

PDP 2026 1st Conference Day
March 25

08:00 09:00	Registration	
09:00 09:30	Opening ceremony - Aula Magna -	
09:30 10:30	Keynote Talk: Prof. Gaétan Hains, University Paris-Est Créteil, France - Aula Magna -	
10:30 11:20	Coffee Break	
	Main Track Session 1 (room Nicolae Iorga)	Session SPDBNC (room Tiberiu Popoviciu) Chair: Igor Kotenko
11:20 11:40	HPC Meets Streaming: Benchmarking OpenMPI, Apache Flink, and Apache Storm, <i>Eduardo Machado Martins, Breno Spohr Bernardi, Gabriel Rustick Fim, Renato B. Hoffmann, Gabriele Mencagli and Dalvan Griebler</i>	Digital Twin of an Industrial Control System in the Power Grid: A Platform for Cybersecurity Threat Modeling and Assessment, <i>Igor Kotenko, Igor Saenko and Evgenii Mityakov</i>
11:40 12:00	In-Core, Low-Cost Hardware Transactional Memory, <i>Álvaro Rubira-García, Eduardo José Gómez-Hernández, Rubén Titos-Gil and Alberto Ros</i>	A Lightweight Hybrid Framework for Semantic Normalization of Security Events, <i>Artem Mitelshet and Sergei Savkov</i>
12:00 12:20	ATTUNE: An Autotuning System for Energy-Performance Optimisation of Parallel Applications on Embedded and Mobile Platforms, <i>Yazeed Almalaq and Vladimir Janjic</i>	Application of Genetic Algorithms for Software Decompilation and their Improvement due to Large Language Models, <i>Konstantin Izrailov and Igor Kotenko</i>
12:30 14:00	Lunch Break - Piramida Restaurant	
	Main Track Session 2 (room Nicolae Iorga)	Session SPDBNC (room Tiberiu Popoviciu) Chair: Igor Kotenko
14:00 14:20	Efficient Binary SpMV on GPUs via Binary Word Compression, <i>Simone Staccone, Salvatore Filippone and Luca Pepè Sciarria</i>	A Comparative Analysis of Small-Scale Language Models for Query Filtering in IoT Systems, <i>Vladimir Lavrentiev and Dmitry Levshun</i>
14:20 14:40	Research Data Version Management and Machine-Actionable Reproducibility for HPC, <i>Andreas Knüfper and Timothy J. Callow</i>	A Methodology of Creating Digital Twins to Generate Realistic Datasets for Cybersecurity Incident Investigation, <i>Maxim Gorda, Andrey Chechulin and Igor Kotenko</i>
14:40 15:00	Reproducible Power Method for Computing Dominant Eigenvalue and Eigenvector, <i>Mykhailo Havdiak, Oliver Lagerqvist, Stef Graillat and Roman Iakymchuk</i>	Integrated Architecture for Testing AI Models in Cybersecurity, <i>Evgenia Novikova, Mikhail Kuznetsov and Andrey Chechulin</i>
15:00 15:20	Coffee Break	
	Main Track Session 3 (room Nicolae Iorga)	Session HPCMS (room Tiberiu Popoviciu) Chair: William Spataro
15:20 15:40	On Imperfect Byzantine Common Coins, <i>Silvia Bonomi, Giovanni Farina, Roy Friedman, Eviatar Procaccia and Sebastien Tixeuil</i>	Transparent memory layout management for High Performance Computing, <i>Andrea Giordano, Alessio De Rango, Thomas Garrafa and William Spataro</i>
15:40 16:00	On the Performance Evaluation of Dragonfly Connection Rules, <i>Javier Navaridas and Jose A. Pascual</i>	Accelerating the Particle-In-Cell code ECsim with OpenACC, <i>Elisabetta Boella, Nitin Shukla, Filippo Spiga, Mozghan Kabiri Chimeh, Matt Bettencourt and Maria Elena Innocenti</i>
16:00 16:20	Multi-path Network Support for Unified Communication X (UCX), <i>Tooraj Taraz, Elizabeth Reid and Ryan E. Grant</i>	Performance and Energy-Aware Modeling of Sparse Matrix Multiplication in Social Graph Analysis, <i>Elio Masciari and Enea Vincenzo Napolitano</i>
16:20 16:40	Optimizing the LIGen Drug Discovery Pipeline for Intel Max GPUs, <i>Saleh Jamali Golzar, Lorenzo Carpentieri, Antonio De Caro, Biagio Cosenza, Davide Gadioli, Gianmarco Accordi, Gianluca Palermo, Federico Ficarella, Daniele Gregori and Andrea R. Beccari</i>	A Visualization Module for Transparent Parallel Execution of Cellular Automata, <i>Andrea Giordano, Alessio De Rango, Grzegorz Bazior, Davide Macri, Luigi Rizzo, Rocco Rongo, Jarostaw Wąs, William Spataro and Giuseppe Mendicino</i>
18:00	Welcome Reception - Piramida Restaurant	

