Table of Contents

Scroll to the title and select a **Blue** link to open a paper. After viewing the paper, use the bookmarks to the left to return to the beginning of the Table of Contents.

ACMCMPH - Advanced Computational Methods in Biomedical Imaging and Population Health Track

Track Co-Chairs: Soon Ae Chun, City University of New York, USA
Ayman EL-Baz, University of Louisville, USA
Mohammed EL Hassouni, Mohammed V University in Rabat, Morocco
Rachid Jennane, University of Orleans, France
Armin Mikler, University of North Texas, USA

Mining String Patterns for Individuating Reading Pathologies 1
Fabio Fassetti, University of Calabria, Italy
Ilaria Fassetti, LogopediaTherapeia Rehabilitation Center, Italy

Discovering, Selecting and Exploiting Feature Sequence Records of Study Participants for the Classification of Epidemiological Data on Hepatic Steatosis 6
Tommy Hielscher, Otto-von-Guericke University Magdeburg, Germany
Henry Völzke, University Medicine Greifswald, Germany
Panagiotis Papapetrou, Stockholm University, Sweden
Myra Spiliopoulou, Otto-von-Guericke University Magdeburg, Germany

An Adaptive Neuro-Fuzzy Inference System for Improving Data Quality in Disease Registries 14
Hatem Bellaaj, University of Sfax, Tunisia
Afef Mdhaffar, University of Sfax, Tunisia
Mohamed Jmaiel, University of Sfax, Tunisia
Sondes Hdiji Mseddi, University of Sfax, Tunisia
Bernd Freisleben, Philipps-Universität Marburg, Germany

A Parallel Framework for HCC Detection in DCE-MRI Sequences with Wavelet-Based Description and SVM classification 18
Ana L.M. Pavan, São Paulo State University, Brazil
Marwa Benabdallah, University of Sfax, Tunisia
Marie-Ange Lebre, Université Clermont Auvergne, France
Diana Rodrigues de Pina, São Paulo State University, Brazil
Faouzi Jaziri, Université Clermont Auvergne, France
Antoine Vacavant, Université Clermont Auvergne, France
Achraf Mtibaa, Université de Sfax, Tunisia
Hawa Mohamed Ali, Université Clermont Auvergne, France
Manuel Grand-Brochier, Université Clermont Auvergne, France
Hugo Rositi, Université Clermont Auvergne, France
Benoît Magnin, CHU Clermont-Ferrand, France
Armand Abergel, CHU Clermont-Ferrand, France
Pascal Chabrot, CHU Clermont-Ferrand, FR

3D Medical Objects Processing and Retrieval using Spherical Harmonics: A Case Study with Congestive Heart Failure MRI Exams 26
Leila Cristina C. Bergamasco, University of São Paulo, Brazil
Carlos E. Rochitte, University of São Paulo, Brazil
Fátima L.S. Nunes, University of São Paulo, Brazil

Poster Papers

Deep Metric Learning for Multi-Labelled Radiographs 34
Mauro Annarumma, King's College London, UK
Giovanni Montana, King's College London, UK

BIO - Bionformatics Track

Track Co-Chairs: Juan Manuel Corchado, University of Salamanca, Spain
Paola Lecca, University of Trento, Italy
Dan Tulpan, National Research Council, Canada

Track Editorial 38

A tf-idf based Topic Model for Identifying lncRNAs from Genomic Background 40
Manu Madhavan, National Institute of Technology Calicut, India
Gopakumar G, National Institute of Technology Calicut, India

A Multi-Criteria Decision Making Approach for Predicting Cancer Cell Sensitivity to Drugs 47
Salma Daoud, University of Sfax, Tunisia
Afef Mdhaffar, University of Sousse, Tunisia
Bernd Freisleben, University of Marburg, Germany
Mohamed Jmaiel, University of Sfax, Tunisia

Interpretable CNV-based Tumour Classification using Fuzzy Rule based Classifiers 54
Mattia Ricatto, University of Pisa, Italy
Marco Barsacchi, University of Florence, Italy
A. Bechini, University of Pisa, Italy

How to Compute Protein Residue Contacts more Accurately? 60
Pedro M. Martins, Universidade Federal de Minas Gerais, Brazil
Vinícius D. Mayrink, Universidade Federal de Minas Gerais, Brazil
Sabrina de A. Silveira, Universidade Federal de Viçosa, Brazil
Carlos H. da Silveira, Universidade Federal de Itajubá, Brazil
Leonardo H.F. de Lima, Universidade Federal de São João del-Rei, Brazil
Raquel C. de Melo-Minardi, Universidade Federal de Minas Gerais, Brazil

Poster Papers

Evaluation of Inductive and Transductive Inference in the context of Translation Initiation Site 68
Wallison W. Guimarães, Pontifical Catholic University of Minas Gerais, Brazil
Cristiano L.N. Pinto, Pontifical Catholic University of Minas Gerais, Brazil
Cristiane N. Nobre, Pontifical Catholic University of Minas Gerais, Brazil
Luis E. Zárate, Pontifical Catholic University of Minas Gerais, Brazil

Student Research Abstract

Student Research Abstract: Estimating the Impacts of HIV Intervention Programs among Females Who Sell Sex in Nigeria: A Modelling Approach 72
Sampson Akwafuo, University of North Texas, USA

Student Research Abstract: Simulation Study of Transient Receptor Potential Current in Urinary Bladder over Activity 74
Chitaranjan Mahapatra, Indian Institute of Technology Bombay, India

BPMEA - Business Process Management & Enterprise Architecture Track

Track Co-Chairs: Davide Rossi, University of Bologna, Italy
Marco Brambilla, Politecnico di Milano, Italy

Track Editorial 76

Ordering Stakeholder Viewpoint Concerns for Holistic Enterprise Architecture (The W6H Framework) 78
Mujahid Sultan, Ryerson University, Canada
Andriy Miranskyy, Ryerson University, Canada

Similarity Resonance for Improving Process Model Matching Accuracy 86
Nour Assy, Eindhoven University of Technology, The Netherlands
Boudewijn F. van Dongen, Eindhoven University of Technology, The Netherlands
Wil M.P. van der Aalst, Eindhoven University of Technology, The Netherlands

Verifying BPMN Understandability with Novice Business Managers 94
Vanessa Mendoza, University of Pernambuco, Brazil
Denis Silva da Silveira, Federal University of Pernambuco, Brazil
Maria Luiza Albuquerque, Federal University of Pernambuco, Brazil
João Araújo, Universidade NOVA de Lisboa, Portugal

Using Enterprise Architecture Model Analysis and Description Logics for Maturity Assessment 102
Diogo Proença, IST/INESC-ID, Portugal
José Borbinha, IST/INESC-ID, Portugal

Conceptual Modeling of Inter-dependencies between Processes and Data 110
Carlo Combi, Università degli Studi di Verona, Italy
Barbara Oliboni, Università degli Studi di Verona, Italy
Mathias Weske, Hasso Plattner Institute at the University of Potsdam, Germany
Francesca Zerbato, Università degli Studi di Verona, Italy

Automated Analysis of Industrial Workflow-based Models 120
Mario Cortes-Cornax, University of Grenoble Alpes, France
Ajay Krishna, University of Grenoble Alpes, France
Adrian Mos, Naver Labs, France
Gwen Salaün, University of Grenoble Alpes, France

Dynamic High-level Requirements in Self-Adaptive Systems 128
Davide Rossi, University of Bologna, Italy
Francesco Poggi, University of Bologna, Italy
Paolo Ciancarini, University of Bologna, Italy

Poster Papers

A Method for Developing Model to Text Transformations 138
Alessandro Tiso, University of Genova, Italy
Gianna Reggio, University of Genova, Italy
Maurizio Leotta, University of Genova, Italy
Filippo Ricca, University of Genova, Italy

CC - Cloud Computing Track

Track Co-Chairs: SD Madhu Kumar, National Institute of Technology Calicut, India
Priya Chandran, National Institute of Technology Calicut, India

Track Editorial 142

Transparent IO Access Control for Application-level Tenant Isolation 143
Majid Makki, imec-DistriNet, KU Leuven, Belgium
Dimitri Van Landuyt, imec-DistriNet, KU Leuven, Belgium
Bert Lagaisse, imec-DistriNet, KU Leuven, Belgium
Wouter Joosen, imec-DistriNet, KU Leuven, Belgium
Nick Hofstede, Inventive Designers, Belgium

Gelly-Scheduling: Distributed Graph Processing for Service Placement in Community Networks 151
Miguel E. Coimbra, Instituto Superior Técnico, Universidade de Lisboa, Portugal
Mennan Selimi, University of Cambridge, UK
Alexandre P. Francisco, Instituto Superior Técnico, Universidade de Lisboa, Portugal
Felix Freitag, Universitat Politècnica de Catalunya, Spain
Luís Veiga, Instituto Superior Técnico, Universidade de Lisboa, Portugal

An Integer Linear-programming based Resource Allocation Method for SQL-like Queries in the Cloud 161
Mohamed Mehdi Kandi, IRIT Laboratory, Paul Sabatier University, France
Shaoyi Yin, IRIT Laboratory, Paul Sabatier University, France
Abdelkader Hameurlain, IRIT Laboratory, Paul Sabatier University, France

Multi-Level Per Node Combiner (MLPNC) to Minimize MapReduce Job Latency on Virtualized Environment 167
Rathinaraja Jeyaraj, National Institute of Technology Karnataka, India
Ananthanarayana V S, National Institute of Technology Karnataka, India

Data Locality and VM Interference Aware Mitigation of Data Skew in Hadoop Leveraging Modern Portfolio Theory 175
Seyed Morteza Nabavinejad, Sharif University of Technology, Iran
Maziar Goudarzi, Sharif University of Technology, Iran

A Memory-Deduplication Side-Channel Attack to Detect Applications in Co-Resident Virtual Machines 183
Jens Lindemann, University of Hamburg, Germany
Mathias Fischer, University of Hamburg, Germany

Cloud Transactions Adhere to Strict Policy Consistency for Improved Performance 193
Dileep Mardham, Missouri University of Science and Technology, USA
Sanjay Madria, Missouri University of Science and Technology, USA
James Milligan, Air Force Research Lab, USA
Mark Linderman, Air Force Research Lab, USA

Bounding the Cost of Virtual Machine Migrations for Resource Allocation in Cloud Data Centers 201
M.P. Gilesh, Government Engineering College Wayanad, India
S.D. Madhu Kumar, National Institute of Technology Calicut, India
Lillykutty Jacob, National Institute of Technology Calicut, India

Poster Papers

Efficient Distributed of MapReduce Jobs for Maximizing Profit on Federated Cloud 207
Thouraya Gouasmi, University of Sfax, Tunisia
Wajdi Louati, University of Sfax, Tunisia
Ahmed Hadj Kacem, University of Sfax, Tunisia

Performance Optimization of Heterogeneous Cloud Storage with Bandwidth & Capacity Considerations 210
Po-Chun Huang, National Taipei University of Technology, Taiwan
Yuan-Hao Chang, Academia Sinica, Taiwan
Tseng-Yi Chen, Academia Sinica and National Tsing Hua University, Taiwan
Chia-Heng Tu, National Cheng Kung University, Taiwan
Chun Chen, National Tsing Hua University, Taiwan
Hsin-Wen Wei, Tamkang University, Taiwan
Wei-Kuan Shih, National Tsing Hua University, Taiwan

Student Research Abstract

Student Research Abstract: Curtailing the Cost of Virtual Machine Migrations in Cloud Data Centers 214
M.P. Gilesh, National Institute of Technology Calicut, India

CCS Track

Track Co-Chairs: Maurice ter Beek, ISTI-CNR, Italy
Barbara Re, University of Camerino, Italy
Mirko Viroli, University of Bologna, Italy
Rachid Anane, Coventry University, UK
Rami Bahsoon, University of Birmingham, UK

Track Editorial 216

Comparing Languages for Engineering Server Software: Erlang, Go, and Scala with Akka 218
Ivan Valkov, University of Glasgow, UK
Natalia Chechina, University of Glasgow, UK
Phil Trinder, University of Glasgow, UK

Coordinated Composition of Continuous Service Collaborations in Decentralized Smart Computing Environments 226
Markus Wutzler, Technische Universität Dresden, Germany
Thomas Springer, Technische Universität Dresden, Germany
Alexander Schill, Technische Universität Dresden, Germany

Online Team-Based Game Development Discussions Patterns Summarised using Probabilistic Models 234
Akiko Teranishi, New York University Abu Dhabi, UAE
Minoru Nakayama, Tokyo Institute of Technology, Japan
Theodor Wyeld, Flinders University, Australia
Eid A. Mohamad, New York University Abu Dhabi, UAE

No Longer Alone: Finding Common Ground in Collaborative Virtual Environments 240
Li Liu, California State University, Northridge, USA
Adam Kaplan, California State University, Northridge, USA

