



PDP 2016

Heraklion, Crete, Greece
17th - 19th February 2016

Conference Programme

24th Euromicro International
Conference on Parallel, Distributed,
and Network-Based Processing





Registration

Tuesday 16th February from **18:30** to **20:00** - Welcome drink

Wednesday 17th February from **7:45** to **8:45**

Presentations

(R) refers to regular papers with 30' presentations

(S) refers to short papers with 15' presentations

Allow time for questions after each presentation.

Please contact the chair person(s) before the beginning of the sessions.



Conference Programme at a glance

	Wed. 17 Feb.			Thu. 18 Feb.			Fri. 19 Feb.		
07:45	Registration								
08:45	Conference Opening								
09:00	1. S&A	2. M&T	3. 4PAD	13. BigData	14. M&T	15. GPU	25. AA&A	26. M&T	27. MC3
10:00	Invited Talk 1 Prof. Nektarios Koziris			Invited Talk 2 Prof. Michael Resch			Invited Talk 3 Prof. Marios Dikaiakos		
11:00	Coffee Break			Coffee Break			Coffee Break		
11:30	4. S&A	5. D&NC	6. GPU	16. S&A	17. AA&A	18. HPCMS	28. S&A	29. D&NC	30. SPDNBS
13:00	Lunch			Lunch			Lunch		
14:30	7. S&A	8. BigData	9. EnergM	19. BigData	20. M&T	21. OC PNS	31. AA&A	32. MC3	33. WIP
16:30	Coffee Break			Coffee Break			Coffee Break		
17:00	10. SPDNBS	11. HPCMS	12. GPU	22. BioInf	23. EnergM	24. 4PAD	34. SPDNBS	35. OC PNS	36. CCISA
18:30	End of Presentations			End of Presentations			End of Conference		

PDP 2016 - Topics

BigData	Big Data	sessions	8, 13, 19
AA&A	Advanced Algorithms and Applications		17, 25, 31
M&T	Models and Tools		2, 14, 20, 26
D&NC	Distributed and Network-based Computing		5, 29
S&A	Systems and Architectures		1, 4, 7, 16, 28

Special Sessions

BioInf	Advances in High-Performance Bioinformatics, Systems and Synthetic Biology	22
CCISA	Cloud Computing on Infrastructure as a Service and its Applications	36
EnergM	Energy Efficient Management of Parallel Systems, Platforms and Computations	9, 23
4PAD	Formal Approaches to Parallel and Distributed Systems	3, 24
GPU	GPU Computing and Many Integrated Core Computing	6, 12, 15
HPCMS	High Performance Computing in Modelling and Simulation	11, 18
MC3	Multi-Core and Many-Core systems for Embedded Computing	27, 32
OC PNS	On-Chip Parallel and Network-Based Systems	21, 35
SPDNBS	Security in Parallel, Distributed and Network-Based Computing	10, 30, 34
WIP	<i>Work in Progress</i>	33

Conference Rooms

Sessions in **1st column** of each day, Conference opening and invited talks in **MINOS II**

Sessions in **2nd column** of each day in **PASIPHAE I**

Sessions in **3rd column** of each day in **PASIPHAE II**



PDP 2016 Conference Programme

Wednesday 17 February

Time	Event	Hall
07:45	Registration	
08:45	Conference Opening	MINOS II
09:00 - 10:00	<p>SESSION 1 Systems and Architectures [Chair: Marco Danelutto]</p> <ul style="list-style-type: none"> Massively Concurrent Red-Black Trees with Hardware Transactional Memory (R) <i>Dimitrios Siakavaras, Konstantinos Nikas, Georgios Goumas and Nectarios Koziris</i> Improving Performance of Transactional Applications through Adaptive Transactional Memory (R) <i>Thirshan Jeyakumaran, Ehsan Atoofian, Yang Xiao, Zhen Li and Ali Jannesari</i> 	MINOS II
09:00 - 10:00	<p>SESSION 2 Models and Tools [Chair: Georgios Ch. Sirakoulis]</p> <ul style="list-style-type: none"> DKPN: A Composite Dataflow/Kahn Process Networks Execution Model (R) <i>Paul-Antoine Arras, Didier Fuin, Emmanuel Jeannot and Samuel Thibault</i> Simulating Search Protocols in Large-Scale Dynamic Networks (R) <i>Spiridoula V. Margariti and Vassilios V. Dimakopoulos</i> 	PASIPHAE I
09:00 - 10:00	<p>SESSION 3 Formal Approaches to Parallel and Distributed Systems [Chair: Enrico Tronci]</p> <ul style="list-style-type: none"> Reasoning about Fences and Relaxed Atomics (R) <i>Mengda He, Viktor Vafeiadis, Shengchao Qin and Joao F. Ferreira</i> Choreography-Based Analysis of Distributed Message Passing Programs (R) <i>Ramsay Taylor, Emilio Tuosto, Neil Walkinshaw and John Derrick</i> 	PASIPHAE II



