

Johan Lilius
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Biography

Prof. Johan Lilius is full professor of Embedded Systems at Åbo Akademi since 2001. He is the leader of the Embedded Systems Laboratory, which has strong international and industrial links and he was a member of the research group "Formal Methods in Programming" that was awarded the status of Centre of Excellency by the Academy of Finland. He has won the Ten-Year Most Influential Paper Award at the ACM/IEEE Conference on Model Driven Engineering Languages and Systems, and a number of Best Paper awards. He has experience in leading large academic organisations, he has been Head of Turku Center for Computer Science, and Head of Department in two periods. During his leadership he participated in major reorganisations of the University. He is experienced in leading PhD research, he has been head of the TUCS graduate programme, and currently he is head of the DITM doctoral Network. He is member of the Editorial board of "Transactions on Petri Nets and Other Models of Concurrency" and a regular member of Program Committees of the relevant conferences in the Embedded systems area. He has co-organised and co-chaired several workshops, summer schools and conferences. He has completed the supervision of 6 doctoral students, and is currently supervising 5 students. He has published 140 research papers. His research interests include Energy-efficient Software, Programming Models for Multi-cores, System-Level Design, Performance Engineering and Models of Concurrency. He is in charge of the Embedded Systems Curriculum, the Embedded Computing Masters Programme and coordinates a number of double degree programmes.

Employment

Professor

Information Technology
Åbo Akademi University
Turku, Finland
1 Jan 2010 → present

Visiting Professor

Institut National des Sciences Appliquées de Rennes
Rennes, France
1 Oct 2016 → 1 Oct 2016

Director

Turku Centre for Computer Science
Turku, Finland
1 Jan 2011 → 1 Dec 2014

Northeast Normal University

Changchun, China
1 Jan 2009 → present

Projects

1. **IoT-Reboot: IoT Reboot Factory**
Lilius, J., Hellström, M. & Sundholm, V.
Project: Research
2. **SMARTER: Sea4Value Smart Terminals**
Hellström, M., Lilius, J., Tsvetkova, A., Långstedt, J. & Chen, Y.
18/02/21 → 17/02/23
Project: Research

3. **AutoMare EduNet: Autonomisen merenkulun koulutusverkosto**
Hellström, M., Tsvetkova, A., Lilius, J. & Ringbom, H.
01/12/20 → 30/11/22
Project: Research
4. **EDISS: EMJMD Programme on the Engineering of Data-intensive Intelligent Software Systems**
Lafond, S., Azimi Rashti, S., Wendelin, A. & Lilius, J.
Education, Audiovisual and Culture Executive Agency - European Commission
01/09/20 → 31/08/26
Project: Other
5. **KSE: Kvarken Space Eco**
Lilius, J., Iancu, B. & Zelioli, L.
01/09/19 → 31/08/22
Project: Research
6. **RAAS: Research Alliance for Autonomous Systems**
Hellström, M., Lilius, J., Wikström, K., Schwartz, H. & Ringbom, H.
07/08/18 → 30/11/20
Project: Research
7. **AIF: Allied ICT-Finland**
Lilius, J.
01/04/18 → 31/03/20
Project: Research
8. **ESC: Efficient Stream Computing by Fitting Computations to Cores**
Lilius, J., Lafond, S., Zelioli, L., Iancu, B., Soloviev, V., Georgakarakos, G. & Kanur Chandra Shekar, S.
01/09/17 → 31/08/21
Project: Research
9. **INTERSYS: Modular Interoperability for Healthcare Cyber-Physical Systems**
Lilius, J. & Liljeberg, P.
01/01/16 → 31/12/17
Project: Research
10. **EASYTRANS: Efficient Distributed Media Transcoding Platforms**
Lafond, S., Deneke, T. & Lilius, J.
01/09/15 → 31/08/16
Project: Research
11. **ParallaX**
Lilius, J., Westerholm, J., Lafond, S. & Björkqvist, J.
01/05/13 → 30/06/16
Project: Research
12. **AMEBA: Agent Based Management of Embedded Data Reserve**
Lilius, J., Lafond, S. & Liljeberg, P.
01/01/12 → 31/12/14
Project: Research
13. **DORADO: Dataflow Oriented Automated Design Toolchain**
Lilius, J. & Lafond, S.
01/09/11 → 31/08/15
Project: Research
14. **Recomp: Reduced Certification Costs Using Trusted Multi-core Platforms**
Lilius, J., Lafond, S., Truscan, D. & Porres Paltor, I.
01/01/10 → 31/03/13
Project: Research
15. **D-Mint: Deployment of Model-Based Technologies to Industrial Testing**
Truscan, D., Lilius, J., Porres Paltor, I. & Abbors, F.
01/01/07 → 31/12/09
Project: Research
16. **PECOS: Power and Energy Consumption Testing for NoTA Devices**
Lilius, J., Porres Paltor, I. & Truscan, D.
01/09/06 → 30/06/08
Project: Research
17. **EFCO: Efficient Feature Combination**
Lilius, J.
01/01/06 → 01/01/08
Project: Research

