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PATMOS 2015, the 25th International Workshop on Power and Timing Modeling, Optimization and Simulation; Salvador, Bahia, Brazil, Sept 1-5, 2015

Reiner Hartenstein
TU Kaiserslautern

IEEE fellow
FPL fellow
SDPS fellow

http://hartenstein.de

The PATMOS Workshop Series

downloadable from
http://xputer.de

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The PATMOS Workshop Series

spin-off from the **PATMOS project** funded by the European Union

Project leader: Reiner Hartenstein

partner leader: Francis Jutand

partner leader: Antonio Núñez

http://hartenstein.de/PATMOS/

The world`s oldest conference series on power efficiency

Pushing Power Efficiency to become an industry-wide issue

however, there is still a lot to be done

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The first ten PATMOS Workshops

3

0th PATMOS Workshop, 1990, Kaiserslautern, Germany
(1st review meeting of the PATMOS ESPRIT basic research project)

1st PATMOS Workshop Apr. 25-26, 1991, Paris, France,
(correlated with the 2nd PATMOS project review meeting)

2nd PATMOS Workshop Sep. 25-26, 1992, Paris, France
(correlated with the 3rd PATMOS project review meeting)

3rd PATMOS Workshop Oct. 11-12, 1993, Montpellier, France
4th PATMOS Workshop Oct. 17-19, 1994, Barcelona, Spain
5th PATMOS Workshop Oct. 4-6, 1995, Oldenburg, Germany
6th PATMOS Workshop Sep. 23-25, 1996, Bologna, Italy
7th PATMOS Workshop Sep. 8-10, 1997, Louvain-la-Neuve, Belgium
8th PATMOS Workshop Oct. 7-9, 1998, Lyngby, Denmark
9th PATMOS Workshop Oct. 6-8, 1999, Kos Island, Greece

The List: http://www.fpl.uni-kl.de/conferences/patmos/index.htm

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PATMOS Workshops 10 thru 25

10th PATMOS Workshop Sep. 13-15, 2000, Göttingen, Germany
11th PATMOS Workshop Sep. 26-28, 2001, Yverdon-Les-Bains, Switzerland
12th PATMOS Workshop Sep 11-13, 2002, Sevilla, Spain
13th PATMOS Workshop Sep. 10-12, 2003, Torino, Italy
14th PATMOS Workshop Sep. 14-17, 2004, Santorini, Greece
15th PATMOS Workshop Sept 20 - 23, 2005, Leuven, Belgium
16th PATMOS Workshop Sept 13 - 15, 2006, Montpellier, France
17th PATMOS Workshop Sept 3 - 5, 2007, Göteborg, Sweden
18th PATMOS Workshop Sept 10-12, 2008, Lisbon, Portugal
19th PATMOS Workshop Sep 9-11, 2009, Delft, The Netherlands
20th PATMOS Workshop Sep 7-10, 2010, Grenoble, France
21th PATMOS Workshop Sep 26-29, 2011, Madrid, Spain
22th PATMOS Workshop Sep 4-6, 2012, Newcastle upon Tyne, UK
23th PATMOS Workshop Sep 9-11, 2013, Karlsruhe, Germany
24th PATMOS Workshop Sep 29 - Oct 1, 2014, Palma de Mallorca, Spain
25th PATMOS Workshop Sep 1 - 4, 2015, Salvador, Bahia, Brazil

twice in Paris, Montpellier, and Kaiserslautern

The List: http://www.fpl.uni-kl.de/conferences/patmos/index.htm

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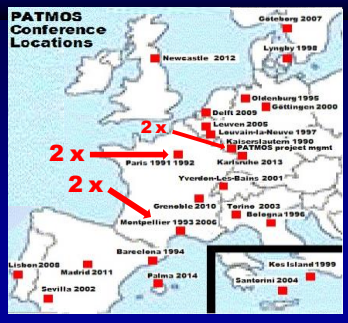
Workshops 0 thru 24 in Europe



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PATMOS now fully International

after 25 years European-only

Future Directions of PATMOS ?