Wednesday 17 February

Time	Event	Hall
10:00	<p>Invited Talk 1 [Chair: Yiannis Cotronis] <i>Prof. Nektarios Koziris</i> School of Electrical and Computer Engineering Department of Computer Science, NTUA</p> <p>Title: "Fifty years of evolution in virtualization technologies: From the first IBM machines to the modern hyperconverged infrastructures"</p>	MINOS II
11:00	Coffee Break	
11:30 - 13:00	<p>SESSION 4 Systems and Architectures [Chair: Hamid Sarbazi-Azad]</p> <ul style="list-style-type: none"> • An Accurate Analytical Design Model for Multithreaded Network Processors (R) <i>Mohamad Hafezan and Leila Beigi</i> • A Cluster-based Method to Detect and Correct Anomlies in Sensor Data of Embedded Systems (R) <i>Roghayeh Mojarad, Hossain Kordestani and Hamidreza Zarandi</i> • Clustering Effects on the Design of Opto-Electrical Network-On-Chip (S) <i>Meisam Abdollahi, Alireza Namazi and Siamak Mohammadi</i> • VANET Event Verification Based on User Trust (S) <i>Alexandra Rivero-García, Iván Santos-González, Pino Caballero-Gil and Cándido Caballero-Gil</i> • X-ray Computed Tomography Applied to Objects of Cultural Heritage: Porting and Testing the Filtered Back-Projection Reconstruction Algorithm on Low Power Systems-On-Chip (S) <i>Elena Corni, Lucia Morganti, Maria Pia Morigi, Rossella Brancaccio, Eva Peccenini, Matteo Bettuzzi, Daniele Cesini, Giuseppe Levi and Andrea Ferraro</i> 	MINOS II
11:30 - 13:00	<p>SESSION 5 Distributed and Network-based Computing [Chair: Julien Bourgeois]</p> <ul style="list-style-type: none"> • QuLa: Service Selection and Forwarding Table Population in Service-Centric Networking Using Real-life Topologies (R) <i>Piet Smet, Bart Dhoedt and Pieter Simoens</i> • RGBCC: A New Congestion Control Mechanism for InfiniBand (R) <i>Qian Liu and Robert Russell</i> • Dimension Reduction Methods for Collaborative Mobile Gossip Learning (S) <i>Árpád Berta, István Hegedűs and Mark Jelasity</i> 	PASIPHAE I



Wednesday 17 February

Time	Event	Hall
11:30 - 13:00	<p>SESSION 6 GPU Computing and Many Integrated Core Computing [Chair: Ivan Merelli]</p> <ul style="list-style-type: none"> GPU Acceleration of Smoothed Particle Hydrodynamics on the Navier-Stokes Equations (R) <i>Yingrui Wang, Leisheng Li, Jingtao Wang and Rong Tian</i> Evaluation of Splitting-Up Conjugate Gradient Method on GPUs (R) <i>Akiyoshi Wakatani</i> Impact of Memory-Level Parallelism on the Performance of GPU Coherence Protocols (S) <i>Francisco Candel, Salvador Petit, Julio Sahuquillo and Jose Duato</i> GPU-Accelerated Texture Analysis Using Steerable Riesz Wavelets (S) <i>Anamaria Vizitiu, Lucian Mihai Itu, Ranveer Joyseeree, Adrien Depeursinge, Henning Müller and Constantin Suciu</i> 	PASIPHAE II
13:00	Lunch	
14:30 - 16:30	<p>SESSION 7 Systems and Architectures [Chair: Marco DaneLutto]</p> <ul style="list-style-type: none"> The Efficient In-band Management for Interconnect Network in Tianhe-2 System (R) <i>Jijun Cao</i> Exploring Energy Reduction in Future Technology Nodes via Voltage Scaling with Application to 10nm (R) <i>Gulay Yalcin, Santhosh Kumar Rethinagiri, Oscar Palomar, Osman Unsal, Adrian Cristal and Dragomir Milojevic</i> Service-Guaranteed Multi-Port Packet Memory for Parallel Protocol Processing Architecture (S) <i>Mohammad Badawi, Zhonghai Lu and Ahmed Hemani</i> Lessons Learned from Spatial and Temporal Correlation of Node Failures in High Performance Computers (S) <i>Siavash Ghiasvand, Florina M. Ciorba, Ronny Tschüter and Wolfgang E. Nagel</i> Stochastic Thermal Control of a Multicore Real-Time System (R) <i>Morteza Mohaqeqi, Mehdi Kargahi and Kazim Fouladi</i> 	MINOS II
14:30 - 16:30	<p>SESSION 8 Big Data [Chair: Konrad Kloeckner]</p> <ul style="list-style-type: none"> Row Key Designs of NoSQL Database Tables and Their Impact on Write Performance (R) <i>Eftim Zdravevski</i> Cloud-based NoSQL Data Migration (R) <i>Aryan BanseI, Horacio González-Vélez and Adriana E. Chis</i> 	PASIPHAE I



Wednesday 17 February

Time	Event	Hall
	<ul style="list-style-type: none"> • Estimation Models for NoSQL Database Consistency Characteristics (R) <i>Aleksey Burdakov, Uriy Grigorev, Andrey Ploutenko and Eugene Tsviashchenko</i> • Approximate Query Processing Using Wavelets in OLAP with Arbitrarily Sized Data and Bounded Errors (R) <i>Andrey Ukharov, Aleksey Burdakov, Uriy Grigorev and Andrey Plutenko</i> 	PASIPHAE I
14:30 - 16:30	<p>SESSION 9 Energy Efficient Management of Parallel Systems, Platforms and Computations [Chair: Tim Süß]</p> <ul style="list-style-type: none"> • How much does a VM cost? Energy-proportional Accounting in VM-based Environments (R) <i>Mascha Kurpicz, Anne-Cecile Orgerie and Anita Sobe</i> • On Exploiting Energy-Aware Scheduling Algorithms for MDE-based Design Space Exploration of MP2SoC (R) <i>Manel Ammar, Mouna Baklouti, Maxime Pelcat, Karol Desnos and Mohamed Abid</i> • Exploration of Mesh-based FPGA Architecture: Comparison of 2D and 3D Technologies in terms of Power, Area and Performance (R) <i>Sonda Chtourou, Zied Marrakchi, Emna Amouri, Vinod Pangracious, Mohamed Abid and Habib Mehrez</i> • Energy Efficient Scheduling of Real Time Signal Processing Applications Through Combined DVFS and DPM (S) <i>Erwan Nagues, Maxime Pelcat, Daniel Menard and Alexandre Mercat</i> • Energy Aware Scheduling of HPC Tasks in Decentralised Cloud Systems (S) <i>Aeshah Alsughayyir and Thomas Erlebach</i> 	PASIPHAE II
16:30	Coffee Break	
17:00 - 18:30	<p>SESSION 10 Security in Parallel, Distributed and Network-Based Computing [Chair: Vasily Desnitsky]</p> <ul style="list-style-type: none"> • Dynamical Calculation of Security Metrics for Countermeasure Selection in Computer Networks (R) <i>Igor Kotenko and Elena Doynikova</i> • Application of a Technique for Secure Embedded Device Design Based on Combining Security Components for Creation of a Perimeter Protection System (R) <i>Vasily Desnitsky, Andrey Chechulin, Igor Kotenko, Dmitry Levshun and Maxim Kolomeec</i> • Formal Analysis and Model Checking of a Group Authentication Protocol by Scyther (S) <i>Huihui Yang, Andreaz Prinz and Vladimir Oleshchuk</i> • Efficient Attribute Management in a Federated Identity Management Infrastructure (S) <i>Diana Berbecaru</i> 	MINOS II



