



Applications of Modern Mathematical Methods in Geosciences

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Message from the Guest Editors

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This Special Issue publishes the novel developments in the research using advanced mathematical and applied physics tools, including modern mathematical structures (group theory, graphs and networks, fractals, topology, and fuzzy structures), modern modeling methods (e.g., nonlinear dynamic systems, game theory, cellular automata, complex systems, and artificial intelligence), and modern inverse methods (e.g., multi-criteria decision making, artificial intelligence, and modern optimization and meta-heuristic algorithms) in different areas within the earth sciences, such as remote sensing, automated petrography, fractal analysis, analytical methods in fracture mechanics and rock engineering, reservoir modeling and fluid mechanics, slope stability and ground control, acoustic emission and induced seismicity, earthquakes and wave propagation in the earth, mining and rock blasting, tunneling and rock drillability, tribology, geophysics, and geomechanics. The focus of this Special Issue is the development of advanced analytical and computational methods used for solving problems in any field of earth and geosciences.





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Message from the Editor-in-Chief

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