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Nota di contenuto	-- Artificial intelligence and supercomputer simulation. -- Tools for Constructing Production Digital Twin Models Based on an Algebraic Approach and a Graphical State Language Extended by Functional and Operational Semantics. -- The Comparison of Meta-Heuristic and Reinforcement Learning Approach to Implement a Given Qubit Logic -- Modelling of a Quantum System Dynamics in an Instantaneous Basis. -- Evaluating Perceived Complexity of Process Models from a Targeted Survey of Healthcare Domain Specialists. -- Constructing Author Closeness Networks Using SCOPUS Bibliometric Data. -- Optimizing Deep Learning Inference on RISC-V Platforms within the OpenVINO Toolkit. -- Computing in optimization and optimal control. --

Multicriteria Selection of Parameters of Multi-Pulse Strongly Nonlinear Dynamic Systems. -- Assessing Diversity in Global Optimization Methods. -- Data Reconciliation and Monitoring in Gasoline Blending Applications. -- The COPRAS Method with Interval Weights. -- Optimal Control of Quasi-Stationary Electromagnetic Fields. -- Computational methods for mathematical models analysis. -- Comparison of Different Models for Simulation of Ice Destroyed Zones During the Low-Speed Impact. -- One-dimensional Boundary Value Problems of Nonlinear Diffusion Theory. -- New simple Lie algebras found by computer and non-alternating Hamiltonian algebras. -- Justification and Implementation of the Galerkin Method for Solving Non-Classical Mathematical Problems of the Atmospheric Electricity Theory. -- Mathematical Modeling of the Dynamics of Elastic Elements of Mechanical Engineering Structures Carrying Moving Distributed Loads. -- Numerical Modeling of Low-Velocity Impacts on Aircraft Composite Rods. -- Dynamic Model of a Composite Sectional Design of a Tiltrotor with Two Tilting Propellers. -- Acoustic Levitation Applied to Tissue Engineering. -- Numerical Investigation of Initial Small Imperfection Influence on Post-buckling Shape of a Cylindrical Shell in Axial Compression.

Sommario/riassunto

This book constitutes the refereed proceedings of the 24th International Conference on Mathematical Modeling and Supercomputer Technologies , MMST 2024, held in Nizhni Novgorod, Russia, during November 18–21 2024. The 17 full papers and 3 short papers included in this book were carefully reviewed and selected from 39 submissions. They were organized in topical sections as follows: artificial intelligence and supercomputer simulation; computing in optimization and optimal control; computational methods for mathematical models analysis.