Record Nr. UNINA9910728948203321 Autore Alikhanov Anatoly Titolo Current Problems in Applied Mathematics and Computer Science and Systems / / edited by Anatoly Alikhanov, Pavel Lyakhov, Irina Samoylenko Cham:,: Springer Nature Switzerland:,: Imprint: Springer,, 2023 Pubbl/distr/stampa **ISBN** 3-031-34127-9 Edizione [1st ed. 2023.] Descrizione fisica 1 online resource (528 pages) Collana Lecture Notes in Networks and Systems, , 2367-3389 ; ; 702 Altri autori (Persone) LyakhovPavel Samoylenkolrina Disciplina 004.0151 Soggetti **Engineering mathematics** Engineering - Data processing Mathematical and Computational Engineering Applications **Data Engineering** Inglese Lingua di pubblicazione Materiale a stampa **Formato** Livello bibliografico Monografia Nota di contenuto Modeling of the potential dependence on the permittivity at the metal – dielectric medium interface -- Difference method for solving the Dirichlet problem for a multidimensional integro-differential equation of convection-diffusion -- The problem of restoring the unit of approximation in the model for studying functional dependence from approximate data -- RNS Reverse conversion algorithm and parity detection for the wide arbitrary moduli set -- Anomalous solute transport in an inhomogeneous porous medium taking into account mass transfer -- Determination of relaxation and flow coefficients during filtration of a homogeneous liquid in fractured-porous media --Solution of the anomalous filtration problem in two-dimensional porous media -- On calculating the hyperbolic parameter of a twodimensional lattice of linear comparison solutions -- Numerical solution of anomalous solute transport in a two-zone fractal porous medium -- Initial-boundary value problems for the loaded Hallaire

Sommario/riassunto

This book is based on the best papers accepted for presentation during

equation with Gerasimov–Caputo fractional derivatives of different

the International Conference on Actual Problems of Applied Mathematics and Computer Systems (APAMCS-2022), Russia. The book includes research materials on modern mathematical problems. solutions in the field of scientific computing, data analysis and modular computing. The scope of numerical methods in scientific computing presents original research, including mathematical models and software implementations, related to the following topics: numerical methods in scientific computing; solving optimization problems; methods for approximating functions, etc. The studies in data analysis and modular computing include contributions in the field of deep learning, neural networks, mathematical statistics, machine learning methods, residue number system and artificial intelligence. Finally, the book gives insights into the fundamental problems in mathematics education. The book intends for readership specializing in the field of scientific computing, parallel computing, computer technology, machine learning, information security and mathematical education.