

2017 IEEE 26th International Conference on Enabling Technologies: Infrastructure for Collaborative Enterprises (WETICE 2017)

**Poznan, Poland
21-23 June 2017**



**IEEE Catalog Number: CFP17051-POD
ISBN: 978-1-5386-1760-1**

**Copyright © 2017 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

| | |
|-------------------------|-------------------|
| IEEE Catalog Number: | CFP17051-POD |
| ISBN (Print-On-Demand): | 978-1-5386-1760-1 |
| ISBN (Online): | 978-1-5386-1759-5 |
| ISSN: | 1524-4547 |

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
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

2017 IEEE 26th International Conference on Enabling Technologies: Infrastructure for Collaborative Enterprises

WETICE 2017

Table of Contents

| | |
|--|--------|
| A Message from WETICE 2017 Chairs..... | xi |
| WETICE 2017 Committees..... | xv |
| ACEC 2017 Track Committees..... | xvii |
| AROSA 2017 Track Committees..... | xviii |
| CBCTIA 2017 Track Committees..... | xx |
| CDCGM 2017 Track Committees..... | xxi |
| CoNeSec 2017 Track Committees..... | xxii |
| DEW 2017 Track Committees..... | xxiii |
| FISA 2017 Track Committees..... | xxiv |
| FVSBS 2017 Track Committees..... | xxv |
| SSTM 2017 Track Committees..... | xxvii |
| VSC 2017 Track Committees..... | xxviii |
| Web2Touch 2017 Track Committees..... | xxix |
| Keynotes..... | xxx |
| Industrial Sessions..... | xxxvi |

Adaptive Computing (and Agents) for Enhanced Collaboration: ACEC 2017

| | |
|---|---|
| Adaptive Computing (and Agents) for Enhanced Collaboration | 1 |
| <i>Federico Bergenti, M. Brian Blake, Giacomo Cabri, Julian Jarrett, Stefania Monica, and Usman Wajid</i> | |
| Interoperability and Scalability for Worker-Job Matching across Crowdsourcing Platforms | 3 |
| <i>Julian Jarrett and M. Brian Blake</i> | |
| PACT: A New Trust Prediction Method for Multi-agents Recommender Systems | 9 |
| <i>Afef Selmi, Zaki Brahmi, and Mohamed Mohsen Gammoudi</i> | |

| | |
|--|----|
| Adaptive Coordination in Autonomous Driving: Motivations and Perspectives | 15 |
| <i>Marko Bertogna, Paolo Burgio, Giacomo Cabri, and Nicola Capodieci</i> | |
| Evaluate a Personalized Multi Agent System through Social Networks: Web Scraping | 18 |
| <i>Amal Trifa, Aroua Hedhili Sbaï, and Wided Lejouad Chaari</i> | |
| An Adaptive Machine Translator for Multilingual Communication | 21 |
| <i>Ryan Lane and Ajay Bansal</i> | |
| Membrane Computing Based Scalable Distributed Learning and Collaborative Decision Making for Cyber Physical Systems | 24 |
| <i>Ankush Rai and R. Jagadeesh Kannan</i> | |