Wednesday 17 February

Time	Event	Hall
17:00 - 18:30	<p>SESSION 11</p> <p>High Performance Computing in Modelling and Simulation [Chairs: William Spataro, Georgios Ch. Sirakoulis, Donato D'Ambrosio, Giuseppe A. Trunfio]</p> <ul style="list-style-type: none"> Parallel Execution of Space-Aware Applications in a Cloud Environment (R) <i>Franco Cicirelli, Agostino Forestiero, Andrea Giordano, Carlo Mastroianni and Giandomenico Spezzano</i> Transactional Memory Scheduling Using Machine Learning Techniques (R) <i>Basem Assiri and Costas Busch</i> Using Nested Graphs to Distribute Parallel and Distributed Multi-Agent Systems (R) <i>Alban Rousset, Laurent Philippe, Christophe Lang, Bénédicte Herrmann and Hadrien Bride</i> 	PASIPHAE I
17:00 - 18:30	<p>SESSION 12</p> <p>GPU Computing and Many Integrated Core Computing [Chair: Peter Kilpatrick]</p> <ul style="list-style-type: none"> Optimal Time and Energy Efficient Work Distributions in Heterogeneous Systems (R) <i>Valon Raca, Eduard Mehofer and Marcus Hudec</i> An OpenACC Optimizer for Accelerating Histogram Computation on a GPU (R) <i>Kei Ikeda, Fumihiko Ino and Kenichi Hagihara</i> Accelerating Dynamic Fault Tree Analysis Based on Stochastic Logic Utilizing GPGPUs (S) <i>Elham Cheshmikhani and Hamid R. Zarandi</i> 	PASIPHAE II
18:30	End of Presentations	

* Welcome Reception at 20:00



Thursday 18 February

Time	Event	Hall
09:00 - 10:00	<p>SESSION 13 Big Data [Chair: Rika Ito]</p> <ul style="list-style-type: none"> Assessing Big Data SQL Frameworks for Analyzing Event Logs (R) <i>Markku Hinkka, Teemu Lehto and Keijo Heljanko</i> Exact vs Approximated Diameter Calculation in Large Graphs (R) <i>Francisco Sanches Banhos Filho and Eduardo Javier Huerta Yero</i> 	MINOS II
09:00 - 10:00	<p>SESSION 14 Models and Tools [Chair: Georgios Ch. Sirakoulis]</p> <ul style="list-style-type: none"> Bio-inspired Call-Stack Reconstruction for Performance Analysis (R) <i>Harald Servat, Germán Llorc, Juan González, Judit Giménez and Jesús Labarta</i> Predicting Performance and Power Consumption of Parallel Applications (R) <i>Daniele De Sensi</i> 	PASIPHAE I
09:00 - 10:00	<p>SESSION 15 GPU Computing and Many Integrated Core Computing [Chair: Maurizio Drocco]</p> <ul style="list-style-type: none"> A Quantitative Performance Evaluation of Fast On-chip Memories of GPUs (R) <i>Elias Konstantinidis and Yiannis Cotronis</i> Microbenchmarks for GPU Characteristics: The Occupancy Roofline and the Pipeline Model (R) <i>Jan Lemeire, Jan G. Cornelis and Laurent Segers</i> 	PASIPHAE II
10:00	<p>Invited Talk 2 [Chair: Konrad Kloeckner] <i>Prof. Michael Resch</i> <i>HPC Center Stuttgart (HLRS) and Institute for HPC, University of Stuttgart</i></p> <p>Title: The end of Moore's Law: Moving on in HPC beyond current technology</p>	MINOS II
11:00	Coffee Break	
11:30 - 13:00	<p>SESSION 16 Systems and Architectures [Chair: Masoud Daneshtalab]</p> <ul style="list-style-type: none"> A Simple Activation/Deactivation Prefetching Scheme for Chip Multiprocessors (R) <i>Vicent Selfa, Crispin Gomez Requena, Maria Gomez and Julio Sahuquillo</i> 	MINOS II



