Ioannis Venetis

Assistant Professor

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Education

Degrees

07/2001–05/2006 **PhD**, *Department of Computer Engineering and Informatics, University of Patras, Greece*

Dissertation Title: Transparently Mapping High-Level Programming Models on Heteromorphic Parallel Architectures

Advisor: Prof. Theodore S. Papatheodorou

10/1998–05/2001 **Master's in Computer Science**, *Department of Computer Engineering and Informatics, University of Patras, Greece*

Dissertation Title: An extension to the kernel level API of the Nano-Threads programming model and its usage from POSIX threads libraries

Advisor: Prof. Theodore S. Papatheodorou

09/1993–07/1998 **Diploma in Computer Engineering and Informatics**, *Department of Computer Engineering and Informatics, University of Patras, Greece*

Dissertation Title: Implementation of a shared arena platform for the Nano-Threads programming model in the kernel of Linux

Advisor: Prof. Theodore S. Papatheodorou

Supervisor: Prof. Dimitrios S. Nikolopoulos

Languages

English: University of Cambridge, Certificate of Proficiency, Grade "B", May 2003

German: Zentrale Mittelstufenprüfung Zeugnis, Grade "Befriedigend", August 1991

Academic experience

Research

09/2012–11/2020 **Post-Doctoral Associate**, *High Performance Information Systems Laboratory, Department of Computer Engineering and Informatics, University of Patras, Greece*

Project title	Duration	Funding agency
Fast calculation of the Seismic Moment Tensor on modern parallel architectures (GISOLA)	04/2020–11/2020	Ministry of Development & Investments
Development of Expertise for Aeroelastic Analysis and Design Optimizations of Wind Turbines	09/2012–11/2015	Ministry of Education & Religions, Culture & Sports

06/2012–11/2015 **Post-Doctoral Associate**, *Department of Informatics, Technological Education Institution (TEI) of Athens, Greece*

Project title	Duration	Funding agency
Communication and Data Processing Techniques in Wireless Sensor Networks and Wireless Sensor/Actor Networks	06/2012–11/2015	Ministry of Education & Religions, Culture & Sports

11/2011–10/2012 **Post-Doctoral Associate**, *Software Engineering Laboratory, School of Electrical and Computer Engineering, National Technical University of Athens, Greece*

Project title	Duration	Funding agency
RELEASE: A High-Level Paradigm for Reliable Large-Scale Server Software	11/2011–10/2012	European Commission, Project FP7-ICT-287510

07/2010–07/2010 **Visiting Scholar**, *Computer Architecture and Parallel Systems Laboratory, Department of Electrical and Computer Engineering, University of Delaware, USA*

Project title	Duration	Funding agency
Cyclops Supercomputer System Software R&D Project	07/2010–07/2010	Department of Electrical and Computer Engineering, University of Delaware

09/2009–10/2013 **Research Fellow**, *Research and Development Telecom Laboratory, Department of Electronics, Technological Education Institution (TEI) of Athens, Greece*

Project title	Duration	Funding agency
Enhancement of SIMSAT Simulation Engine	02/2012–10/2013	European Space Agency
Linux and Multi-Core Processor Technology for Simulators	09/2009–01/2011	European Space Agency

04/2006–01/2008 **Post-Doctoral Associate**, *Computer Architecture and Parallel Systems Laboratory, Department of Electrical and Computer Engineering, University of Delaware, USA*

Project title	Duration	Funding agency
CSR-AES: Dynamic Adaptive Multithreading: Continuous Compilation and Runtime Scheduling for High-End Computing	04/2006–01/2008	National Science Foundation, Project CNS-0509332
IBM Programmable, Easy-to-use, Reliable Computing System (PERCS)	04/2006–01/2008	DARPA, High Productivity Computing Systems (HPCS)
A Dynamic Multithreaded Virtual Machine for High-End Computing: Architecture Model and Continuous Compilation	04/2006–01/2008	Undisclosed Funding Source