Adaptive and Reconfigurable Systems and Architectures: AROSA 2017

| | |
|--|-----|
| AROSA 2017: Summary Report | 28 |
| <i>Ismael Bouassida Rodriguez, Slim Kallel, Mohamed Jmaiel, and Khalil Drira</i> | |
| Formal Approach for QoS-Aware Cloud Service Composition | 30 |
| <i>Abderrahim Ait Wakrime and Said Jabbour</i> | |
| Ontology-Based SLA Negotiation and Re-Negotiation for Cloud Computing | 36 |
| <i>Taher Labidi, Achraf Mtibaa, Walid Gaaloul, and Faiez Gargouri</i> | |
| Configurable Structure Tree as a Means to Manage Configurable Business Processes | 42 |
| <i>Wehbi Benallal, Mahmoud Barhamgi, Djamel Benslimane, and Zakaria Maamar</i> | |
| Situation/Reaction Paradigm for SoS Simulation | 48 |
| <i>Rymel Benabidallah, Imane Cherfa, Salah Sadou, and Mohamed Ahmed Nacer</i> | |
| Adaptable Monitoring for Intrusion Detection in Wireless Sensor Networks | 54 |
| <i>Takoua Abdellatif, Kais Rouis, and Mohamed Mosbah</i> | |
| A Token-Based Scheme for Coordinating Decisions in Large-Scale Autonomic Systems | 60 |
| <i>Olga Melekhova and Jacques Malenfant</i> | |
| Towards Formal Planning for Quality-Aware Self-Adaptive Systems | 66 |
| <i>Esma Maatougui, Chafia Bouanaka, and Nadia Zeghib</i> | |
| Verifying the Package-Based Free and Open Source Software Configuration using EVENT-B | N/A |
| <i>Abir Elkhalfa, Layth Sliman, Sindyana Jlassi, Imed Abbassi, and Mohamed Graiet</i> | |

Adaptive Computing (and Agents) for Enhanced Collaboration: CBCTIA 2017

| | |
|---|----|
| Track report of Cloud-Based Collaborative Technologies in IoT Age (CBCTIA 2017) | 72 |
| <i>Lukasz Czekierda and Sławomir Zieliński</i> | |
| Flow-Based Programming for IoT Leveraging Fog Computing | 74 |
| <i>Tomasz Szydło, Robert Brzoza-Woch, Joanna Sendorek, Mateusz Windak, and Chris Gniady</i> | |

| | |
|--|-----|
| Benefits of Extending Collaborative Educational Cloud with IoT | 80 |
| <i>Lukasz Czekerda, Sławomir Zieliński, and Marcin Szreter</i> | |
| A Comparison of QoS Parameters of WebRTC Videoconference with Conference Bridge Placed in Private and Public Cloud | 86 |
| <i>Robert R. Chodorek, Agnieszka Chodorek, Grzegorz Rzym, and Krzysztof Wajda</i> | |
| Convergence of Distributed Clouds, Grids and their Management: CDCGM 2017 | |
| Track Chair's Report: Convergence of Distributed Clouds, Grids and their Management CDCGM 2017 | 92 |
| <i>Fabrizio Messina, Rao Mikkilineni, Giovanni Morana, and Domenico Rosaci</i> | |
| Combining Distributed and Multi-core Programming Techniques to Increase the Performance of K-Means Algorithm | 95 |
| <i>Ilias K. Savvas and Dimitrios Tselios</i> | |
| A Platform for Vehicular Networks in the Cloud to Applications in Intelligent Transportation Systems | 101 |
| <i>George Leite Junior, Rogério P. C. do Nascimento, Mario A. R. Dantas, and Douglas D. J. de Macedo</i> | |
| MUSA Deployer: Deployment of Multi-cloud Applications | 107 |
| <i>Valentina Casola, Alessandra De Benedictis, Massimiliano Rak, Umberto Villano, Erkuden Rios, Angel Rego, and Giancarlo Capone</i> | |
| Globally Interoperable Network of Clouds and Cognitive Workload Quality of Service Assurance | 113 |
| <i>Rao Mikkilineni, Giovanni Morana, and Surendra Keshan</i> | |
| PRIARMOR: An IaaS Solution for Low-Level Privacy Enforcement in the Cloud | 119 |
| <i>Amal Ghorbel, Mahmoud Ghorbel, and Mohamed Jmaiel</i> | |
| Revising Max-Min for Scheduling in a Cloud Computing Context | 125 |
| <i>Paul Moggridge, Na Helian, Yi Sun, Mariana Lilley, Vito Veneziano, and Martin Eaves</i> | |
| Towards Self-Organizing Cloud Markets Fostering Intermediaries | 131 |
| <i>Benedikt Pittl, Irfan Ul-Haq, Werner Mach, and Erich Schikuta</i> | |
| A Programmable Network Architecture for Information Centric Network Using Data Replication in Private Clouds | 137 |
| <i>Erick Barros Nascimento, Edward David Moreno, and Douglas Dyllon Jeronimo de Macedo</i> | |