Thursday 18 February

Time	Event	Hall
	<ul style="list-style-type: none"> • Communication in Shared Memory: Concepts, Definitions and Efficient Detection (R) <i>Matthias Diener, Eduardo Cruz, Marco Antonio Zanata Alves and Philippe Navaux</i> • Specific Read-only Data Management for Memory System Optimization (S) <i>Gregory Vaumourin, Alexandre Guerre, Thomas Dombek and Denis Barthou</i> • Thread Progress Aware Block Migration for Dynamic NUCA (S) <i>Jianhua Li, Xin An, Yiming Ouyang and Wei Wang</i> 	MINOS II
11:30 - 13:00	<p>SESSION 17 Advanced Algorithms and Applications [Chair: Julien Bourgeois]</p> <ul style="list-style-type: none"> • Exploring Parallel Implementations of the Bayesian Probabilistic Matrix Factorization (R) <i>Imen Chakroun, Tom Haber, Tom Vander Aa and Thomas Kovac</i> • A K-way Greedy Graph Partitioning with Initial Fixed Vertices for Parallel Applications (R) <i>Maria Predari and Aurelien Esnard</i> • A General Purpose Branch and Bound Parallel Algorithm (S) <i>Alexandros Dimopoulos, Christos Pavlatos and George Papakonstantinou</i> • Distributed Communication System for Emergencies (S) <i>Iván Santos-González, Pino Caballero-Gil, Alexandra Rivero-García and Candelaria Hernández Goya</i> 	PASIPHAE I
11:30 - 13:00	<p>SESSION 18 High Performance Computing in Modelling and Simulation [Chairs: William Spataro, Georgios Ch. Sirakoulis, Donato D'Ambrosio, Giuseppe A. Trunfio]</p> <ul style="list-style-type: none"> • Computing Multiple Accumulated Cost Surfaces with Graphics Processing Units (R) <i>Giuseppe A. Trunfio and Georgios Ch. Sirakoulis</i> • Parallel Implementation of a Cellular Automata-based Model for Assisted Evacuation of Elderly People (R) <i>Konstantina Konstantara, Nikolaos Dourvas, Ioakeim Georgoudas and Georgios Ch. Sirakoulis</i> • Multi-Agent System with Multiple Group Modelling for Bird Flocking on GPU (R) <i>Rahmat Hidayat, Davide Spataro, Elisa De Giorgio, William Spataro and Donato D'Ambrosio</i> 	PASIPHAE II
13:00	Lunch	
14:30 - 16:30	<p>SESSION 19 Big Data [Chair: Rika Ito]</p> <ul style="list-style-type: none"> • Black-box Optimization of Hadoop Parameters Using Derivative-free Optimization (R) <i>Diego Desani, Veronica Gil Costa, Cesar A.C. Marcondes and Hermes Senger</i> 	MINOS II



Thursday 18 February

Time	Event	Hall
	<ul style="list-style-type: none"> • Efficiency Experiments on Hadoop and Giraph with PageRank (S) <i>Arne Koschel, Felix Heine, Irina Astrova, Fred Korte, Thomas Rossow and Sebastian Stipkovic</i> • Detecting Events in Streaming Multimedia with Big Data Techniques (S) <i>José Herrera and Germán Moltó</i> 	MINOS II
14:30 - 16:30	<p>SESSION 20 Models and Tools [Chair: Horacio Gonzalez-Velez]</p> <ul style="list-style-type: none"> • RPL: A Domain-Specific Language for Designing and Implementing Parallel C++ Applications (R) <i>Vladimir Janjic, Christopher Brown, Kevin Hammond, Kenneth Mackenzie, Marco Aldinucci, Marco Danelutto and Jose Daniel Garcia Sanchez</i> • Introducing Parallelism by using REPARA C++11 Attributes (S) <i>Marco Danelutto, Jose Daniel Garcia, Luis Miguel Sanchez, Rafael Sotomayor and Massimo Torquati</i> • Efficient Execution of SkePU Skeleton Programs on the Low-power Multicore Processor Myriad2 (S) <i>Sebastian Thorarensen, Rosandra Cuello, Christoph Kessler, Lu Li and Brendan Barry</i> • A Cluster-As-Accelerator Approach for SPMD-free Data Parallelism (S) <i>Maurizio Drocco, Claudia Misale and Marco Aldinucci</i> • A Flexible Profiling Sub-system for Reconfigurable Logic Architectures (S) <i>Giacomo Valente, Marco Faccio, Fabio Federici, Luigi Pomante, Vittoriano Muttillio, Serenella Ferri and Andrea Moro</i> • Suitability of the Random Topology for HPC Applications (S) <i>Fabien Chaix, Michihiro Koibuchi and Ikki Fujiwara</i> • SOF: Zero Configuration Simulation Optimization Framework on the Cloud (S) <i>Michele Carillo, Gennaro Cordasco, Vittorio Scarano, Flavio Serrapica, Carmine Spagnuolo and Przemyslaw Szufel</i> 	PASIPHAE I
14:30 - 16:30	<p>SESSION 21 On-Chip Parallel and Network-Based Systems [Chairs: Hamid Sarbazi-Azad, Masoumeh Ebrahimi, Masoud Daneshtalab, Nader Bagherzadeh]</p> <ul style="list-style-type: none"> • Efficient Congestion-Aware Scheme for Wireless On-Chip Networks (R) <i>Amin Rezaei, Masoud Daneshtalab, Maurizio Palesi and Danella Zhao</i> • Globally Asynchronous Locally Synchronous Simulation of NoCs on Many-Core Architectures (R) <i>Marcus Eggenberger, Manuel Strobel and Martin Radetzki</i> • Evaluation of the Memory Communication Traffic in a Hierarchical Cache Model for Massively-Manycore Processors (R) <i>Sharifa Al Khanjari and Wim Vanderbauwhede</i> 	PASIPHAE II