Poster Papers

A Pipelining-based Framework for Processing Events in Multimedia Sensor Networks 247
Chinnapong Angsuchotmetee, University of Pau and Pays de l'Adour, France
Richard Chbeir, University of Pau and Pays de l'Adour, France
Yudith Cardinale, Universidad Simón Bolívar, Venezuela
Shohei Yokoyama, Shizuoka University, Japan

CIVIA - Computational Intelligence and Video & Image Analysis Track

Track Co-Chairs: Yin-Fu Huang, National Yunlin University of Science and Technology, Taiwan
Agostinho Rosa, University of Lisbon, Portugal

Track Editorial 251

Evaluation of Morphological Hierarchies for Supervised Video Segmentation 252
Filipe Tório. L.R. Nhimi, PUC Minas, Brazil
Zenilton Patrocínio Jr., PUC Minas, Brazil
Benjamin Perret, ESIEE Paris, France
Jean Cousty, ESIEE Paris, France
Silvio Jamil F. Guimaraes, PUC Minas, Brazil

Identification of Fruit Fly in Intelligent Traps using Techniques of Digital Image Processing and Machine Learning 260
Thainan B. Remboski, Universidade Federal de Pelotas, Brazil
William D. de Souza, Universidade Federal de Pelotas, Brazil
Marilton S. de Aguiar, Universidade Federal de Pelotas, Brazil
Paulo R. Ferreira Júnior, Universidade Federal de Pelotas, Brazil

A Low Cost VSLAM Prototype using Webcams and a Smartphone for Outdoor Application 268
Eduardo A. Speroni, Universidade Federal de Santa Maria, Brazil
Simone R. Ceolin, Universidade Federal de Santa Maria, Brazil
Osmar M. dos Santos, Universidade Federal de Santa Maria, Brazil
Andrei P. Legg, Universidade Federal de Santa Maria, Brazil

A Deep-Learning-Based Approach for Automated Wagon Component Inspection 276
Rafael L. Rocha, Instituto Tecnológico Vale, Brazil
Ana Carolina Q. Siravenha, SESI, Brazil
Ana Cláudia S. Gomes, SESI, Brazil
Gerson L. Serejo, Instituto Tecnológico Vale, Brazil
Alexandre F.B. Silva, SENAI Institute of Innovation for Minerals Technologies, Brazil
Luciano M. Rodrigues, Instituto Tecnológico Vale, Brazil
Júlio Braga, Vale S.A., Brazil
Giovanni Dias, Vale S.A., Brazil
Schubert R. Carvalho, Instituto Tecnológico Vale, Brazil
Cleidson R.B. de Souza, Instituto Tecnológico Vale and Universidade Federal do Pará, Brazil

A Curve Completion Algorithm for Agricultural Planning 284
Iuri R. Souza, Sensix, Brazil
Mauricio C. Escarpinati, Universidade Federal de Uberlândia, Brazil
Daniel D. Abdala, Universidade Federal de Uberlândia, Brazil

Computer Vision System forWeld Bead Geometric Analysis 292
Luciane B. Soares, Universidade Federal do Rio Grande, Brazil
Átila A. Weis, Universidade Federal do Rio Grande, Brazil
Bruna de V. Guterres, Universidade Federal do Rio Grande, Brazil
Ricardo N. Rodrigues, Universidade Federal do Rio Grande, Brazil
Silvia S. da C. Botelho, Universidade Federal do Rio Grande, Brazil

Comparative Study of Genetic and Discrete Firefly Algorithm for Combinatorial Optimization 300
Willian Tessaro Lunardi, University of Luxembourg, Luxembourg
Holger Voos, University of Luxembourg, Luxembourg

Poster Papers

BoSS: Image Retrieval using Bag-of-Superpixel Signatures 309
Daniel Y.T. Chino, University of São Paulo, Brazil
Lucas C. Scabora, University of São Paulo, Brazil
Caetano Traina Jr., University of São Paulo, Brazil
Agma J.M. Traina, University of São Paulo, Brazil

CoCo - Cognitive Computing Track

Track Co-Chairs: Mauro Dragoni, Fondazione Bruno Kessler (FBK), Italy
Marco Rospocher, Fondazione Bruno Kessler (FBK), Italy

Track Editorial 313

Review-Level Aspect-Based Sentiment Analysis using an Ontology 315
Sophie de Kok, Erasmus University Rotterdam, The Netherlands
Linda Punt, Erasmus University Rotterdam, The Netherlands
Rosita van den Puttelaar, Erasmus University Rotterdam, The Netherlands
Karoliina Ranta, Erasmus University Rotterdam, The Netherlands
Kim Schouten, Erasmus University Rotterdam, The Netherlands
Flavius Frasincar, Erasmus University Rotterdam, The Netherlands

Predicting Incorrect Mappings: A Data-Driven Approach Applied to DBpedia 323
Mariano Rico, Universidad Politécnica de Madrid, Spain
Nandana Mihindukulasooriya, Universidad Politécnica de Madrid, Spain
Dimitris Kontokostas, Leipzig University, Germany
Heiko Paulheim, University of Mannheim, Germany
Sebastian Hellmann, Leipzig University, Germany
Asunción Gómez-Pérez, Universidad Politécnica de Madrid, Spain

Deep Reinforcement Learning Boosted by External Knowledge 331
Nicolas Bougie, National Institute of Informatics, Japan
Ryutaro Ichise, National Institute of Informatics, Japan

Predicting Facebook-Users' Personality based on Status and Linguistic Features via Flexible Regression Methodologies 339
Prantik Howlader, Cisco Systems, India
Kuntal Kumar Pal, Cavium Networks, India
Alfredo Cuzzocrea, University of Trieste and ICAR-CNR, Italy
S.D. Madhu Kumar, National Institute of Technology, India

Poster Papers

Applying Machine Learning Algorithms for Deriving Personality Traits in Social Network 346
Eric F.M. Araújo, Vrije Universiteit Amsterdam, The Netherlands
Bojan Simoski, Vrije Universiteit Amsterdam, The Netherlands
Michel Klein, Vrije Universiteit Amsterdam, The Netherlands

CPS - Cyber-Physical Systems Track

Track Co-Chairs: Ai-Chun Pang, National Taiwan University, Taiwan
Chun Jason Xue, City University of Hong Kong, China
Jingtong Hu, University of Pittsburgh, USA

Track Editorial 350

Boosting the Performance with a Data-backup-free Programming Scheme for TLC-based SSDs 351
Chin-Chiang Pan, National Taiwan University, Taiwan
Chien-Chung Ho, National Chung Cheng University, Taiwan
Yuan-Hao Chang, Academia Sinica, Taiwan
Tei-Wei Kuo, National Taiwan University, Taiwan
Yu-Ming Chang, National Taiwan University, Taiwan
Ming-Chang Yang, The Chinese University of Hong Kong, HK

Prediction of Abnormal Temporal Behavior in Real-Time Systems 359
Mohammad Hamad, Technische Universität Braunschweig, Germany
Zain A.H. Hammadeh, Technische Universität Braunschweig, Germany
Selma Saidi, Hamburg University of Technology, Germany
Vassilis Prevelakis, Technische Universität Braunschweig, Germany
Rolf Ernst, Technische Universität Braunschweig, Germany

Integrated Simulation Testbed for Security and Resilience of CPS 368
Himanshu Neema, Vanderbilt University, USA
Bradley Potteiger, Vanderbilt University, USA
Xenofon Koutsoukos, Vanderbilt University, USA
Gabor Karsai, Vanderbilt University, USA
Peter Volgyesi, Vanderbilt University, USA
Janos Sztipanovits, Vanderbilt University, USA

Low Power Driven and Multi-CLP aware Loop Tiling for RRAM Crossbar-based CNN 375
Yuanhui Ni, Capital Normal University, China
Keni Qiu, Capital Normal University, China
Weiwen Chen, Capital Normal University, China
Lixue Xia, Tsinghua University, China
Yu Wang, Tsinghua University, China

DADS - Dependable, Adaptive, and Secure Distributed Systems Track

Track Co-Chairs: Karl Goeschka, UAS Technikum Vienna, Austria
Rui Oliveira, Universidade do Minho, Portugal
Peter Pietzuch, Imperial College London, UK
Giovanni Russello, University of Auckland, New Zealand

Track Editorial 381

Towards a Model for Comprehending and Reasoning about PoW-based Blockchain Network Sustainability 383
Sotirios Liaskos, York University, Canada
Bo Wang, York University, Canada

Secure Publish and Subscribe Systems with Efficient Revocation 388
Sana Belguith, The University of Auckland, New Zealand
Shujie Cui, The University of Auckland, New Zealand
Muhammad Rizwan Asghar, The University of Auckland, New Zealand
Giovanni Russello, The University of Auckland, New Zealand

Adaptive Information Distribution for Dynamic Sets 395
Matthias Prellwitz, University of Rostock, Germany
Helge Parzyjegla, University of Rostock, Germany
Steffen Steiner, University of Rostock, Germany
Gero Mühl, University of Rostock, Germany

EcoVMBroker: Energy-aware Scheduling for Multi-layer Datacenters 403
Rodrigo Fernandes, INESC-ID Lisboa, Portugal
José Simão, INESC-ID Lisboa, Portugal
Luís Veiga, INESC-ID Lisboa, Portugal

Dynamic Adaptation of Byzantine Consensus Protocols 411
Carlos Carvalho, INESC-ID, Portugal
Daniel Porto, INESC-ID, Portugal
Luís Rodrigues, INESC-ID, Portugal
Manuel Bravo, INESC-ID, Portugal
Alysson Bessani, LaSIGE, Portugal

Poster Papers

Modeling and Verifying SDN with Multiple Controllers 419
Lili Xiao, East China Normal University, China
Shuangqing Xiang, East China Normal University, China
Huibiao Zhu, East China Normal University, China

Safe and Efficient Fleet Operation for Autonomous Machines: An Actor-based Approach 423
Ali Jafari, Reykjavik University, Iceland
Jayasoorya Jayanthi Surendran Nair, Mälardalen University, Sweden
Stephan Baumgart, Volvo Construction Equipment, Sweden
Marjan Sirjani, Mälardalen University and Reykjavik University, Sweden

Trigger Correlation for Dynamic System Reconfiguration 427
Mahin Abbasipour, Concordia University, Canada
Ferhat Khendek, Concordia University, Canada
Maria Toeroe, Ericsson Inc., Canada

Student Research Abstract

Student Research Abstract: IT-Security in Self-Organizing Decentralized Virtual Power Plants 431
Marius Stübs, Universtität Hamburg, Germany

DM - Data Mining Track

Track Co-Chairs: Hasan Jamil, University of Idaho, USA
Rosa Meo, Università degli Studi di Torino, Italy

Track Editorial 433

An Efficient Hybrid SVDD/Clustering approach for Anomaly-based Intrusion Detection 435
Tayeb Kenaza, Ecole Militaire Polytechnique, Algeria
Khadija Benaceur, Ecole Nationale Préparatoire aux Etudes d'Ingéniorat, Algeria
Abdenour Labed, Ecole Militaire Polytechnique, Algeria

Vehicle Emission Prediction using Remote Sensing Data and Machine Learning Techniques 444
Jiazhen Chen, University of Auckland, New Zealand
Gillian Dobbie, University of Auckland, New Zealand
Yun Sing Koh, University of Auckland, New Zealand
Elizabeth Somervell, National Institute of Water and Atmospheric Research, New Zealand
Gustavo Olivares, National Institute of Water and Atmospheric Research, New Zealand

Sentiment Phrase Generation using Statistical Methods 452
Dirk Reinel, Hof University of Applied Sciences, Germany
Jörg Scheidt, Hof University of Applied Sciences, Germany
Andreas Henrich, University of Bamberg, Germany
Niko Brucker, Hof University of Applied Sciences, Germany

On the Behavior of the Infinite Restricted Boltzmann Machine for Clustering 461
Nikolas A. Huhnstock, University of Skövde, Sweden
Alexander Karlsson, University of Skövde, Sweden
Maria Riveiro, University of Skövde, Sweden
H. Joe Steinhauer, University of Skövde, Sweden

Weight-based Search to Find Clusters around Medians in Subspaces 471
Sergio Peignier, INSA/LIRIS/INRIA, France
Christophe Rigotti, INSA/LIRIS, France
Anthony Rossi, INRIA, France
Guillaume Beslon, INSA/LIRIS/INRIA, France

A Novel Join Technique for Similar-Trend Searches supporting Normalization on Time-Series Databases 481
Junho Song, Hanyang University, South Korea
Sungchae Lim, Dongduk Women's University, South Korea
Sang-Wook Kim, Hanyang University, South Korea

Error Analysis and Topology Modifications of a Self-Organizing Incremental Neural Network 487
Xiaoyu Wang, Tokyo Institute of Technology, Japan
Osamu Hasegawa, Tokyo Institute of Technology, Japan
Shiming Ge, Chinese Academy of Sciences, China

Poster Papers

A Quality Control Method for Fraud Detection on Utility Customers without an Active Contract 495
Bernat Coma-Puig, Universitat Politècnica de Catalunya, Spain
Josep Carmona, Universitat Politècnica de Catalunya, Spain

