Dionisios N. Pnevmatikatos

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Professor

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Education

B.S.   January 1989, *University of Crete, Department of* Computer Science.

M.Sc.   May 1991, *University of Wisconsin–Madison,* Computer Sciences Department.

Ph.D.   December 1995, *University of Wisconsin–Madison*, Computer Sciences Department. *Advisor*: Gurindar S. Sohi. *Thesis title*: "Incorporating Guarded Execution into Existing Instruction Sets".

Research Interests

His research interests are in the broader area of Computer Architecture, where he investigates the Design and Implementation of High-Performance and Cost-Effective Systems, Reliable System Design, and Reconfigurable Computing. Within this context, he has performed research in Networking Hardware and Network Processors, Application Acceleration, Custom and Application-Specific Architectures, and Hardware Acceleration of Bioinformatics Algorithms.

Employment

January 1993–December 1995: *Research Assistant, University of Wisconsin–Madison*, Computer Sciences Department.

March 1996–February 1997: While serving the mandatory military service, research associate at FORTH-ICS, working on the *Asiccom project*.

February 1997–August 2000: *Researcher,* FORTH-ICS.

August 2000–now: Professor, Electronic and Computer Engineering Department, Technical University of Crete, (Assistant Professor untill September 2002, Associate Professor until November 2009).

Funding/Project Participation

FASTER – Facilitating Analysis and Synthesis Technologies for Effective Reconfiguration, ICT STREP, Coordinator.

DeSyRe – on-Demand System Reliability, ICT STREP, Scientific Coordinator on behalf of the CARV Laboratory.

Encore – ENabling technologies for a programmable many-CORE, ICT STREP (member)

SARC – Scalable computer ARChitecture, ICT Integrated Project aiming to

develop a scalable integrated architecture applicable to a wide range of applications (member).

HiPEAC– European Network of Excellence on High Performance and Embedded Architecture and Compilation, ICT Network of Excellence, Member of the Interconnects and Reconfigurable Computing Clusters (member).

VPLANET: Advanced Verification and Emulation Platform, GSRT, Scientific Coordinator.

EASY/HIPERLAN: Advanced Pipelining and Implementation of a HIPERLAN Wireless Modem.

PRO3 – Architecture, Design and Implementation of the I/O Subsystem of a Network Processor.

PENED 1999: PLATO: A Development Platform for Protocol Boosting in ATM networks (GSRT, graded 9.9/10).

ASSICOM – Design and Implementation of the ATLAS I ATM single chip switch (member).

SPEAR-II – Superscalar Network Processor Architecture (member).

Teaching

Since September 1997 I have taught many courses in in Computer Architecture and Digital Design, both at undergraduate and graduate levels, and in the Department of Computer Science of the University of Crete and in the Electronic and Computer Engineering Department of the Technical University of Crete. The undergraduate courses are:
- Digital Design
- Advanced Digital Design
- Digital Computers (Assembly)
- Computer Organization
- Computer Architecture
- Advanced Computer Architecture

The undergraduate courses are:
- Parallel Computer Architecture (University of Crete)
- Advanced Processor Architectures
- Special Topics in Computing System Design
- Designing Application Specific Architectures
- Network Processor Architecture

I designed the undergraduate courses Advanced Digital Design, Advanced Computer Architecture Προχωρημένη Λογική Σχεδίαση, Προχωρημένη Αρχιτεκτονική Υπολογιστών, and all the graduate courses I teach, and I significantly revamped the undergraduate courses Digital Computers and Computer Architecture.

Together with Professors D. Serpanos and G Stamoulis, I translated the 3rd edition of the "Computer Architrecture – A Quantitative Approach" by J. L. Hennessy, D. A. Patterson, a reference book in Computer Architecture.

Student Advising

In the Technical University of Crete since August 2000 I have supervised more

than 20 undergraduate diploma thesis and 6 Master thesis.

PhD. Examination Committees:

"Opponent", Department of Electrical Engineering, Linköping University, Sweden, 2004 (Dr. Ulf Nordqvist).

TU-Delft, December 2007 (Dr. I. Sourdis), May 2011 (D. Theodoropoulos), June 2011 (Daniele Ludovici)

University of Crete: N. Chrysos, S. Kavvadias

Democritus University of Thrace: K. Siozios

University of Patras: G. Keramidas.

