Special Issue

Development and Application of Intelligent Drilling Technology: 2nd Edition

Message from the Guest Editors

With the rapid development of artificial intelligence, the application of machine learning in oil and gas drilling engineering is increasing day by day. Intelligent drilling technology based on machine learning is a revolutionary approach that integrates big data, artificial intelligence, information engineering, underground control engineering and other theories and technologies. Through the use of automated surface drilling rigs, intelligent downhole executive agencies, and advanced monitoring and decision-making technologies, drilling operations can achieve advanced detection, closed-loop control, precision guidance, and intelligent decision-making. This Special Issue will delve into the latest research, application cases, and future trends in machine learning technology within the field of drilling.

- machine learning
- drilling technology
- intelligent well trajectory optimization
- intelligent optimization of the drilling rate
- intelligent guided drilling
- downhole closed-loop control
- intelligent monitoring and decision-making
- intelligent rig
- intelligent drilling pipe
- intelligent bit
- intelligent controlled pressure drilling
- intelligent drilling fluid

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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