18. **RODIN: Rigorous Open Development Environment for Complex Systems**
 Troubitsyna, E., Sere, K., Lilius, J., Laibinis, L. & Walden, M.
 01/04/04 → 31/12/07
 Project: Research
19. **MICAS: Model-Driven Architecture In Co-design Architectures**
 Lilius, J., Porres Paltor, I. & Truscan, D.
 01/01/04 → 31/12/05
 Project: Research
20. **ADSEES: Architecture-driven software engineering for embedded systems**
 Lilius, J.
 01/01/01 → 01/01/03
 Project: Research

Publications

ABOships - An Inshore and Offshore Maritime Vessel Detection Dataset with Precise Annotations

Iancu, B., Soloviev, V., Zelioli, L. & Lilius, J., 5 Feb 2021, In: *Remote Sensing*. 13, 5, p. 1-17 17 p., 988.

Challenges of Artificial Intelligence and Machine Learning Software in Autonomous Vessels

Ashraf, A., Lilius, J., Porres Paltor, I., Walden, M. & Petre, L., 2021, *Proceedings of International Seminar on Safety and Security of Autonomous Vessels (ISSAV'19)*. p. –

A survey of machine learning approaches for surface maritime navigation

Azimi, S., Salokannel, J., Lafond, S., Lilius, J., Salokorpi, M. & Porres, I., 2020, *Maritime Transport VIII: proceedings of the 8th International Conference on Maritime Transport: Technology, Innovation and Research: Maritime Transport '20*. Iniciativa Digital Politècnica, p. 103 117 p.

Comparing CNN-Based Object Detectors on Two Novel Maritime Datasets

Soloviev, V., Farahnakian, F., Zelioli, L., Iancu, B., Lilius, J. & Heikkonen, J., 2020, *2020 IEEE International Conference on Multimedia & Expo Workshops (ICMEW)*. IEEE

On the Verification and Validation of AI Navigation Algorithms

Porres, I., Azimi, S., Lafond, S., Lilius, J., Salokannel, J. & Salokorpi, M., 2020, *Global OCEANS 2020*.

Recursive Task Generation for Scalable SDF Graph Execution on Multicore Processors

Georgakarakos, G. & Lilius, J., 2020, *Proceedings 2020 28th Euromicro International Conference on Parallel, Distributed and Network-Based Processing PDP 2020*. IEEE Computer Society Conference Publishing Services (CPS), p. –

Scenario-based Testing of a Ship Collision Avoidance System

Porres, I., Azimi, S. & Lilius, J., 2020, *2020 46th Euromicro Conference on Software Engineering and Advanced Applications (SEAA)*. IEEE, p. 545-552