Technical University of Crete: E. Sotiriadis, E. Koutroulis, I. Chatzakis.

Departmental Duties, Committees, etc

- Chair, Electronic and Computer Engineering Department, September 2007-August 2009
- Scientific Coordinator for the Network Operation Center of the Technical University of Crete, October 2002 – March 2006
- Scientific Coordinator of the Departmental Practical Training Program, 2006-now.
- Various employee selection and employee promotion evaluation committees

Citations

Circa 2003 there were 120 citations of my work (excluding self-citations), and in selected conferences and journals only.

Google Scholar reported ~820 citations to my work *total* (*i.e. with all self-citations by me or by co-authors*) on February 2009, and ~1250 on April 2011, while the Scholar Index tool:

http://interaction.lille.inria.fr/~roussel/projects/scholarindex/index.cgi

based on the same raw data gives {h-index, g-index} = {13, 27} and {17, 34) for February 2009 and April 2011 respectively.

Professional Service

Program Co-Chair:

- 21st International Conference on Field Programmable Logic and Applications (FPL), 2011

Program Chair:

- Design and Test Europe (DATE) Architecture and Microarchitecture Track, 2009, 2010

Program Co-Chair:

- Design and Test Europe (DATE) Architecture and Microarchitecture Track, 2007, 2008

General Co-Chair:

- Panhellenic Conference on Informatics (PCI) 2008
- International Workshop on Rapid System Prototyping (RSP) 2007.

Conference Technical Committee Member:

- International Symposium on Microarchitecture (MICRO), 2011

- Design and Test Europe (DATE), Architecture and Microarchitecture Track, 2006
- International Conference on Field Programmable Logic and Applications (FPL), 2007, 2008, 2009
- International Conference on Embedded Computer Systems: Architectures, Modelling, and Simulation (IC-SAMOS) 2006, 2007, 2008, 2009
- International Workshop on Rapid System Prototyping (RSP) 2006, 2007, 2008, 2009
- International Conference on Supercomputing (ICS) 2006, 2007
- IEEE International Parallel & Distributed Processing Symposium (IPDPS) 2007
- International Conference on Computer Design (ICCD) 2007, 2008
- International Conference on Parallel Processing (ICPP), Architecture Track 2002
- Computing Frontiers 2007
- IEEE International Symposium on Circuits and Systems (ISCAS) 2007
- IFIP/IEEE International Conference on Very Large Scale Integration (VLSI-Soc) 2008
- International Symposium on Signal Processing and Information Technology (ISSPIT) 2006
- IEEE International ASIC/SOC Conference (ASIC) 2000-2002
- Panhellenic Conference on Informatics (PCI) 2005

Workshop Technical Committee Member:
- HIPEAC-RC (Reconfigurable Computing) 2007, 2008, 2009
- HIPEAC- Interconnection Network Architectures: On-Chip, Multi-Chip (INA-OCMC), 2007, 2008, 2009

Journal Reviewer:
- IEEE Micro
- ACM Transactions on Architecture and Code Optimization (TACO)
- ACM Transactions on Embedded Systems (TECS)
- IEEE Transactions on Computers (TC)
- IEEE Transactions on VLSI Systems (TVLSI)
- IEEE Transactions on Networking (TON)
- International Journal on Parallel Processing
- Journal of Systems Architecture
- Computer Architecture Letters
- Computer Networks, The International Journal of Computer and Telecommunications Networking (COMNET)
- IET Computers & Digital Techniques
- Electronics and Telecommunications Research Institute Journal (ETRI), South Korea.

<u>Conference Reviewer:</u>

- International Symposium on Computer Architecture (ISCA) 1993, 1995, 1998
- Architectural Support for Programming Languages and Operating Systems (ASPLOS) 1994
- IEEE/ACM International Symposium on Microarchitecture (MICRO) 2001
- IEEE Symposium on High-Performance Computer Architecture (HPCA) 1995, 2008
- International Conference on Computer Design (ICCD) 1997-1998
- International Conference on Parallel Architectures and Compilation Techniques (PACT) 1999, 2001
- International Conference on Supercomputing (ICS) 2000, 2001, 2007
- IEEE International Parallel & Distributed Processing Symposium (IPDPS) 2007
- IEEE International on ASIC/SOC Conference (ASIC) 2000-2002
- The 8th Workshop on Hot Topics in Operating Systems (HotOS-VIII) 2001
- IEEE International Symposium on Circuits and Systems (ISCAS) 2007
- International Conference on New Technologies, Mobility and Security (NTMS) 2007
- 9th International World Wide Web Conference (WWW9) 1999
- International Workshop on Agents and Peer-to-Peer Computing (AP2PC) 2002
- Pan-Hellenic Informatics Conference (PCI) 2000-2001
- SIGDA PhD Forum at Design Automation Conference 2002