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FPL

Sep 2-4, 2015 London, UK

Avoid the traditional Timing Clash with FPL* ...

... will create multiple PATMOS attendence

*) R. H.: Program Chair 1992, 1994, 1996, 1998, 1999, 2000

http://fpl.org/h/

Almost no Scope Conflict

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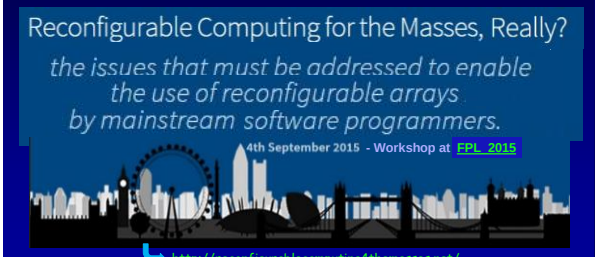
Most important FPL subject:
Educational Obstacles to widespread FPGA adoption



http://reconfigurablecomputing4themasses.net/

The Future of PATMOS ?

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FPL

FPL so far was European-only...

Who will volonteer extending to run it internationally ?

and to run PATMOS in conjuntion with international FPL ?

... as a competitor of ISLPED http://www.islped.org/

http://fpl.org/h/

Conclusions

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FPGAs and other such Reconfigurable Resources are inevitable to improve Power Efficiency as massively as needed

The Xputer Paradigm supports programming the Data Streams needed to run such Resources

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thank you !

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Backup for Discussion

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Both lists are very far from being complete

Conferences focused on FPGAs or Reconfigurable Computing:

http://tcfpga.org/conferences.html

Conference	Submission	Occurs	Where
International Symposium on Field-Programmable Gate Arrays (FPGA)	September	February	Monterey, CA
Int'l IEEE Symposium on Field-Programmable Custom Computing Machines (FCCM)	January	April/May	North America
International Conference on Field-Programmable Technology (ICFPT)	June	December	Pacific Rim
International Conference on Field Programmable Logic and Applications (FPL)	March	August	Europe
Reconfigurable Architecture Workshop (RAW)	October	May	with IPDPS
International Symposium on Applied Reconfigurable Computing (ARC)	November	March	various
International Conference on ReConFigurable Computing and FPGAs (ReConFig)	August	September	Mexico
Int'l Conference on Engineering of Reconfigurable Systems and Architectures (ERSA)	March	July	Las Vegas, NM
Int'l Workshop on Highly Efficient Accelerators and Reconfigurable Technologies (HEART)	February	May/June	Japan and UK

Conferences that often include FPGA or Reconfigurable Computing Content:

Conference	Submission	Occurs	Where
International Symposium on Rapid System Prototyping (RSP)	February	June	various
Design Automation Conference (DAC)	November	June	usually in CA
International Conference on Computer-Aided Design (ICCAD)	April	November	San Jose, CA
Asia and South Pacific Design Automation Conference (ASPDAC)	June	December	Asia and South Pacific
Design Automation and Test Europe (DATE)	September	March	Europe

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IPDPS 2015 WORKSHOPS – MONDAY 25 MAY

1	HCW	Heterogeneity in Computing Workshop
2	RAW	Reconfigurable Architectures Workshop
3	HIPS	Workshop on High-Level Parallel Programming Models & Supportive Environments
	LSPP	Workshop on Large-Scale Parallel Processing
4	NIDISC	Workshop on Nature Inspired Distributed Computing
5	HiCOMB	Workshop on High Performance Computational Biology
6	APDCM	Advances in Parallel and Distributed Computing Models
7	HPBC	High Performance Big Data and Cloud Computing Workshop
	HPDIC	High Performance Data Intensive Computing
8	ASHES	Accelerators and Hybrid Exascale Systems
9	PLC	Programming Models, Languages and Compilers for Manycore and Heterogeneous Architectures
10	EduPar	NSF/TCPP Workshop on Parallel and Distributed Computing Education
11	GABB	Graph Algorithms Building Blocks