An efficient model for quantifying the interaction between structural properties of software and hardware in the ARM big.LITTLE architecture

Stepanovic, S., Georgakarakos, G., Holmbacka, S. & Lilius, J., 2019, In: *Concurrency and Computation: Practice and Experience*. p. –

RDF stores for enhanced living environments: An overview

Karvinen, P., Diaz-Rodriguez, N., Grönroos, S. & Lilius, J., 2019, *Enhanced Living Environments: Algorithms, Architectures, Platforms, and Systems*. Ganchev, I., Garcia, N. M., Dobre, C., Mavromoustakis, C. X. & Goleva, R. (eds.). Springer, p. 19–52

Efficient task-based code generation for SDF graph execution on multicore processors

Georgakarakos, G. & Lilius, J., 2018, *2018 Conference on Design and Architectures for Signal and Image Processing (DASIP)*. IEEE, p. 112–117

Inactivity Benchmarking

Lund, W. & Lilius, J., 2018, *2018 International Conference on High Performance Computing & Simulation (HPCS)*. Smari Khalid Zine-Dine, W. W. (ed.). IEEE, p. 1028–1033

IoT at Sea

Nyblom, K., Lund, W., Lafond, S., Lilius, J., Björkqvist, J., Suominen, K. & Tuulos, K., 2018, *2018 IEEE International Symposium on Broadband Multimedia Systems and Broadcasting (BMSB)*. IEEE, p. 1–7 7 p.

Model-Based Representations for Dataflow Schedules

Bhattacharyya, S. S. & Lilius, J., 2018, *Principles of Modeling: Essays Dedicated to Edward A. Lee on the Occasion of His 60th Birthday*. Springer Verlag, p. 88-105 18 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 10760 LNCS)(Programming and Software Engineering).

Quantifying the Interaction Between Structural Properties of Software and Hardware in the ARM Big.LITTLE Architecture

Stepanovic, S., Georgakarakos, G., Holmbacka, S. & Lilius, J., 2018, *2018 26th Euromicro International Conference on Parallel, Distributed and Network-based Processing (PDP)*. Merelli, I., Lio, P. & Kottenko, I. (eds.). IEEE, p. 138–144

A Method for Automatic Whoosh Sound Description

Chernyi, E., Lilius, J. & Mouromtsev, D., 2017, *Proceedings of the 20th International Conference on Digital Audio Effects (DAFx-17), Edinburgh, UK, September 5–9, 2017*. Torin, A., Hamilton, B., Bilbao, S. & Newton, M. (eds.). p. 459–465

Detecting data-parallel synchronous dataflow graphs

Kanur Chandra Shekar, S., Lilius, J. & Ersfolk, J., 2017, *Design and Architectures for Signal and Image Processing (DASIP), 2017 Conference on*. IEEE, p. 67–72

Energy-Awareness and Performance Management with Parallel Dataflow Applications

Holmbacka, S., Nogues, E., Pelcat, M., Lafond, S., Menard, D. & Lilius, J., 2017, In: *Journal of Signal Processing Systems*. 87, 1, p. 33–48

Task-based execution of synchronous dataflow graphs for scalable multicore computing

Georgakarakos, G., Kanur Chandra Shekar, S., Lilius, J. & Desnos, K., 2017, *Signal Processing Systems (SiPS), 2017 IEEE International Workshop on*. IEEE, p. –

Accurate energy modeling for many-core static schedules with streaming applications

Holmbacka, S., Keller, J., Eitschberger, P. & Lilius, J., 2016, In: *Microprocessors and Microsystems*. 43, p. 14–25

A Knowledge Engineering Approach to Computational Creativity in Sound Design

Chernyi, E., Lilius, J., Brusila, J. & Mouromtsev, D., 2016, *Proceedings. 1st Conference on Computer Simulation of Musical Creativity*. Jan, S. & Valerio, V. (eds.). University of Huddersfield, p. –