Thursday 18 February

Time	Event	Hall
	<ul style="list-style-type: none"> • A Method to Improve Adaptivity of Odd-even Routing Algorithm in Mesh NoCs (S) <i>Mohammad Sadrosadati, Ramin Bashizade, Shahin Roozkhosh, Ali Shafiee and Hamid Sarbazi-Azad</i> • A Hardware Scheduler for Multicore Block Cipher Processor (S) <i>Sang Muk Lee, Eun Nu Ri Ko and Seung Eun Lee</i> 	PASIPHAE II
16:30	Coffee Break	
17:00 - 18:30	<p>SESSION 22</p> <p>Advances in High-Performance Bioinformatics, Systems and Synthetic Biology [Chairs: Daniele D'Agostino, Ivan Merelli]</p> <ul style="list-style-type: none"> • MicroRNA-target Interaction: A Parallel Approach for Computing Pairing Energy (R) <i>Elisabetta Ronchieri, Daniele D'Agostino, Luciano Milanese and Ivan Merelli</i> • A Machine Learning Approach for the Integration of miRNA-target Predictions (R) <i>Stefano Beretta, Mauro Castelli, Yuliana Martinez, Ivan Merelli, Luis Munoz, Sara Silva and Leonardo Trujillo</i> • Evaluating Systems on Chip through HPC Bioinformatic and Astrophysic Applications (S) <i>Lucia Morganti, Daniele Cesini and Andrea Ferraro</i> 	MINOS II
17:00 - 18:30	<p>SESSION 23</p> <p>Energy Efficient Management of Parallel Systems, Platforms and Computations [Chair: Tim Süß]</p> <ul style="list-style-type: none"> • Bag-of-Task Load Balancing on Power-aware Clusters (R) <i>George Terzopoulos and Helen Karatza</i> • Improving the Energy Efficiency of MPI Applications by Means of Malleability (R) <i>Manuel Rodriguez-Gonzalo, David E. Singh, Javier Garcia Blas and Jesus Carretero</i> • Energy-Aware Programming Model for Distributed Infrastructures (S) <i>Francesc-Josep Lordan Gomis, Jorge Ejarque, Raül Sirvent and Rosa M. Badia</i> 	PASIPHAE I
17:00 - 18:30	<p>SESSION 24</p> <p>Formal Approaches to Parallel and Distributed Systems [Chair: Enrico Tronci]</p> <ul style="list-style-type: none"> • VerCors: a Layered Approach to Practical Verification of Concurrent Software (R) <i>Afshin Amighi, Stefan Blom and Marieke Huisman</i> • Towards a General Framework for Ensuring and Reusing Proofs of Termination Detection in Distributed Computing (R) <i>Maha Boussabbeh, Mohamed Tounsi, Ahmed Hadj Kacem and Mohamed Mosbah</i> • Program Transformation to Identify Parallel Skeletons (R) <i>Venkatesh Kannan and Geoff Hamilton</i> 	PASIPHAE II
18:30	End of Presentations	

* Banquet at 19:45



Friday 19 February

Time	Event	Hall
09:00 - 10:00	SESSION 25 Advanced Algorithms and Applications [Chair: Benoît Piranda] <ul style="list-style-type: none"> The UA \leftrightarrow CG Workflow: High Performance Molecular Dynamics of Coarse-Grained Polymers (R) <i>David Ozog, Allen Malony and Marina Guenza</i> A Distributed Algorithm for Reconfiguration of Lattice-based Modular Self-Reconfigurable Robots (R) <i>Benoît Piranda and Julien Bourgeois</i> 	MINOS II
09:00 - 10:00	SESSION 26 Models and Tools [Chair: Georgios Ch. Sirakoulis] <ul style="list-style-type: none"> Transient Temperature Prediction for Aging Thermal Sensors Using Artificial Neural Network (R) <i>Kameswar Rao Vaddina, Juan M. Cebrian and Lasse Natvig</i> Analyzing Data-Error Propagation Effects in High-Performance Computing (S) <i>Gladys Utrera, Marisa Gil and Xavier Martorell</i> 	PASIPHAE I
09:00 - 10:00	SESSION 27 Multi-Core and Many-Core systems for Embedded Computing [Chair: Amir Rahmani] <ul style="list-style-type: none"> Using an Intermediate Representation to map Workloads on Heterogeneous Parallel Systems (R) <i>Nicolas Benoit and Stephane Louise</i> Avionics Applications on a Time-predictable Chip-Multiprocessor (R) <i>Andre Rocha, Claudio Silva, Rasmus Bo Sørensen, Jens Sparsoe and Martin Schoeberl</i> 	PASIPHAE II
10:00	Invited Talk 3 [Chair: Masoud Daneshtalab] <i>Prof. Marios Dikaiakos</i> <i>Department of Computer Science, University of Cyprus</i> Title: Is the Cloud a Public Utility?	MINOS II
11:00	Coffee Break	
11:30 - 13:00	SESSION 28 Systems and Architectures [Chair: Tomas Nordström] <ul style="list-style-type: none"> Randomizing Packet Memory Networks for Low-latency Processor-memory Communication (R) <i>Daichi Fujiki, Hiroki Matsutani, Michihiro Koibuchi and Hideharu Amano</i> A Hardware Approach to Detect, Expose and Tolerate High Level Data Races (R) <i>Lois Orosa Nogueira and João Lourenço</i> 	MINOS II