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IPDPS 2015 WORKSHOPS – FRIDAY 29 MAY

12	HPPAC	High-Performance, Power-Aware Computing
13	PDSEC	Workshop on Parallel and Distributed Scientific and Engineering Computing
14	DPDNS	Dependable Parallel, Distributed and Network-Centric Systems
15	PCO	Parallel Computing and Optimization
16	ParLearning	Parallel and Distributed Computing for Large Scale Machine Learning and Big Data Analytics
17	JSSPP	Workshop on Job Scheduling Strategies for Parallel Processing
18	iWAPT	International Workshop on Automatic Performance Tuning
19	Julia	Invited Workshop: A new approach to high performance technical computing

The workshops HiPeR and HPDAV scheduled for Friday will not be held this year at IPDPS 2015.

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Annually: change of place worldwide

IEEE computer society RAW 2015 IPDPS 2015 Hyderabad, India

2nd Reconfigurable Architectures Workshop
Monday, May 25, 2015, Hyderabad, India

Workshop Chairs: Jürgen Becker, Karlsruhe Institute of Technology, Germany
Ramachandran Vaidyanathan, Louisiana State University, USA

Program Chairs: Marco Santambrogio, Politecnico di Milano, Italy
Wayne Luk, Imperial College, London, England

Program Vice-Chairs: Architectures & Algorithms: Steve Wilton, University of British Columbia, Canada
Reconfigurable Systems & Applications: Diana Goehringer, Ruhr-University Bochum, Germany

Steering Chair: Viktor K. Prasanna, University of Southern California, USA

Steering Committee: Jürgen Becker, Karlsruhe Institute of Technology, Germany
Viktor K. Prasanna, University of Southern California, USA
Ramachandran Vaidyanathan, Louisiana State University, USA

Also see History of ASAP conferences and „sister conferences"

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Same place every year: Mayan Riviera, Mexico:

The 10th ReConFiG at Cancun

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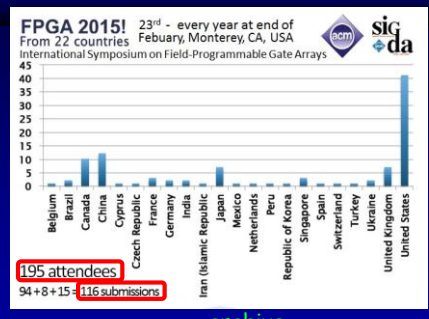
Same place every year: Monterey, CA, USA



archive

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Annually: change of place worldwide

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The International Symposium on Low Power Electronics and Design

USA: 9x
Asia: 4x
Eur.: 2x

ISLPED'01 Huntington Beach, CA, USA, August 6-7, 2001
ISLPED'02 Monterey, California, USA, August 12-14, **2002**
ISLPED'03 Seoul, Korea, August 25-27 2003
ISLPED'04 Newport, CA, USA, August 9-11, 2004
ISLPED'05 San Diego, CA, USA, August 8-10, 2005
ISLPED'06 Tegernsee, Germany, October 4-6, 2006 *
ISLPED'07 Portland, Oregon, USA, August 27-29, 2007
ISLPED'08 Bangalore, India, August 11-13, 2008
ISLPED'09 San Francisco, CA, USA, August 19-21, 2009
ISLPED'10 Austin, Texas, USA, August 18-20, 2010
ISLPED'11 Fukuoka, Japan, August 1-3, 2011
ISLPED'12 Redondo Beach, CA, USA, July 30-August 1, 2012
ISLPED'13 Beijing, China Sept 4-6, 2013
ISLPED'14 La Jolla, CA, USA, August 11-13, 2014
ISLPED'15 Rome, Italy, July 22-24, 2015

*) R.: panelist

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10 years younger than PATMOS

The ISLPED conference series is 10 years younger than the PATMOS series

Claims to be "the premier forum for advances in all aspects of low power design and technologies, ranging from process and circuit technologies, to simulation and synthesis tools, and to system level design and optimization."

http://www.islped.org/2015/index.html

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