Analysis on scalability and energy efficiency of HEVC decoding using task-based programming model

Georgakarakos, G., Holmbacka, S. & Lilius, J., 2016, *Design and Architectures for Signal and Image Processing (DASIP), 2016 Conference on*. Cerisier, S. & Adam Morawiec, D. (eds.). IEEE, p. –

An Approach for Structuring Sound Sample Libraries Using Ontology

Chernyi, E., Lilius, J., Brusila, J., Mouromtsev, D. & Rogozinsky, G., 2016, *Knowledge Engineering and Semantic Web*. Ngonga Ngomo, A-C. & Křemen, P. (eds.). Springer, p. 202–214

An Ontology for Wearables Data Interoperability and Ambient Assisted Living Application Development.

Diaz Rodriguez, N., Grönroos, S., Wickström, F., Lilius, J., Eertink, H., Braun, A., Dillen, P., Crowley, J. & Alexandersson, J., 2016, *World Conference on Soft Computing, 2016*. Springer, p. – 5 p.

A Semantic Security Framework and Context-Aware Role-Based Access Control Ontology for Smart Spaces

Hosseinzadeh, S., Virtanen, S., Diaz Rodriguez, N. & Lilius, J., 2016, *SBD '16 Proceedings of the International Workshop on Semantic Big Data*. Groppe, S. & Gruenwald, L. (eds.). ACM, p. –

Energy Aware Software: Issues, Approaches and Challenges

Lafond, S., Holmbacka, S. & Lilius, J., 2016, *7th International Green & Sustainable Computing Conference*. Shirazi, B. & Ahmad, I. (eds.). IEEE, p. –

Medicine Tray Design and Security for Medication Administration Processes at Hospital Wards.

Ranjita, P., Rodríguez Natalia, D., Riitta, D-O., Hanna, P., Lotta, H., Ilona, T., Sanna, S., Soini, A. & Lilius, J., 2016, *CHI 2016 Tangibles for Health Workshop*. ACM, p. –

Performance-Based Pricing in Multi-Core Geo-Distributed Cloud Computing

Lučanin, D., Pietri, I., Holmbacka, S., Brandic, I., Lilius, J. & Sakellariou, R., 2016, In: *IEEE Transactions on Cloud Computing*. 99, p. –

Accurate Energy Modelling for Many-Core Static Schedules

Holmbacka, S., Keller, J., Eitschberger, P. & Lilius, J., 2015, *Parallel, Distributed and Network-Based Processing (PDP), 2015 23rd Euromicro International Conference on*. O'Conner & Lisa (eds.). IEEE, p. 525–532

Actor Merging for Dataflow Process Networks

Boutellier, J., Ersfolk, J., Lilius, J., Mattavelli, M., Roquier, G. & Silvén, O., 2015, In: *IEEE Transactions on Signal Processing*. 63, 10, p. 2496–2508

Analysis and Transcoding Time Prediction of Online Videos

Deneke, T., Lafond, S. & Lilius, J., 2015, *2015 IEEE International Symposium on Multimedia*. Liao, A. Y. H. (ed.). IEEE International Symposium on Multimedia, p. 319–322

Analysis and Transcoding Time Prediction of Online Videos

Deneke, T., Lafond, S. & Lilius, J., 2015, *Turku Centre for Computer Science (TUCS)*.

Cost-Efficient, Utility-Based Caching of Expensive Computations in the Cloud

Byholm, B., Jokhio, F., Ashraf, A., Lafond, S., Lilius, J. & Porres Paltor, I., 2015, *23rd Euromicro International Conference on Parallel, Distributed, and Network-Based Processing*. Daneshtalab, M., Aldinucci, M., Leppänen, V., Lilius, J. & Brorsson, M. (eds.). IEEE Computer Society Conference Publishing Services (CPS), p. 505–513

Determining a Device Crossover Point in CPU/GPU Systems for Streaming Applications