<u>Guest Editor:</u>

ACM Transactions on Embedded Computing Systems (TECS), Special Issue on Rapid System Prototyping, Volume 7, Issue 4 (July 2008).

Invited Talks

University of Ioannina, Computer Sciences Department, June 1998, ``Computer Architecture around the Turn of the Century''.

Publications

Book Chapters:

[B1] Sotiris Ioannidis, Athanasios Papathanasiou, Gregorios Maglis, Evangelos Markatos, Dionisios Pnevmatikatos, and Julia Sevaslidou, ``On Using Reliable Network RAM in Networks of Workstations'', Cluster Computing, pp. 109-121, Chapter 10, 2001, ISBN 1-59033-113-3, Nova Science Publishers, USA.

[B2] George Kornaros, Ioannis Papaeystathiou, and Dionısios Pnevmatikatos, ``Real-time Monitoring and Diagnostic Services for Networks-on-Chip'', Chanter 9, Networks-on-Chips: Theory and Practice, In Press, Publisher: Taylor & Francis Group LLC - CRC Press, Editors: Fayez Gebali, Haytham Elmiligi, and M.Watheq El-Kharashi.

[B3] Koen De Bosschere, Wayne Luk, Xavier Martorell, Nacho Navarro, Mike O'Boyle, Dionisios Pnevmatikatos, Alex Ramirez, Pascal Sainrat, André Seznec, Per Stenström, Olivier Temam, ``High-Performance Embedded Architecture and Compilation Roadmap'', *Transactions on High-Performance*

Embedded Architectures and Compilers. Springer-Verlag. Vol. 1 (1). 2007. pp. 5-29.

Journal Publications

[J1] Jeffrey D. Gee, Mark D. Hill, Dionisios N. Pnevmatikatos, and Alan J. Smith, ``Cache Performance of the SPEC92 Benchmark Suite,'' IEEE Micro, August 1993.

[J2] Georgios Kornaros, Dionisios Pnevmatikatos, Panagiota Vatsolaki, Georgios Kalokerinos, Chara Xanthaki, Dimitrios Mavroidis, Dimitrios Serpanos, and Manolis Katevenis, ``Implementation of ATLAS I: a Single-Chip ATM Switch with Backpressure'', IEEE *Micro*, vol. 19, n. 1, pp. 30-41, February 1999.

[J3] Sotiris Ioannidis, Athanasios Papathanasiou, Gregorios Maglis, Evangelos Markatos, Dionisios Pnevmatikatos, and Julia Sevaslidou, ``On Using Reliable Network RAM in Networks of Workstations'', *Parallel and Distributed Computing Practices (PDCP)*, Special Issue on High Performance Computing Clusters, Vol. 2, No. 5, Nova Science Publishers, USA, May 1999*.

[J4] Dionisios Pnevmatikatos, Evangelos Markatos, Gregory Maglis, and Sotiris Ioannidis, ``On Using Network RAM as a non-volatile Buffer'', *Cluster Computing: The Journal on Networks, Software and Applications*, Special Issue on I/O in Shared-Storage Clusters, (4), pp. 295-303, Baltzer Science Publishers, 1999.

[J5] Evangelos Markatos, Dionisios Pnevmatikatos, Michail Flouris and Manolis Katevenis, ``Secondary Storage Management for Web Proxies,'' *IEEE Transactions On Networking (TON)*, Vol. 10, No 6, December 2002.

[J6] Dionisios Pnevmatikatos, Ioannis Sourdis and Kyriakos Vlachos, ``An Efficient and Low-Cost Input/Output Subsystem for Network Processors'', *IEEE Design and Test of Computers,* Vol. 20, no. 4, pp. 56-64, July 2003.