Student Research Abstract

Student Research Abstract: On Improving ROCK-based Clustering for Categorical Data 499
Riccardo Cappuzzo, SAP, Italy

DS - Data Streams Track

Track Co-Chairs: Albert Bifet, LTCI, Telecom ParisTech, France
Andre Carvalho, ICMC, USP, Brazil
Joao Gama, University of Porto, Portugal

Track Editorial 501

Maximally Informative k-Itemset Mining from Massively Distributed Data Streams 502
Mehdi Zitouni, INRIA and University of Montpellier, France
Reza Akbarinia, INRIA and University of Montpellier, France
Sadok Ben Yahia, Université Tunis ElManar, Tunisia
Florent Masseglia, INRIA and University of Montpellier, France

Iterative Subset Selection for Feature Drifting Data Streams 510
Lanqin Yuan, University of Waikato, New Zealand
Bernhard Pfahringer, University of Auckland, New Zealand
Jean Paul Barddal, Pontifícia Universidade Católica do Paraná, Brazil

Unsupervised Context Switch for Classification Tasks on Data Streams with Recurrent Concepts 518
Denis M. dos Reis, Universidade de São Paulo, Brazil
André G. Maletzke, Universidade de São Paulo, Brazil
Gustavo E.A.P.A. Batista, Universidade de São Paulo, Brazil

Poster Papers

Predicting Polarities of Entity-Centered Documents without Reading their Contents 525
Christian Beyer, Otto-von-Guericke-University Magdeburg, Germany
Uli Niemann, Otto-von-Guericke-University Magdeburg, Germany
Vishnu Unnikrishnan, Otto-von-Guericke-University Magdeburg, Germany
Eirini Ntoutsi, Leibniz University Hannover, Germany
Myra Spiliopoulou, Otto-von-Guericke-University Magdeburg, Germany

Co-training Study for Online Regression 529
Ricardo Sousa, LIAAD/INESC TEC, Universidade do Porto, Portugal
João Gama, LIAAD/INESC TEC, Universidade do Porto, Portugal

DTTA - Database Theory, Technology, and Applications Track

Track Co-Chairs: Ramzi Haraty, Lebanese American University, USA
Apostolos Papadopoulos, Aristotle University, Greece
Junping Sun, Nova Southeastern University, USA

Track Editorial 532

CURATOR – A Secure Shared Object Store: Design, Implementation, and Evaluation of a Manageable, Secure, and Performant Data Exchange Mechanism for Smart Devices 533
Christoph Stach, University of Stuttgart, IPVS/AS, Germany
Bernhard Mitschang, University of Stuttgart, IPVS/AS, Germany

Data Modeling for Analytical Queries on Document-Oriented DBMS 541
R.A.S.N. Soransso, Instituto Militar de Engenharia, Brazil
M.C. Cavalcanti, Instituto Militar de Engenharia, Brazil

Class-Constraint Similarity Queries 549
Jessica A. de Souza, Universidade de São Paulo, Brazil
Agma J.M. Traina, Universidade de São Paulo, Brazil
Sebastien Michel, University of Kaiserslautern, Germany

Blind Attribute Pairing for Privacy-Preserving Record Linkage 557
Thiago Pereira da Nóbrega, Universidade Federal de Campina Grande, Brazil
Carlos Eduardo S. Pires, Universidade Federal de Campina Grande, Brazil
Tiago Brasileiro Araújo, Universidade Federal de Campina Grande, Brazil
Demetrio Gomes Mestre, Universidade Federal de Campina Grande, Brazil

Student Research Abstract

Student Research Abstract: A Clustering-based Sales Forecast for Fashion Retailing 565
Graziele Marques Mazuco dos Santos, Pontifícia Universidade Católica do Rio Grande do Sul, Brazil

ES - Embedded Systems Track

Track Co-Chairs: Li-Pin Chang, National Chiao-Tung University, Taiwan
Marco Di Natale, Scuola Superiore S. Anna, Italy

Impact of Memory Frequency Scaling on User-centric Smartphone Workloads 567
H.R. Mendis, University of York, UK
Wei-Ming Chen, National Taiwan University, Taiwan
L.S. Indrusiak, University of York, UK
Tei-Wei Kuo, National Taiwan University, Taiwan
Pi-Cheng Hsiu, Academia Sinica, Taiwan

Assessing the Pessimism of Current Multicore Global Fixed-Priority Schedulability Analysis 575
Youcheng Sun, University of Oxford, UK
Marco Di Natale, Scuola Superiore Sant'Anna, Italy

Controller-Aware Memory Coloring for Multicore Real-Time Systems 584
Xing Pan, North Carolina State University, USA
Frank Mueller, North Carolina State University, USA

RPR: A Random Replacement Policy with Limited Pathological Replacements 593
Pedro Benedicte, Barcelona Supercomputing Center and Universitat Politècnica de Catalunya, Spain
Carles Hernandez, Barcelona Supercomputing Center, Spain
Jaume Abella, Barcelona Supercomputing Center, Spain
Francisco J. Cazorla, Barcelona Supercomputing Center and IIIA-CSIC, Spain

Energy-Aware Real-Time Scheduling in the Linux Kernel 601
Claudio Scordino, Evidence Srl, Italy
Luca Abeni, Scuola Superiore S. Anna, Italy
Juri Lelli, Red Hat, Inc., USA

A Brute-Force Schedulability Analysis for Formal Model under Logical Execution Time Assumption 609
Pierre-Emmanuel Hladik, LAAS-CNRS, France

Poster Papers

A Partnership-Based Approach to Minimize the Maximal Response Time of Flash-Memory Storage Systems 616
Tse-Yuan Wang, National Taiwan University, Taiwan
Che-Wei Tsao, Academia Sinica, Taiwan
Yuan-Hao Chang, Academia Sinica, Taiwan
Tei-Wei Kuo, National Taiwan University, Taiwan
Hsiang-Pang Li, Macronix International Co., Ltd., Taiwan

HCI - Smart Human Computer Interaction Track

Track Co-Chairs: Soon Ki Jung, Kyungpook National University, South Korea
Anand Paul, Kyungpook National University, South Korea
Ganesh Kumar, Anna University, India

Accelerated Exhaustive Eye Glints Localization Method for Infrared Video Oculography 620
Zihan Ding, University of Science and Technology of China, China
Jiayi Luo, University of Science and Technology of China, China
Hongping Deng, University of Science and Technology of China, China

IoT based Monitoring of Container Vehicle for Secure and Reliable Delivery of Goods 628
Sathish Kumar R, Government College of Engineering Salem, India
Rani C, Government College of Engineering Salem, India
Ganesh Kumar P, Anna University Regional Campus Coimbatore, India

Segmentation of Affected Skin Lesion with Blind Deconvolution and L*a*b Colour Space 634
Imran Ahmed, Institute of Management Sciences, Pakistan
Qazi Nida ur Rehman, Institute of Management Sciences, Pakistan
Ghulam Masood, Institute of Management Sciences, Pakistan
Awais Adnan, Institute of Management Sciences, Pakistan
Awais Ahmad, Yeungnam University, South Korea
Seungmin Rho, Sungkyul University, South Korea

Understanding Data Dimensions by Cluster Visualization using Edge Bundling in Parallel Coordinates 640
Rodrigo Santos do Amor Divino Lima, Federal University of Pará, Brazil
Carlos Gustavo Resque dos Santos, Federal University of Pará, Brazil
Sandro de Paula Mendonça, Federal University of Pará, Brazil
Jefferson Magalhães de Morais, Federal University of Pará, Brazil
Bianchi Serique Meiguins, Federal University of Pará, Brazil

A Heuristic Evaluation of the User and Programming Interfaces of a Sleep Medicine Application 648
Eduardo Mosqueira-Rey, University of A Coruña, Spain
David Alonso-Ríos, University of A Coruña, Spain
Vicente Moret-Bonillo, University of A Coruña, Spain

Impact of Web Design Features on Irritation for E-commerce Websites 656
C.M. Nadeem Faisal, National Textile University, Pakistan
Javier de Andres-Suarez, University of Oviedo, Spain
Martin Gonzalez-Rodriguez, University of Oviedo, Spain
Daniel Fernandez-Lanvin, University of Oviedo, Spain
Mudassar Ahmad, National Textile University, Pakistan
Muhammad Asif Habib, National Textile University, Pakistan

IoT based Smart Interaction Framework for eLearning 664
Sohail Jabbar, National Textile University, Pakistan
Muhammad Farhan, COMSATS Institute of Information Technology, Pakistan
Jin Li, Guangzhou University, China
Haseeb Ahmad, National Textile University, Pakistan
Awais Ahmad, Yeungnum University, South Korea

Poster Papers

Visual Design Checklist for Graphical User Interface (GUI) Evaluation 670
Murilo C. Camargo, Londrina State University, Brazil
Rodolfo M. Barros, Londrina State University, Brazil
Vanessa T.O. Barros, Londrina State University, Brazil

Student Research Abstract

Student Research Abstract: Human Behavior Analysis based on Big Data Analytics in Cyber-Physical System 673
Sadia Din, Kyungpook National University, South Korea

IAR - Information Access and Retrieval Track

Track Co-Chairs: Gloria Bordogna, CNR-IREA Consiglio Nazionale delle Ricerche, Italy
Gabriella Pasi, Università degli Studi di Milano Bicocca, Italy

Track Editorial 675

LiMe: Linear Methods for Pseudo-Relevance Feedback 678
Daniel Valcarce, University of A Coruña, Spain
Javier Parapar, University of A Coruña, Spain
Álvaro Barreiro, University of A Coruña, Spain

Fuzzy Query by Example 688
Aurélien Moreau, University of Rennes 1 / IRISA, France
Olivier Pivert, University of Rennes 1 / IRISA, France
Grégory Smits, University of Rennes 1 / IRISA, France

CoRec: A Co-Training Approach for Recommender Systems 696
Arthur F. da Costa, University of São Paulo, Brazil
Marcelo G. Manzato, University of São Paulo, Brazil
Ricardo J.G.B. Campello, James Cook University, Australia

Optimization Framework Model for Retrospective Tweet Summarization 704
Abdelhamid Chellal, University of Toulouse III, France
Mohand Boughanem, University of Toulouse III, France

Towards Coherent Single-Document Summarization: An Integer Linear Programming-based Approach 712
Rodrigo Garcia, Federal Rural University of Pernambuco, Brazil
Rinaldo Lima, Federal Rural University of Pernambuco, Brazil
Bernard Espinasse, Aix-Marseille Université, France
Hilário Oliveira, Federal University of Pernambuco, Brazil

Source Selection of Long Tail Sources for Federated Search in an Uncooperative Setting 720
Günter Urak, Know-Center GmbH, Austria
Hermann Ziak, Know-Center GmbH, Austria
Roman Kern, Know-Center GmbH, Austria

Poster Papers

Automatic Keyphrase Extraction using Graph-based Methods 728
Josiane Mothe, Institut de Recherche en Informatique de Toulouse, France
Faneva Ramiandrisoa, Institut de Recherche en Informatique de Toulouse, France
Michael Rasolomanana, Université d'Antananarivo, Madagascar

IoT - Internet of Things Track

Track Co-Chairs: Gail-Joon Ahn, Arizona State University, USA
Seong-je Cho, Dankook University, South Korea
Jun Zheng, New Mexico Institute of Mining and Technology, USA

Track Editorial 731

Energy Efficient Scheduling in IoT Networks 733
Smruti R. Sarangi, Indian Institute of Technology Delhi, India
Sakshi Goel, Indian Institute of Technology Delhi, India
Bhumika Singh, Indian Institute of Technology Delhi, India

Leaking Data from Enterprise Networks using a Compromised Smartwatch Device 741
Shachar Siboni, Ben-Gurion University of the Negev, Israel
Asaf Shabtai, Ben-Gurion University of the Negev, Israel
Yuval Elovici, Ben-Gurion University of the Negev, Israel

Combining Hardware Nodes and Software Components Ordering-based Heuristics for Optimizing the Placement of Distributed IoT Applications in the Fog 751
Ye Xia, Orange Labs, France
Xavier Etchevers, Orange Labs, France
Loïc Letondeur, Orange Labs, France
Thierry Coupaye, Orange Labs, France
Frédéric Desprez, Université Grenoble Alpes, Inria, CNRS, LIG, France

Fuzzy Logic and MCDA in IoT Resources Classification 761
Renato Dilli, Federal University of Pelotas, Brazil
Amanda Argou, Federal University of Pelotas, Brazil
Mauricio Pilla, Federal University of Pelotas, Brazil
Ana Marilza Pernas, Federal University of Pelotas, Brazil
Renata Reiser, Federal University of Pelotas, Brazil
Adenauer Yamin, Federal University of Pelotas, Brazil

A Graph Partitioning-based Heuristic for Runtime IoT Data Placement Strategies in a Fog Infrastructure 767
Mohammed Islam Naas, Orange Labs, France
Laurent Lemarchand, Université de Bretagne Occidentale, France
Jalil Boukhobza, Université de Bretagne Occidentale, France
Philippe Raipin, Orange Labs, France

