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| 1. | Record Nr. | UNINA9910135082803321 |
| | Titolo | Data Compression Conference (DCC), 2015 |
| | Pubbl/distr/stampa | IEEE |
| | ISBN | 1-4799-8430-2 |
| | Lingua di pubblicazione | Inglese |
| | Formato | Materiale a stampa |
| | Livello bibliografico | Monografia |
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| 2. | Record Nr. | UNINA9910847595303321 |
| | Autore | Freeden W (Willi) |
| | Titolo | Exploratory Potential Methods in Geothermal Power Generation : A Survey on Innovative Gravimetry and Magnetometry / / by Willi Freeden, Helga Nutz |
| | Pubbl/distr/stampa | Cham : , : Springer Nature Switzerland : , : Imprint : Birkhäuser, , 2024 |
| | ISBN | 3-031-54412-9 |
| | Edizione | [1st ed. 2024.] |
| | Descrizione fisica | 1 online resource (XXVI, 207 p. 1 illus.) |
| | Collana | Lecture Notes in Geosystems Mathematics and Computing, , 2512-3211 |
| | Disciplina | 550.151 |
| | Soggetti | Mathematical models
Geophysics
Numerical analysis
Mathematical Modeling and Industrial Mathematics
Numerical Analysis
Enginyeria geotèrmica
Energia geotèrmica
Gravimetria (Geofísica)
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| | Lingua di pubblicazione | Inglese |
| | Formato | Materiale a stampa |
| | Livello bibliografico | Monografia |
| | Nota di bibliografia | Includes bibliographical references and index. |
| | Nota di contenuto | 1 Geothermal energy and exploration -- 2 Geomathematics as a key |

technology of exploration -- 3 Potential data and basic mathematical modeling -- 4 Gravimetric multiscale approximation and mollifier decorrelation -- 5 Magnetometric multiscale approximation and mollifier decorrelation -- 6 Test reservoir modeling in Bavarian molasse basin -- 7 Data collection in the Saarland test areas -- 8 Geologic mollifier decorrelation applied to Saarland test areas -- 9 Conclusions and outlook.

Sommario/riassunto

The book provides the geoscientific context, that arises in gravimetric/magnetometric exploration. It essentially uses mathematics as a key technology for modeling issues on the basis of analysis and interpretation according to dense and precise gravitational/magnetic measurements. It is dedicated to surface and deep geology with potential data primarily of terrestrial origin. The book spans the interdisciplinary arc from geoengineering, especially geodesy, via geophysics to geomathematics and geology, and back again. It presents the recently published pioneering and groundbreaking multiscale mollifier methodologies realizing the bridging transfer from gravitational/magnetic measurements to approximative/numerical mollifier wavelet decorrelations with novel geologic prospects and layer-structure determination as outcome. Using the specific example of the German Saarland region, new important fields of application, especially for areas with mining-related cavities, will be opened up and subjected to an in-depth geologic detection.