Complex Networks Monitoring, Security and Fraud Detection for Enterprises: CoNeSec 2017

| | |
|---|-----|
| CoNeSec Track Report | 143 |
| <i>Grzegorz Kolaczek and Krzysztof Juszczyszyn</i> | |
| Structural Analysis and Link Prediction in Dynamic Networks of Web Services | 144 |
| <i>Krzysztof Juszczyszyn, Grzegorz Kolaczek, and Dominika Dudziak-Gajowiak</i> | |
| Network Hardware Analyzer Based on NetFPGA 1G. | 150 |
| <i>Sergiy Dorosh, Grzegorz Debita, and Patryk Schauer</i> | |

Data Exploration in the Web 3.0 Age: DEW 2017

| | |
|--|-----|
| Track Summary Report for the Data Exploration in the Web 3.0 Age (DEW) Track | 155 |
| <i>Maurizio Atzori, Nicoletta Dessì, and Barbara Pes</i> | |
| Web Mining & Computer Vision: New Partners for Object-Based Activity Recognition | 158 |
| <i>Daniele Riboni and Marta Murtas</i> | |
| Is Wikipedia a Latent Gene Ontology? | 164 |
| <i>Nicoletta Dessì and Maurizio Atzori</i> | |
| Feature Selection for High-Dimensional Data: The Issue of Stability | 170 |
| <i>Barbara Pes</i> | |
| Improving Multi-label Medical Text Classification by Feature Selection | 176 |
| <i>Kinga Glinka, Rafał Woźniak, and Danuta Zakrzewska</i> | |
| An Algorithm for Fuzzy Association Rules Extraction Based on Prime Number Coding | 182 |
| <i>Imen Mguiris, Hamida Amdouni, and Mohamed Mohsen Gammoudi</i> | |
| Towards Effective Industrial Robot Fleet Visualization for Remote Service Applications | 185 |
| <i>Veronika Domova and Goranka Zoric</i> | |
| Benchmark for Evaluating Approximate Query Processing on Data Streams | 191 |
| <i>Francesco Di Tria, Ezio Lefons, and Filippo Tangorra</i> | |
| Integrating a Priori Probabilistic Knowledge into Classification for Image Description | 197 |
| <i>Andrea Apicella, Anna Corazza, Francesco Isgrò, and Giuseppe Vettigli</i> | |
| Injecting Semantic Background Knowledge into Neural Networks using Graph Embeddings | 200 |
| <i>Konstantin Ziegler, Olivier Caelen, Mathieu Garchery, Michael Granitzer, Liyun He-Guelton, Johannes Jurgovsky, Pierre-Edouard Portier, and Stefan Zwicklbauer</i> | |

Future Internet Services and Applications: FISA 2017

| | |
|--|-----|
| Track Report of Future Internet Services and Applications (FISA 2017) | 206 |
| <i>Hatem Hadj Kacem, Vanilson Buregio, and Mohamed Sellami</i> | |
| A Web Service Architecture for Tracking and Analyzing Data from Distributed E-Learning Environments | 208 |
| <i>Alexander Askinadze and Stefan Conrad</i> | |
| Semantic Framework for Internet of Things-Aware Business Process Development | 214 |
| <i>Kunal Suri, Walid Gaaloul, Arnaud Cuccuru, and Sebastien Gerard</i> | |
| An Autonomic QoE-Aware Management Architecture for Software-Defined Networking | 220 |
| <i>Felipe Volpato, Madalena Pereira Da Silva, Alexandre Leopoldo Gonçalves, and Mario Antonio Ribeiro Dantas</i> | |
| Hierarchical Identity Based Cryptography for Security and Trust in Named Data Networking | 226 |
| <i>Balkis Hamdane, Rihab Boussada, Mohamed Elhoucine Elhdhili, and Sihem Guemara El Fatmi</i> | |
| Multi-tenancy Aware Configurable Service Discovery Approach in Cloud Computing | 232 |
| <i>Jalel Eddine Hajlaoui, Mohamed Nazih Omri, and Djamel Benslimane</i> | |