Friday 19 February

Time	Event	Hall
	<ul style="list-style-type: none"> • Exploring Cache Size and Core Count Tradeoffs in Systems with Reduced Memory Access Latency (S) <i>Paulo Cesar Santos, Marco Antonio Zanata Alves, Matthias Diener, Luigi Carro and Philippe Navaux</i> • Exploiting Very-Wide Vectors on Intel Xeon Phi with Lattice-QCD kernels (S) <i>Andreas Diavastos, Giannos Stylianou and Giannis Koutsou</i> 	MINOS II
11:30 - 13:00	<p>SESSION 29 Distributed and Network-based Computing [Chair: Hamid Sarbazi-Azad]</p> <ul style="list-style-type: none"> • PICA: Multi-Population Implementation of Parallel Imperialist Competitive Algorithms (R) <i>Amin Majd, Shahriar Lotfi, Golnaz Sahebi, Masoud Daneshtalab and Juha Plosila</i> • Conch: A Cyclic MapReduce Model for Iterative Applications (R) <i>Ran Zheng, Genmao Yu, Hai Jin, Xuanhua Shi and Qin Zhang</i> • Implementing the Open Community Runtime for Shared-Memory and Distributed-Memory Systems (S) <i>Jiri Dokulil, Martin Sandrieser and Siegfried Benkner</i> • Neighbor Detection Based on Multiple Virtual Mobile Nodes (S) <i>Behnaz Bostanipour and Benoit Garbinato</i> 	PASIPHAE I
11:30 - 13:00	<p>SESSION 30 Security in Parallel, Distributed and Network-Based Computing [Chair: Vasily Desnitsky]</p> <ul style="list-style-type: none"> • Parallel Improved Schnorr-Euchner Enumeration SE++ for the CVP and SVP (R) <i>Fábio Correia, Artur Mariano, Alberto Proenca, Christian Bischof and Erik Agrell</i> • Enhancing the Scalability and Memory Usage of HashSieve on Multi-core CPUs (R) <i>Artur Mariano and Christian Bischof_ Insights into Encrypted</i> • Network Connections: Analyzing Remote Desktop Protocol Traffic (S) <i>Martin Ussath, Feng Cheng and Christoph Meinel</i> • Validating a Suite for a Model Based Simulation of Attack Chains (S) <i>Fabrizio Baiardi, Federico Tonelli and A.D. Ruggiero Di Biase</i> 	PASIPHAE II
13:00	Lunch	
14:30 - 16:30	<p>SESSION 31 Advanced Algorithms and Applications [Chair: Julien Bourgeois]</p> <ul style="list-style-type: none"> • A Time Synchronization Protocol for Modular Robots (R) <i>André Naz, Benoît Piranda, Seth Copen Goldstein and Julien Bourgeois</i> • HPSVM: Heterogeneous Parallel SVM with Factorization Based IPM Algorithm on CPU-GPU Cluster (R) <i>Tao Li, Xuechen Liu, Qiankun Dong, Wenjing Ma and Kai Wang</i> 	MINOS II



Friday 19 February

Time	Event	Hall
	<ul style="list-style-type: none"> Analyzing and Improving Memory Access Patterns of Large Irregular Applications on NUMA Machines (S) <i>Artur Mariano, Matthias Diener, Christian Bischof and Philippe Navaux</i> Optimized Belief Propagation Algorithm Onto Embedded Multi and Many-core Systems for Stereo Matching (S) <i>Jean-François Nezan, Alexandre Mercat, Patrice Delmas and Georgy Gimel Farb</i> A Study of the Dynamic Characteristics of Software Implementation as an Essential Part for a Universal Description of Algorithm Properties (S) <i>Alexander Antonov, Vadim Voevodin, Vladimir Voevodin and Aleksey Teplov</i> 	MINOS II
14:30 - 16:30	<p>SESSION 32 Multi-Core and Many-Core systems for Embedded Computing [Chair: Amir Rahmani]</p> <ul style="list-style-type: none"> Gate Merging: An NBTI Mitigation Method to Eliminate Critical Internal Nodes in Digital Circuits (R) <i>Maryam Ghane and Hamid R. Zarandi</i> Improving Latency in a Signal Processing System on the Epiphany Architecture (R) <i>Peter Brauer, Martin Lundqvist and Aare Mällo</i> An Efficient Soft Error Detection in Multicore Processors Running Server Applications (S) <i>Alireza Tajary and Hamid R. Zarandi</i> ALMOS Many-Core Operating System Extension with New Secure-Enable Mechanisms for Dynamic Creation of Secure Zones (S) <i>Maria Méndez Real, Vincent Migliore, Vianney Lapotre and Guy Gogniat</i> Novel Heuristic Mapping Algorithms for Design Space Exploration of Multiprocessor Embedded Architectures (S) <i>Sima Sinaei and Omid Fatemi</i> Towards Architectural Design Space Exploration for Heterogeneous Manycores (S) <i>Benard Xypolitidis, Rudin Shabani, Satej Khandeparkar, Zain Ul-Abdin, Suleyman Savas and Tomas Nordström</i> 	PASIPHAE I
14:30 - 16:30	<p>SESSION 33 Work in Progress [Chairs: Kart-Erwin Grosspietsch, Konrad Kloeckner]</p> <ul style="list-style-type: none"> Many-Core Design for Data-Flow Execution Using the SWitches Prototype Implementation <i>Andreas Diavastos, Pedro Trancoso</i> Applying Temporal Blocking to Out-of-Core Stencil Computation with Open ACC <i>Nobuhiro Miki, Fumihiko Ino, Kenichi Hagihara</i> Analytical Model for the Evaluation of Business Processes Elasticity in the Cloud <i>Lydia Yataghene, Malika Ioualalen, Mourad Amziani, Samir Tata</i> 	PASIPHAE II



