



EMERGING 2012

The Fourth International Conference on Emerging Network Intelligence

September 23-28, 2012

Barcelona, Spain

EMERGING 2012 Editors

Michael D. Logothetis, University of Patras, Greece

Tulin Atmaca, IT/Telecom&Management SudParis, France

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2012) by International Academy, Research, and Industry Association (IARIA)
Please refer to the Copyright Information page.

Printed by Curran Associates, Inc. (2012)

International Academy, Research, and Industry Association (IARIA)
412 Derby Way
Wilmington, DE 19810

Phone: (408) 893-6407
Fax: (408) 527-6351

petre@iaria.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

EMERGING 1: ADVANCED NETWORK ELEMENTS

Improving Performance of Multithreaded Scalar Architectures for Embedded Microcontrollers	1
<i>Horia Vladut Caprita, Mircea Popa, Ioan Miha</i>	
Optimization of Proxy Caches Using Proxy Filters	7
<i>Fabian Weber, Marcel Daneck, Christoph Reich</i>	
The Impact of the Floorplan of Functional Units on 3D Multi-core Processors	13
<i>Hyung Gyu Jeon, Hong Jun Choi, Jong Myon Kim, Cheol Hong Kim</i>	
A Plug-in Node Architecture for Dynamic Traffic Control	19
<i>Wangbong Lee, Dong Won Kang, Joon Kyung Lee</i>	

EMERGING 2: EMERGING TECHNOLOGIES AND APPLICATIONS

Emerging Function Concept Applied to Photonic Packet Switching Network	22
<i>Antonio Sachs, Ricardo Rocha, Fernando Redigolo, Tereza Carvalho</i>	
Fighting Botnets - A Systematic Approach	29
<i>Nuno G. Rodrigues, António Nogueira, Paulo Salvador</i>	
A Cluster Head Election Method with Adaptive Separation Distance and Load Distribution for Wireless Sensor Networks	37
<i>Cosmin Cirstea, Mihail Cernaianu, Aurel Gontean</i>	
Energy Efficient Wireless Sensor Network System for Localization	43
<i>Sila Ozen, Ture Peken, Sema Oktug</i>	
A Context-Relational Approach for the Internet of Things	49
<i>Jamie Walters, Theo Kanter</i>	

EMERGING 3: QUALITY

A Quasi-random Multirate Loss Model Supporting Elastic and Adaptive Traffic	56
<i>Ioannis Moscholios, John Vardakas, Michael Logothetis, Michael Koukias</i>	
A New Architecture for Trustworthy Autonomic Systems	62
<i>Thaddeus Eze, Richard Anthony, Chris Walshaw, Alan Soper</i>	
Quality Assessment for Recognition Tasks (QART)	69
<i>Mikolaj Leszczuk, Joel Dumke</i>	
Monitoring of Audiovisual Quality by Key Indicators (MOAVI) (IDEA PROPOSAL)	N/A
<i>Emmanuel Wyckens, Mikolaj Leszczuk, Silvio Borer</i>	
Development of Remote Support Service by Augmented Reality Videophone	74
<i>Atsushi Fukayama, Shunsuke Takamiya, Junichi Nakagawa, Shinyo Muto, Naoki Uchida</i>	
Author Index	