

1. Record Nr.	UNINA9910741181003321
Autore	Xue Qilong
Titolo	Data Analytics for Drilling Engineering [[electronic resource]] : Theory, Algorithms, Experiments, Software / / by Qilong Xue
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-34035-X
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (324 pages)
Collana	Information Fusion and Data Science, , 2510-1528
Disciplina	622.3382
Soggetti	Engineering geology Engineering—Geology Foundations Hydraulics Geotechnical engineering Sociophysics Econophysics Signal processing Image processing Speech processing systems Vibration Dynamical systems Dynamics Geoengineering, Foundations, Hydraulics Geotechnical Engineering & Applied Earth Sciences Data-driven Science, Modeling and Theory Building Signal, Image and Speech Processing Vibration, Dynamical Systems, Control
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction to the Application of Drilling Data Processing -- Signal Processing of Downhole Information Transmission -- Dynamic Measurement of Spatial Attitude at the Bottom Rotating DrillString --

Measurement and Analysis of Drillstring Dynamics -- Signal processing in logging while drilling -- Data Mining in Seismic While Drilling -- Applications of Big Data in Drilling Engineering -- Summary and Outlook.

Sommario/riassunto

This book presents the signal processing and data mining challenges encountered in drilling engineering, and describes the methods used to overcome them. In drilling engineering, many signal processing technologies are required to solve practical problems, such as downhole information transmission, spatial attitude of drillstring, drillstring dynamics, seismic activity while drilling, among others. This title attempts to bridge the gap between the signal processing and data mining and oil and gas drilling engineering communities. There is an urgent need to summarize signal processing and data mining issues in drilling engineering so that practitioners in these fields can understand each other in order to enhance oil and gas drilling functions. In summary, this book shows the importance of signal processing and data mining to researchers and professional drilling engineers and open up a new area of application for signal processing and data mining scientists.