10/1998–04/2006 **Research Assistant**, *High Performance Information Systems Laboratory, Department of Computer Engineering and Informatics, University of Patras, Greece*

Project title	Duration	Funding agency
POP: Performance Portability of OpenMP	12/2001–02/2005	IST-2001-33071

High Performance Computations for Scientific and Multimedia Applications	01/2000–06/2001	Greek General Secretariat of Research and Technology, Project 99EΔ-566
NANOS: Effective Integration of Fine-Grain Parallelism Exploitation and Multiprogramming	10/1996–12/1999	ESPRIT EC-DGIII, Basic Research Project 6634

Participation in other projects

Project title	**Funding agency**
A network between Greece and Italy for the diffusion of culture, tourism and the environmental heritage	Ministry of Economy and Finance, Project INTERREG I2101018
Development of a Web server, propagation of standards and design procedures and development of digital applications for cultural organizations with the exploitation of contemporary developments in research	Lambrakis Foundation
Participation in the reformation of the course “Introduction to Algorithms”	Ministry of National Education and Religious Affairs
Provision of auxiliary teaching services	Research Committee of the University of Patras
Program for the Digitalization of the Cultural Reserve	Ministry of Culture
Exploitation of new Internet technologies and the global web from the National Tourism Organization	National Tourism Organization
DIAYLOS: Internet for the sports	Subministry of Culture
POLINET: Agreement for the support of the node ULYSSES on the Internet and the application of new technologies on culture	Ministry of Culture
Continuous support and development of new services for the “Bookspace”	National Book Centre
BOOKTRADE: An e-commerce environment among businesses for the book trading market	Greek General Secretariat of Research and Technology, Project EKBAN-1.3-104

Teaching

Assistant Professor, *Department of Informatics, University of Piraeus, Greece*

Course	*Level*	*Teaching period*
Operating Systems	Undergraduate	Fall 2021/22 – 2024/25
Information Retrieval and Searching on the World Wide Web	Undergraduate	Fall 2021/22 – 2024/25
Parallel Computing	Undergraduate	Spring 2020/21 – 2024/25
Data Structures	Undergraduate	Spring 2020/21 – 2024/25
Scientific Writing in Education	Undergraduate	Fall 2024/25
Operating Systems	Postgraduate	Fall 2021/22 – 2024/25
Algorithmic Techniques and Applications	Postgraduate	Fall 2021/22 – 2024/25
Data Structures and Algorithms	Postgraduate	Spring 2024/25

Tutor, *Hellenic Open University, Greece*

Course	*Level*	*Teaching period*
Module DAMA60 (Algorithmic Techniques & Systems for Data Science & Machine Learning)	Postgraduate	Academic Year 2023/24 – 2024/25
Module PLS60 (Specialization in Software Engineering)	Postgraduate	Academic Year 2013/14 – 2014/15, 2018/19 – 2022/23
Module PLI11 (Principles of Software Technology)	Undergraduate	Academic Year 2017/18

Adjunct Faculty, *Department of Computer Engineering and Informatics, University of Patras, Greece*

Course	*Level*	*Teaching period*
Operating Systems I	Undergraduate	Fall 2008/09 – 2010/11
Operating Systems Lab	Undergraduate	Spring 2008/09 – 2010/11
Parallel Computing	Undergraduate	Spring 2008/09, 2011/12 – 2019/20
Software and Programming for High Performance Systems	Undergraduate	Fall 2014/15 – 2019/20
Assembly Language Programming	Undergraduate	Spring 2008/09 – 2012/13

Academic Scholar, *Department of Informatics and Computer Engineering, University of West Attica, Greece*

Course	*Level*	*Teaching period*
Operating Systems I	Undergraduate	Fall 2018/2019 – 2019/2020
Operating Systems II	Undergraduate	Spring 2018/2019 – 2019/2020
Introduction to Parallel Programming	Undergraduate	Fall 2018/2019 – 2019/2020
Parallel Systems	Undergraduate	Fall 2018/2019 – 2019/2020
Distributed Systems	Undergraduate	Spring 2018/2019 – 2019/2020

