

Experimental Design Inside Mines

The best of ground control technology, 40 years in the making. Developments in Ground Control summarizes the objectives, methodology used, and major conclusions reached from papers presented and published in the International Conference on Ground Control in Mining (ICGCM) proceedings from 1981 to 2020. Because the subject areas of the papers published in the proceedings are so broad, ranging from accident training and coal/rock bursts to geology, pillar, multi-seam mining, in situ stresses, roof falls, and roof supports to surface subsidence, the papers were grouped into 13 aggregate topics and addressed separately in 13 book chapters by 13 authors from 4 countries. These book chapters are a fresh look at the topics, providing new insights, sourcing older papers, and summarizing data. This is an enormous help for those seeking information on ground control. There were 1,795 papers in the 40 years of ICGCM proceedings in more than 40 ground control topical areas. It would certainly be very time consuming if not impossible to find the right papers of interest in a timely manner. This book makes it easy for interested people to find the progress, application, and achievements of certain techniques from the past 40 years and how they affected the field of ground control and the world mining industry, in particular, the United States. Generally speaking, most researchers tend to favor recent developments when performing a literature search, ignoring or considering old papers outdated. In contrast, over the last 40 years, most research findings for a specific topic in ICGCM received continuing attention for subsequent development or repeated citations if applications were successful.

Proceedings of the 4th International Symposium held in Montreal, Oct.2-5, 1989. Paper topics include: review, laboratory testing, modelling and design, rockburst control, soft rock mining, and system design.

Advanced Analytics in Mining Engineering

Human Engineering and Human Resources Management in Mining

A Case-Based Approach

Catalog of Books and Reports in the Bureau of Mines Technical Library, Pittsburgh, Pa

Hearings Before a Subcommittee of the Committee on Appropriations, House of Representatives, Ninety-fifth Congress, First Session

Leverage Advanced Analytics in Mining Industry to Make Better Business Decisions

New trends of mineral deposits mining in the world consist of intensifying and concentration of mining operations. This is achieved with the help of new technical equipment that is more reliable, having greater service life and more available power. Consideration is given to quantity reduction of stopes and development workings together with t

Contemporary Experimental Design. Multivariate Analysis and Data MiningFestschrift in Honour of Professor Kai-Tai FangSpringer Nature

Developments in Ground Control in Mining 1981-2020

Influence of Atmospheric Moisture on Ignition of Firedamp by Explosives

Rockbursts and Seismicity in Mines 93

Department of the Interior and Related Agencies Appropriations for 1975

Report of Investigations

Spontaneous Combustion Fire Detection for Deep Metal Mines

Reports for 1924-40 include a report on matters dealt with by the Health Advisory Committee.

Veterinary Clinical Pathology: A Case-Based Approach presents 200 cases with questions for those interested in improving their skills in veterinary clinical pathology. It emphasises an understanding of basic pathophysiologic mechanisms of disease, differential diagnoses and recognition of patterns associated with various diseases or conditions. Topics discussed include haematology, clinical chemistry, endocrinology, acid-base and blood gas analysis, haemostasis, urinalysis, biological variation and quality control. Species covered include the cat, dog and horse, with additional material on ruminants. Cases vary in difficulty, allowing beginners to improve their clinicopathologic skills while more complicated cases, or cases treating unfamiliar topics, are included for experienced readers. This book is a helpful revision aid for those in training as well as for those in practice who are pursuing continuing education. It is also a valuable resource for veterinary nurses and technicians.

Department of the Interior and Related Agencies Appropriations for Fiscal Year 1978

Mine Ventilation

Measurement of Air Velocity in Mines

8th International Workshop, NFMCP 2019, Held in Conjunction with ECML-PKDD 2019, Würzburg, Germany, September 16, 2019, Revised Selected Papers

School of Underground Mining 2011

Surface Mine Blasting

This book constitutes the refereed post-conference proceedings of the 8th International Workshop on New Frontiers in Mining Complex Patterns, NFMCP 2019, held in conjunction with ECML-PKDD 2019 in Würzburg, Germany, in September 2019. The workshop focused on the latest developments in the analysis of complex and massive data sources, such as blogs, event or log data, medical data, spatio-temporal data, social networks, mobility data, sensor data and streams.

The collection and analysis of data play an important role in many fields of science and technology, such as computational biology, quantitative finance, information engineering, machine learning, neuroscience, medicine, and the social sciences. Especially in the era of big data, researchers can easily collect data characterised by massive dimensions and complexity. In celebration of Professor Kai-Tai Fang's 80th birthday, we present this book, which furthers new and exciting developments in modern statistical theories, methods and applications. The book features four review papers on Professor Fang's numerous contributions to the fields of experimental design, multivariate analysis, data mining and education. It also contains twenty research articles contributed by prominent and active figures in their fields. The articles cover a wide range of important topics such as experimental design, multivariate analysis, data mining, hypothesis testing and statistical models.