Lightweight Secure Bootstrap and Message Attestation in the Internet of Things 775
Clémentine Gritti, EURECOM Sophia Antipolis, France
Refik Molva, EURECOM Sophia Antipolis, France
Melek Önen, EURECOM Sophia Antipolis, France

Hybrid Controller Synthesis for the IoT 783
Arthur Gatouillat, INSA-Lyon, France
Youakim Badr, INSA-Lyon, France
Bertrand Massot, INSA-Lyon, France

FI-MApp: A Web Application for Managing FI-WARE Environments in Internet of Things 791
Phelipe Feio, Federal University of Pará, Brazil
José Neto, Federal University of Pará, Brazil
Vagner Nascimento, Federal University of Pará, Brazil
Antônio Abelém, Federal University of Pará, Brazil

Poster Papers

AffectiveROAD System and Database to Assess Driver's Attention 800
Neska El Haouij, University of Tunis El Manar, Tunisia
Jean-Michel Poggi, University of Paris-Sud and Paris Descartes University, France
Sylvie Sevestre-Ghalila, CEA-LinkLab, Tunisia
Raja Ghozi, University of Tunis El Manar, Tunisia
Mériem Jaïdane, University of Tunis El Manar, Tunisia

Student Research Abstract

Student Research Abstract: A Novel Low Power Brain Electrical Activity Monitor using IoT 804
Alexandre Tessier, Miami University, USA

IRMAS - Intelligent Robotics and Multi-Agent Systems Track

Track Co-Chairs: Rui P. Rocha, ISR – University of Coimbra, Portugal
Daniel Kudenko, University of York, UK
Shaojie Shen, HKUST, Hong Kong, China

Track Editorial 806

Distributed Optimization in Multi-Agent Robotics for Industry 4.0 Warehouses 808
Ajay Kattepur, Tata Consultancy Services, India
Hemant Kumar Rath, Tata Consultancy Services, India
Anantha Simha, Tata Consultancy Services, India
Arijit Mukherjee, Tata Consultancy Services, India

Declarative vs Rule-based Control for Flocking Dynamics 816
Usama Mehmood, Stony Brook University, USA
Nicola Paoletti, Stony Brook University, USA
Dung Phan, Stony Brook University, USA
Radu Grosu, Technische Universitat Wien, Austria
Shan Lin, Stony Brook University, USA
Scott D. Stoller, Stony Brook University, USA
Ashish Tiwari, SRI International, USA
Junxing Yang, Stony Brook University, USA
Scott A. Smolka, Stony Brook University, USA

Evolving Collective Behaviours in Simulated Kilobots 824
Jane Holland, National University of Ireland, Galway, Ireland
Josephine Griffith, National University of Ireland, Galway, Ireland
Colm O'Riordan, National University of Ireland, Galway, Ireland

Fast Consensus for Fully Distributed Multi-Agent Task Allocation 832
Joanna Turner, Loughborough University, UK
Qinggang Meng, Loughborough University, UK
Gerald Schaefer, Loughborough University, UK
Andrea Soltoggio, Loughborough University, UK

Poster Papers

Unsupervised Activity Recognition for Autonomous Water Drones 840
Alberto Castellini, University of Verona, Italy
Giovanni Beltrame, University of Verona, Italy
Manuele Bicego, University of Verona, Italy
Jason Blum, University of Verona, Italy
Matteo Denitto, University of Verona, Italy
Alessandro Farinelli, University of Verona, Italy

MiMicS: A Multi-robot Simulator for Teaching, Rapid Prototyping and Large Scale Evaluations 843
Eduardo Ferrera, University of Duisburg-Essen, Germany
Jesús Capitán, University of Seville, Spain
Merlin Stampa, University of Duisburg-Essen, Germany
Pedro J. Marrón, University of Duisburg-Essen, Germany

Student Research Abstract

Student Research Abstract: Cooperative Routing with Refueling for Aerial and Ground Vehicles for Large Scale Surveillance 847
Parikshit Maini, IIIT Delhi, India

KEGeoD - Knowledge Extraction from Geographical Data Track

Track Co-Chairs: Maguelonne Teisseire, UMR TETIS, France
Christian Sallaberry, University of PAU & PAYS ADOUR, France
Eric Kergosien, University of LILLE, France
Cyril de Runz, University of Reims, France
Thomas Guyet, AGROCAMPUS-OUEST/IRISA, France

MOVELETS: Exploring Relevant Subtrajectories for Robust Trajectory Classification 849
Carlos Andres Ferrero, Universidade Federal de Santa Catarina, Brazil
Luis Otavio Alvares, Universidade Federal de Santa Catarina, Brazil
Willian Zalewski, Universidade Federal da Integração Latino-Americana, Brazil
Vania Bogorny, Universidade Federal de Santa Catarina, Brazil

Adaptive kNN using Expected Accuracy for Classification of Geo-Spatial Data 857
Mark Kibanov, University of Kassel, Germany
Martin Becker, University of Würzburg, Germany
Juergen Mueller, University of Kassel, Germany
Martin Atzmueller, Tilburg University, The Netherlands
Andreas Hotho, University of Würzburg, Germany
Gerd Stumme, University of Kassel, Germany

Modeling changes in Territorial Partitions Over Time: Ontologies TSN and TSN-Change 866
Camille Bernard, Université Grenoble Alpes, France
Marlène Villanova-Oliver, Université Grenoble Alpes, France
Jérôme Gensel, Université Grenoble Alpes, France
Hy Dao, University of Geneva, Switzerland

Assessing the Planimetric Accuracy of Paris Atlases from the late 18th and 19th Centuries 876
Bertrand Duménieu, Ecole des Hautes Etudes en Sciences Sociales, France
Nathalie Abadie, Université Paris-Est, LASTIG COGIT, IGN, ENSG, France
Julien Perret, Université Paris-Est, LASTIG COGIT, IGN, ENSG, France

Student Research Abstract

Student Research Abstract: Quantifying Walkability of Roads using Digital Elevation Models 884
Faris Hawamdeh, University of North Texas, USA

KRR - Knowledge Representation and Reasoning Track

Track Co-Chairs: Stefano Bistarelli, Università di Perugia, Italy
Martine Ceberio, Univerity of Texas El Paso, USA
Eric Monfroy, Université de Nantes, France
Francesco Santini, Università di Perugia, Italy

Track Editorial 886

Tractable Reasoning in Probabilistic OWL Profiles 888
Melisachew Wudage Chekol, University of Mannheim, Germany
Heiner Stuckenschmidt, University of Mannheim, Germany

A Preference-Based Approach to Backbone Computation with Application to Argumentation 896
Alessandro Previti, University of Helsinki, Finland
Matti Järvisalo, University of Helsinki, Finland

An Infinite-Valued Grounded Labelling for Abstract Argumentation Frameworks 903
João Alcântara, Universidade Federal do Ceará, Brazil
Samy Sá, Universidade Federal do Ceará, Brazil

Incremental Computation of Warranted Arguments in Dynamic Defeasible Argumentation: The Rule Addition Case 911
Gianvincenzo Alfano, University of Calabria, Italy
Sergio Greco, University of Calabria, Italy
Francesco Parisi, University of Calabria, Italy
Gerardo I. Simari, Universidad Nacional del Sur, Argentina
Guillermo R. Simari, Universidad Nacional del Sur, Argentina

In, Out and Through: Formalising some Dynamic Aspects of the Image Schema Containment 918
Maria M. Hedblom, Free University of Bozen-Bolzano, Italy
Dagmar Gromann, Technical University Dresden, Germany
Oliver Kutz, Free University of Bozen-Bolzano, Italy

Student Research Abstract

Student Research Abstract: Concept Maps Construction using Natural Language Processing to Support Studies Selection 926
Vinicius dos Santos, Universidade Tecnológica Federal do Paraná, Brazil

MCA - Mobile Computing and Applications Track

Track Co-Chairs: Hong Va Leong, The Hong Kong Polytechnic University, Hong Kong, China
Sheikh Iqbal Ahamed, Marquette University, USA

Track Editorial 928

Deep Feature Learning and Selection for Activity Recognition 930
Yasser Mohammad, KDDI Research Inc., Japan
Kazunori Matsumoto, KDDI Research Inc., Japan
Keiichiro Hoashi, KDDI Research Inc., Japan

Estimating Local Coverage Areas for Location Dependent Queries 940
Jorge Bernad, University of Zaragoza, Spain
Carlos Bobed, Université de Rennes 1, France
Eduardo Mena, University of Zaragoza, Spain

Text Extraction and Retrieval from Smartphone Screenshots: Building a Repository for Life in Media 948
Agnese Chiatti, Pennsylvania State University, USA
Mu Jung Cho, Stanford University, USA
Anupriya Gagneja, Stanford University, USA
Xiao Yang, Pennsylvania State University, USA
Miriam Brinberg, Pennsylvania State University, USA
Katie Roehrick, Stanford University, USA
Sagnik Ray Choudhury, Pennsylvania State University, USA
Nilam Ram, Pennsylvania State University, USA
Byron Reeves, Stanford University, USA
C. Lee Giles, Pennsylvania State University, USA

A Smartphone Application to Measure the Quality of Pest Control Spraying Machines via Image Analysis 956
Bruno Brandoli Machado, Federal University of Mato Grosso do Sul, Brazil
Gabriel Souza, University of São Paulo, Brazil
Mauro S. Arruda, Federal University of Mato Grosso do Sul, Brazil
Wesley N. Goncalves, Federal University of Mato Grosso do Sul, Brazil
Andre C.P.L.F. Carvalho, University of São Paulo, Brazil
Jose F. Rodrigues Jr., University of São Paulo, Brazil

Poster Papers

On the I/O Characteristics of the Mobile Web Browsers 964
Taeho Hwang, Hanyang University, South Korea
Myungsik Kim, Samsung Electronics Co., Ltd., South Korea
Seongjin Lee, Gyeongsang National University, South Korea
Youjip Won, Hanyang University, South Korea

MaE! A Service for Supporting People Meeting at Events 967
Wender Z. Xavier, Pontifical Catholic University of Minas Gerais, Brazil
Mateus P. Silveira, Pontifical Catholic University of Minas Gerais, Brazil
Josemar A. Caetano, Pontifical Catholic University of Minas Gerais, Brazil
Humberto T. Marques-Neto, Pontifical Catholic University of Minas Gerais, Brazil

NET - Networking Track

Track Co-Chairs: Mário M. Freire, University of Beira Interior, Portugal
Marília Curado, University of Coimbra, Portugal
Ivan Ganchev, University of Limerick, Ireland

On the Feasibility of 40 Gbps Network Data Capture and Retention with General Purpose Hardware 970
Guillermo Julián-Moreno, Naudit High Performance Computing and Networking, Spain
Rafael Leira, Universidad Autónoma de Madrid, Spain
Jorge E. López de Vergara, Universidad Autónoma de Madrid and Naudit High Performance Computing and Networking, Spain
Francisco J. Gómez-Arribas, Universidad Autónoma de Madrid and Naudit High Performance Computing and Networking, Spain
Iván González, Universidad Autónoma de Madrid and Naudit High Performance Computing and Networking, Spain

GAC: Graph-Based Alert Correlation for the Detection of Distributed Multi-Step Attacks 979
Steffen Haas, Universität Hamburg, Germany
Mathias Fischer, Universität Hamburg, Germany

A Flexible and Efficient Container-based NFV Platform for Middlebox Networking 989
Chao Zheng, Institute of Information Engineering, Chinese Academy of Sciences, China
Qiuwen Lu, Institute of Information Engineering, Chinese Academy of Sciences, China
Jia Li, Institute of Information Engineering, Chinese Academy of Sciences, China
Qingyun Liu, Institute of Information Engineering, Chinese Academy of Sciences, China
Binxing Fang, Institute of Electronic and Information Engineering of UESTC in Guangdong, China

Scaling Topology Pattern Matching: A Distributed Approach 996
Michael Stein, Technische Universität Darmstadt, Germany
Alexander Frömmgen, Technische Universität Darmstadt, Germany
Roland Kluge, Technische Universität Darmstadt, Germany
Lin Wang, Technische Universität Darmstadt, Germany
Augustin Wilberg, Technische Universität Darmstadt, Germany
Boris Koldehofe, Technische Universität Darmstadt, Germany
Max Mühlhäuser, Technische Universität Darmstadt, Germany

Efficient Feature Extraction for Internet Data Analysis using AS2Vec 1006
John Robert Mendoza, University of the Philippines Diliman, Philippines
Roel Ocampo, University of the Philippines Diliman, Philippines
Isabel Montes, University of the Philippines Diliman, Philippines
Cedric Angelo Festin, University of the Philippines Diliman, Philippines

Poster Papers

Topology Resilience Enhancement for Software Defined Networks 1014
Pedro Montibeler, Federal University of Pará, Brazil
Fernando Farias, Federal University of Pará, Brazil
Antônio Abelém, Federal University of Pará, Brazil

