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Disciplina	006.3
Soggetti	Computer science Artificial intelligence Computer engineering Computer networks Logic design Computer vision Computer science—Mathematics Theory of Computation Artificial Intelligence Computer Engineering and Networks Logic Design Computer Vision Mathematics of Computing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Track of Data-Driven Computational Sciences -- Nonparametric Approach to Weak Signal Detection in the Search for Extraterrestrial Intelligence (SETI) -- Parallel Strongly Connected Components Detection with Multi-partition on GPUs -- Efficient Parallel Associative Classification based on Rules Memoization -- Integrated Clustering and

Anomaly Detection (INCAD) for Streaming Data -- An Implementation of Coupled Dual-Porosity-Stokes Model with FEniCS -- Anomaly Detection in Social Media using Recurrent Neural Network -- Conditional BERT Contextual Augmentation -- An innovative and reliable water leak detection service supported by data-intensive remote sensing processing -- Track of Machine Learning and Data Assimilation for Dynamical Systems -- Scalable Weak Constraint Gaussian Processes -- A Learning-Based Approach for Uncertainty Analysis in Numerical Weather Prediction Models -- Kernel embedded nonlinear observational mappings in the variational mapping particle filter -- Data assimilation in a nonlinear time-delayed dynamical system with Lagrangian optimization -- Machine learning to approximate solutions of ordinary differential equations: Neural networks vs. linear regressors -- Kernel Methods for Discrete-Time Linear Equations -- Physics-Informed Echo State Networks for Chaotic Systems Forecasting -- Tuning Covariance Localization using Machine Learning -- Track of Marine Computing in the Interconnected World for the Benefit of the Society -- Marine and Atmospheric Forecast Computational System for Nautical Sports in Guanabara Bay (Brazil) -- An integrated perspective of the Operational Forecasting System in Rias Baixas (Galicia, Spain) with observational data and end-users -- Climate evaluation of a high-resolution regional model over the Canary current upwelling system -- Validating Ocean General Circulation Models via Lagrangian particle simulation and data from drifting buoys -- Implementation of a 3-dimensional hydrodynamic model to a fish aquaculture area in Sines, Portugal - A down-scaling approach -- Numerical characterization of the Douro River plume -- The Impact of Sea Level Rise in the Guadiana Estuary -- Estuarine light attenuation modelling towards improved management of coastal fisheries -- The NARVAL software toolbox in support of ocean model skill assessment at regional and coastal scales -- Salinity control on Saigon river downstream of Dautieng reservoir within multi-objective simulation-optimisation framework for reservoir operation -- Clustering hydrographic conditions in Galician estuaries -- Early Warning Systems for Shellfish Safety - The Pivotal Role of Computational Science -- Track of Multiscale Modelling and Simulation -- Creating a reusable cross-disciplinary multi-scale and multi-physics framework: from AMUSE to OMUSE and beyond -- A Semi-Lagrangian Multiscale Framework for Advection-Dominant Problems -- A Multiscale Model of Atherosclerotic Plaque Development: toward a Coupling between an Agent-Based Model and CFD Simulations -- Special Aspects of Hybrid Kinetic-Hydrodynamic Model When Describing the Shape of Shockwaves -- Computational Analysis of Pulsed Radiofrequency Ablation in Treating Chronic Pain -- MaMiCo: Parallel Noise Reduction for Multi-Instance Molecular-Continuum Flow Simulation -- Projection-Based Model Reduction Using Asymptotic Basis Functions -- Introducing VECMAtk - verification, validation and uncertainty quantification for multiscale and HPC simulations -- Track of Simulations of Flow and Transport: Modeling, Algorithms and Computation -- deal.II Implementation of a Weak Galerkin Finite Element Solver for Darcy Flow -- Recovery of the Interface Velocity for the Incompressible Flow in Enhanced Velocity Mixed Finite Element Method -- A New Approach to Solve the Stokes-Darcy-Transport System Applying Stabilized Finite Element Methods -- Energy Stable Simulation of Two-Phase Equilibria with Capillarity -- Effects of Numerical Integration on DLM/FD Method for Solving Interface Problems with Body-Unfitted Meshes -- Application of a Double Potential Method to Simulate Incompressible Viscous Flows -- A bubble

formation in the two-phase system -- Performance of a Two-Path Aliasing Free Calculation of a Spectral DNS Code -- DNS of mass transfer from bubbles rising in a vertical channel -- A Hybrid Vortex Method for the simulation of 3D incompressible flows -- Accelerated Phase Equilibrium Predictions for Subsurface Reservoirs Using Deep Learning Methods -- Study on the thermal-hydraulic coupling model for the enhanced geothermal systems -- Modelling of thermal transport in wire + arc additive manufacturing process.

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## Sommario/riassunto

The five-volume set LNCS 11536, 11537, 11538, 11539 and 11540 constitutes the proceedings of the 19th International Conference on Computational Science, ICCS 2019, held in Faro, Portugal, in June 2019. The total of 65 full papers and 168 workshop papers presented in this book set were carefully reviewed and selected from 573 submissions (228 submissions to the main track and 345 submissions to the workshops). The papers were organized in topical sections named: Part I: ICCS Main Track Part II: ICCS Main Track; Track of Advances in High-Performance Computational Earth Sciences: Applications and Frameworks; Track of Agent-Based Simulations, Adaptive Algorithms and Solvers; Track of Applications of Matrix Methods in Artificial Intelligence and Machine Learning; Track of Architecture, Languages, Compilation and Hardware Support for Emerging and Heterogeneous Systems Part III: Track of Biomedical and Bioinformatics Challenges for Computer Science; Track of Classifier Learning from Difficult Data; Track of Computational Finance and Business Intelligence; Track of Computational Optimization, Modelling and Simulation; Track of Computational Science in IoT and Smart Systems Part IV: Track of Data-Driven Computational Sciences; Track of Machine Learning and Data Assimilation for Dynamical Systems; Track of Marine Computing in the Interconnected World for the Benefit of the Society; Track of Multiscale Modelling and Simulation; Track of Simulations of Flow and Transport: Modeling, Algorithms and Computation Part V: Track of Smart Systems: Computer Vision, Sensor Networks and Machine Learning; Track of Solving Problems with Uncertainties; Track of Teaching Computational Science; Poster Track ICCS 2019 Chapter “Comparing Domain-decomposition Methods for the Parallelization of Distributed Land Surface Models” is available open access under a Creative Commons Attribution 4.0 International License via [link.springer.com](http://link.springer.com).

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