Scientific Fellow, *Department of Electronic Computer Systems, Technological Education Institution (TEI) of Piraeus, Greece*

Course	*Level*	*Teaching period*
Parallel Computing	Undergraduate	Fall 2009/10 – 2014/15 Spring 2009/10 – 2011/12

Laboratory Fellow, *Department of Mathematics, Technological Education Institution (TEI) of Piraeus, Greece*

Course	*Level*	*Teaching period*
Programming A	Undergraduate	Fall 2011/12
Computer Programming II	Undergraduate	Fall 2009/10 Spring 2009/10

Laboratory Fellow, *Department of Informatics, Technological Education Institution (TEI) of Athens, Greece*

Course	*Level*	*Teaching period*
Operating Systems I	Undergraduate	Fall 2011/12 – 2017/18
Operating Systems II	Undergraduate	Spring 2014/15 – 2016/17
Introduction to Parallel Programming	Undergraduate	Fall 2009/10 – 2012/13, 2014/15 – 2017/18 Spring 2009/10 – 2013/14
Computer Systems Architecture	Undergraduate	Fall 2009/10 Spring 2009/10

Scientific Fellow, *Department of Oenology and Technology of Drinks, Technological Education Institution (TEI) of Athens, Greece*

Course	*Level*	*Teaching period*
Applied Informatics	Undergraduate	Fall 2010/11 Spring 2010/11

Laboratory Fellow, *Department of Oenology and Technology of Drinks, Technological Education Institution (TEI) of Athens, Greece*

Course	*Level*	*Teaching period*
Applied Informatics	Undergraduate	Fall 2010/11 Spring 2010/11

Laboratory Fellow, *Department of Social Work, Technological Education Institution (TEI) of Athens, Greece*

Course	*Level*	*Teaching period*
Introduction to Computers	Undergraduate	Fall 2010/11 – 2011/12 Spring 2010/11 – 2013/14

Laboratory Fellow, *Department of Physiotherapy, Technological Education Institution (TEI) of Athens, Greece*

Course	*Level*	*Teaching period*
Informatics in Health Sciences	Undergraduate	Fall 2010/11 – 2011/12 Spring 2010/11

Teaching Assistant, *Department of Computer Engineering and Informatics, University of Patras, Greece*

Course	*Level*	*Teaching period*
Provision of auxiliary teaching services (20 months)	Undergraduate	01/10/2000 – 31/01/2001, 01/04/2001 – 30/04/2001, 01/06/2001 – 30/06/2001, 01/08/2001 – 31/08/2001, 01/10/2001 – 30/06/2002, 01/11/2002 – 31/01/2003, 01/04/2003 – 30/04/2003

PhD Advisory/Examination Committees

- Member of the PhD Examination Committee for Mr. Christos Samaras, "Methodology for the analysis of large-scale educational data for the modeling and prediction of drop-out in Education", Hellenic Open University, April 2025. Supervisor: Prof. Vassilios Verykios
- Member of the PhD Examination Committee for Mrs. Rodanthi Tsoni, "A Holistic Approach to Distance Education Learning Analytics and Educational Data Mining Using Data Pipelines and Machine Learning", Hellenic Open University, December 2022. Supervisor: Prof. Vassilios Verykios

