1. Record Nr. UNINA9911047682703321

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Titolo	Computational Science and Its Applications – ICCSA 2025 Workshops : Istanbul, Turkey, June 30 – July 3, 2025, Proceedings, Part III / / edited by Osvaldo Gervasi, Beniamino Murgante, Chiara Garau, Yeliz Karaca, Maria Noelia Faginas Lago, Francesco Scorza, Ana Cristina Braga
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2026
ISBN	3-031-97596-0
Edizione	[1st ed. 2026.]
Descrizione fisica	1 online resource (729 pages)
Collana	Lecture Notes in Computer Science, , 1611-3349 ; ; 15888
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Disciplina	004.6
Soggetti	Computer networks Computer engineering Computer systems Artificial intelligence Computer Communication Networks Computer Engineering and Networks Computer System Implementation Artificial Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	-- Bio and Neuro inspired Computing and Applications (BIONCA 2025). -- Using Differential Evolution for Minimal Routing In Network-on-Chips with2D and 3D Mesh Topology. -- MARS-SLAM: Marker-Assisted Region Scanning for Simultaneous Localization and Mapping Pollutant Spill Containment via Flocking. -- Computational Methods for Business Analytics (CMBA 2025). -- Analyze and Predict Potential Customers based on Customer Clustering. -- Mixed-Integer Multi-Objective Programming for Intermodal Supply Chain Design. --

Computational Methods, Statistics and Industrial Mathematics (CM-SIM 2025). -- Physiological impact of personal protective equipment in distinct thermal environments. -- Application of the DeepXDE Library for Solving Mathematical Models with PINNs. -- Features of Designing Control Systems of Tested Aviation Moving Platforms. -- Modeling the service quality indicators using quantile regression. -- Computational Optimization and Applications (COA 2025). -- On Augmented Lagrangian for LP Feasibility. -- Analysis of the Effect of Global and Local Objectives in Multi-Objective Distributed Job Shop Scheduling Problems. -- Relationship between Operational, Economic, and Financial Efficiencies and User Satisfaction at the Health Centers of Praia City. -- Multifractal Analysis of Gold as a Hedge Against Geopolitical Risk. -- A Study on the Effects of Model Simplifications for Generating Human-like Robot Movements in Refill Tasks. -- Characterization of Key Processes for Production Systems Optimization. -- Computational Astrochemistry 2025 (CompAstro 2025). -- Theoretical study of the reaction involving HCl and NaO in the interstellar medium: a potential formation route of NaCl. -- Modeling Polymer Degradation by Atomic Oxygen in Low Mars and Earth Orbits: Are Diffuse Functions Necessary?. -- Formation routes of interstellar metal oxides: a computational chemistry approach. -- Synthesis of chemical species relevant in environmental and astro chemistry: their production and characterization by synchrotron radiation. -- Computational methods for porous geomaterials (CompPor 2025). . Multi-GPU implementation of the numerical algorithm enhancing discrete element modeling performance. -- Monitoring CO2 in seismic data using neural network. -- Spectral Decomposition to Solve the Elasticity Problem in Quasi-static Formulation. -- Numerical Implementation of Boundary Conditions for Finite Difference Method on Staggered Grid for Wave Propagation in Saturated Porous Medium. -- Machine learning-based preconditioner to solve Poisson equation. -- Implementation of the spectral preconditioner to solve Poisson equation. -- Algorithm for restoring the electrical resistivity of a medium with plane-parallel and coaxial-cylindrical interface boundaries based on lateral logging sounding data. .-Constructing dependence of electrical parameters on porosity and water saturation for digital models of high-permeability rock samples. -- Effect of power-law parameters on time step size in CFD-DEM simulations of non-Newtonian fluid-driven fracture. -- Physics informed kolmogorov-arnold network for two-phase flow model with experimental data.

Sommario/riassunto

The fourteen-volume set LNCS 15886-15899 constitutes the papers of several workshops which were held in conjunction with the 25th International Conference on Computational Science and Its Applications, ICCSA 2025, held in Istanbul, Turkey, during June 30–July 3, 2025. The 362 full papers, 37 short papers and 2 PHD showcase included in this book were carefully reviewed and selected from 1043 submissions. In addition, the conference consisted of 58 workshops, focusing on very topical issues of importance to science, technology and society: from new mathematical approaches for solving complex computational systems, to information and knowledge in the Internet of Things, new statistical and optimization methods, several Artificial Intelligence approaches, sustainability issues, smart cities and related technologies.