

**The 10th IEEE/IFIP International Conference on Embedded and
Ubiquitous Computing (IEEE/IFIP EUC 2012)
Program**

December 5th			
Time	Session 1	Session 2	Session 3
	<i>Room Akamas 1</i>		
09:00 - 10:30	Keynote: Santosh Kumar Title: Mobile Measurement of Behavioral and Social Health at Population Scale - Implications for Computing Research		
10:30 - 11:00	Coffee Break		
	<i>Room Akamas 1</i>	<i>Room Akamas 2</i>	<i>Room Akamas 3</i>
11:00 - 12:30	EUC-1: Application-Specific Architectures	EUC-2: Smart Mobile Systems	CSE-1: CSE Applications I
12:30 - 13:30	Lunch		
13:30 - 15:00	EUC-3: Special Session 1 - Virtualization and adaptive systems	EUC-4: Power-Aware Systems	CSE-2: CSE Applications II
15:00 - 15:30	Coffee Break		
15:30 - 17:00	EUC-5: Special Session 2 - New frontiers in multicore and reconfigurable computing systems	EUC-6: Multiprocessors: Memories and Fault-Tolerance	CSE-3: Database and Data Mining I

December 6 th			
Time	Session 1	Session 2	Session 3
	<i>Room Akamas 1</i>		
09:00 – 09:30	Awards		
09:30 - 10:30	Keynote: Professor Geyong Min Title: Performance Analysis and Optimization of Integrated Scheduling Systems in Wireless Multimedia Networks		
10:30 - 11:00	Coffee Break		
	<i>Room Akamas 1</i>	<i>Room Akamas 2</i>	<i>Room Akamas 3</i>
11:00 - 12:30	EUC-7: Storage	EUC-8: Distributed and Smart Sensing	CSE-4: Database and Data Mining II
12:30 - 13:30	Lunch		
13:30 - 15:00	EUC-9: Smart Mobile Systems: Performance, Security and Reliability	EUC-10: Scheduling Techniques	CSE-5: Scientific and Engineering Computing I
15:00 - 15:30	Coffee Break		
15:30 - 17:00	EUC-11: Model Driven and *-Aware Systems	EUC-12: From Embedded Processors to Distributed Systems	CSE-6: Scientific and Engineering Computing II

December 7 th			
Time	Session 1	Session 2	Session 3
	<i>Room Akamas 1</i>	<i>Room Akamas 2</i>	<i>Room Akamas 3</i>
09:00 - 10:30	EUC-13: Real Time Systems	CSE-7: Distributed and Parallel Computing I	CSE-8: Security, Privacy and Trust I
10:30 - 11:00	Coffee Break		
11:00 - 12:30	EUC-14: Data Quality and Quality of Service	EUC-15: Dependability and Security	CSE-9: Security, Privacy and Trust II
12:30 - 13:30	Lunch		
13:30 - 15:00	EUC-16: Smart Environments	CSE-10: Embedded and Ubiquitous Computing	CSE-11: Advanced Networking and Applications
15:00 - 15:30	Coffee Break		
15:30 - 17:00	EUC-17: UUWSN2012: Underwater Wireless Communication	CSE-12: Services, Internet and Parallel Computing	CSE-13: Intelligent and Bio-inspired Computing

Session EUC-1: Application-Specific Architectures

Chair: Tobias Becker

1. A Dynamic Fuzzy Logic Based Routing Scheme for Bufferless NoCs
Chrysostomos Chrysostomou, Konstantinos Tatas, Adrian Radu Runcan
2. Hybrid Pixel Encoding: An Effective Algorithm for Display Frame Compressor
Yifu Li, Wenxiang Wang, Guangfei Zhang
3. A Parallel-Serial Decimal Multiplier Architecture
Luigi Dadda, Mauro Pisoni, Marco Santambrogio

Session EUC-2: Smart Mobile Systems

Chair: Jalil Boukhobza

1. MPower: towards an adaptive power management system for mobile devices
Alessandra Bonetto, Matteo Ferroni, Domenico Matteo, Alessandro Antonio Nacci, Matteo Mazzucchelli, Donatella Sciuto, Marco Domenico Santambrogio
2. A Method to Evaluate the Energy-Efficiency of Wide-Area Location Determination Techniques Used by Smartphones
Thomas O. Oshin, Stefan Poslad, Athen Ma
3. O-Sleep : Smartphone's output-oriented power saving mode
Jungseok Kim, Hyunwoo Joe, Hyungshin Kim

Session EUC-3: Special Session 1 - Virtualization and adaptive systems

Chair: Marco D. Santambrogio

1. Hardware / Software Virtualization for the Reconfigurable Multicore Platform
M. Ferger, M. Al Kadi, M. Hübner, M. Koedam, S. Sinha, K. Goossens, G. Marchesan Almeida, J. Rodrigo
2. Towards Full Virtualization of Heterogeneous NoC- based Multicore Embedded Architectures
George Kornaros, Miltos D. Grammatikakis, Marcello Coppola
3. EPICS: Engineering Proprioception in Computing Systems
Tobias Becker, Andreas Agne, Peter R. Lewis, Rami Bahsoon, Funmilade Faniyi, Lukas Esterle, Ariane Keller, Arjun Chandra, Alexander Refsum Jensenius, C. Stillerich