[J7] Ioannis Papaefstathiou, Stylianos Perissakis, Theofanis G. Orphanoudakis, Nikos A. Nikolaou, George Kornaros, Nicholas A. Zervos, George Konstantoulakis, Dionisios N. Pnevmatikatos, and Kyriakos Vlachos, ``PRO3: A Hybrid NPU Architecture" , IEEE Micro, Vol. 24, no. 5, pp. 20-33, September/October 2004.

[J8] Kyriakos Vlachos, Theofanis Orphanoudakis, Yannis Papaeftathiou, Nikolaos Nikolaou, Dionisios Pnevmatikatos, George Konstantoulakis, J. A. Sanchez-P., ``Design and performance evaluation of a Programmable Packet Processing Engine (PPE) suitable for high-speed network processors units'', Journal of Microprocessors and Microsystems, vol. 31, no 3, 2007.

[J9] Ioannis Sourdis, Dionisios N. Pnevmatikatos, Stamatis Vassiliadis, ``Scalable multigigabit pattern matching for packet inspection'', IEEE Transactions on Very Large Scale Integration (VLSI) Systems, Volume 16 , Issue 2 (February 2008).

[J10] Manolis Katevenis, Vassilis Papaefstathiou, Stamatis G. Kavadias, Dionisios N. Pnevmatikatos, Federico Silla, Dimitrios S. Nikolopoulos, ``Explicit Communication and Synchronization in SARC''. IEEE Micro, vol 30, no 5, pp. 30-41, 2010.

Conference Publications (Refereed):

[C1] Dionisios N. Pnevmatikatos, Manoj Franklin, and Gurindar S. Sohi, ``Control Flow Prediction for Dynamic ILP Processors,'' *Proceedings of the 26th Annual International Symposium on Microarchitecture (MICRO-26)*, December 1993, IEEE/ACM.

[C2] Dionisios N. Pnevmatikatos and Gurindar S. Sohi, ``Guarded Execution and Branch Prediction in Dynamic ILP Processors,'' *Proceedings of the 21st Annual International Symposium on Computer Architecture (ISCA-21)*, April 1994, IEEE/ACM.

[C3] Todd M. Austin, Dionisios N. Pnevmatikatos, and Gurindar S. Sohi, ``Streamlining Data Cache Access with Fast Address Calculation,'' *Proceedings of the 22nd Annual International Symposium on Computer Architecture (ISCA-22)*, June 1995, IEEE/ACM.

[C4] Georgios Kornaros, Dionisios Pnevmatikatos, Panagiota Vatsolaki, Georgios Kalokerinos, Chara Xanthaki, Dimitrios Mavroidis, Dimitrios Serpanos, and Manolis Katevenis, ``Implementation of ATLAS I: a Single-Chip ATM Switch with Backpressure'', Proceedings of the *Hot Interconnects VI Symposium*, August 1998.

[C5] Dionisios Pnevmatikatos, Georgios Kornaros, G. Kalokerinos, and Chara Xanthaki, ``The Memory Structures of ATLAS I, a High Performance, 16x16 ATM Switch Supporting Backpressure,'' *Proceedings of the 11th Annual 1998 IEEE International ASIC Conference,* September 1998.

[C6] Georgios Kornaros, Dionisios Pnevmatikatos, Dimitrios Mavroidis, Peni Vatsolaki, George Kalokerinos, Chara Xanthaki, Georgios Dimitriadis, ``On Optimizing ATLAS I, A 10 Gbps ATM Switch,'' *Proceedings of the 7-th Hellenic Conference on Informatics,* Ioannina, Greece, August 26-29, 1999, pp. IV.50-IV.60.

[C7] Dionisios Pnevmatikatos and Georgios Kornaros, ``ATLAS II: Optimizing a 10Gbps Single-chip ATM Switch,'' *12th Annual 1999 IEEE International ASIC/SOC Conference,* Washington, DC, USA, September 15-18, 1999, IEEE.

[C8] Evangelos Markatos, Manolis Katevenis, Dionisios Pnevmatikatos and Michail Flouris, ``Secondary Storage Management for Web Proxies,'' *Proceedings of the 2nd USENIX Symposium on Internet Technologies and Systems (USITS '99),* Boulder, CO, USA, October 12-13, 1999, USENIX.