Investigation of Priority Queueing Systems with Peaked Traffic Flows 1017
Seferin Mirtchev, Technical University of Sofia, Bulgaria
Rossitza Goleva, Technical University of Sofia, Bulgaria
Dimitar Atamian, Technical University of Sofia, Bulgaria
Ivan Ganchev, University of Limerick and University of Plovdiv, Ireland

OOPPS - Object Oriented and Parallel Programming and Systems Track

Track Co-Chairs: Davide Ancona, University of Genova, Italy
Frédéric Loulergue, Northern Arizona University, USA

Track Editorial 1020

OOlong: An Extensible Concurrent Object Calculus 1022
Elias Castegren, Uppsala University, Sweden
Tobias Wrigstad, Uppsala University, Sweden

Implementing Modular Class-based Reuse Mechanisms on Top of a Single Inheritance VM 1030
Pablo Tesone, Université de Lille, France
Guillermo Polito, Université de Lille, France
Luc Fabresse, Université de Lille, France
Noury Bouraqadi, Université de Lille, France
Stéphane Ducasse, Inria Lille-Nord Europe, France

A Type and Effect System for Uniqueness and Immutability 1038
Paola Giannini, Università del Piemonte Orientale, Italy
Marco Servetto, Victoria University of Wellington, New Zealand
Elena Zucca, Università di Genova, Italy

Textual Alignment in SPMD Programs 1046
Frédéric Dabrowski, Université d'Orléans, France

Enabling Lock-free Concurrent Workers over Temporal Graphs Composed of Multiple Time-Series 1054
Francois Fouquet, University of Luxembourg, Luxembourg
Thomas Hartmann, University of Luxembourg, Luxembourg
Sébastien Mosser, Université Côte d'Azur, I3S, France
Maxime Cordy, University of Luxembourg and University of Namur, Luxembourg

Poster Papers

Automatic Scalable Parallel Test Case Execution, Introducing the Münster DiStributed Test Case Runner for Java (MiDSTR) 1062
Vincent von Hof, University of Münster, Germany
Andreas Fuchs, University of Münster, Germany

CBM: A Compact Representation and its Parallel Search for Query Processing on GPU 1065
Chidchanok Choksuchat, Prince of Songkla University, Thailand
Sergei Gorlatch, University of Münster, Germany
Chantana Chantrapornchai, Kasetsart University, Thailand

Student Research Abstract

Student Research Abstract: Node-level Optimization by Caching Data and Choosing the Optimal Tile Size for Parallel Dense Linear Algebra on Distributed Systems 1068
Yonghyun Ryu, Yonsei University, South Korea

OS - Operating Systems Track

Track Co-Chairs: Bongjae Kim, Sun Moon Univeristy, South Korea
George Hamer, South Dakota State University, USA
Jaeheung Lee, Daejeon University, South Korea

Track Editorial 1070

Automatic Code Conversion for Non-Volatile Memory 1071
Jinsoo Yoo, Hanyang University, South Korea
Yongjun Park, Hanyang University, South Korea
Seongjin Lee, Gyeongsang National University, South Korea
Youjip Won, Hanyang University, South Korea

Exploring OS-based Full-system Deterministic Replay 1077
Hyunmin Yoon, Hanyang University, South Korea
Shakaiba Majeed, Hanyang University, South Korea
Minsoo Ryu, Hanyang University, South Korea

Monitoring-based Auto-Scalability Across Hybrid Clouds 1087
Constantin-Cosmin Crecană, University Politehnica of Bucharest, Romania
Florin Pop, University Politehnica of Bucharest, Romania

Analyzing and Modeling the Impact of Memory Latency and Bandwidth on Application Performance 1095
Myunghoon Oh, Dankook University, South Korea
Jongmoo Choi, Dankook University, South Korea
Seong-je Cho, Dankook University, South Korea
Jeesoo Kim, Johns Hopkins University, USA
Changhwan Youn, SK Hynix Inc., South Korea
Woosuk Chung, SK Hynix Inc., South Korea

Unified Hardware Abstraction Layer with Device Masquerade 1102
Iori Yoneji, University of Tsukuba, Japan
Takaaki Fukai, University of Tsukuba, Japan
Takahiro Shinagawa, The University of Tokyo, Japan
Kazuhiko Kato, University of Tsukuba, Japan

Efficient Page-cache Encryption for Smart Devices with Non-volatile Main Memory 1109
Kenichi Kourai, Kyushu Institute of Technology, Japan
Naoto Fukuda, Kyushu Institute of Technology, Japan
Tomohiro Kodama, Kyushu Institute of Technology, Japan

Ethernet Bonding on a Bare PC Web Server with Dual NICs 1116
Faris Almansour, Towson University, USA
Ramesh Karne, Towson University, USA
Alexander Wijesinha, Towson University, USA
Bharat Rawal, Pennsylvania State University Abington, USA

Kloadavg: A Load Index for the OS Kernel Level 1122
Rivalino Matias Jr., Federal University of Uberlandia, Brazil
Alexandre Beletti Ferreira, Federal Institute of São Paulo and Federal University of Para, Brazil

Poster Papers

A Cost-Aware Object Management Method for In-Memory Computing Frameworks 1129
Chin-Hsien Wu, National Taiwan University of Science and Technology, Taiwan
Chien-Wei Chen, National Taiwan University of Science and Technology, Taiwan
Kai-Chun Wang, National Taiwan University of Science and Technology, Taiwan

UFLRU: Unmapped File First LRU Scheme for Non-volatile Memory 1133
Yeonjin Noh, Hanyang University, South Korea
Jinsoo Yoo, Hanyang University, South Korea
Seongjin Lee, Gyeongsang National University, South Korea
Youjip Won, Hanyang University, South Korea

Investigating the Performance Impacts of I/O Operations and Disk Cache on Operating Systems for Wearables 1136
Vicente J.P. Amorim, Federal University of Ouro Preto, Brazil
Saul E. Delabrida, Federal University of Ouro Preto, Brazil
Ricardo A.O. Oliveira, Federal University of Ouro Preto, Brazil

PDP - Privacy by Design in Practice Track

Track Co-Chairs: Ronald Petrlic, The Commissioner for Data Protection and Freedom of Information Baden-Württemberg, Germany
Christoph Sorge, Saarland University, Germany

Track Editorial 1140

Extending Model-based Privacy Analysis for the Industrial Data Space by Exploiting Privacy Level Agreements 1142
Amir Shayan Ahmadian, University of Koblenz Landau, Germany
Jan Jürjens, University of Koblenz Landau, Germany
Daniel Strüber, University of Koblenz Landau, Germany

A System of Privacy Patterns for User Control 1150
Michael Colesky, Radboud University, The Netherlands
Julio C. Caiza, Escuela Politécnica Nacional, Ecuador
José M. Del Álamo, Universidad Politénica de Madrid, Spain
Jaap-Henk Hoepman, Radboud University, The Netherlands
Yod-Samuel Martín, Universidad Politécnica de Madrid, Spain

To Reveal or Not To Reveal: Balancing User-Centric Social Benefit and Privacy in Online Social Networks 1157
Sourya Joyee De, LORIA-INRIA Nancy Grand-Est, France
Abdessamad Imine, Lorraine University, LORIA-INRIA Nancy Grand-Est, France

Helping John to Make Informed Decisions on Using Social Login 1165
Farzaneh Karegar, Karlstad University, Sweden
Nina Gerber, Technische Universität Darmstadt, Germany
Melanie Volkamer, Karlstad University and Technische Universität Darmstadt, Sweden
Simone Fischer-Hübner, Karlstad University, Sweden

Poster Papers

Effective and Efficient Privacy Threat Modeling through Domain Refinements 1175
Kim Wuyts, KU Leuven, Belgium
Dimitri Van Landuyt, KU Leuven, Belgium
Aram Hovespyan, KU Leuven, Belgium
Wouter Joosen, KU Leuven, Belgium

AppPETs: A Framework for Privacy-Preserving Apps 1179
Erik Sy, University of Hamburg, Germany
Tobias Mueller, University of Hamburg, Germany
Matthias Marx, University of Hamburg, Germany
Dominik Herrmann, University of Bamberg, Germany

PL - Programming Languages Track

Track Co-Chairs: Marjan Mernik, University of Maribor, Slovenia
Barrett Bryant, University of North Texas, USA
Rajeev Raje, Indiana University-Purdue University-Indianapolis, USA

Track Editorial 1183

A Constraint-logic Object-oriented Language 1185
Jan C. Dageförde, University of Münster, Germany
Herbert Kuchen, University of Münster, Germany

Syntax Error Recovery in Parsing Expression Grammars 1195
Sérgio Medeiros, Federal University of Rio Grande do Norte, Brazil
Fabio Mascarenhas, Federal University of Rio de Janeiro, Brazil

Declarative Algorithms for Generation, Counting and Random Sampling of Term Algebras 1203
Paul Tarau, University of North Texas, USA

An Approach based on a DSL + API for Programming Runtime Adaptivity and Autotuning Concerns 1211
Tiago Carvalho, University of Porto, Portugal
João M.P. Cardoso, University of Porto, Portugal

Leveraging Teenagers Feedback in the Development of a Domain-Specific Language – The Case of Programming Low-Cost Robots 1221
Ankica Barišić, Universidade NOVA de Lisboa, Portugal
João Cambeiro, Universidade NOVA de Lisboa, Portugal
Vasco Amaral, Universidade NOVA de Lisboa, Portugal
Miguel Goulão, Universidade NOVA de Lisboa, Portugal
Tarquinio Mota, Artica Creative Computing, Portugal

Efficient Evaluation of Context-Free Path Queries for Graph Databases 1230
Ciro M. Medeiros, Universidade Federal do Rio Grande do Norte, Brazil
Martin A. Musicante, Universidade Federal do Rio Grande do Norte, Brazil
Umberto S. Costa, Universidade Federal do Rio Grande do Norte, Brazil

A Framework for Constructing JavaScript Virtual Machines with Customized Datatype Representations 1238
Takafumi Kataoka, Kochi University of Technology, Japan
Tomoharu Ugawa, Kochi University of Technology, Japan
Hideya Iwasaki, The University of Electro-Communications, Japan

Communications in Choreographies, Revisited 1248
Luís Cruz-Filipe, University of Southern Denmark, Denmark
Fabrizio Montesi, University of Southern Denmark, Denmark
Marco Peressotti, University of Southern Denmark, Denmark

Poster Papers

Buffered Garbage Collection for Self-Reflective Customization 1256
Tetsuro Yamazaki, The University of Tokyo, Japan
Shigeru Chiba, The University of Tokyo, Japan

RE - Requirements Engineering Track

Track Co-Chairs: Jaelson Castro, Universidade Federal de Pernambuco, Brazil
João Araújo, Universidade Nova de Lisboa, Portugal

Track Editorial 1260

Building a Software Requirements Specification and Design for an Avionics System: An Experience Report 1262
Andrés Paz, École de Technologie Supérieure, Canada
Ghizlane El Boussaidi, École de Technologie Supérieure, Canada

Comparing Alternative Goal Model Visualizations for Decision Making: an Exploratory Experiment 1272
Sotirios Liaskos, York University, Canada
Teodora Dundjerovic, York University, Canada
Grace Gabriel, University of Toronto, Canada

SafeTrace: A Safety-Driven Requirement Traceability Framework on Device Interaction Hazards for MD PnP 1282
Andrew Yi-Zong Ou, University of Illinois at Urbana-Champaign, USA
Maryam Rahmaniheris, University of Illinois at Urbana-Champaign, USA
Yu Jiang, Tsinghua University, China
Lui Sha, University of Illinois at Urbana-Champaign, USA
Zhicheng Fu, Illinois Institute of Technology, USA
Shangping Ren, Illinois Institute of Technology, USA

Improving Self-adaptive Systems Conceptual Modeling 1292
João Pablo S. da Silva, Federal University of Pampa, Brazil
Miguel Ecar, Federal University of Pampa, Brazil
Marcelo S. Pimenta, Federal University of Rio Grande do Sul, Brazil
Fabio Natanael Kepler, Federal University of Pampa, Brazil
Gilleanes T.A. Guedes, Federal University of Pampa, Brazil
Carlos Michel Betemps, Federal University of Pampa, Brazil

A Gamified Requirements Inspection Process for Goal Models 1300
João Pimentel, Universidade Federal Rural de Pernambuco, Brazil
Emanuel Santos, Universidade Federal de Pernambuco, Brazil
Tarcisio Pereira, Universidade Federal de Pernambuco, Brazil
Daniel Ferreira, Universidade de Pernambuco, Brazil
Jaelson Castro, Universidade Federal de Pernambuco, Brazil

Deriving Services from KAOS Models 1308
Eric Souza, Universidade NOVA de Lisboa, Portugal
Ana Moreira, Universidade NOVA de Lisboa, Portugal

