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Disciplina	004
Soggetti	Computer science Artificial intelligence Computer science - Mathematics Computer engineering Computer networks Computer vision Theory of Computation Artificial Intelligence Mathematics of Computing Computer Engineering and Networks Computer Vision
Lingua di pubblicazione	Inglese
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Nota di contenuto	Advances in High-Performance Computational Earth Sciences: Applications and Frameworks -- Large-scale stabilized multi-physics earthquake simulation for digital twin -- On the design of Monte-Carlo particle coagulation solver interface: a CPU/GPU Super-Droplet Method case study with PySDM -- Applications of Computational Methods in Artificial Intelligence and Machine Learning -- A Deep Neural Network Based on Stacked Auto-Encoder and Dataset Stratification in Indoor Localization -- Recurrent Autoencoder with Sequence-Aware Encoding -- A Gist Information Guided Neural Network for Abstractive

Summarization -- Quality of Recommendations and Cold-start Problem in Recommender Systems based on Multi-Clusters -- Model of the Cold-start Recommender System Based on the Petri-Markov Nets -- Text-Based Product Matching with Incomplete and Inconsistent Items Descriptions -- Unsupervised Text Style Transfer via An Enhanced Operation Pipeline -- Exemplar Guided Latent Pre-trained Dialogue Generation -- Monte Carlo Winning Tickets -- Interpreting Neural Networks Prediction for a Single Instance via Random Forest Feature Contributions -- A Higher-Order Adaptive Network Model to Simulate Development of and Recovery from PTSD -- Trojan Traffic Detection Based on Meta-learning -- Grasp the Key: Towards Fast and Accurate Host-based Intrusion Detection in Data Centers -- MGEL: A Robust Malware Encrypted Traffic Detection Method Based on Ensemble Learning with Multi-Grained Features -- TS-Bert: Time-series Anomaly Detection via Pre-training Model Bert -- Relation order histograms as a network embedding tool -- Desensitization Due to Overstimulation: A Second-Order Adaptive Network Model -- A modified deep Q-network algorithm applied to the evacuation problem -- Human-like Storyteller: A Hierarchical Network with Gated Memory for Visual Storytelling -- Discriminative Bayesian Filtering for the Semi-Supervised Augmentation of Sequential Observation Data -- TSAX is Trending- MultiEmo: Multilingual, Multilevel, Multidomain Sentiment Analysis Corpus of Consumer Reviews -- Artificial Intelligence and High-Performance Computing for Advanced Simulations -- Outlier removal for isogeometric spectral approximation with the optimally-blended quadratures -- Socio-cognitive Evolution Strategies -- Eective solution of ill-posed inverse problems with stabilized forward solver -- Supermodeling - a meta-procedure for data assimilation and parameters estimation -- AI-accelerated CFD simulation based on OpenFOAM and CPU/GPU computing -- An application of a pseudo-parabolic modeling to texture image recognition -- A study on a feedforward neural network to solve partial dierential equations in hyperbolic-transport problems -- Agent-based Modeling of Social Phenomena for High Performance Distributed Simulations -- Automated Method for Evaluating Neural Network’s Attention Focus -- Machine Learning Control Design for Elastic Composite Materials -- Optimize Memory Usage in Vector Particle-In-Cell (VPIC) to Break the 10 Trillion Particle Barrier in Plasma Simulations -- Deep learning for prediction of complex geology ahead of drilling -- Biomedical and Bioinformatics Challenges for Computer Science -- Controlling costs in feature selection: information theoretic approach -- How fast vaccination can control the COVID-19 pandemic in Brazil? -- Uncertainty Quantification of Tissue Damage Due to Blood Velocity in Hyperthermia Cancer Treatments -- EEG-based Emotion Recognition – Evaluation Methodology Revisited -- Modeling the electromechanics of a single cardiac myocyte -- Towards Mimetic Membrane Systems in Molecular Dynamics: Characteristics of E. coli Membrane System -- PathMEx: Pathway-based Mutual Exclusivity for Discovering Rare Cancer Driver Mutations -- Serverless Nanopore Basecalling with AWS Lambda -- A Software Pipeline Based on Sentiment Analysis to Analyze Narrative Medicine Texts.

Sommario/riassunto

The six-volume set LNCS 12742, 12743, 12744, 12745, 12746, and 12747 constitutes the proceedings of the 21st International Conference on Computational Science, ICCS 2021, held in Krakow, Poland, in June 2021.* The total of 260 full papers and 57 short papers presented in this book set were carefully reviewed and selected from 635 submissions. 48 full and 14 short papers were accepted to the main track from 156 submissions; 212 full and 43 short papers were

accepted to the workshops/ thematic tracks from 479 submissions. The papers were organized in topical sections named: Part I: ICCS Main Track Part II: Advances in High-Performance Computational Earth Sciences: Applications and Frameworks; Applications of Computational Methods in Artificial Intelligence and Machine Learning; Artificial Intelligence and High-Performance Computing for Advanced Simulations; Biomedical and Bioinformatics Challenges for Computer Science Part III: Classifier Learning from Difficult Data; Computational Analysis of Complex Social Systems; Computational Collective Intelligence; Computational Health Part IV: Computational Methods for Emerging Problems in (dis-)Information Analysis; Computational Methods in Smart Agriculture; Computational Optimization, Modelling and Simulation; Computational Science in IoT and Smart Systems Part V: Computer Graphics, Image Processing and Artificial Intelligence; Data-Driven Computational Sciences; Machine Learning and Data Assimilation for Dynamical Systems; MeshFree Methods and Radial Basis Functions in Computational Sciences; Multiscale Modelling and Simulation Part VI: Quantum Computing Workshop; Simulations of Flow and Transport: Modeling, Algorithms and Computation; Smart Systems: Bringing Together Computer Vision, Sensor Networks and Machine Learning; Software Engineering for Computational Science; Solving Problems with Uncertainty; Teaching Computational Science; Uncertainty Quantification for Computational Models *The conference was held virtually.