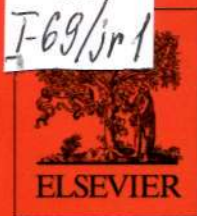


1171
F-69/jr 1

Volume 58
www.elsevier.com

February 2013

ISSN 1365-1609



New developments and case studies in rock mechanics
and rock engineering

International Journal of Rock Mechanics and Mining Sciences

Editor-in-Chief: R. W. Zimmerman, *Imperial College, London, UK*



- fundamental rock behaviour
- *in situ* stress
- site investigation
- rock cutting and drilling
- underground excavations
- rock reinforcement and support
- dam engineering
- geothermal energy
- petroleum engineering
- radioactive waste disposal

CONTENTS

Articles

- | | | |
|------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| J.-W. Park and J.-J. Song | 8 | Numerical method for the determination of contact areas of a rock joint under normal and shear loads |
| R. Plassart, R. Fernandes, A. Giraud, D. Hoxha and F. Laigle | 23 | Hydromechanical modelling of an excavation in an underground research laboratory with an elastoviscoplastic behaviour law and regularization by second gradient of dilation |
| S. Wang, D. Elsworth and J. Liu | 34 | Permeability evolution during progressive deformation of intact coal and implications for instability in underground coal seams |
| J. Ju and J. Xu | 46 | Structural characteristics of key strata and strata behaviour of a fully mechanized longwall face with 7.0 m height chocks |
| R.K. Wattimena, S. Kramadibrata, I.D. Sidi and M.A. Azizi | 55 | Developing coal pillar stability chart using logistic regression |
| B. Rajesh Kumar, H. Vardhan, M. Govindaraj and G.S. Vijay | 61 | Regression analysis and ANN models to predict rock properties from sound levels produced during drilling |
| I.A. Onederra, J.K. Furtney, E. Sellers and S. Iverson | 73 | Modelling blast induced damage from a fully coupled explosive charge |
| P. Liolios and G. Exadaktylos | 85 | A smooth hyperbolic failure criterion for cohesive-frictional materials |
| X.P. Yuan, H.Y. Liu and Z.Q. Wang | 92 | An interacting crack-mechanics based model for elastoplastic damage model of rock-like materials under compression |
| J. Mah, C. Samson, S.D. McKinnon and D. Thibodeau | 111 | 3D laser imaging for surface roughness analysis |
| R. Mikaeil, Y. Ozcelik, R. Yousefi, M. Ataei and S. Mehdi Hosseini | 118 | Ranking the sawability of ornamental stone using Fuzzy Delphi and multi-criteria decision-making techniques |
| P. Oreste | 127 | Face stabilization of deep tunnels using longitudinal fibreglass dowels |
| J. Nadah, F. Bignonnet, C.A. Davy, F. Skoczylas, D. Troadec and S. Bakowski | 149 | Microstructure and poro-mechanical performance of Haubourdin chalk |
| P.E. Snelling, L. Godin and S.D. McKinnon | 166 | The role of geologic structure and stress in triggering remote seismicity in Creighton Mine, Sudbury, Canada |

*continued on inside back cover*IJRMMS now has a dedicated WWW page: <http://www.elsevier.com/locate/ijrmms>

Int. J. Rock Mech. Min. Sci. is Indexed/Abstracted in: Appl. Mech. Rev., Cam. Sci. Abstr., Curr. Cont./Eng. Tech. & Appl. Sci., Eng. Ind., Curr. Cont. Sci. Cit. Ind., Curr. Cont. SCISEARCH Data, Geo. Abstr., Geo. Bib. & Ind., INSPEC Data., Int. Civil Eng. Abstr., Mater. Sci. Cit. Ind., PASCAL-CNRS Data., Res. Alert. Also covered in the abstract and citation database SciVerse SCOPUS®. Full text available in SciVerse ScienceDirect®.



1365-1609(201302)58:C;1-M

ISSN 1365-1609

continued from outside back cover

Technical Notes

D.Q. Dan, H. Konietzky and M. Herbst	1	Brazilian tensile strength tests on some anisotropic rocks
J.C. Zhang, S.H. Zhou, X.H. Xu and L.G. Fang	103	Evolution of the elastic properties of a bedded argillite damaged in cyclic triaxial tests
J. Alcalde-Gonzalo, M.B. Prendes-Gero, M.I. Álvarez-Fernández, A.E. Álvarez-Vigil and C. González-Nicieza	141	Roof tensile failures in underground excavations
S. Okubo, K. Hashiba and K. Fukui	180	Loading rate dependency of the strengths of some Japanese rocks