Poster Papers

Applying a Requirement Engineering based Approach to Evaluate the Security Requirements Engineering Methodologies 1316
Sravani Teja Bulusu, University Paul Sabatier, France
Romain Laborde, University Paul Sabatier, France
Ahmad Samer Wazan, University Paul Sabatier, France
Francois Barrere, University Paul Sabatier, France
Abdelmalek Benzekri, University Paul Sabatier, France

RS - Recommender Systems: Theory, User Interactions and Applications Track

Track Co-Chairs: Yong Zheng, Illinois Institute of Technology, USA
Li Chen, Hong Kong Baptist University, Hong Kong, China
Markus Zanker, Free University of Bolzano, Italy

Track Editorial 1319

What to Write and Why: a Recommender for News Media 1321
Alessandro Cucchiarelli, Università Politecnica delle Marche, Italy
Christian Morbidoni, Università Politecnica delle Marche, Italy
Giovanni Stilo, Sapienza University of Rome, Italy
Paola Velardi, Sapienza University of Rome, Italy

Explicit or Implicit Feedback? Engagement or Satisfaction? A Field Experiment on Machine-Learning-Based Recommender Systems 1331
Qian Zhao, University of Minnesota, USA
F. Maxwell Harper, University of Minnesota, USA
Gediminas Adomavicius, University of Minnesota, USA
Joseph A. Konstan, University of Minnesota, USA

Investigating Serendipity in Recommender Systems based on Real User Feedback 1341
Denis Kotkov, University of Jyväskylä, Finland
Joseph A. Konstan, University of Minnesota, USA
Qian Zhao, University of Minnesota, USA
Jari Veijalainen, University of Jyväskylä, Finland

Active Learning in Multi-Domain Collaborative Filtering Recommender Systems 1351
Xin Guan, University of Warwick, UK
Chang-Tsun Li, Charles Sturt University, Australia
Yu Guan, Newcastle University, UK

Human Uncertainty and Ranking Error – Fallacies in Metric-Based Evaluation of Recommender Systems 1358
Kevin Jasberg, University of Duesseldorf, Germany
Sergej Sizov, University of Duesseldorf, Germany

Situation-Dependent Combination of Long-Term and Session-Based Preferences in Group Recommendations: An Experimental Analysis 1366
Thuy Ngoc Nguyen, Free University of Bozen-Bolzano, Italy
Francesco Ricci, Free University of Bozen-Bolzano, Italy

A Hybrid Approach to Music Playlist Continuation based on Playlist-Song Membership 1374
Andreu Vall, Johannes Kepler University, Austria
Matthias Dorfer, Johannes Kepler University, Austria
Markus Schedl, Johannes Kepler University, Austria
Gerhard Widmer, Johannes Kepler University, Austria

MovieExplorer: Building an Interactive Exploration Tool from Ratings and Latent Taste Spaces 1383
Taavi T. Taijala, University of Minnesota, USA
Martijn C. Willemsen, Eindhoven University of Technology, The Netherlands
Joseph A. Konstan, University of Minnesota, USA

Poster Papers

A Label Ranking Approach for Selecting Rankings of Collaborative Filtering Algorithms 1393
Tiago Cunha, University of Porto, Portugal
Carlos Soares, University of Porto, Portugal
André C.P.L.F. de Carvalho, Universidade de Sao Paulo, Brazil

Knowing the Unknown: Visualising Consumption Blind-Spots in Recommender Systems 1396
Nava Tintarev, Delft University of Technology, The Netherlands
Shahin Rostami, Bournemouth University, UK
Barry Smyth, University College Dublin, Ireland

SATTA - Software Architecture: Theory, Technology, and Applications Track

Track Co-Chairs: Marina Mongiello, Politecnico di Bari, Italy
Diego Perez-Palacin, Linnaeus University, Sweden
Sungwon Kang, Korea Advanced Institute of Science and Technology, South Korea
Patrizia Scandurra, DIGIP, University of Bergamo, Italy

Track Editorial 1400

An Ocarina Extension for AADL Formal Semantics Generation 1402
Hana Mkaouar, ReDCAD Laboratory, University of Sfax, Tunisia
Bechir Zalila, ReDCAD Laboratory, University of Sfax, Tunisia
Jérôme Hugues, Institut Supérieur de l'Aéronautique et de l'Espace, France
Mohamed Jmaiel, Digital Research Center of Sfax, Tunisia

Improving the Detection of Architectural Evolutionary Coupling: An Approach Considering Sliding Verification 1410
Marcelo Machado, Military Engineering Institute, Brazil
Ricardo Choren, Military Engineering Institute, Brazil

Reconstruction of Execution Architecture View using Dependency Relationships and Execution Traces 1417
Hwi Ahn, Korea Advanced Institute of Science and Technology, South Korea
Sungwon Kang, Korea Advanced Institute of Science and Technology, South Korea
Seonah Lee, Gyeongsang National University, South Korea

Solution-aware Data Flow Diagrams for Security Threat Modeling 1425
Laurens Sion, KU Leuven, Belgium
Koen Yskout, KU Leuven, Belgium
Dimitri Van Landuyt, KU Leuven, Belgium
Wouter Joosen, KU Leuven, Belgium

Enabling Temporal-Aware Contexts for Adaptative Distributed Systems 1433
Ludovic Mouline, University of Luxembourg, Luxembourg
Amine Benelallam, INRIA Rennes, France
Thomas Hartmann, University of Luxembourg, Luxembourg
François Fouquet, University of Luxembourg, Luxembourg
Johann Bourcier, INRIA Rennes, France
Brice Morin, SINTEF, Norway
Olivier Barais, INRIA Rennes, France

Model-driven Adaptation of Service Choreographies 1441
Marco Autili, University of L'Aquila, Italy
Amleto Di Salle, University of L'Aquila, Italy
Francesco Gallo, University of L'Aquila, Italy
Claudio Pompilio, University of L'Aquila, Italy
Massimo Tivoli, University of L'Aquila, Italy

Poster Papers

A Hybrid Architecture to Enrich Context Awareness through Data Correlation 1451
Roger Machado, Federal University of Pelotas, Brazil
Felipe Rosa, Federal University of Pelotas, Brazil
Ricardo Almeida, Federal University of Pelotas, Brazil
Tiago Primo, Federal University of Pelotas, Brazil
Mauricio Pilla, Federal University of Pelotas, Brazil
Ana Pernas, Federal University of Pelotas, Brazil
Adenauer Yamin, Federal University of Pelotas, Brazil

Recovering Runtime Architecture Models and Managing their Complexity using Dynamic Information and Composite Structures 1454
Soumia Zellagui, LIRMM, CNRS and University of Montpellier, France
Chouki Tibermacine, LIRMM, CNRS and University of Montpellier, France
Ghizlane El Boussaidi, École de Technologie Supérieure, Canada
Abdelhak-Djamel Seriai, LIRMM, CNRS and University of Montpellier, France
Hinde-Lilia Bouziane, LIRMM, CNRS and University of Montpellier, France
Christophe Dony, LIRMM, CNRS and University of Montpellier, France

Lessons Learned from Adapting "Things" to IoT Platforms in Research and Teaching 1457
Ulrik Ekedahl, Malmö University, Sweden
Radu-Casian Mihailescu, Malmö University, Sweden
Zhizhong Ma, Malmö University, Sweden

Back-SoS: Towards a Model-based Approach to Address Architectural Drift in Systems-of-Systems 1461
Valdemar V. Graciano Neto, University of São Paulo, Brazil
Wallace Manzano, University of São Paulo, Brazil
Lina Garcés, University of São Paulo, Brazil
Milena Guessi, University of São Paulo, Brazil
Brauner Oliveira, University of São Paulo, Brazil
Tiago Volpato, University of São Paulo, Brazil
Elisa Yumi Nakagawa, University of São Paulo, Brazil

Student Research Abstract

Student Research Abstract: A Liquid Software-driven Semantic Complex Event Processing-based Platform for Health Monitoring 1464
Francesco Nocera, Polytechnic University of Bari, Italy

SE - Software Engineering Track

Track Co-Chairs: Eunjee Song, Baylor University, USA
Byungjeong Lee, University of Seoul, South Korea
Tao Zhang, Harbin Engineering University, China

Track Editorial 1466

Supporting Privacy Impact Assessment by Model-Based Privacy Analysis 1467
Amir Shayan Ahmadian, University of Koblenz Landau, Germany
Daniel Strüber, University of Koblenz Landau, Germany
Volker Riediger, University of Koblenz Landau, Germany
Jan Jürjens, University of Koblenz Landau, Germany

Improving Function Coverage with Munch: A Hybrid Fuzzing and Directed Symbolic Execution Approach 1475
Saahil Ognawala, Technical University of Munich, Germany
Thomas Hutzelmann, Technical University of Munich, Germany
Eirini Psallida, Technical University of Munich, Germany
Alexander Pretschner, Technical University of Munich, Germany

On the Use of Package Managers by the C++ Open-Source Community 1483
André Miranda, University of Pernambuco, Brazil
João Pimentel, Universidade Federal Rural de Pernambuco, Brazil

Formal Verification of Energy and Timed Requirements for a Cooperative Automotive System 1492
Eun-Young Kang, Sun Yat-Sen University, China
Li Huang, Sun Yat-Sen University, China
Dongrui Mu, Sun Yat-Sen University, China

A Model for Analysis and Presentation of Design Pattern Detection Results 1500
Shouzheng Yang, York University, Canada
Vassilios Tzerpos, York University, Canada

An Experimental Evaluation of a De-biasing Intervention for Professional Software Developers 1510
Martin Shepperd, Brunel University London, UK
Carolyn Mair, Fashion.Psychology, UK
Magne Jørgensen, Simula Research Laboratory, Norway

Test-Case Generation for Web-Service Clients 1518
Andreas Fuchs, University of Münster, Germany
Herbert Kuchen, University of Münster, Germany

A Systematic Literature Mapping on the Relationship Between Design Patterns and Bad Smells 1528
Bruno L. Sousa, Federal University of Minas Gerais, Brazil
Mariza A.S. Bigonha, Federal University of Minas Gerais, Brazil
Kecia A.M. Ferreira, Federal Center of Technological Education of Minas Gerais, Brazil

DEVA: Sensing Emotions in the Valence Arousal Space from Software Engineering Text 1536
Md. Rakibul Islam, University of New Orleans, USA
Minhaz F. Zibran, University of New Orleans, USA

An Agile Process supporting Software Reuse: An Industrial Experience 1544
Luigi Cafaro, INDRA, Italy
Rita Francese, University of Salerno, Italy
Ciro Palumbo, INDRA, Italy
Michele Risi, University of Salerno, Italy
Genoveffa Tortora, University of Salerno, Italy

Program Understanding using Ontologies and Dynamic Analysis 1552
Javier Belmonte, eKlore Srl, Switzerland
Philippe Dugerdil, HES-SO, Switzerland

A Collaborative Filtering Recommender System for Test Case Prioritization in Web Applications 1560
Maral Azizi, University of North Texas, USA
Hyunsook Do, University of North Texas, USA

NewTL: Engineering an Extract, Transform, Load (ETL) Software System for Business on a Very Large Scale 1568
Vidroha Debroy, Varidesk Inc., USA
Lance Brimble, Varidesk Inc., USA
Matt Yost, Varidesk Inc., USA

Poster Papers

FancyMock: Creating Virtual Services from Transactions 1576
Hasan Ferit Eniser, Bogazici University, Turkey
Alper Sen, Bogazici University, Turkey
Süleyman Olcay Polat, Netas Telecommunications, Turkey

Student Research Abstract

Student Research Abstract: Leveraging Project-Specificity to Find Suitable Specifications 1579
Robert Heumüller, Otto-von-Guerricke University Magdeburg, Germany

Student Research Abstract: A Formally Assured Intelligent Ecosystem for Enhanced Ambient Assisted Living Support 1581
Ashalatha Kunnappilly, Mälardalen University, Sweden

SEC - Computer Security Track

Track Co-Chairs: Giampaolo Bella, Università di Catania, Italy
Lieven Desmet, Katholieke Universiteit Leuven, Belgium

Track Editorial 1583

The Security Risks of Power Measurements in Multicores 1585
Philipp Miedl, ETH Zurich, Switzerland
Lothar Thiele, ETH Zurich, Switzerland

Combinatorial Subset Difference Public Key Broadcast Encryption Scheme for Secure Multicast 1593
Jihye Kim, Kookmin University, South Korea
Seunghwa Lee, Kookmin University, South Korea
Jiwon Lee, Hanyang University, South Korea
Hyunok Oh, Hanyang University, South Korea

Bridging the Gap in Privacy-Preserving Revocation: Practical and Scalable Revocation of Mobile eIDs 1601
Michael Hölzl, Institute of Networks and Security, JKU Linz, Austria
Michael Roland, University of Applied Sciences Upper Austria, Austria
Omid Mir, Institute of Networks and Security, JKU Linz, Austria
René Mayrhofer, Institute of Networks and Security, JKU Linz, Austria

