



energies



Special Issue Reprint

Volume II: Mining Innovation

www.mdpi.com/books/reprint/6201

Edited by

Krzysztof Skrzypkowski

ISBN 978-3-0365-5535-5 (Hardback)

ISBN 978-3-0365-5536-2 (PDF)



Contemporary exploitation of natural raw materials by borehole, opencast, underground, seabed, and anthropogenic deposits is closely related to, among others, geomechanics, automation, computer science, and numerical methods. More and more often, individual fields of science coexist and complement each other, contributing to lowering exploitation costs, increasing production, and reduction of the time needed to prepare and exploit the deposit. The continuous development of national economies is related to the increasing demand for energy, metal, rock, and chemical resources. Very often, exploitation is carried out in complex geological and mining conditions, which are accompanied by natural hazards such as rock bursts, methane, coal dust explosion, spontaneous combustion, water, gas, and temperature. In order to conduct a safe and economically justified operation, modern construction materials are being used more and more often in mining to support excavations, both under static and dynamic loads. The individual production stages are supported by specialized computer programs for cutting the deposit as well as for modeling the behavior of the rock mass after excavation in it. Currently, the automation and monitoring of the mining works play a very important role, which will significantly contribute to the improvement of safety conditions. In this Special Issue of *Energies*, we focus on innovative laboratory, numerical, and industrial research that has a positive impact on the development of safety and exploitation in mining.



Order Your Print Copy
You can order print copies at
www.mdpi.com/books/reprint/6201

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.