Formal Verification of Service Based Systems: FVSBS 2017

| | |
|--|-----|
| Track Report for Formal Verification of Service Based Systems: FVSBS 2017 | 238 |
| <i>Mohamed Graiet and Kais Klai</i> | |
| Behavioral Verification of Service Component Architecture | 239 |
| <i>Wael chargui, Taoufik Sakka Rouis, Mourad Kmimech, Mohamed Tahar Bhiri, Layth Sliman, and Badran Raddaoui</i> | |

Security, Safety and Trust Management: SSTM 2017

| | |
|--|-----|
| Security, Safety and Trust Management (SSTM '17) | 242 |
| <i>Haider Abbas, Eugenio Orlandi, Farrukh Aslam Khan, Oliver Popov, and Asif Masood</i> | |
| Privacy-Utility Feature Selection as a Privacy Mechanism in Collaborative Data Classification | 244 |
| <i>Mina Sheikhalishahi and Fabio Martinelli</i> | |
| Towards a Secure Access to Content in Named Data Networking | 250 |
| <i>Balkis Hamdane, Rihab Boussada, Mohamed Elhoucine Elhdhili, and Sihem Guemara El Fatmi</i> | |
| Run-Time Security and Safety Management in Adaptive Smart Work Environments | 256 |
| <i>Mahsa Teimourikia, Mariagrazia Fugini, and Claudia Raibulet</i> | |

Validation of Safety critical Collaboration Systems: VSC 2017

| | |
|--|-----|
| VSC Track Report | 262 |
| <i>Andrea Calvagna, Andrea Fornaia, and Emiliano Tramontana</i> | |
| Formal Methods Meet Mobile Code Obfuscation Identification of Code Reordering Technique | 263 |
| <i>Aniello Cimitile, Fabio Martinelli, Francesco Mercaldo, Vittoria Nardone, and Antonella Santone</i> | |
| Is My Code Easy to Port? Using Taint Analysis to Evaluate and Assist Code Portability | 269 |
| <i>Andrea Fornaia and Emiliano Tramontana</i> | |

Semantic Technologies in Smart Information Sharing and Web Collaboration: Web2Touch 2017

| | |
|--|-----|
| Web2Touch 2017: Semantic Technologies in Smart Information Sharing and Web Collaboration | 275 |
| <i>Olga Nabuco, Rodrigo Bonacin, and Riccardo Martoglia</i> | |
| PLDSD: Propagated Linked Data Semantic Distance | 278 |
| <i>Sultan Alfarhood, Kevin Labille, and Susan Gauch</i> | |
| A Flexible Architecture for Cognitive Sensing of Activities in Ambient Assisted Living..... | 284 |
| <i>Rita Zgheib, Antonio De Nicola, Maria Luisa Villani, Emmanuel Conchon, and Rémi Bastide</i> | |
| Enhancing the Creation of Detection Rules for Malicious Software through Ontologies and Crowdsourcing | 290 |
| <i>Antonio Carlos de Marchi, Andre Gregio, and Rodrigo Bonacin</i> | |
| A Web-Based Knowledge Management System for Scientific Research Team | 296 |
| <i>Abir Masmoudi, Emna Mezghani, Hatem Bellaaj, Khalil Drira, and Mohamed Jmaiel</i> | |
| Recognizing Intentions in Free Text Messages: Studies with Portuguese Language | 302 |
| <i>Julio Cesar dos Reis, Rodrigo Bonacin, and Maria Cecília Calani Baranauskas</i> | |
| An Ontological Approach for Semantic Modeling of Learning Pathways | 308 |
| <i>Omiros Iatrellis, Achilles Kameas, and Panos Fitsilis</i> | |
| rMatcher: A Tool for Semantic Web Services Discovery & Publication | 311 |
| <i>Randa Hammami, Hatem Bellaaj, and Ahmed Hadj Kacem</i> | |
| Author Index | 314 |