

Table of contents

In: Jan Chleboun and Pavel Kůs and Jan Papež and Miroslav Rozložník and Karel Segeth and Jakub Šístek (eds.): Programs and Algorithms of Numerical Mathematics, Proceedings of Seminar. Jablonec nad Nisou, June 19-24, 2022. Institute of Mathematics CAS, Prague, 2023. pp. 3–4.

Persistent URL: <http://dml.cz/dmlcz/703181>

Terms of use:

Institute of Mathematics of the Czech Academy of Sciences provides access to digitized documents strictly for personal use. Each copy of any part of this document must contain these *Terms of use*.



This document has been digitized, optimized for electronic delivery and stamped with digital signature within the project *DML-CZ: The Czech Digital Mathematics Library*
<http://dml.cz>

Contents

Preface	5
<i>Stanislav Bartoň</i>	
Visualisation of the electromagnetic vector fields	7
<i>Michal Béréš</i>	
Reduced basis solver for stochastic Galerkin formulation of Darcy flow with uncertain material parameters	15
<i>Simona Béréšová</i>	
Numerical realization of the Bayesian inversion accelerated using surrogate models	25
<i>Jan Chleboun, Judita Runczиковá, Pavel Krejčí</i>	
The impact of uncertain parameters on ratchetting trends in hypoplasticity	37
<i>Dana Černá</i>	
Valuation of two-factor options under the Merton jump-diffusion model using orthogonal spline wavelets	47
<i>Cyril Fischer, Jiří Náprstek</i>	
Identification of quasiperiodic processes in the vicinity of the resonance	57
<i>Eva Havelková, Iveta Hnětynková</i>	
Residual norm behavior for Hybrid LSQR regularization	65
<i>Jiří Hozman, Tomáš Tichý</i>	
DGM for real options valuation: options to change operating scale	75
<i>Radka Keslerová, Anna Lancmanová, Tomáš Bodnár</i>	
Validation of numerical simulations of a simple immersed boundary solver for fluid flow in branching channels	85
<i>Jan Lamač, Miloslav Vlasák</i>	
Finding vertex-disjoint cycle cover of undirected graph using the least-squares method	97
<i>Josef Malík, Alexej Kolcun</i>	
Determination of the initial stress tensor from deformation of underground opening — theoretical background and applications	107
<i>Josef Martínek, Václav Kučera</i>	
Numerical optimization of parameters in systems of differential equations	123
<i>Ivan Němec, Jiří Vala, Hynek Štekbauer, Michal Jedlička, Daniel Burkart</i>	
New methods in collision of bodies analysis	133
<i>Eda Oktay, Erin Carson</i>	
Mixed precision GMRES-based iterative refinement with recycling	149

<i>Štěpán Papáček, Ctirad Matonoha</i>	
Testing the method of multiple scales and the averaging principle for model parameter estimation of quasiperiodic two time-scale models	163
<i>Marek Pecha, Zachary Langford, David Horák, Richard Tran Mills</i>	
Wildfires identification: semantic segmentation using support vector machine classifier	173
<i>Stefano Pozza, Niel Van Buggenhout</i>	
The \star -product approach for linear ODEs: a numerical study of the scalar case ..	187
<i>Jana Radová, Jitka Machalová</i>	
Identification problem for nonlinear beam — extension for different types of boundary conditions	199
<i>Hynek Řezníček, Jan Geletič, Martin Bureš, Pavel Krč, Jaroslav Resler, Kateřina Vrbová, Arsenii Trush, Petr Michálek, Luděk Beneš, Matthias Sühring</i>	
Different boundary conditions for LES solver PALM 6.0 used for ABL in tunnel experiment	209
<i>Karel Segeth</i>	
Spherical basis function approximation with particular trend functions	219
<i>Stanislav Sysala</i>	
Estimation of EDZ zones in great depths by elastic-plastic models	229
<i>David Šilhánek, Michal Beneš</i>	
Homogenization of the transport equation describing convection-diffusion processes in a material with fine periodic structure	239
<i>Lukáš Vacek, Václav Kučera</i>	
Godunov-like numerical fluxes for conservation laws on networks	249
<i>Karel Vacek, Petr Sváček</i>	
On finite element approximation of fluid structure interaction by Taylor–Hood and Scott–Vogelius elements	259
<i>Jiří Vala, Václav Rek</i>	
On a computational approach to multiple contacts / impacts of elastic bodies ..	269
<i>Jan Valášek, Petr Sváček</i>	
Interpolation with restrictions — role of the boundary conditions and individual restrictions	281
<i>Miloslav Vlasák, Jan Lamač</i>	
Improved flux reconstructions in one dimension	293
List of participants	303