[C9] Apostolos Dollas, Dionisios Pnevmatikatos, Nikolaos Aslanides, Stamatios Kavvadias, Euripides Sotiriades, Sotirios Zogopoulos, Kyprianos Papademetriou, Architecture and Applications of PLATO, a Reconfigurable Active Network Platform, *Proceedings, 9th International IEEE Symposium on Field-Programmable Custom Computing Machines (FCCM-2001)*, Rohnert Park, CA, April 30 - May 2, 2001, IEEE.

[C10] Apostolos Dollas, Nikolaos Aslanides, Stamatios Kavvadias, Euripides Sotiriades, Kyprianos Papademetriou, Dionisios N. Pnevmatikatos, Rapid Prototyping of a Reusable 4x4 Active ATM Switch Core with the PCI Pamette, *Proceedings, 12th International IEEE Workshop on Rapid System Prototyping (RSP-2001),* pp. 17-23, Monterey, CA, June 25-27, 2001, IEEE.

[C11] Andreas Moshovos, Dionisios Pnevmatikatos, Amirali Baniasadi, ``Slice-Processors: An Implementation of Operation-based Prediction'', *Proceedings of the 15th ACM International Conference on Supercomputing (ICS),* Sorrento, Naples, Italy, June, 16 - 21, 2001, ACM.

[C12] Apostolos Dollas, Dionisios Pnevmatikatos, Nikolaos Aslanides, Euripides Sotiriades, Stamatis Kavvadias, Sotiris Zogopoulos, ``Experimental Testing of PLATO, a Reconfigurable Active ATM Network Node'', *Proceedings of the 8th Panhellenic Informatics Conference*, Cyprus, November, 2001.

[C13] K. Vlachos, T. Orphanoudakis, N. Nikolaou, S. Perissakis, D. Pnevmatikatos, G. Kornaros, J.A. Sanchez and G. Konstantoulakis, ``Processing and Scheduling Components in an Innovative Network Processor Architecture'', *Proceedings of the International Conference on VLSI Design,* New Dehli, India, January 4-8, 2003. (7 pages) IEEE, ACM.

[C14] Ioannis Sourdis Dionisios Pnevmatikatos, and Kyriakos Vlachos, ``An Efficient and Low-Cost Input/Output Subsystem for Network Processors'', *Workshop on Application Specific Processors (WASP-1),* November 19, 2002, Istanbul, Turkey (8 pages).

[C15] George Lykakis, Nikolaos Mouratidis, George Konstantoulakis, Kyriakos Vlachos, Nikolaos Nikolaou, Stylianos Perissakis, Ioannis Sourdis, Dionisios Pnevmatikatos, Dionisios Reisis, ``Efficient Field Processing Cores In An Innovative Protocol Processor System-On-Chip'', *Design Automation and Test Europe (DATE)*, March 3-7, 2003, Munich, Germany.

[C16] Ioannis Sourdis and Dionisios Pnevmatikatos, ``Fast, Large-Scale String Match for a 10Gbps FPGA-based Network Intrusion Detection System'', *13th International Conference on Field Programmable Logic and Applications (FPL)*, September 1-3, 2003, Lisbon – Portugal.

[C17] I. Charitakis, Dionisios Pnevmatikatos, Evangelos Markatos, Kostas Anagnostakis ``S2I: a Tool for Automatic Rule Match Compilation for the IXP Network Processor''. Proceedings of the 7th International Workshop on Software and Compilers for Embedded Systems, SCOPES 2003, pp.226-239, September 24-26, 2003 Vienna - Austria.

[C18] Ioannis Sourdis, and Dionisios Pnevmatikatos, ``Pre-decoded CAMs for Efficient and High-Speed NIDS Pattern Matching'', Proceedings of the Twelfth Annual IEEE Symposium on Field Programmable Custom Computing Machines (FCCM), April 20 - 23, 2004, Napa, California, USA.