Friday 19 February

Time	Event	Hall
	<ul style="list-style-type: none"> • Towards a Denotational Semantics for Parameterized Networks of Processes <i>Siqi Li, Huibiao Zhu, Eric Madelaine</i> • Low-Cost Indoor Positioning System for Car Parks <i>Iván Santos-González, Pino Caballero-Gil, Alexandra Rivero-García, Candelaria Hernández-Goya</i> • Traffic Light Priority System Based on the Presence of Emergency Vehicles <i>Alexandra Rivero-García, Pino Caballero-Gil, Iván Santos-González, Candelaria Hernández-Goya, Jezabel Molina-Gil</i> • A Hardware Failure Prediction System Using Big Data Analysis <i>Rika Ito, Naoyuki Fujita</i> • Explorations in Fault-Accommodation to Enable Scalable Parallelism Vaidy Sunderam Which - Watch over Heterogeneous Multicore ICs to Diagnose Harmful Stalls <i>Giacomo Valente, Andrea Bufalino, Vittoriano Muttillio, Fabio Federici, Luigi Pomante, Marco Faccio</i> 	PASIPHAE II
16:30	Coffee Break	
17:00 - 18:30	<p>SESSION 34 Security in Parallel, Distributed and Network-Based Computing [Chair: Vasily Desnitsky]</p> <ul style="list-style-type: none"> • Distributed Differentially Private Stochastic Gradient Descent: An Empirical Study (R) <i>István Hegedűs and Mark Jelasity</i> • An Extension of Haruspex to Cover Vulnerabilities in Application Environments (R) <i>Fabrizio Baiardi, Federico Tonelli and Lorenzo Isoni</i> • Towards a Usage Control Based Video Surveillance Framework (S) <i>Enrico Carniani, Gianpiero Costantino, Francesco Marino, Fábio Martinelli and Paolo Mori</i> 	MINOS II
17:00 - 18:30	<p>SESSION 35 On-Chip Parallel and Network-Based Systems [Chairs: Hamid Sarbazi-Azad, Masoumeh Ebrahimi, Masoud Daneshtalab, Nader Bagherzadeh]</p> <ul style="list-style-type: none"> • A Three-Dimensional Networks-On-Chip Architecture with Dynamic Buffer Sharing (R) <i>Mehdi Modarressi, S. Hossein Seyedaghaei Rezaei, Masoud Daneshtalab and Shervin Roshanifefat</i> • MWPF: A Deadlock Avoidance Fully Adaptive Routing Algorithm in Networks-On-Chip (R) <i>Kamran Nasiri and Hamid R. Zarandi</i> • SCAC-Net: Reconfigurable Interconnection Network in SCAC Massively Parallel SoC (S) <i>Hana Krichene, Mouna Baklouti, Mohamed Abid, Philippe Marquet, Jean-Luc Dekeyser and Samy Meftali</i> 	PASIPHAE I



Friday 19 February

Time	Event	Hall
17:00 - 18:30	<p>SESSION 36 Cloud Computing on Infrastructure as a Service and its Applications [Chair: Anne-Cecile Orgerie]</p> <ul style="list-style-type: none">• Private IaaS Clouds: A Comparative Analysis of OpenNebula, CloudStack and OpenStack (R) <i>Adriano Vogel, Dalvan Griebler, Carlos A. F. Maron, Claudio Schepke and Luiz Fernandes</i>• A Cost Model for Virtual Machine Storage in Cloud IaaS Context (R) <i>Hamza Ouarnoughi, Jalil Boukhobza, Frank Singhoff and Stéphane Rubini</i>• Towards Weather Forecasting in the Cloud (S) <i>Emmanuel Diaz Carreño, Eduardo Roloff and Philippe Navaux</i>	PASIPHAE II
18:30	End of Conference	



Curriculum Vitae of Invited Speakers

Professor Michael M. Resch

HPC Center Stuttgart (HLRS) and Institute for HPC University of Stuttgart

Michael Resch is the director of the High Performance Computing Center Stuttgart and the Department for HPC at the University of Stuttgart, holding a full professorship for HPC. Michael Resch was an invited plenary speaker at SC'07 in Reno, USA. He won HPC Wire awards for industrial applications in 2015 and 2013 and won with his team the HPC Challenge Award in 2003. In 1999 his team received the NSF Award for High Performance Distributed Computing. He holds honorable doctoral degree of the Technical University of Donezk/Ukraine and of the Russian Academy of Science (RAS) as well as an honorary professorship from RAS. Michael Resch is a PI in the cluster of excellence for Simulation Technology as part of the German Initiative for Excellence in Research. Michael Resch holds an MSc in Technical Mathematics (Technical University of Graz/Austria) and a PhD in Engineering from the University of Stuttgart. In 2002 he held an Assistant Professorship at the Department of Computer Science of the University of Houston, TX.

Professor Marios D. Dikaiakos

Department of Computer Science, University of Cyprus

Marios D. Dikaiakos is a Professor of Computer Science at the University of Cyprus where he established and directs the Laboratory for Internet Computing. Since January 2015 he also serves as Director of the Centre for Entrepreneurship of the University. He was Head of the Computer Science Department between 2010-2014. Dikaiakos received his Ph.D. in Computer Science from Princeton University (1994). His research focuses on large-scale distributed systems with emphasis on Cloud Computing, Online Social Networks and the World-Wide Web. He has been a principal institutional investigator or principal investigator for 25 projects funded by the European Union and the Research Promotion Foundation of Cyprus, has published over 170 papers and led the development of several research software systems released internationally as open source.