Supervision of Master's Thesis

- A biological neuron simulator on a Process-In-Memory architecture.
  Andreou Nikolaos, University of Piraeus, Under development.
- A study of page replacement algorithms with real data.
  Kampilafkas Ioannis, University of Piraeus, October 2023.
- Development of software for studying page replacement algorithms.
  Pantazis Evangelos, Hellenic Open University, September 2023.
- Semantic similarity in Python by exploiting the ability to perform calculations on a graphics card.
  Tzolas Dimitrios, Hellenic Open University, May 2023.
- Educational Software Development for studying fixed or variable partitioning placement algorithms.
  Dragoidis Panagiotis, Hellenic Open University, September 2021.
- Development of software to visualize the operation of scheduling algorithms.
  Leonidou Nikolaos, Hellenic Open University, September 2021.
- Educational material for distance learning in Cloud Computing.
  Tassopoulos Nikolaos, Hellenic Open University, September 2017.
- Educational material for IT infrastructure distance learning courses.
  Psinias Andreas, Hellenic Open University, May 2017.
- Development of image processing applications based on Matlab with the intent to be used on GPUs.
  Gavrielides Vasileios, Hellenic Open University, September 2015.
- Software development of text images digital processing for Optical Character Recognition using MATLAB and graphics cards (GPUs).
  Athanasopoulos Pantelis, Hellenic Open University, September 2015.

Supervision of Bachelor's Thesis

- Study of Parallel Execution Models for Training Convolutional Neural Networks.
  Panagiotis Criparacos, Department of Informatics, University of Piraeus, June 2025.
- Simultaneous simulation of multiple networks of biological neurons on parallel systems.
  Konstantinos Loizidis, Department of Informatics, University of Piraeus, September 2024.

Advisory Support – Co-advisor of Bachelor's Thesis

- Design and Implementation of a Software Framework for Exhaustive Searches in Distributed Memory Systems with Co-processors.
  Christos Kyriakopoulos, Department of Computer Engineering and Informatics, University of Patras, September 2020.
- Development of image processing code in CUDA with application in handwritten signature feature extraction.
  Georgios-Karolos Lykos, Department of Computer Engineering and Informatics, University of Patras, July 2020.
- Parallelization of neural network training algorithms on massively multicore architectures.
  Andreas Triantafyllou, School of Electrical and Computer Engineering, National Technical University of Athens, June 2018.
- Performance evaluation of parallel applications under the presence of Stacked or 3D memory.
  Christos Balkonis, Department of Computer Engineering and Informatics, University of Patras, September 2017.
- Development of clustering algorithms in MATLAB for GPUs.
  Sotiria Patroni, Department of Computer Engineering and Informatics, University of Patras, September 2017.
- Parallelization of Rotation Forest.
  Georgios Kourousias, Department of Computer Engineering and Informatics, University of Patras, March 2017.

- Data clustering using the k-medoids clustering algorithm and variants for parallel processing.
  Dimitrios Christofidellis, Department of Computer Engineering and Informatics, University of Patras, September 2016.
- Tridiagonal solvers for co-processors: Adapting g-spike from CUDA for GPU to OpenMP for the multi-core Intel Xeon Phi.
  Alexandros Nakos, Department of Computer Engineering and Informatics, University of Patras, June 2016.
- Towards the parallelization of large-scale solid mechanics codes on NVidia GPUs with CUDA.
  Nikolaos Nikoloutsakos, Department of Computer Engineering and Informatics, University of Patras, February 2014.

Program Committee Member

- International Conference on Supercomputing (ICS), 2023
- Euro-Par 2022 (Topic 3 – Scheduling and Load Balancing), 2022
- International Conference on Information, Intelligence, Systems and Applications (IISA), 2021, 2022, 2023, 2024, 2025
- International Conference on Tools with Artificial Intelligence (ICTAI), 2021
- Cloud Computing and Internet of Things (CCIoT), 2018
- ArcHitectures for dEep Learning wIth COnvolutional Networks (HELICON), 2018
- International Conference on Scalable Computing and Communications (ScalCom), 2011
- International Workshop on Semantic Web And Reasoning for Cultural Heritage and Digital Libraries (SWARCH-DL), 2010

Reviewer for the European Commission

Interim and final reviews of projects

- Project EPEEC (ID: 801051), funded under the Program Horizon 2020.
- Project AllScale (ID: 671603), funded under the Program Horizon 2020.
- Project INTERTWINE (ID: 671602), funded under the Program Horizon 2020.
- Project CARP (ID: 287767), funded under the 7th Framework Program.