Session EUC-4: Power-Aware Systems

Chair: Claudio Maia

1. Applied Lightweight Parallel Multi-Appliance Recognition on Smart Meter
Chin-Feng Lai, Man Lin, Yonggang Wen, Yi-Wei Ma, Jiann-Liang Chen
2. Dynamic Voltage Scaling for Power-aware Hierarchical Real-Time Scheduling Framework
Guy Martin Tchamgoue, Kyong Hoon Kim, Yong-Kee Jun

3. The Power of Isolation
Silviu Craciunas, Christoph Kirsch

Session EUC-5: Special Session 2 - New frontiers in multicore and reconfigurable computing systems

Chair: Marco D. Santambrogio

1. A Compilation- and Simulation-Oriented Architecture Description Language for Multicore Systems
Timo Stripf, Oliver Oey, Thomas Bruckschloegl, Ralf Koenig, George Goulas, Panayiotis Alefragis, Nikolaos S. Voros, Jordy Potman, Kim Sunesen, Steven Derrien, Olivier Sentieys, and Juergen Becker
2. Novel Design Methods and a Tool Flow for Unleashing Dynamic Reconfiguration"
Kyprianos Papadimitriou, Christian Pilato, Dionisios Pnevmatikatos, Marco D. Santambrogio, Catalin Ciobanu, Tim Todman, Tobias Becker, Tom Davidson, Xinyu Niu, Georgi Gaydadjiev, Wayne Luk, Dirk Stroobandt
3. Resource-Efficient Designs using an Aspect-Oriented Approach
Jose G. F. Coutinho, Sujit Bhattacharya, Wayne Luk, George A. Constantinides, Joao M. P. Cardoso, Tiago Carvalho, Pedro C. Diniz, Zlatko Petrov

Session EUC-6: Multiprocessors: Memories and Fault-Tolerance

Chair: Max Fergner

1. MCC: A Load Balancing and Deadlock Free Interconnect Network for Cache Coherent Chip Multiprocessors
Liwei Chen, Guangfei Zhang, Huandong Wang, Wenxiang Wang, Ling Li, Hua Jing
2. ILP-based Memory-Aware Mapping Optimization for MPSoCs
Olivera Jovanovic, Nils Kneuper, Michael Engel, and Peter Marwedel
3. A Fault-Tolerant Low-Energy Multi-Application Mapping onto NoC-based Multiprocessors
Fateme Khalili, Hamid Reza Zarandi

Session EUC-7: Storage

Chair: Martijn Hendriks

1. Advil: A Pain Reliever for the Storage Performance of Mobile Devices
Je-Min Kim, Jin-Soo Kim
2. Micro-benchmarking Flash Memory File-System Wear leveling and Garbage Collection : a Focus on Initial State Impact
Pierre Olivier, Jalil Boukhobza, Eric Senn
3. MNK: Configurable Hybrid Flash Translation Layer for Multi-Channel Solid State Disk
Gyudong Shim, Sung Kyu Park, Kyu Ho Park

Session EUC-8: Distributed and Smart Sensing

Chair: Claudio Maia

1. InferLoc: Calibration Free based Location Inference for Temporal and Spatial Fine-Granularity Magnitude
Zhenyu Chen, Shuangquan Wang, Yiqiang Chen, Zhongtang Zhao, and Mu Lin
2. Enabling Massive Scale Sensing with the @LooCI Mobile Sensing Framework
Rafael Bachiller, Danny Hughes, Sam Michiels, Wouter Joosen
3. An Architecture for Ubiquitous and Collaborative 3D Position Sensing for Ubiquitous 3D Drawing
Shun'ichi Tano, Byongchol Pei, Junko Ichino, Tomonori Hashiyama, Mitsuru Iwata

Session EUC-9: Smart Mobile Systems: Performance, Security and Reliability

Chair: Tobias Becker

1. Controlling the Handoff Procedure in an Oil Refinery Environment Using Fuzzy Logic
Zinon Zinonos, Chrysostomos Chrysostomou, Vasos Vassiliou
2. A Performance Evaluation of Multi-Path Routing Protocols for Mobile Ad Hoc Network
Phu Hung Le
3. Dynamic Tessellation to Ensure K-anonymity
Hamilton Turner, Thaddeus Czauski, Brian Dougherty, Jules White

Session EUC-10: Scheduling Techniques

Chair: Max Ferger

1. Dynamic Global Scheduling of Parallel Real-Time Tasks
Luís Nogueira, José Carlos Fonseca, Cláudio Maia, Luís Miguel Pinho
2. Extensibility-Aware Message Scheduling Algorithm for the Static Segment of FlexRay
Yong Xie, Gang Zeng, Hiroaki Takada, Renfa Li
3. Regional Scheduler: A Region-based High Efficient Solid State Drive Scheduler
Hongyan Li, Ping Huang, Qiang Cao, Changsheng Xie