Professor Nectarios Koziris

Department of Computer Science, National Technical University of Athens

Nectarios Koziris is a Professor of Computer Science at the School of Electrical and Computer Engineering of the National Technical University of Athens. His research interests include parallel and distributed systems, interaction between compilers, OS and architectures, hardware virtualization and large scale storage systems. He has co-authored more than 140 research papers with more than 2500 citations. He is a recipient of two best paper awards for his research in parallel and distributed computing (IEEE/ACM IPDPS 2001 and CCGRID 2013) and had received recognition for his contributions in transactional memory (TSX synchronization extensions) from the processor industry. He is a member of the IEEE Computer Society, senior member of the ACM, elected chair for the IEEE Greece Section and started the IEEE Computer Society Greece. He co-founded the Greek Free/Open Source Software Society (GFOSS-www.ellak.gr) in 2008, with members 29 Greek Universities and Research Centers, where he is now serving as the Vice-Chair of the Board of Directors. He was a member of the EU cloud computing expert group (2012-2013). For the last 10 years (2004-2014), Nectarios has served as the Vice-Chair of the Board of Directors for the Greek Research and Technology Network-GRNET (www.gmet.gr). He was the founder of the ~okeanos project, a public Cloud IaaS infrastructure, powered by the open source Synnefo software (www.synnefo.org). For more: <http://www.cslab.ece.ntua.gr/~nkoziris>



Welcome Reception

Wednesday 17/2

OPUS - Wine Bar

3, Kapetan Charalampi Str., Heraklion
Tel.: (+30) 28 10 225151
www.opuswinebar.com

Meeting point:

Opus 20:00

Banquet

Thursday 18/2

PETOUSIS Tavern

140, Andrea Papandreou Str.
Ammoudara - Gazi, Heraklion
Tel.: (+30) 28 10 821376
www.petousis.gr

Departure point:

In front of the Aquila Atlantis Hotel 19:45

Info

Aquila Atlantis Hotel

2, Ygias Str., Heraklion
Tel.: (+30) 28 10 229103
www.theatlantishotel.gr

Archaeological Museum of Herakleion

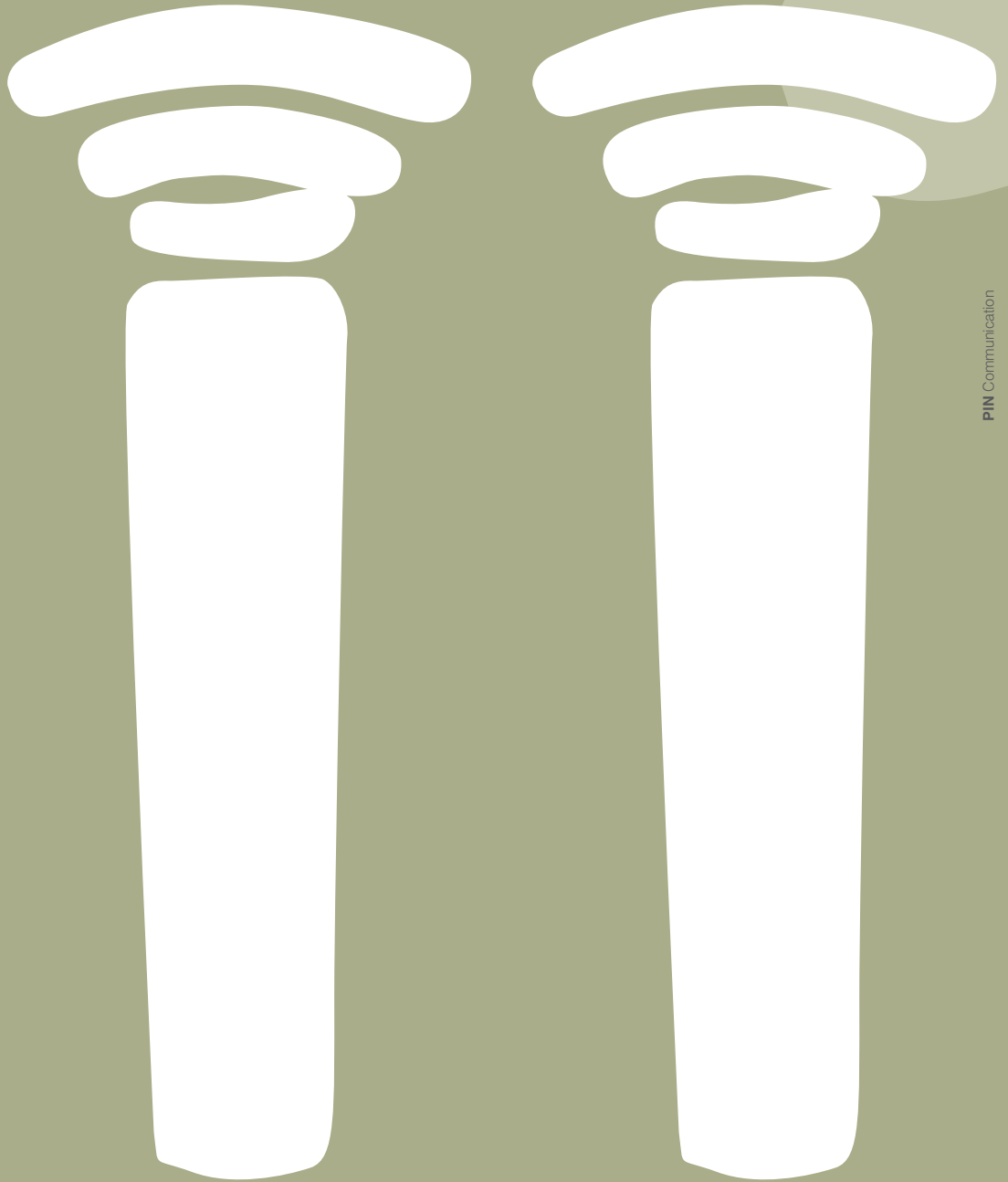
2, Xanthoudidou Str., Heraklion
Tel.: (+30) 28 10 279000,
(+30) 28 10 279086, (+30) 28 10 279087

Taxi services

- Hotel Reception
- (+30) 28 10 210102

Emergency number

European Emergency Call Number
112



PDP 2016

Heraklion, Crete, Greece
17th - 19th February 2016