Kanur Chandra Shekar, S., Lund, W., Tsiopoulos, L. & Lilius, J., 2015, *2015 IEEE Global Conference on Signal and Information Processing (GlobalSIP 2015)*. Moura, J. & Oliver Wu, D. (eds.). IEEE Global Conference on Signal and Information Processing, p. 100–106

Execution of dataflow process networks on OpenCL platforms

Lund, W., Kanur Chandra Shekar, S., Ersfolk, J., Tsiopoulos, L., Lilius, J., Haldin, J. & Falk, U., 2015, *Parallel, Distributed and Network-Based Processing (PDP), 2015 23rd Euromicro International Conference on*. Daneshtalab, M., Aldinucci, M., Leppänen, V., Lilius, J. & Brorsson, M. (eds.). IEEE, p. 618–625

Integration of Dataflow Components Within a Legacy Video Transcoding Framework

Deneke, T., Morel, L., Lafond, S. & Lilius, J., 2015, *Signal Processing Systems (SiPS), 2015 IEEE Workshop on*. Chakrabarti, C. (ed.). IEEE, p. 1–6

Performance Evaluation of Parallel HEVC Strategies

Georgakarakos, G., Tsiopoulos, L., Lilius, J., Haldin, J. & Falk, U., 2015, *Parallel, Distributed and Network-Based Processing (PDP), 2015 23rd Euromicro International Conference on*. Daneshtalab, M., Aldinucci, M., Leppänen, V., Lilius, J. & Brorsson, M. (eds.). IEEE, p. 137–144

Performance Monitor Based Power Management for big.LITTLE Platforms

Holmbacka, S., Lafond, S. & Lilius, J., 2015, *N/A. International conference on high-performance and embedded architectures and compilers*, p. –

Safe Motor Controller in a Mixed-Critical Environment with Runtime Updating Capabilities

Gutiérrez-Rivas, J-L., Holmbacka, S., Méndez-Macías, M., Lund, W., Lafond, S., Lilius, J. & Díaz-Alonso, J., 2015, In: *Journal of Universal Computer Science*. 21, 2, p. 177–205

Active Video Games to Promote Physical Activity in Children with Cancer: A Randomized Clinical Trial with Follow-Up

Kauhanen, L., Järvelä, L., M Lähteenmäki, P., Arola, M., J Heinonen, O., Axelin, A., Lilius, J., Vahlberg, T. & Salanterä, S., 2014, In: *BMC Pediatrics*. 14, 94, p. –

A Fuzzy Ontology for Semantic Modelling and Recognition of Human Behaviour

Diaz Rodriguez, N., Cuéllar, M. P., Lilius, J. & Delgado Calvo-Flores, M., 2014, In: *Knowledge-Based Systems*. 66, p. 46–60

A Run-Time Power Manager Exploiting Software Parallelism

Holmbacka, S., Lafond, S. & Lilius, J., 2014, *PACT '14 Proceedings of the 23rd international conference on Parallel architectures and compilation*. p. 471–472 2 p.

A Survey on Ontologies for Human Behaviour Recognition

Diaz Rodriguez, N., P. Cuéllar, M., Lilius, J. & Delgado Calvo-Flores, M., 2014, In: *ACM Computing Surveys*. 46, 4, p. –

A task migration mechanism for distributed many-core operating systems

Holmbacka, S., Fattah, M., Lund, K. W., Rahmani, A-M., Lafond, S. & Lilius, J., 2014, In: *Journal of Supercomputing*. 68, 3, p. 1141–1162 22 p.