Reviewer for International Scientific Journals and Conferences

- Journal of Parallel and Distributed Computing
- Intelligent Decision Technologies
- Computer Physics Communications
- IEEE International Parallel and Distributed Processing Symposium (IPDPS 2012)
- International Conference on Compiler Construction (CC 2010)
- ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming (PPoPP 2012, 2012)
- Supercomputing (SC 2015, 2009, 2007)
- European Conference on Parallel Computing (EuroPar 2012, 2010)
- International Conference on Parallel Processing (ICPP 2003, 2002)
- ACM International Conference on Supercomputing (ICS 2010, 2009, 2007, 2001, 2000, 1999)
- International Conference on Parallel Architectures and Compilation Techniques (PACT 1999)
- International Workshop on OpenMP (IWOMP 2007, 2006)
- IFIP International Conference on Network and Parallel Computing (NPC 2006)
- International Workshop on High-Level Parallel Programming Models and Supportive Environments (HIPS 2007)
- Workshop on Programmability Issues for Multi-Core Computers (MULTIPROG 2007)

Distinctions

- Scholar of "Alexander S. Onassis" Public Benefit Foundation for the completion of a Ph.D. Thesis, 2001-2004.

Speaker at Trainings - Seminars

Performance optimizations in CUDA, *GRNET*

- 04/04/2025

Usage of high-performance libraries for GPUs, *GRNET*

- 04/04/2025

Training for the use of CUDA on supercomputers, *GRNET*

- 12/04 – 13/04/2022, 01/04 – 02/04/2021, 10/02 – 11/02/2020, 13/03 – 14/03/2019, 22/05 – 23/05/2018

Training for the use of MPI on supercomputers, *GRNET*

- 14/12 – 16/12/2021, 11/11 – 13/11/2020, 05/11 – 07/11/2019, 20/11 – 22/11/2018, 28/11 – 01/12/2017

Publications

Dissertations

[3] Ioannis E. Venetis. "Transparently Mapping High-Level Programming Models on Heteromorphic Parallel Architectures". PhD Thesis. Patras, Greece: University of Patras, Mar. 2006.

[2] Ioannis E. Venetis. "An extension to the kernel level API of the Nano-Threads programming model and its usage from POSIX threads libraries". Master's Thesis. Patras, Greece: University of Patras, May 2001.

[1] Ioannis E. Venetis and Christos D. Antonopoulos. "Implementation of a shared arena platform for the Nano-Threads programming model in the kernel of Linux". Bachelor's Thesis. Patras, Greece: University of Patras, June 1998.

Book Chapters

[1] Ioannis E. Venetis. "Multi-Core and Many-Core Computing". In: *Scalable Computing and Communications: Theory and Practice*. Ed. by Samee U. Khan, Lizhe Wang, and Albert Y. Zomaya. John Wiley & Sons, Feb. 2013. Chap. 4.

Refereed International Scientific Journals

[12] Christos Kyriakopoulos, Efstratios Gallopoulos, and Ioannis E. Venetis. "Hierarchical Dynamic Workload Scheduling on Heterogeneous Clusters for Grid Search of Inverse Problems". In: *The Journal of Supercomputing* 79(15) (Apr. 2023), pp. 16720–16772. DOI: 10.1007/s11227-023-05306-z. (IF: 3.300).

[11] Ioannis E. Venetis and Astero Provata. "Analysis of the Leaky Integrate-and-Fire neuron model for GPU implementation". In: *Journal of Parallel and Distributed Computing* 163 (May 2022), pp. 1–19. DOI: 10.1016/j.jpdc.2022.01.021. (IF: 4.542).

[10] Nikolaos Triantafyllis, Ioannis E. Venetis, Ioannis Fountoulakis, Erion-Vasilis Pikoulis, Efthimios Sokos, and Christos P. Evangelidis. "Gisola: A High-Performance Computing Application for Real-Time Moment Tensor Inversion". In: *Seismological Research Letters* 93(2A) (Dec. 2021), pp. 957–966. DOI: 10.1785/0220210153. (IF: 4.288).

