Table of Contents

Global Exponential Stability of the Periodic Solution of a Discrete-Time Complex-Valued Hopfield Neural Network with Delays and Impulses Valery Covachev and Zlatinka Covacheva	1
Computation and Knowledge Mapping for Data Entities Claus-Peter Ruckemann	7
Fitness Switching Strategy for Developing Genetic Algorithm that Utilizes Infeasible Solutions Jun Woo Kim	13
A Model of a Source-Retrial Open Exponential Queuing Network with Finite Shared Buffers in Multi-Queue Nodes Miron Vinarskiy	17
A Simple Framework for Energy Efficiency Evaluation and Hardware Parameter Tuning with Modular Support for Different HPC Platforms Ondrej Vysocky, Jan Zapletal, and Lubomir Riha	25
Performance Optimization of D3Q19 Lattice Boltzmann Kernels on Intel® KNL Ivan Girotto, Sebastiano Fabio Schifano, Enrico Calore, Gianluca Di Staso, and Federico Toschi	31
Energy Efficiency of Epiphany Many-Core Architecture for Parallel Molecular Dynamics Calculations Vsevolod Nikolskii and Vladimir Stegailov	37
Optimal Hardware Parameters Prediction for Best Energy-to-Solution of Sparse Matrix Operations Using Machine Learning Techniques Vojtech Nikl, Ondrej Vysocky, Lubomir Riha, and Jan Zapletal	43
Data Driven Software Development: Who Owns Copyrights? Iryna Lishchuk	49
A Theoretical Concept: Towards Mathematical Declarations of Code Intentions Athanasios Tsitsipas and Lutz Schubert	55
A Parallel Hardware Architecture for Fork-Join Parallel Applications Atakan Dogan, Ismail San, and Kemal Ebcioglu	57
Privacy-Preserving Multicast to Explicit Agnostic Destinations Cuong Ngoc Tran and Vitalian Danciu	60
Understanding Power Measurement Capabilities on Zaius Power9	66

Bo Li, Edgar A Leon, and Kirk W Cameron

Data-monitoring Visualizer for Software Defined Networks Luz Angela Aristizabal and Nicolas Toro	71
Forecasting Transportation Project Frequency using Multivariate Regression with Elastic Net Regularization Alireza Shojaei, Hashem Izadi Moud, and Ian Flood	74
Qualitative and Quantitative Risk Analysis of Unmanned Aerial Vehicle Flights over Construction Job Sites Hashem Izadi Moud, Alireza Shojaei, Ian Flood, Xun Zhang, and Mohsen Hatami	80
A Simplex Algorithm with the Smallest Index Rule for Concave Quadratic Programming Mohand Bentobache, Mohamed Telli, and Abdelkader Mokhtari	88
Mixing Power Consumption for Hulled Millet in an Agitated Drum Dryer with Discrete Element Method <i>Tibor Poos Dr., Daniel Horvath, and Kornel Tamas Dr.</i>	94