Can IT health-care applications improve the medication tray-filling process at hospital wards? An exploratory study using eye-tracking and stress response

Diaz Rodriguez, N., Lilius, J., Danielsson-Ojala, R., Pirinen, H., Kauhanen, L., Salanterä, S., Björklund, S., Majors, J., Rautanen, K., Salakoski, T. & Tuominen, I., 2014, *16th International Conference on E-health Networking, Application & Services (Healthcom)*. Neto, Venâncio, A., de Souza, N. & José (eds.). IEEE Computer Society Institute of Electrical and Electronic Engineers, p. 423–428

Cost-Efficient, Utility-Based Caching of Expensive Computations in the Cloud

Byholm, B., Jokhio, F., Ashraf, A., Lafond, S., Lilius, J. & Porres Paltor, I., 2014, *Turku Centre for Computer Science (TUCS)*.

Decoding of DVB-T2 LDPC Codes on a Tile Processor: Optimisations and Performance Comparisons

Kanur Chandra Shekar, S., Grönroos, S., Nybom, K., Björkqvist, J. & Lilius, J., 2014, *Wireless innovation forum conference on wireless communications technologies and software defined radio*. Glossner, J., Hamill, S. & Pucker, L. (eds.). The Wireless Innovation Forum, p. 75–85

Energy and Power Management, Measurement and Analysis for Multi-Core Processors

Holmbacka, S., Hällis, F., Lund, K. W., Lafond, S. & Lilius, J., 2014, *Turku Centre for Computer Science (TUCS)*.

Energy Efficiency and Performance Management of Parallel Dataflow Applications

Holmbacka, S., Nogues, E., Pelcat, M., Lafond, S. & Lilius, J., 2014, *The 2014 Conference on Design & Architectures for Signal & Image Processing*. Ana, P. & Adam, M. (eds.). ECDI Electronic Chips & Systems design initiative, p. 1–8

Evaluation of CPU Hotplug Latency on Multi-Core ARM Chips

Holmbacka, S. & Lilius, J., 2014, *MCC'14: Seventh Swedish Workshop on Multicore Computing*. Kuchinski, Krzysztof, Gruian & Flavius (eds.). Lunds Tekniska Högskola, p. 9–12

Exploiting Smart Spaces for Interactive TV Applications Development

Saleemi, MM., Diaz Rodriguez, N. & Lilius, J., 2014, In: *Journal of Supercomputing*. 70, 3, p. 1200–1217

Handling Real-World Context-Awareness, Uncertainty and Vagueness in Real-Time Human Activity Tracking and Recognition with a Fuzzy Ontology-Based Hybrid Method

Díaz Rodríguez, N., León Cadahía, O., Pegalajar Cuéllar, M., Lilius, J. & DelgadoCalvo-Flores, M., 2014, In: *Sensors*. 14, 10, p. 18131–18171

Modelling Resilience of Data Processing Capabilities of CPS

Laibinis, L., Klionskiy, D., Troubitsyna, E., Dorokhov, A., Lilius, J. & Kupriyanov, M., 2014, *Software Engineering for Resilient Systems*. Majzik, I. & Vieira, M. (eds.). Springer, p. 55–70

Monitorizado remoto de ejercicios de rehabilitación en tiempo real con sensores de profundidad 3D y tecnologías semánticas.

Díaz Rodríguez, N., Wikström, R., Grönroos, S., Wickström, F., Karvinen, P., Berg, A., Hosseinzadeh, S., Lilius, J., Cuéllar, MP., Calvo-Flores M, D. & Karppi, M., 2014, *I CNMJI (The National Multidisciplinary Congress of Young Researchers)*. Granada (Spain).. Bailón-Moreno, R. (ed.). Conference proceedings PDF online, p. 319–319

Power-Aware HEVC Decoding with Tunable Image Quality

Nogues, E., Holmbacka, S., Pelcat, M., Menard, D. & Lilius, J., 2014, *2014 IEEE Workshop on Signal Processing Systems (SiPS)*. John, M. & Maire, ON. (eds.). IEEE workshop on signal processing systems, p. 38–44

Semantic and Fuzzy Modelling of Human Behaviour in Smart Spaces. A case study on Ambient Assisted Living and Remote Rehabilitation