[C19] Vassilios Dimopoulos, Giorgos Papadopoulos and Dionisios Pnevmatikatos, ``On the Importance of Header Classification in HW/SW Network Intrusion Detection Systems'', Proceedings of the 10th Panhellenic Conference on Informatics (PCI), November 11-13, 2005, Volos, Greece. Lecture Notes in Computer Science, Vol. 3746, ``Advances in Informatics'' P. Bozanis and E. Houstis (Eds.), 2005, XIX, ISBN-10: 3-540-29673-5

[C20] Ioannis Sourdis, Dionisios Pnevmatikatos, Stephan Wong, and Stamatis Vassiliadis, ``A Reconfigurable Perfect-Hashing Scheme for Packet Inspection'', Proceedings of the 15th International Conference on Field Programmable Logic and Applications (FPL), August 24-26, 2005, Tampere, Finland.

[C21] Giorgos Papadopoulos and Dionisios Pnevmatikatos, ``Hashing + Memory = Low Cost, Exact Pattern Matching'', Proceedings of the 15th International Conference on Field Programmable Logic and Applications (FPL), August 24-26, 2005, Tampere, Finland.

[C22] Aggelos Arelakis and Dionisios Pnevmatikatos, ``Variable-Length Hashing for Exact Pattern Matching'', Proceedings of the 16th International Conference on Field Programmable Logic and Applications (FPL), August 28-30, 2006, Madrid, Spain.

[C23] Ioannis Sourdis, Vasilis Dimopoulos, Dionisios Pnevmatikatos, and Stamatis Vassiliadis, ``Packet Pre-filtering for Network Intrusion Detection'', Proceedings of the ACM/IEEE Symposium on Architectures for Networking and Communications Systems (ANCS) December 4-5, 2006, San Jose, USA.

[C24] Ioannis Mavroidis, Ioannis Papaefstathiou and Dionisios Pnevmatikatos, ``Hardware Implementation of 2-Opt Local Search Algorithm for the Travelling Salesman Problem'', RSP '07: Proceedings of the 18th IEEE/IFIP International Workshop on Rapid System Prototyping, June 2007.

[C25] George Michelogiannakis and Dionisios Pnevmatikatos and Manolis Katevenis, ``Approaching Ideal NoC Latency with Pre-Configured Routes'', NOCS '07: Proceedings of the First International Symposium on Networks-on-Chip, 2007.

[C26] Ioannis Mavroidis and Ioannis Papaefstathiou and Dionisios Pnevmatikatos, ``A Fast FPGA-Based 2-Opt Solver for Small-Scale Euclidean Traveling Salesman Problem'', FCCM '07: Proceedings of the 15th Annual IEEE Symposium on Field-Programmable Custom Computing Machines, 2007.

[C27] Vassilis Dimopoulos, Ioannis Papaefstathiou, Dionisios N. Pnevmatikatos, ``A Memory-Efficient Reconfigurable Aho-Corasick FSM Implementation for Intrusion Detection Systems'', Proceedings of the 2007 International Conference on Embedded Computer Systems: Architectures, Modelling and Simulation (IC-SAMOS 2007), Samos, Greece, July 16-19, 2007.

[C28] Vassilis Papaefstathiou, Dionisios N. Pnevmatikatos, Manolis Marazakis, Giorgos Kalokairinos, Aggelos Ioannou, Michael Papamichael, Stamatis Kavadias, Giorgos Mihelogiannakis, Manolis Katevenis, ``Prototyping Efficient Interprocessor Communication Mechanisms'', Proceedings of the 2007 International Conference on Embedded Computer Systems: Architectures, Modelling and Simulation (IC-SAMOS 2007), Samos, Greece, July 16-19, 2007.

[C29] Ioannis Papaefstathiou, Dimitris Mprachos, Christodoulos Yannakou, Nikolaos Zervos, Dionisios Pnevmatikatos, ``Rapid System Prototyping of Networking Embedded Systems using System-C'', In proceedings, Parallel and Distributed Computing and Systems (PDCS), 16-18 November, 2008.

[C30] Sotiria Fytraki, Dionisios Pnevmatikatos, ``ReSim, a Trace-Driven, Reconfigurable ILP Processor Simulator'', In Proceedings, Design, Automation and Test Europe, 20-24 April 2009, Nice, France.

[C31] Panagiotis Afratis, Constantinos Galanakis, Euripides Sotiriades, Georgios-Grigorios Mplemenos, Grigorios Chrysos, Yiannis Papaefstathiou, Dionisios Pnevmatikatos, ``Design and Implementation of a Database Filter for BLAST Acceleration'', In Proceedings, Design, Automation and Test Europe, 20-24 April 2009, Nice, France.