PDP 2026 2nd Conference Day
March 26

08:30 09:00	Registration		
09:00 10:00	Keynote Talk: Prof. Radu Prodan, University of Innsbruck, Austria - room Nicolae Iorga -		
10:00 10:30	Coffee Break		
	Main Track Session 4 (room Nicolae Iorga)	Session HPCMS (room Tiberiu Popoviciu) Chair: William Spataro	
10:30 10:50	Evaluating Portable Programming Models for Hypergraph Label Propagation on GPUs, <i>Antonio De Caro, Dario De Maio, Francesco Monzillo, Alessia Antelmi and Biagio Cosenza</i>	Performance analysis of a parallel implementation of the city hotspot detector algorithm, <i>Santina Capalbo, Eugenio Cesario, Paolo Lindia, Federica Lobello and Andrea Vinci</i>	
10:50 11:10	Fast GPU-driven Kernel Launch with Dynamic Thread Allocation for Irregular Applications, <i>Kento Kitamura, Kenji Tanaka and Kazunori Seno</i>	A Multithreaded Implementation of the Analog Ensemble Method Assisted by a k-d Tree, <i>Allan Rodrigues Clementino, Claudio Schepke, Carlos Balsa and José Carlos Rufino Amaro</i>	
11:10 11:30	Infinite Data, Zero I/O: A CUDA-Optimized Framework for On-the-Fly Synthetic Data Generation for Deep Learning Pretraining, <i>Ferran Soler-Guiral, Manuel F. Dolz and José I. Aliaga</i>	Evaluating Deep Models for Motion-Based Authentication in Immersive Environments, <i>Luca Ghiani, Enrico Grosso, Andrea Lagorio, Ruiu Pietro and Giuseppe A. Trunfio</i>	
11:30 11:50	Proxy-Enabled Multi-Transport Connectivity, <i>Nicolò Tonci and Massimo Torquati</i>	Shard-Local Concurrent Hybrid k-d Tree, <i>Kapil Kumar Attinagaramu, Praveen Alapati and Brahmaiah Gandham</i>	
12:00 13:30	Lunch Break - Piramida Restaurant		
13:30 14:30	Keynote Talk: Prof. Marco Aldinucci, University of Turin, Italy - room Nicolae Iorga -		
	Session DT4DC (room Nicolae Iorga) Chair: Lavinia Chiara Tagliabue	Session HPCMS (room Tiberiu Popoviciu) Chair: William Spataro	Session HPC@Edge (room D.V. Ionescu) Chair: Marco Lapegna
14:40 15:00	Real-Time BIM-IoT Synchronization for Operational Digital Twins: The HPC4AI Datacenter Case Study, <i>Viviana Vaccaro, Lavinia Chiara Tagliabue and Robert Birke</i>	Large-scale, mixed-precision brain simulations on heterogeneous accelerators, <i>James Knight, Hengye Zhu and Thomas Nowotny</i>	Exploring Distributed Energy Learning: A Federated, Self-Adapting Framework for Sensor-Free Power Estimation at Scale, <i>Gennaro Mellone, Antonio Caccioppoli, Alberto Savarese, Fabio Angeletti, Pasquale Corvino and Diana Di Luccio</i>
15:00 15:20	Sensor-Driven Digital Twin Architectures for Energy-Efficient Data Centers: The Use Case of EV Charging Infrastructure, <i>Chiara Franzoni, Salvatore Dello Iacono and Stefano Rinaldi</i>	Exploiting Warp-Level Parallelism for High-Order Finite Element Computations on GPUs, <i>Balint Marton Nyakas, Dennis Giannacopoulos and Zeljko Zilic</i>	Reinforcement Learning-Based Dynamic Management of Structured Parallel Farm Skeletons on Serverless Platforms, <i>Lanpei Li, Massimo Coppola, Mallo Li, Valerio Besozzi, Jack Bell and Vincenzo Lomonaco</i>
15:20 15:40	Preliminary Life Cycle Assessment of a High-Performance Computing Data Center: A Case Study of the HPC4AI Facility at the University of Turin, <i>Lavinia Chiara Tagliabue, Viviana Vaccaro, Alessandro Zichi, Robert Birke and Marco Aldinucci</i>	Evaluating Performance in Transformer and Rule-Based Sentiment Analysis Models, <i>Maria Chiara Martinis, Chiara Zucco and Mario Cannataro</i>	Joint Resource-Aware Scheduling for Peer-to-Peer Stream Processing at the Edge, <i>Mastaneh Bahmani and Julien Gascon-Samson</i>
15:40 16:00	Coffee Break		
	Session DT4DC (room Nicolae Iorga) Chair: Lavinia Chiara Tagliabue	Session HPCMS (room Tiberiu Popoviciu) Chair: William Spataro	
16:00 16:20	LEED Certification and Data Centers: A Critical Assessment of Building Sustainability Rating Systems for HPC Facilities, <i>Lavinia Chiara Tagliabue, Viviana Vaccaro, Alessandro Zichi and Silvia Meschini</i>	Scalability and Energy Profiling of GNNs on Heterogeneous Hardware: Jetson vs x86, <i>Luca Barillaro, Chiara Zucco, Marianna Milano, Giuseppe Agapito and Mario Cannataro</i>	
16:20 16:40	Digital Twin for DCs: a reference architecture based on BIM, IoT and analytics control, <i>Silvia Meschini, Paola Gasbarri, Lavinia Chiara Tagliabue, Viviana Vaccaro, Robert Birke and Marco Aldinucci</i>	From Molecules to Metrics: Parallel MO-Dijkstra for Multi-Objective Shortest Paths in Biology, <i>Giuseppe Agapito, Mario Cannataro and Francesco Rania</i>	
16:40 17:00	Simulation Model Tracking System: a Digital Twin-based technology to improve the thermal performance of Data Centres, <i>Sergio Velásquez Correa, Rossano Scocchia, Marcello Aprile, Pablo Vicente Legazpi and Eduard Loscos Domingo</i>	An Efficient and Scalable Federated Graph Neural Network Architecture for Information Operation Detection, <i>Gianluigi Follino, Marco Minici, Pietro Sabatino and Michele Scinarido Tengi</i>	
17:30 19:30	City Tour (starting point: front of the UBB Main Building)		
19:30	Conference Dinner Restaurant Panoramic Cetățuie		