Investigation of Simon & Coles Manganese Deposit Bedford County, Pa

List of Bureau of Mines Publications and Articles ... with Subject and Author Index

Proceedings of the Eleventh Tailings and Mine Waste Conference, 10-13 October 2004, Vail, Colorado, USA

Proceedings of the 37th International Conference on Ground Control in Mining

Festschrift in Honour of Professor Kai-Tai Fang

Department of the Interior and Related Agencies Appropriations for 1978

Recent seismological research has focused on processes other than pure shear failure (double-couple) as an alternative mechanism for some types of seismic events. This has been stimulated by what appears to be anomalous focal mechanisms observed for several earthquakes of possible volcanic nature in the 1980 Mammoth Lakes, California sequence (JULIAN and SIPKIN, 1985; SIPKIN, 1986). Although studies have concentrated on earthquakes associated with magmatic processes, possible non-double-couple seismic failure has been observed, but not widely known, in cases of mine seismicity in the past three decades. Such cases have occurred on a world-wide basis; however, no cases until now have been observed in the United States. The existence of non-double-couple failure in mine seismicity has been controversial as it has been for tectonic/volcanic earthquakes. Several of the benchmark studies of mine seismicity in the deep South African gold mines have resulted in the belief that no fundamental distinction in the source mechanism exists between tectonic earthquakes and rock bursts (MCGARR, 1984); both types of events are the result of pure shear failure. However, the reported cases of implan focal mechanisms for mine seismicity continue to increase in number and prolong the controversy. During the summer of 1984, a three-dimensional, high resolution micro earthquake network was operated by Woodward-Clyde Consultants (WCC) in the vicinity of two coal mines beneath Gentry Mountain in the eastern Wasatch Plateau of central Utah.

Advances in Geophysics

Proceedings

Experimental Longwall Mining in a Pennsylvania Anthracite Mine (in Two Parts).

Chemical Dust Suppression Technology and Its Applications in Mines (Open-pit Mines)

Proceedings: Tenth International Conference of Directors of Safety in Mines Research

Proceedings of the 3rd international symposium, Kingston, Ontario, 16-18 August 1993

The International Conference on Ground Control in Mining has a rich history of advancing ground control techniques and knowledge. It provides a unique platform for researchers, regulators, consultants, manufacturers, and mine operators to present and exchange challenging industry topics as well as to expedite solutions to ground control problems that require immediate attention. This proceedings from the 37th International Conference is no exception. It includes 47 peer-reviewed research papers from industry experts covering topics of importance for today and the future.

Written by specialists from the mining industry, this collection of over sixty papers from the eleventh annual Tailings and Mine Waste Conference deals with technical capabilities and developments, as well as regulations and environmental concerns. It includes papers on topics such as site characterization, radioactivity and ris

Hearings Before a Subcommittee of ... 93-2, ...

Proceedings of the North American/Ninth US Mine Ventilation Symposium, Kingston, Canada, 8-12 June 2002

Technical and Geoinformational Systems in Mining

Contemporary Experimental Design, Multivariate Analysis and Data Mining

Review of Recent Research on Organizational and Behavioral Factors Associated with Mine Safety

Ergonomics-human Factors in Mining

This proceedings volume showcases all aspects of the science and engineering of mine ventilation and health and safety, with special focus on the applied aspects of mine ventilation practice. Papers span the spectrum of mine ventilation and air conditioning.

These proceedings include the latest developments in research and practice in the area of mining-induced seismicity. Three themes are explored: strong ground motion and rockburst hazard; mechanics of seismic events and stochastic methods; and monitoring of seismicity and geomechanical modelling.

Advances in Geophysics

Proceedings, Bureau of Mines Technology Transfer Seminars, Pittsburgh, Pa., December 3, 1981, St. Louis, Mo., December 10, 1981, and Denver, Colo., December 15, 1981

Coal Mining and Preparation Research, Development and Demonstration in Fiscal Year 1978

Veterinary Clinical Pathology

New Frontiers in Mining Complex Patterns

Hearings Before a Subcommittee of the Committee on Appropriations, United States Senate, Ninety-fifth Congress, First Session

Focuses on how work poses risk of injury to the musculoskeletal system of the worker and emphasizes designs that reduce human error and injury. Gives advice, information resources, referrals and links to publications and bibliographic databases.

