora Taşcu-Stavre, Zsolt Schléder, Csaba Krézsek, Sorin Filipescu, and Janos L. Urai | |

| | |
|--|-----|
| Spectacular Sandstone Rock Cities in the Czech Republic | 189 |
| Lucie Novakova and Petr Novak | |
| Field Guide to RODS in the Pireneus Syntaxis, Central Brazil | 221 |
| Marco Antonio Caçador Martins-Ferreira and Sérgio Wilians de Oliveira Rodrigues | |
| Low Baric Metamorphic Belts in the Northern Tip of the Arabian–Nubian Shield: Selected Examples from the Eastern Desert/Midyan Terranes, Egypt | 265 |
| N. A. Shallaly and A. S. A. A. Abu Sharib | |
| Review of the Geometric Model Parameters of the Main Himalayan Thrust | 305 |
| Kutubuddin Ansari | |
| Traverses Through the Bagalkot Group from North Karnataka State, India: Deformation in the Mesoproterozoic Supracrustal Kaladgi Basin | 325 |
| Shilpa Patil Pillai and Vivek S. Kale | |
| Tectonic Framework of Northern Pakistan from Himalaya to Karakoram | 367 |
| Asghar Ali, Sajjad Ahmad, Sajjad Ahmad, Mohammad AsifKhan, Muhammad Irfan Khan, and Gohar Rehman | |
| Structures of Lesser/Greater Himalaya in and Around an Out-of-Sequence Thrust in the Chaura-Sarahan Area (Himachal Pradesh, India) | 413 |
| Rajkumar Ghosh and Soumyajit Mukherjee | |
| Structural Geology Along the Nainital–Pangot Road (Kilbari Section), Nainital Lesser Himalaya (Uttarakhand, India): Focus on Back-Structures | 429 |
| Mohit Kumar Puniya and Soumyajit Mukherjee | |
| Geology, Structural, Metamorphic and Mineralization Studies Along the Mandi-Kullu-Manali-Rohtang Section of Himachal Pradesh, NW-India | 437 |
| Paramjeet Singh, Aliba Ao, S. S. Thakur, Shruti Rana, Rajesh Sharma, A. K. Singh, and Saurabh Singhal | |
| Tectonics and Channel Morpho-Hydrology—A Quantitative Discussion Based on Secondary Data and Field Investigation | 461 |
| Mery Biswas, Ankita Paul, and Mostafa Jamal | |
| Geological Field Guide: Malvan (Maharashtra, India) | 495 |
| Ashwin Pundalik, Shiba Nikalje, Arnav Samant, and Hrishikesh Samant | |

| | |
|---|------------|
| A Field Guide to the Champaner Region, Southern Aravalli Mountain Belt (SAMB), Gujarat, Western India | 529 |
| Aditya U. Joshi and Manoj A. Limaye | |
| Importance of Fracturing in Uranium Mineralization in Gulcheru Quartzite Host: A Case from Ambakapalle Area, Cuddapah Basin, Andhra Pradesh, India | 577 |
| Sukanta Goswami, P. K. Upadhyay, and V. Natarajan | |
| Granitic Rocks Underlying Deccan Trap Along the Margin of East Dharwar Craton, Mutnyal (Maharashtra)—Bhaisa (Telangana), India—General Description and Deformation | 599 |
| R. D. Kaplay, Md. Babar, Soumyajit Mukherjee, Deepak Wable, and Kunal Pisel | |
| Structural Analyses of the Lunavada–Santrampur Area (Gujarat, India) Using Remote Sensing Images | 621 |
| Geetika H. Chauhan, G. S. Rao, and Soumyajit Mukherjee | |
| Fundamentals of Lithostructural Mapping: Example from the SW Part of the Proterozoic Bhima Basin, Karnataka, India: A Note on Dharwarian Crustal Evolution | 639 |
| Sukanta Goswami, Shivam Shrivastava, Suman Das, and Purnajit Bhattacharjee | |
| A 3D Photogrammetric Approach in Mapping Meso-Scale Folds and Shears in Structurally Controlled Syngenetic Mn-Mineralised Zones of Shivrajpur Region, Eastern Gujarat, India | 685 |
| Aditya U. Joshi | |
| Vein Geometry Around Bhuj (Gujarat, India) | 707 |
| Mohammad Walid Omid, Soumyajit Mukherjee, and Sudipta Dasgupta | |
| Oriented Rock Samples for Detailed Structural Analysis | 715 |
| Krzysztof Gaidzik and Jerzy Żaba | |