Ransomware Prevention using Application Authentication-Based File Access Control 1610
Or Ami, Ben-Gurion University of the Negev, Israel
Yuval Elovici, Ben-Gurion University of the Negev, Israel
Danny Hendler, Ben-Gurion University of the Negev, Israel

State-Aware Anomaly Detection for Industrial Control Systems 1620
Hamid Reza Ghaeini, Singapore University of Technology and Design, Singapore
Daniele Antonioli, Singapore University of Technology and Design, Singapore
Ferdinand Brasser, Technische Universitat Darmstadt, Germany
Ahmad-Reza Sadeghi, Technische Universitat Darmstadt, Germany
Nils Ole Tippenhauer, Singapore University of Technology and Design, Singapore

Applying Deep Learning on Packet Flows for Botnet Detection 1629
Jos Van Roosmalen, Open Universiteit, The Netherlands
Harald Vranken, Open Universiteit, The Netherlands
Marko Van Eekelen, Open Universiteit, The Netherlands

Behavior Analysis in the Medical Sector: Theory and Practice 1637
Mahdi Alizadeh, Eindhoven University of Technology, The Netherlands
Sander Peters, Eindhoven University of Technology, The Netherlands
Sandro Etalle, Eindhoven University of Technology, The Netherlands
Nicola Zannone, Eindhoven University of Technology, The Netherlands

Measuring E-Mail Header Injections on the World Wide Web 1647
Sai Prashanth Chandramouli, Arizona State University, USA
Pierre-Marie Bajan, IRT SystemX, France
Christopher Kruegel, University of California, Santa Barbara, USA
Giovanni Vigna, University of California, Santa Barbara, USA
Ziming Zhao, Arizona State University, USA
Adam Doupé, Arizona State University, USA
Gail-Joon Ahn, Arizona State University, USA

SiSoS - Software-intensive Systems-of-Systems Track

Track Co-Chairs: Khalil Drira, LAAS-CNRS – Univ. Toulouse, France
Flavio Oquendo, UMR CNRS IRISA – Univ. Bretagne Sud, France
Axel Legay, INRIA, France
Thais Vasconcelos Batista, DIMAp – UFRN, Brazil

Track Editorial 1657

A Refinement-based approach for Specifying Multi-scale Software Architectures: Application to SoS 1660
Ilhem Khlif, ReDCAD Research Laboratory, Tunisia
Imen Tounsi, ReDCAD Research Laboratory, Tunisia
Mohamed Hadj Kacem, ReDCAD Research Laboratory, Tunisia
Cédric Eicheler, INSA Centre Val de Loire, France
Ahmed Hadj Kacem, ReDCAD Research Laboratory, Tunisia

A Decision Approach for Energy Distribution Management in Smart Cities 1668
Imen Abdennadher, ReDCAD, University of Sfax, Tunisia
Ismael Bouassida Rodriguez, ReDCAD, University of Sfax, Tunisia
Mohamed Jmaiel, ReDCAD, University of Sfax, Tunisia

Formal Modeling of Systems-of-Systems Missions with mKAOS 1674
Eduardo Silva, IRISA – UMR CNRS and University of South Britanny, France
Thais Batista, Federal University of Rio Grande do Norte, Brazil

Correctness by Construction and Style Preserving Reconfigurations of System of Systems 1680
Cédric Eichler, INSA Centre Val de Loire-LIFO, France
Khalil Drira, LAAS-CNRS, France
Thierry Monteil, LAAS-CNRS, France
Patricia Stolf, Université Jean Jaurès, France

Externalizing Patterns for Simulation in Software Engineering of Systems-of-Systems 1687
Valdemar V. Graciano Neto, University of São Paulo, Brazil
Wallace Manzano, University of São Paulo, Brazil
Adair José Rohling, Instituto Nacional de Pesquisas Espaciais, Brazil
Mauricio Gonçalves Vieira Ferreira, Instituto Nacional de Pesquisas Espaciais, Brazil
Tiago Volpato, University of São Paulo, Brazil
Elisa Yumi Nakagawa, University of São Paulo, Brazil

Poster Papers

Heterogeneous Design Models Alignment: From Matching to Consistency Management 1695
Mahmoud El Hamlaoui, Mohammed V University in Rabat, Morocco
Saloua Bennani, Mohammed V University in Rabat, Morocco
Mahmoud Nassar, Mohammed V University in Rabat, Morocco
Sophie Ebersold, University of Toulouse-Jean Jaurès, France
Bernard Coulette, University of Toulouse-Jean Jaurès, France

ABC+: Extended Action-Benefit-Cost Modeling with Knowledge-based Decision-Making and Interaction Model for System of Systems Simulation 1698
Mingyu Jin, Korea Advanced Institute of Science and Technology, South Korea
Donghwan Shin, Korea Advanced Institute of Science and Technology, South Korea
Doo-Hwan Bae, Korea Advanced Institute of Science and Technology, South Korea

Student Research Abstract

Student Research Abstract: Collaborative Processes Behavioral Modeling 1702
Mamadou Lakhassane Cissé, Institut de Recherche en Informatique de Toulouse, France

SOAP - Service-Oriented Architecture and Programming Track

Track Co-Chairs: Massimo Bartoletti, University of Cagliari, Italy
Gwen Salaün, Université Grenoble Alpes, France
Luís Cruz-Filipe, University of Southern Denmark, Denmark

Track Editorial 1704

Supporting Micro-services Deployment in a Safer Way: a Static Analysis and Automated Rewriting Approach 1706
Benjamin Benni, Université Côte d'Azur, France
Sébastien Mosser, Université Côte d'Azur, France
Philippe Collet, Université Côte d'Azur, France
Michel Riveill, Université Côte d'Azue, France

On the Structure and Authorization Management of RESTful Web Services 1716
Bojan Suzic, Graz University of Technology, Austria
Bernd Prünster, Graz University of Technology, Austria
Dominik Ziegler, Know-Center GmbH, Austria

Query Strategies on Polyglot Persistence in Microservices 1725
Luis H.N. Villaça, Universidade Federal do Estado do Rio de Janeiro, Brazil
Leonardo G. Azevedo, Universidade Federal do Estado do Rio de Janeiro, Brazil
Fernanda Baião, Universidade Federal do Estado do Rio de Janeiro, Brazil

Poster Papers

From the Decorator Pattern to Circuit Breakers in Microservices 1733
Fabrizio Montesi, University of Southern Denmark, Denmark
Janine Weber, University of Southern Denmark, Denmark

SONAMA - Social Network and Media Analysis Track

Track Co-Chairs: Sang-Wook Kim, Hanyang University, South Korea

Track Editorial 1736

Scalable and Timely Detection of Cyberbullying in Online Social Networks 1738
Rahat Ibn Rafiq, University of Colorado Boulder, USA
Homa Hosseinmardi, University of Southern California, USA
Richard Han, University of Colorado Boulder, USA
Qin Lv, University of Colorado Boulder, USA
Shivakant Mishra, University of Colorado Boulder, USA

The Follower Count Fallacy: Detecting Twitter Users with Manipulated Follower Count 1748
Anupama Aggarwal, IIIT-Delhi, India
Saravana Kumar, College of Engineering, Guindy, India
Kushagra Bhargava, IIIT-Delhi, India
Ponnurangam Kumaraguru, IIIT-Delhi, India

Towards a Reputation Model applied to Geosocial Networks: A Case Study on Crowd4City 1756
Ana Gabrielle Ramos Falcão, Universidade Federal de Campina Grande, Brazil
Cláudio de Souza Baptista, Universidade Federal de Campina Grande, Brazil
Maxwell Guimarães de Oliveira, Federal University of Cariri, Brazil
Júlio Henrique Rocha, Universidade Federal de Campina Grande, Brazil
Tiago Henrique da Silva Leite, Universidade Federal de Campina Grande, Brazil
José Eustáquio Rangel de Queiroz, Universidade Federal de Campina Grande, Brazil

Exploiting LinkedIn to Predict Employee Resignation Likelihood 1764
Ana Carolina C. de Jesus, Pontifical Catholic University of Minas Gerais, Brazil
Márcio Enio G. Dutra Júnior, Federal University of Minas Gerais, Brazil
Wladmir C. Brandão, Pontifical Catholic University of Minas Gerais, Brazil

Towards an Approach to Elicit Domain Requirements from Social Networks: The Case of Emergency Systems 1772
Cláudio Borges, Universidade NOVA de Lisboa, Portugal
João Araújo, Universidade NOVA de Lisboa, Portugal
Armanda Rodrigues, Universidade Nova de Lisboa, Portugal

A Preselection Algorithm for the Influence Maximization Problem in Power Law Graphs 1782
Renato S. Melo, Federal University of Paraná, Brazil
Andre L. Vignatti, Federal University of Paraná, Brazil

Improving Sentiment Classification from High Volatility Financial News 1790
Jenq-Haur Wang, National Taipei University of Technology, Taiwan
Shiang Huang, Chung-Hwa Telecom, Taiwan

Computational Advertising in Social Networks: An Opinion Mining-based Approach 1798
Mauro Dragoni, Fondazione Bruno Kessler, Italy

A Multi-Task Neural Network for Multilingual Sentiment Classification and Language Detection on Twitter 1805
Jônatas Wehrmann, Pontifical Catholic University of Rio Grande do Sul, Brazil
Willian E. Becker, Pontifical Catholic University of Rio Grande do Sul, Brazil
Rodrigo C. Barros, Pontifical Catholic University of Rio Grande do Sul, Brazil

GreenShip: A Social Networking System for Combating Cyber-Bullying and Defending Personal Reputation 1813
Hasan M. Jamil, University of Idaho, USA
Robert Breckenridge, University of Idaho, USA

Poster Papers

Emoji Recommendation in Private Instant Messages 1821
Gaël Guibon, LSIS-CNRS and Caléa Solutions, France
Magalie Ochs, LSIS-CNRS, France
Patrice Bellot, LSIS-CNRS, France

Unsupervised Translated Word Sense Disambiguation in Constructing Bilingual Lexical Database 1824
Htet Myet Lynn, Chosun University, South Korea
Chang Choi, Chosun University, South Korea
Pankoo Kim, Chosun University, South Korea

Using an Agent-based Model to Measure the Message Repetition Effect on Twitter 1828
Paul Leger, Universidad Católica del Norte, Chile
Carmen Hidalgo-Alcázar, Universidad Católica del Norte, Chile
Manuela López, University of Murcia, Chile

SP - Software Platforms Track

Track Co-Chairs: Jinman Jung, Hannam University, South Korea
Jun Huang, Chongqing University of Posts and Telecom, China
Hong Min, Hoseo University, South Korea

Track Editorial 1831

A New Architecture and Implementation Strategy for Non-Invasive Software Measurement Systems 1832
Anton Bykov, Innopolis University, Russia
Vladimir Ivanov, Innopolis University, Russia
Alan Rogers, Innopolis University, Russia
Alexandr Shunevich, Innopolis University, Russia
Alberto Sillitti, Innopolis University, Russia
Giancarlo Succi, Innopolis University, Russia
Alexander Tormasov, Innopolis University, Russia
Jooyong Yi, Innopolis University, Russia
Albert Zabirov, Innopolis University, Russia
Denis Zaplatnikov, Innopolis University, Russia

Development of a Plugin based Extensible Feature Extraction Framework 1840
Vikas Malviya, Indian Institute of Information Technology, Design and Manufacturing, Jabalpur, India
Sawan Rai, Indian Institute of Information Technology, Design and Manufacturing, Jabalpur, India
Atul Gupta, Indian Institute of Information Technology, Design and Manufacturing, Jabalpur, India

Smart IoT Monitoring Framework based on oneM2M for Fog Computing 1848
Jeongwoo Choi, Soongsil University, South Korea
Yongmin Kim, Soongsil University, South Korea
Sung-Y. Shin, South Dakota State University, USA
Jiman Hong, Soongsil University, South Korea

Poster Papers

Role-based Automatic Programming Framework for Interworking a Drone and Wireless Sensor Networks 1853
Hong Min, Hoseo University, South Korea
Jinman Jung, Hannam University, South Korea
Seoyeon Kim, Hannam University, South Korea
Bongjae Kim, Sun Moon University, South Korea
Junyoung Heo, Hansung University, South Korea

SVT - Software Verification and Testing Track

Track Co-Chairs: Yliès Falcone, Univ. Grenoble Alpes, France
Leonardo Mariani, University of Milano Bicocca, Italy

TwAS: Two-stage Shape Analysis for Speed and Precision 1857
Amey Karkare, Indian Institute of Technology Kanpur, India

A Web-Based Tool for Analysing Normative Documents in English 1865
John J. Camilleri, Chalmers University of Technology and University of Gothenburg, Sweden
Mohammad Reza Haghshenas, Chalmers University of Technology and University of Gothenburg, Sweden
Gerardo Schneider, Chalmers University of Technology and University of Gothenburg, Sweden

Qualitative and Quantitative Analysis with Scheduling Policies in Model Checking 1873
Nhat-Hoa Tran, Japan Advanced Institute of Science and Technology, Japan
Yuki Chiba, Japan Advanced Institute of Science and Technology, Japan
Toshiaki Aoki, Japan Advanced Institute of Science and Technology, Japan