PDP 2026 3rd Conference Day
March 27

08:30 09:00	Registration	
09:00 10:00	Keynote Talk: Prof. Dana Petcu, West University of Timisoara, Romania - room Nicolae Iorga -	
10:00 10:40	Sponsor talk: Brinel - HPE - NVidia	
10:40 11:00	Coffee Break	
	Main Track Session 5 (room Nicolae Iorga)	Session QC (room Tiberiu Popoviciu) Chair: Tudor Mihoc
11:00 11:20	<i>Scalable Pipeline Parallel Training of Neural Networks using Reversibility, Ryota Miyagi, Kensuke Setsu, Kentaro Sano, Hiroshi Nakamura and Hideki Takase</i>	<i>Distributed Quantum-DNA Hybrid Architectures for Scalable Molecular Computing, Vasile Vancea</i>
11:20 12:40	<i>Accelerating Large-Scale Bayesian Network Structure Learning on GPU via Data Access Reduction, Akira Namekata, Ryota Miyagi, Hirotaka Nishikori, Hiroshi Nakamura and Hideki Takase</i>	<i>Scalable Quantum Inspired Evolutionary Algorithm for Multi-Objective Optimization Real World Problems, Olivian-Antonio Gilea, Adrian Florea, Claudia Banciu and Alexandru Telcean</i>
12:40 13:00	<i>Unlocking Parallel Efficiency in Monte Carlo Particle Transport Applications on Manycore Architectures, Mina Warnet, Adrien Rousset, Marc Perache and Michael Krajecki</i>	<i>Exploring Geometric Lattice-Inspired Distribute Quantum Computing: Analogies with Hydrophobic-Polar Models and Qubit Routing, Ioan Sima</i>
13:00 13:20	<i>Enabling AI Deep Potentials for Ab Initio-quality Molecular Dynamics Simulations in GROMACS, Andong Hu, Luca Pennati, Stefano Markidis and Ivy Peng</i>	<i>Quantum-Assisted Regression for Overall Survival Modeling in Acute Myeloid Leukemia, Tudor Mihoc and Rodica Ioana Lung</i>
13:30 15:00	Lunch Break - Piramida Restaurant	
15:00 15:30	Awards and conclusions	