[9] Astero Astero and Ioannis E. Venetis. "Chimera states in Leaky Integrate-and-Fire dynamics with power law coupling". In: *The European Physical Journal B* 93(8) (Aug. 2020). DOI: 10.1140/epjb/e2020-10252-9. (IF: 1.511).

[8] Ioannis E. Venetis, Vasso Saltogianni, Stathis Stiros, and Efstratios Gallopoulos. "Multivariable inversion using exhaustive grid search and high-performance GPU processing: a new perspective". In: *Geophysical Journal International* 221(2) (Jan. 2020), pp. 905–927. DOI: 10.1093/gji/ggaa042. (IF: 2.777).

[7] Ioannis E. Venetis, Damianos Gavalas, Grammati Pantziou, and Charalampos Konstantopoulos. "Mobile agents-based data aggregation in WSNs: benchmarking itinerary planning approaches". In: *Wireless Networks* 24(6) (Aug. 2018), pp. 2111–2132. DOI: 10.1007/s11276-017-1460-y. (IF: 1.006).

[6] Damianos Gavalas, Ioannis E. Venetis, Charalampos Konstantopoulos, and Grammati Pantziou. "Mobile agent itinerary planning for WSN data fusion: considering multiple sinks and heterogeneous networks". In: *International Journal of Communication Systems* 30(8) (May 2017). DOI: https://doi.org/10.1002/dac.3184. (IF: 1.099).

[5] Damianos Gavalas, Ioannis E. Venetis, Charalampos Konstantopoulos, and Grammati Pantziou. "Energy-efficient multiple itinerary planning for mobile agents-based data aggregation in WSNs". In: *Telecommunication Systems* 63(4) (Dec. 2016), pp. 531–545. DOI: 10.1007/s11235-016-0140-z. (IF: 2.331).

[4] Charalampos Konstantopoulos, Grammati Pantziou, Ioannis E. Venetis, and Damianos Gavalas. "Efficient event handling in Wireless Sensor and Actor Networks: An on-line computation approach". In: *Journal of Network and Computer Applications* 75 (Nov. 2016), pp. 181–199. DOI: 10.1016/j.jnca.2016.08.025. (IF: 2.331).

[3] Ioannis E. Venetis, Alexandros Kouris, Alexandros Sobczyk, Efstratios Gallopoulos, and Ahmed H. Sameh. "A direct tridiagonal solver based on Givens rotations for GPU architectures". In: *Parallel Computing* 49 (Nov. 2015), pp. 101–116. DOI: 10.1016/j.parco.2015.03.008. (IF: 1.890).

[2] Christos G. Xanthis, Ioannis E. Venetis, and Anthony H. Aletras. "High performance MRI simulations of motion on multi-GPU systems". In: *Journal of Cardiovascular Magnetic Resonance* 16(1) (July 2014). DOI: 10.1186/1532-429X-16-48. (IF: 5.110).

[1] Christos G. Xanthis, Ioannis E. Venetis, A. V. Chalkias, and Anthony H. Aletras. "MRISIMUL: A GPU-Based Parallel Approach to MRI Simulations". In: *IEEE Transactions on Medical Imaging* 33(3) (Mar. 2014), pp. 607–617. DOI: 10.1109/TMI.2013.2292119. (IF: 3.799).

Refereed International Scientific Conferences

[26] Dimitrios Tzolas and Ioannis E. Venetis. "S^{2}BERTopic – A Topic Modeling Approach on Semantic Similarity Leveraging BERTopic". In: *16th International Conference on Information, Intelligence, Systems and Applications (IISA 2025)*. Mytilene, Greece, July 2025.

[25] Nikolaos Triantafyllis, Ioannis E. Venetis, Ioannis Fountoulakis, Erion-Vasilis Pikoulis, Efthimios Sokos, and Christos Evangelidis. "Gisola: Real-Time Moment Tensor computation optimized for multicore and manycore architectures". In: *23rd European Geosciences Union General Assembly 2021*. Online, Apr. 2021. DOI: 10.5194/egusphere-egu21-15888.