In this book, Dr. Soofastaei and his colleagues reveal how all mining managers can effectively deploy advanced analytics in their day-to-day operations- one business decision at a time. Most mining companies have a massive amount of data at their disposal. However, they cannot use the stored data in any meaningful way. The powerful new business tool-advanced analytics enables many mining companies to aggressively leverage their data in key business decisions and processes with impressive results. From statistical analysis to machine learning and artificial intelligence, the authors show how many analytical tools can improve decisions about everything in the mine value chain, from exploration to marketing. Combining the science of advanced analytics with the mining industrial business solutions, introduce the “ Advanced Analytics in Mining Engineering Book ” as a practical road map and tools for unleashing the potential buried in your company ’ s data. The book is aimed at providing mining executives, managers, and research and development teams with an understanding of the business value and applicability of different analytic approaches and helping data analytics leads by giving them a business framework in which to assess the value, cost, and risk of potential analytical solutions. In addition, the book will provide the next generation of miners – undergraduate and graduate IT and mining engineering students – with an understanding of data analytics applied to the mining industry. By providing a book with chapters structured in line with the mining value chain, we will provide a clear, enterprise-level view of where and how advanced data analytics can best be applied. This book highlights the potential to interconnect activities in the mining enterprise better. Furthermore, the book explores the opportunities for optimization and increased productivity offered by better interoperability along the mining value chain – in line with the emerging vision of creating a digital mine with much-enhanced capabilities for modeling, simulation, and the use of digital twins – in line with leading “ digital ” industries.

Hearings Before a Subcommittee of the Committee on Appropriations, House of Representatives, Ninety-third Congress, Second Session

Innovations in Mining Backfill Technology

Bureau of Mines Research

Seismicity in Mines

Fossil Energy Update

An Experimental Mine-sampling Project Designed for Statistical Analysis

This book focuses on the study of chemical dust suppression in mine dust pollution control by means of theories, experiments, computer simulation, and case application, aiming at providing chemical dust suppression solutions for mining worksites. It has seven chapters, including the following contents: (1) introduces fundamental theories and applications of chemical dust suppression, analyzes the dust source intensity of worksites and the mechanisms of dust generation, and summarizes the dust control measures for different mining worksites. (2) According to the mechanisms of dust generation in different mining worksites, targeted dust suppressants were developed. Through optimization by monomer experiment and orthogonal experiment, the optimum formula of different types of dust suppressants was obtained, and its properties were characterized. (3) The dust suppressant field application process was introduced, and the economic benefits were analyzed. This book is expected to provide valuable references both for researchers and engineering technicians engaged in environmental engineering, safety engineering, occupational health, and mining metallurgical engineering, and it also serves as a textbook for graduate students in above disciplines.

This book teaches readers ground engineering principles and related mining and risk management practices associated with underground coal mining. It establishes the basic elements of risk management and the fundamental principles of ground behaviour and then applies these to the essential building blocks of any underground coal mining system, comprising excavations, pillars, and interactions between workings. Readers will also learn about types of ground support and reinforcement systems and their operating mechanisms. These elements provide the platform whereby the principles can be applied to mining practice and risk management, directed primarily to bord and pillar mining, pillar extraction, longwall mining, sub-surface and surface subsidence, and operational hazards. The text concludes by presenting the framework of risk-based ground control management systems for achieving safe workplaces and efficient mining operations. In addition, a comprehensive reference list provides additional sources of information on the subject. Throughout, a large variety of examples show good and bad mining situations in order to demonstrate the application, or absence, of the established principles in practice. Written by an expert in underground coal mining and risk management, this book will help students and practitioners gain a deep understanding of the basic principles behind designing and conducting mining operations that are safe, efficient, and economically viable. Provides a comprehensive coverage of ground engineering principles within a risk management framework Features a large variety of examples that show good and poor mining situations in order to demonstrate the application of the established principles in practice Ideal for students and practitioners About the author Emeritus Professor Jim Galvin has a relatively unique combination of industrial, research and academic experience in the mining industry that spans specialist research and applied knowledge in ground engineering, mine management and risk management. His career encompasses directing ground engineering research groups in South Africa and Australia; practical mining experience, including active participation in the mines rescue service and responsibility for the design, operation, and management of large underground coal mines and for the consequences of loss of ground control as a mine manager; appointments as Professor and Head of the School of Mining Engineering at the University of New South Wales; and safety advisor to a number of Boards of Directors of organisations associated with mining. Awards Winner of the ACARP Excellence Research Award 2016. The Australian Coal Industry's Research Program selects recipients to receive ACARP Research and Industry Excellence Awards every two years. The recipients are selected on the recommendation of technical committees. They are honored for achievement of a considerable advance in an area of importance to the Australian coal mining industry. An important criterion is the likelihood of the results from the project being applied in mines. Winner of the Merv Harris Award from the Mine Managers Association of Australia. The Merv Harris Award is named for Merv Harris who donated money to be invested for a continuing award in 1988. With the award, the Mine Managers Association of Australia honors members of the Association who demonstrate technical achievement in the Australian Coal Mining Industry. The first award was granted in 1990, since then, only two people have received this honor. The book has received the following awards.... AGS (Australian Geomechanics Society) congratulates Dr Galvin for these awards

Tailings and Mine Waste '04

Ground Engineering - Principles and Practices for Underground Coal Mining

Annual Report of the Safety in Mines Research Board