

Abstracts of Acta Montana, ser. AB, No. 6 (109), Prague 1998

Bucha V.	Implementation of the Seismic Subroutine Packages MODEL and CRT to UNIX Operating System	9
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Abstract

Subroutine packages MODEL and CRT used for ray method in seismology were implemented and tested in reliable and efficient UNIX operating system (HP-UX, Linux).

Bucha V.	Study of the Methods for the Location of Seismic Hypocentres in 3-D Laterally Inhomogeneous Models	13
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Abstract

Nonlinear kinematic hypocentre determination with the ray method was used for the location of seismic hypocentres in 3-D a priori Western Bohemia model.

Hanzlík J., Jahoda K., Navrátil O. and René M.	Determination of the Representative Elementary Volume for Mathematic Modelling of the Groundwater Flow	17
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Abstract

The representative elementary volume (REV) has been an element, whose dimensions and shape are available for modeling of groundwater flowing, characterizing, while, the examined structure. The REV for a grained permeable medium has been determined. Now the study of REV of fractured hard rocks is under consideration. Discontinuities in rock massifs in relation to structural--geological conditions, determine a groundwater flow and by that a size of the REV. The application of a REV shows one possibility of the description and the evaluation of a permeable medium, particularly within hydrogeological massifs with dominant fractured permeability. These massifs are mostly characterized by quick as far as chaotic changes of hydraulic parameters. The analytical solution had been aimed at the verification of the effect of physical quantities at the groundwater flow. The topic is linked with the program of the IAH commission for "Hydrogeology of Hard Rocks."

Kaláb Z., Růžek B., Fischer T., Muleer K., Vesedá V. and Gruntorád B.	Energy Characteristic of Mining Induced Seismic Events (in the Czech Part of the Upper Silesian Basin)	27
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Abstract

The main goals within this grant were formulated as follows: The substance of the grant project is to contribute to the knowledge of the energy release both in space and in time, which is radiated from seismic foci induced by mining (rockbursts). It is supposed that more precise determination of the energy, respecting different types of foci mechanism, will be achieved. Mining induced seismic events do originate in regions, in which the mining has been already stopped as well. Therefore the investigation of the mining induced activity remains permanently topical. Digital records of seismic events from existing seismic networks as well as from seismic stations in the Czech part of the Upper Silesian Basin will be utilized.

Smolík J., Kučera J., Sýkorová I., Schmarz J., Veselý V., Kruger J., Havránek V., Šrein V., Šťastný M. and Melichárková E.	Emission from the Fluidized Bed Combustion	33
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Abstract

The research project No. 104/95/0653 supported by the Grant Agency of the Czech Republic is aimed at study of the emission streams of heavy metals from the fluidized bed combustion of fossil fuels in the fluidized bed combustor equipped with standard, effluent gas cleaning facilities such as cyclones, barrier filters and wet scrubbers. This project was solved by co-operation of three scientific institutes within the Academy of Sciences of the Czech Republic. The behavior of elements Al, As, Ca, Cd, Co, Cr, Fe, K, Mn, Na, Ni, Pb, Si, Ti, V, Zn was studied in dependence on the fuel composition, reaction conditions and type of separators. The attentions was paid to the possibility of the emission increasing of the heavy metals.

Heiland J.	Translational Block-type Slope Movements – Mechanism and Examples (Diploma thesis)	81
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Abstract

This publication summarizes a doctoral thesis, which had been worked out between 1994-1997 within external postgradual studies at the Faculty of Sciences, Charles University and at the Department of Engineering Geology, Institute of Rock Structure and Mechanics, Czech Academy of Sciences. The work had been partly supported by the German Academic Exchange Service (DAAD) and by the European Commission, Supplementary Agreement No ERBCIPDCT 930052 to contract No ERBEV5VCT 920180. The theme of this work is translational block-type slope movements and their mechanism, as could be examined in several field areas. My method of working was firstly extensive field mapping of the geological and geomorphological conditions in four chosen field areas. In the next stage I tried to construct cross-sections of the slope movement areas along profiles taken during field work and thus I tried to establish a possible explanation for the slope movement evolution and mechanism of each field area. In the case of one field area in the

Moravskoslezsk, Beskydy Mountains this did not lead to a satisfying result and I decided to do physical modeling on this particular area with the help of my colleague B. Košťálk. In the last stage of my work I tried to establish general thoughts about the definition, mechanism and characteristics of translational block-type slope movements. A result of this work is a new interpretation of the slope movement area Lukšinec Hill in the Moravskoslezské Beskydy Mountains, which is mainly based on a different geological build-up than was described by Novosad (1966, 1978, 1993) in previous works. In the slope movement area Potvorovský kopec, situated in the Kladno-Rakovník Permocarboneous fault-basin, several stages of slope movement activity could be distinguished, which culminated in a disastrous landslide in 1872. In Austria, I studied two field areas situated in a similar geology with both showing translational block-type slope movement development in a

pronounced form. A large part of this thesis is concerned with the comparison of žetice landslide in the Beskydy Mountains with similar slope movements in the Langhe-Cunesi region in Northern Italy