[24] Ioannis E. Venetis, Vasso Saltogianni, Stathis Stiros, and Efstratios Gallopoulos. "High performance GPU processing for inversion using uniform grid searches". In: *19th European Geosciences Union General Assembly 2017*. Vienna, Austria, Apr. 2017.

[23] Damianos Gavalas, Ioannis E. Venetis, Grammati Pantziou, and Charalampos Konstantopoulos. "An Iterated Local Search Approach for Multiple Itinerary Planning in Mobile Agent-Based Sensor Fusion". In: *Proceedings of the 2015 International Conference on Mobile Ad-hoc and Sensor Networks (MSN 2015)*. Shenzhen, China, Dec. 2015, pp. 1–7. DOI: 10.1109/MSN.2015.12.

[22] Ioannis E. Venetis, Alexandros Sobczyk, Alexandros Kouris, Alexandros Nakos, Nikolaos Nikoloutsakos, and Efstratios Gallopoulos. "A general tridiagonal solver for coprocessors: Adapting g-Spike for the Intel Xeon Phi". In: *Proceedings of the 2015 International Conference on Parallel Computing (ParCo 2015)*. Edinburgh, UK, Sept. 2015, pp. 371–380. DOI: 10.3233/978-1-61499-621-7-371.

[21] Ioannis E. Venetis, Nikolaos Nikoloutsakos, Efstratios Gallopoulos, and John Ekaterinaris. "Towards the Implementation of Wind Turbine Simulations on Many-Core Systems". In: *Proceedings of the 2015 AIAA Science and Technology Forum and Exposition (SciTech 2015)*. Kissimmee, FL, Jan. 2015. DOI: 10.2514/6.2015-0050.

[20] Ioannis E. Venetis, Nikolaos Nikoloutsakos, Efstratios Gallopoulos, and John Ekaterinaris. "Local Stiffness matrix calculations for FSI applications on multi-GPU systems". In: *Book of Abstracts of the 6th Conference on Numerical Analysis (NUMAN 2014)*. Chania, Greece, Sept. 2014.

[19] Ioannis E. Venetis, Alexandros Kouris, Nikolaos Nikoloutsakos, Alexandros Sobczyk, and Efstratios Gallopoulos. "Towards robust parallel solvers for tridiagonal systems for multiGPUs". In: *Book of Abstracts of the 6th Conference on Numerical Analysis (NUMAN 2014)*. Chania, Greece, Sept. 2014.

[18] Ioannis E. Venetis, Grammati Pantziou, Damianos Gavalas, and Charalampos Konstantopoulos. "Benchmarking Mobile Agent Itinerary Planning Algorithms for Data Aggregation on WSNs". In: *Proceedings of the 6th International Conference on Ubiquitous and Future Networks (ICUFN 2014)*. Shanghai, China, July 2014, pp. 105–110. DOI: 10.1109/ICUFN.2014.6876759.

[17] Charalampos Konstantopoulos, Grammati Pantziou, Ioannis E. Venetis, and Damianos Gavalas. "An Efficient Event Handling Protocol for Wireless Sensor and Actor Networks". In: *Proceedings of the 19th IEEE Symposium on Computers and Communications (ISCC 2014)*. Funchal, Portugal, June 2014, pp. 1–6. DOI: 10.1109/ISCC.2014.6912470.

[16] Christos G. Xanthis, Ioannis E. Venetis, and Anthony H. Aletras. "Accelerated MR simulations of heart motion model using graphic processing unit technology". In: *Proceedings of the XVI Swedish Cardiovascular Spring Meeting*. Malmö, Sweden, May 2014.

[15] Elkin Garcia, Daniel Orozco, Rishi Khan, Ioannis E. Venetis, Kelly Livingston, and Guang R. Gao. "A Dynamic Schema to Increase Performance in Many-Core Architectures Through Percolation Operations". In: *Proceedings of the 2013 IEEE International Conference on High Performance Computing (HiPC 2013)*. Bangalore, India, Dec. 2013, pp. 276–285. DOI: 10.1109/HiPC.2013.6799134.