Session EUC-11: Model Driven and *-Aware Systems

Chair: Jose Gabriel de F. Coutinho

1. Reconstructing Critical Paths from Execution Traces
Martijn Hendriks, Frits Vaandrager
2. A Framework for Dynamic Validation of Context-Aware Applications
Achilleas Achilleos, Georgia Kapitsaki, George Papadopoulos
3. PerFridge: An Augmented Refrigerator that Detects and Presents Wasteful Usage for Eco-Persuasion
Satoshi Murata, Shota Kagatsume, Hiroaki Taguchi, Kaori Fujinami

Session EUC-12: From Embedded Processors to Distributed Systems

Chair: Jalil Boukhobza

1. Information Dissemination in Distributed Organic Computing Systems with Distributed Hash Tables
Michael Roth, Julia Schmitt, Florian Kluge, Theo Ungerer
2. USN: An Optimization Framework for User-centric Social Networks
Panayiotis Andreou, Panagiotis Germanakos, Andreas Konstantinides, Dimosthenis Georgiadis, Marios Belk, George Samaras

Session EUC-13: Real Time Systems

Chair: Wouter Joosen

1. A Hardware/Software CBSE Framework for RTOS Services: the Timing Service Case Study
Stéphane Rubini, Jean-Philippe Babau, Jalil Boukhobza
2. RTOS support for mixed time-triggered and event-triggered task sets
Martijn M.H.P. van den Heuvel, Reinder J. Bril, Johan J. Lukkien, Damir Isovici, Gowri Sankar Ramachandran
3. Overall System Value Maximization for Resource Constrained Heterogeneous Real-Time Embedded Systems
LI WANG, SHANGPING REN, GANG QUAN

Session EUC-14: Data Quality and Quality of Service

Chair: Czauski Thaddeus

1. A Queueing Theory Based Approach to QoS-Driven Adaptation for Service Discovery over MANETs
Yuanfeng Wen, Beihong Jin, Keqin Li, Albert Cheng, Wenjing Fang
2. Data Quality Observation in Pervasive Environments
Fei Li, Stefan Nastic, Schahram Dustdar
3. A Compositional Trust Model for Predicting the Trust Value of Software System QoS Properties
Dimuthu Gamage, Lahiru Gallage, James Hill, Rajeev Raje

Session EUC-15: Dependability and Security

Chair: Hamilton Turner

1. A Machine Learning Approach for Identifying and Classifying Faults in Wireless Sensor Networks
Ehsan Ullah Warriach, Kenji Tei, Marco Aiello
2. Network Coding-Based Network Coding Recovery Scheme
Yunlong Zhao, Shilong Kang, Masayuki Iwai, Kaoru Sezaki, Yoshito Tobe
3. An Accelerated Verification of an ID-based Signature Scheme for Broadcast Authentication in Wireless Sensor Networks
Chafika BENZAID, Sana MEDJEDBA, Nadjib BADACHE, Ameer Al-Nemrat

Session EUC-16: Smart Environments

Chair: Wouter Joosen

1. A distributed PIR-based approach for estimating people count in office environments
Florian Wahl, Marija Milenkovic, Oliver Amft
2. Aspects of Pervasive Information Management: an Account of the Green Move System
Emanuele Panigati, Angelo Rauseo, Fabio A. Schreiber, Letizia Tanca
3. A Smart Home Experience using Egocentric Interaction Design Principles
Dipak Surie, Thomas Pederson, Lars-Erik Janlert

Session EUC-17: UUWSN2012: Underwater Wireless Communication

Chairs: Changhwa Kim, Gangnung-Wonju

1. MDS-Mac: A Scheduled MAC for Localization, Time-Synchronisation and Communication in Underwater Acoustic Networks
Wouter van Kleunen, Nirvana Meratnia, Paul J.M. Havinga
2. AHU (Aloha and Handshaking Union): A MAC Protocol for Underwater MANETs
Seung-Won Shin, Nam-Yeol Yun, Soo-Hyun Park, Changhwa Kim
3. Cortex-M3 and TMS320C6416 based Acoustic modem Implementation for Underwater Wireless Communication
DongSoo Lee
4. Hex-grid based Routing Protocol in Wireless Sensor Networks
Youngho KIM, Jaesub KIM, Heungwoo Nam, Sunshin An
5. Integration Method between Localization and Routing in Underwater Sensor Network
Satoshi Hirai
6. Experimental Results of MIMO Underwater Acoustic Communication in Water Tank
Min-Soo Han, Jeong-Woo Han, Ki-Man Kim
7. Design of Optimum Linear Equalizer for Efficient Underwater Acoustic Communication
Tae-Jin Lee, Min-Soo Han, Jeong-Woo Han, Ki-Man Kim, Sang-Kook Lee, Seung-Yong Chun, Kwon Son