[C32] George Kalokerinos, Vassilis Papaefstathiou, George Nikiforos, Stamatis Kavadias, Manolis Katevenis, Dionisios Pnevmatikatos and Xiaojun Yang, ``FPGA Implementation of a Configurable Cache/Scratchpad Memory with Virtualized User-Level RDMA Capability'', Proceedings of the 2009 International Conference on Embedded Computer Systems: Architectures, Modelling and Simulation (IC-SAMOS 2009), Samos, Greece, July 20-23, 2009.

[C33] Konstantinos Kyriakoulakos, Dionisios Pnevmatikatos, ``A Novel SRAM-Based FPGA Architecture for Efficient TMR Fault Tolerance Support'', Proceedings of the 19th International Conference on Field Programmable

Logic and Applications (FPL), August 31-September 2, 2009, Prague, Czeck Republic.

[C34] Dimitrios Kontos, Ioannis Papaefstathiou, Dionisios Pnevmatikatos, ``Design Space Exploration of Reconfigurable Systems for Calculating Flying Object's Optimal Noise Reduction Paths'', Proceedings of the 19th International Conference on Field Programmable Logic and Applications (FPL), August 31-September 2, 2009, Prague, Czeck Republic.

[C35] K. Siozios, D. Soudris, and D. Pnevmatikatos, "A Framework for Enabling Fault Tolerance in Reconfigurable Architectures", Proceedings of the 6th International Symposium on Applied Reconfigurable Computing (ARC), pp. 257–268, March 2010.

[C36] G. Passas, M. Katevenis, D. Pnevmatikatos: "A 128x128x24Gb/s Crossbar, Interconnecting 128 Tiles in a Single Hop, and Occupying 6% of their Area", Proceedings, of the 4th ACM/IEEE International Symposium on Networks-on-Chip (NOCS 2010), 3-6 May 2010, pp.

[C37] M. Katevenis, V. Papaefstathiou, S. Kavadias, D. Pnevmatikatos, F. Silla, D. Nikolopoulos: "Explicit Communication and Synchronization in SARC", IEEE Micro, vol. 30, no. 5, pp. 30-41, Sep./Oct. 2010,

[C38] G. Passas, M. Katevenis, D. Pnevmatikatos: "VLSI Micro-Architectures for High-Radix Crossbar Schedulers", Proceedings, 5th ACM/IEEE Int. Symp. on Networks-on-Chip (NOCS 2011), 1-4 May 2011.

Conference Poster Publications (accepted after Full Paper Review):

[P1] George Kornaros, Ioannis Papaefstathiou, Dionisios Pnevmatikatos, ``Dynamic Software-Assisted Monitoring of On-Chip Interconnects'', In Proceedings, Workshop on Diagnostic Services in Network-on-Chips, IEEE Design Automation & Test in Europe 2007, Nice, France, April 16-20, 2007, 2-page Full paper.

[P2] Panagiotis Afratis, Eyripides Sotiriades, Grigorios Chrysos, Sotiria Fytraki, Dionisios Pnevmatikatos, ``A Rate-based Prefiltering Approach to BLAST Acceleration'', In Proceedings, International Conference on Field Programmable Logic and Applications (FPL), September 8-10, 2008, Full 6-page, Poster Presentation.

[P3] Dimitris Theodoroupolos, Ioannis Papaefstathiou and Dionisios Pnevmatikatos, ``Cproc: An efficient Cryptographic Coprocessor'', In Proceedings, 16th IFIP/IEEE International Conference on Very Large Scale Integration (VLSI-SoC), October 13-15, 2008, 4-page paper, Poster Presentation.

[P4] Dimitris Theodoropoulos, Alexandros Siskos, Dionisios Pnevmatikatos, ``CCproc: A custom VLIW cryptography co-processor for symmetric-key ciphers'', 5th International Workshop on Applied Reconfigurable Computing (ARC) 2009, Full 6-page paper, Poster Presentation.

Pattents

``Data Cache Fast Address Calculation System and Method''. Εφευρέτες: Todd M. Austin, Dionisios N. Pnevmatikatos, και Gurindar S. Sohi, USA Patent Number 5,860,151 (January 12, 1999).