[14] Christos G. Xanthis, Ioannis E. Venetis, and Anthony H. Aletras. "Accelerated MR Physics Simulations on Multi-GPU Systems". In: *Proceedings of the 13th IEEE International Conference on BioInformatics and BioEngineering (BIBE 2013)*. Chania, Greece, Nov. 2013. DOI: 10.1109/BIBE.2013.6701639.

[13] Christos G. Xanthis, Ioannis E. Venetis, and Anthony H. Aletras. "Accelerating MRI Physics Simulations using GPU Computing: Comparison with other Computer Configurations". In: *Proceedings of the 2013 Panhellenic Conference on Biomedical Technology (ELEVIT 2013)*. Athens, Greece, Apr. 2013.

[12] Christos G. Xanthis, Ioannis E. Venetis, and Anthony H. Aletras. "A High Performance Parallelizable MRI Physics Simulator with Graphic Processing Unit Technology". In: *Proceedings of the 2013 Society for Cardiovascular Magnetic Resonance Scientific Session (SCMR 2013)*. San Francisco, U.S.A., Feb. 2013. DOI: 10.1186/1532-429X-15-S1-E45.

[11] Elkin Garcia, Daniel Orozco, Rishi Khan, Ioannis E. Venetis, Kelly Livingston, and Guang R. Gao. "Dynamic Percolation: A Case of Study on the Shortcomings of Traditional Optimization in Many-Core Architectures". In: *Proceedings of the 2012 ACM International Conference on Computer Frontiers (CF 2012)*. Cagliari, Italy: Association for Computing Machinery, May 2012, pp. 245–248. DOI: 10.1145/2212908.2212944.

[10] Ioannis E. Venetis. "Improving Basic Thread Operations with Batches of Threads". In: *Proceedings of the 2011 International Conference on High Performance Computing and Simulation (HPCS 2011)*. Istanbul, Turkey, July 2011, pp. 808–813. DOI: 10.1109/HPCSim.2011.5999912.

[9] Vemund Reggestad, Nikolaos-A.I.Livanos, Pantelis Antoniou, and Ioannis E. Venetis. "Operational Simulators Going Parallel: From a Dream to a Concrete Concept". In: *Proceedings of the 2011 DAta Systems In Aerospace Conference (DASIA 2011)*. San Anton, Malta, May 2011.

[8] Elkin Garcia, Ioannis E. Venetis, Rishi Khan, and Guang R. Gao. "Optimized Dense Matrix Multiplication on a Many-Core Architecture". In: *Proceedings of the 2010 European Conference on Parallel Computing (EuroPar 2010)*. Vol. LNCS 6272. Ischia, Italy: Springer Verlag, Sept. 2010, pp. 316–327. DOI: 10.1007/978-3-642-15291-7_29.

[7] Amalia Bozinaki, Ioannis E. Venetis, Nikolaos A. Livanos, Elias N. Zois, and Athanasios Nassiopoulos. "The Art of Simulation: Migrating from DES to PDES". In: *Proceedings of the 2010 International Conference on Telecommunications and Multimedia (TEMU 2010)*. Chania, Greece, July 2010.

[6] Ioannis E. Venetis and Theodore S. Papatheodorou. "Handling Massive Parallelism Efficiently: Introducing Batches of Threads". In: *Proceedings of the 2009 International Conference on Parallel Computing (ParCo 2009)*. Lyon, France: IOS Press, Sept. 2009, pp. 257–264. DOI: 10.3233/978-1-60750-530-3-257.

[5] Ioannis E. Venetis and Guang R. Gao. "Mapping the LU Decomposition on a Many-Core Architecture: Challenges and Solutions". In: *Proceedings of the 2009 ACM International Conference on Computing Frontiers (CF 2009)*. Ischia, Italy: Association for Computing Machinery, May 2009, pp. 71–80. DOI: 10.1145/1531743.1531756.

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