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Smart Dosing: A Mobile Application for Tracking the Medication Tray-Filling and Dispensation Processes in Hospital Wards

Khan, NA., Díaz Rodríguez, N., Danielsson-Ojala, R., Pirinen, H., Kauhanen, L., Salanterä, S., Majors, J., Björklund, S., Rautanen, K., Salakoski, T., Tuominen, I., Porres Paltor, I. & Lilius, J., 2014, *6th International Workshop on Intelligent Environments Supporting Healthcare and Well-being (WISHWell'14)*. Augusto, JC. & Wolf, K. (eds.). Workshop proceedings in PDF (not online), p. 1–10

Teaching Many-Core Programming

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Laine, I., Lilius, J., Mäntylä, T., Petre, I., Tuohi, O. & Tuominen, I., 2014, *Turku Centre for Computer Science (TUCS)*.

Video Transcoding Time Prediction for Proactive Load Balancing

Deneke, T., Haile, H., Lafond, S. & Lilius, J., 2014, *IEEE International Conference on Multimedia and Expo*. Touradj, E., Shipeng, L., Houjun, W. & Jie, Y. (eds.). IEEE Computer Society Institute of Electrical and Electronic Engineers, p. 1–6

A Computation and Storage Trade-Off Strategy for Cost-Efficient Video Transcoding in the Cloud

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An Approach to Improve Semantics in Smart Spaces Using Reactive Fuzzy Rules

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A Scalable Distributed M3 Platform on a Low-Power Cluster

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Cost-Efficient Dynamically Scalable Video Transcoding in Cloud Computing

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Extending Semantic Web Tools for Improving Smart Spaces Interoperability and Usability

Diaz Rodriguez, N., Lilius, J., Pegalajar Cuéllar, M. & Delgado Calvo-Flores, M., 2013, *Distributed Computing and Artificial Intelligence, 10th International Conference*. Omatu, S., Neves, J., Corchado, JM., Paz Santana JF, D. & González S, R. (eds.). Springer, p. 45–52

Introduction to Cloud Computing Technologies

Ashraf, A., Hartikainen, M., Hassan, U., Heljanko, K., Lilius, J., Mikkonen, T., Porres Paltor, I., Syeed, M. & Tarkoma, S., 2013, *Developing Cloud Software: Algorithms, Applications, and Tools*. Porres, I., Mikkonen, T. & Ashraf, A. (eds.). TUCS general publications, p. 1–41

Lightweight Framework for Runtime Updating of C-Based Software in Embedded Systems

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M3 Interoperability for Remote Rehabilitation with Kinect

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Modeling Control Tokens for Composition of CAL Actors

Ersfolk, J., Roquier, G., Lilius, J. & Mattavelli, M., 2013, *Design and Architectures for Signal and Image Processing (DASIP), 2013 Conference on*. Morawiec, A. & Hinderscheit, J. (eds.). IEEE, p. 71–78

Parallel Decoder for Low Density Parity Check Codes: A MPSoC Study

Kanur Chandra Shekar, S., Georgakarakos, G., Siirilä, A., Lagravière, J., Nybom, K., Lafond, S. & Lilius, J., 2013, *High Performance Computing and Simulation (HPCS), 2013 International Conference on*. Smari, WW. & Zeljkovic, V. (eds.). IEEE, p. 202–206

Power Optimized Many-Cores with User Centric Notion of Parallelism

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Prediction-Based Dynamic Resource Allocation for Video Transcoding in Cloud Computing

Jokhio, F., Ashraf, A., Lafond, S., Porres Paltor, I. & Lilius, J., 2013, *Parallel, Distributed and Network-Based Processing (PDP), 2013 21st Euromicro International Conference on*. Kilpatrick, Peter, Milligan, Stotzka & Rainer (eds.). IEEE, p. 254–261 8 p.

Proactive Virtual Machine Allocation for Video Transcoding in the Cloud

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