ICONS 2017

The Twelfth International Conference on Systems

April 23 - 27, 2017

Venice, Italy

ICONS 2017 Editors

Mark Austin, University of Maryland at College Park, USA
Andrew Snow, Ohio University, USA
Fabrice Mourlin, U-PEC University, 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© (2017) by International Academy, Research, and Industry Association (IARIA)
Please refer to the Copyright Information page.

Printed by Curran Associates, Inc. (2017)

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: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

ICONS 1: ADVANCED SYSTEMS

Performance of Authenticated Encryption for Payment Cards with Crypto Co-processors 1
K. Mayes

Distributed System Behavior Modeling of Urban Systems with Ontologies, Rules and Many-to-Many Association Relationships 10
M. Coelho, M. Austin, M. Blackburn

Challenges in Functional Testing on the Way to Automated Driving 16
S. Wittel, D. Ulmer, O. Buhler

ICONS 2 / EVSYS: EVOLVING SYSTEMS

Evolving Agent Architecture for Data Collection 22
A. Esserhir

Design of Mobile Services for Embedded Device 30
G. Djiken, S. Mostadi, F. Mourlin

ICONS 3: APPLICATION-ORIENTED SYSTEMS

BioWallet: A Biometric Digital Wallet 38
E. Benli, I. Engin, C. Giousouf, M. Ulak, S. Bahtiyar

Security of Mobile Agents in Distributed Java Agent Development Framework (JADE) Platforms 42
T. Bayer, C. Reich

Semantic Models and Rule-based Reasoning for Fault Detection and Diagnostics: Applications in Heating, Ventilating and Air Conditioning Systems 48
P. Delgoshaei, M. Austin, D. Veronica

Scoring Methods to Enable Bespoke Portfolio Management 54
D. Pashley, T. Tryfonas, A. Crossley, C. Setchell

Author Index