Verified Compilation of Linearizable Data Structures – Mechanizing Rely Guarantee for Semantic Refinement 1881
Yannick Zakowski, University Rennes / Inria / CNRS / IRISA, France
David Cachera, University Rennes / Inria / CNRS / IRISA, France
Delphine Demange, University Rennes / Inria / CNRS / IRISA, France
David Pichardie, University Rennes / Inria / CNRS / IRISA, France

Cycle-Bounded Model Checking of PLC Software via Dynamic Large-Block Encoding 1891
Dimitri Bohlender, RWTH Aachen University, Germany
Daniel Hamm, RWTH Aachen University, Germany
Stefan Kowalewski, RWTH Aachen University, Germany

Generating Minimal Test Set Satisfying MC/DC Criterion via SAT based Approach 1899
Ling Yang, Chinese Academy of Sciences, China
Jun Yan, Chinese Academy of Sciences, China
Jian Zhang, Chinese Academy of Sciences, China

LOCKS: A Property Specification Language for Security Goals 1907
Rajesh Kumar, University of Twente, The Netherlands
Arend Rensink, University of Twente, The Netherlands
Mariëlle Stoelinga, University of Twente, The Netherlands

On the Use of Sequence Mining within Spectrum based Fault Localisation 1916
Gulsher Laghari, University of Antwerp, Belgium
Serge Demeyer, University of Antwerp, Belgium

TeSSLa: Runtime Verification of Non-synchronized Real-Time Streams 1925
Martin Leucker, University of Lübeck, Germany
César Sánchez, IMDEA Software Institute, Spain
Torben Scheffel, University of Lübeck, Germany
Malte Schmitz, University of Lübeck, Germany
Alexander Schramm, IMDEA Software Institute, Spain

Korat-API: A Framework to Enhance Korat to Better Support Testing and Reliability Techniques 1934
Nima Dini, University of Texas at Austin, USA
Cagdas Yelen, University of Texas at Austin, USA
Zakaria Alrmaih, University of Texas at Austin, USA
Amresh Kulkarni, University of Texas at Austin, USA
Sarfraz Khurshid, University of Texas at Austin, USA

AutoPUT: An Automated Technique for Retrofitting Closed Unit Tests into Parameterized Unit Tests 1944
Keita Tsukamoto, The University of Tokyo, Japan
Yuta Maezawa, National Institute of Informatics, Japan
Shinichi Honiden, The University of Tokyo and National Institute of Informatics, Japan

SWA - Semantic Web and Application Track

Track Co-Chairs: Hyoil Han, Illinois State University, USA
Soon Ae Chun, City University of New York, USA
Sangsoo Sung, Google Inc, USA

RDF Shape Induction using Knowledge Base Profiling 1952
Nandana Mihindukulasooriya, Universidad Politécnica de Madrid, Spain
Mohammad Rifat Ahmmad Rashid, Politecnico di Torino, Italy, Italy
Giuseppe Rizzo, Instituto Superiore Mario Boella, Italy
Raúl García-Castro, Universidad Politecnica de Madrid, Spain, Spain
Oscar Corcho, Universidad Politécnica de Madrid, Spain
Marco Torchiano, Politecnico di Torino, Italy

Measuring Structural Similarity Between RDF Graphs 1960
Pierre Maillot, IRISA/Université Rennes 1, France
Carlos Bobed, IRISA/Université Rennes 1, France

Fuzzy Ontologies for Search Results Diversification: Application to Medical Data 1968
Ghada Besbes, University of Manouba, Tunisia
Hajer Baazaoui-Zghal, University of Manouba, Tunisia

EffTE: A Dependency-aware Approach for Test-Driven Ontology Development 1976
Lavdim Halilaj, University of Bonn and Fraunhofer IAIS, Germany
Irlán Grangel-González, University of Bonn and Fraunhofer IAIS, Germany
Steffen Lohmann, Fraunhofer IAIS, Germany
Maria-Esther Vidal, German National Library of Science and Technology and Fraunhofer IAIS, Germany
Sören Auer, German National Library of Science and Technology, Germany

Predicting the Possibilistic Score of OWL Axioms through Modified Support Vector Clustering 1984
Dario Malchiodi, Università degli Studi di Milano, Italy
Andrea G.B. Tettamanzi, University of Côte d'Azur, France

Knowledge Base Completion using Distinct Subgraph Paths 1992
Sameh K. Mohamed, National University of Ireland, Galway, Ireland
Vit Nováček, National University of Ireland, Galway, Ireland
Pierre-Yves Vandenbussche, Fujitsu Ireland Ltd., Ireland

Poster Papers

Seamless Integration of Cyber-Physical Systems in Knowledge Graphs 2000
Irlán Grangel-González, University of Bonn and Fraunhofer IAIS, Germany
Lavdim Halilaj, University of Bonn and Fraunhofer IAIS, Germany
Maria-Esther Vidal, Fraunhofer IAIS, Germany
Steffen Lohmann, Fraunhofer IAIS, Germany
Sören Auer, German National Library of Science and Technology, Germany
Andreas W. Mueller, Schaefer Technologies, Germany

UE - Usability Engineering Track

Track Co-Chairs: Eduardo Mosqueira Rey, University of A Coruña, Spain
Vicente Moret Bonillo, University of A Coruña, Spain
David Alonso Ríos, University of A Coruña, Spain

Track Editorial 2004

Does Gamification Matter? A Systematic Mapping about the Evaluation of Gamification in Educational Environments 2006
Ana Carolina Tomé Klock, Federal University of Rio Grande Sul, Brazil
Aline Nunes Ogawa, Santa Catarina State University, Brazil
Isabela Gasparini, Santa Catarina State University, Brazil
Marcelo Soares Pimenta, Federal University of Rio Grande do Sul, Brazil

Usa-DSL: Usability Evaluation Framework for Domain-Specific Languages 2013
Ildevana Poltronieri, Pontifical Catholic University of Rio Grande do Sul, Brazil
Avelino Francisco Zorzo, Pontifical Catholic University of Rio Grande do Sul, Brazil
Maicon Bernardino, Federal University of Pampa, Brazil
Marcia de Borba Campos, Pontifical Catholic University of Rio Grande do Sul, Brazil

Accessibility and Usability Problems Encountered on Websites and Applications in Mobile Devices by Blind and Normal-Vision Users 2022
Michael Crystian Nepomuceno Carvalho, Universidade Federal de Lavras, Brazil
Felipe Silva Dias, Universidade Federal de Lavras, Brazil
Aline Grazielle Silva Reis, Universidade Federal de Lavras, Brazil
André Pimenta Freire, Federal University of Lavras, Brazil

Poster Papers

Experience Report: Studying the Readability of a Domain Specific Language 2030
Johann Thor Mogensen Ingibergsson, University of Southern Denmark, Denmark
Stefan Hanenberg, University of Essen, Germany
Joshua Sunshine, Carnegie Mellon University, USA
Ulrik Pagh Schultz, University of Southern Denmark, Denmark

VSPLE - Variability and Software Product Line Engineering Track

Track Co-Chairs: Abdelhak-Djamel Seriai, University of Montpellier, France
Tewfik Ziadi, University Pierre et Marie Curie, France

Towards a Fault-Detection Benchmark for Evaluating Software Product Line Testing Approaches 2034
Stefan Fischer, Johannes Kepler University Linz, Austria
Roberto Erick Lopez-Herrejon, École de Technologie Supérieure, Canada
Alexander Egyed, Johannes Kepler University Linz, Austria

Physical Separation of Features: A Survey with CPP Developers 2042
Jacob Krüger, Harz University of Applied Sciences and Otto-von-Guericke Unviersity Magdeburg, Germany
Kai Ludwig, Harz University of Applied Sciences, Germany
Bernhard Zimmermann, Harz University of Applied Sciences, Germany
Thomas Leich, Harz University of Applied Sciences, Germany

Engineering Configurators for the Retail Industry: Experience Report and Challenges Ahead 2050
Maxime Cordy, University of Namur, Belgium
Patrick Heymans, University of Namur, Belgium

Visual Guidance for Product Line Configuration using Recommendations and Non-Functional Properties 2058
Juliana Alves Pereira, University of Magdeburg, Germany
Jabier Martinez, University Pierre et Marie Curie, France
Hari Kumar Gurudu, University of Magdeburg, Germany
Sebastian Krieter, University of Magdeburg, Germany
Gunter Saake, University of Magdeburg, Germany

Assessing the Functional Feasibility of Variability-Intensive Data Flow-Oriented Systems 2066
Sami Lazreg, University Côte d'Azur, France
Philippe Collet, Université Cote d'Azur, France
Sébastien Mosser, Université Côte d'Azur, France

Student Research Abstract

Student Research Abstract: Separation of Concerns: Experiences of the Crowd 2076
Jacob Krüger, Harz University of Applied Sciences and Otto-von-Guericke Unviersity Magdeburg, Germany

WCN - Selected Areas of Wireless Communications and Networking Track

Track Co-Chairs: Dongkyun Kim, Kyungpook National University, South Korea
Wei Wang, San Diego State University, USA

BIRD: Bio-InspiRed Distributed Interest Forwarding in Vehicular Named-Data Networks 2078
Muhammad Azfar Yaqub, Kyungpook National University, South Korea
Syed Hassan Ahmed, University of Central Florida, USA
Dongkyun Kim, Kyungpook National University, South Korea

Dynamic Control of Beacon Transmission Rate and Power with Position Error Constraint in Cooperative Vehicular Networks 2084
Sandy Bolufé, Universidad de Chile, Chile
Samuel Montejo-Sánchez, Universidad de Chile, Chile
Cesar A. Azurdia-Meza, Universidad de Chile, Chile
Sandra Céspedes, Universidad de Chile, Chile
Richard Demo Souza, Federal University of Santa Catarina, Brazil
Evelio M.G. Fernandez, Federal University of Parana, Brazil

A Centralized Channelization Scheme for Wireless LANs Exploiting Channel Bonding 2092
Made Harta Dwijaksara, Seoul National University, South Korea
Wha Sook Jeon, Seoul National University, South Korea
Dong Geun Jeong, Hankuk University of Foreign Studies, South Korea

A Distributed Online Certificate Status Protocol for Named Data Networks 2102
Daniel Rezende, Federal University of Paraná, Brazil
Carlos Maziero, Federal University of Paraná, Brazil
Elisa Mannes, Santa Catarina State University, Brazil

Cooperative Neighborhood Map in VANETs 2109
Hermes Pimenta de Moraes Júnior, Université de Technologie de Compiègne, France
Bertrand Doucourthial, Université de Technologie de Compiègne, France

Identification of Anchor Zones for Floating Content in VaNETs based on Centrality Measures 2117
Fábio Massalino, Federal University of Alagoas, Brazil
André L.L. Aquino, Federal University of Alagoas, Brazil

Energy-Efficient Unequal Chain Length Clustering for WSN 2125
Mhanwoo Heo, Soongsil University, South Korea
Mohammad Baniata, Soongsil University, South Korea
Jinwoo Lee, Soongsil University, South Korea
Juw Won Park, University of Louisville, USA
Jiman Hong, Soongsil University, South Korea

Poster Papers

Energy Saving on DTNs using Trajectory Inference Model 2132
Antônio Rodrigo D. De Vit, Pontifical Catholic University of Rio Grande do Sul, Brazil
César Marcon, Pontifical Catholic University of Rio Grande do Sul, Brazil
Raul Ceretta Nunes, Universidade Federal de Santa Maria, Brazil
Thais Webber, Universidade de Santa Cruz do Sul, Brazil
Gustavo Sanchez, Pontifical Catholic University of Rio Grande do Sul, Brazil
Carlos Oberdan Rolim, Universidade Federal do Rio Grande do Sul, Brazil

SDN for QUIC: An Enhanced Architecture with Improved Connection Establishment 2136
Ali Hussein, American University of Beirut, Lebanon
Ayman Kayssi, American University of Beirut, Lebanon
Imad H. Elhajj, American University of Beirut, Lebanon
Ali Chehab, American University of Beirut, Lebanon

Student Research Abstract

Student Research Abstract: Energy Efficient Topology Management Scheme from Wireless Sensor and Ad-hoc Network 2140
Muhammad Diyan, Kyungpook National University, South Korea

WT - Web Technologies Track

Track Co-Chairs: Tim A. Majchrzak, University of Agder - Kristiansand, Norway
Cristian Mateos, UNICEN University - Tandil, Argentina
Francesco Poggi, University of Bologna - Bologna, Italy

Track Editorial 2142

A Quality Analysis of Facebook Messenger's Most Popular Chatbots 2144
Juanan Pereira, University of the Basque Country, Spain
Oscar Díaz, University of the Basque Country, Spain

Gesture4All: A Framework for 3D Gestural Interaction to Improve Accessibility of Web Videos 2151
Marcio Maestrelo Funes, University of São Paulo, Brazil
Tiago Henrique Trojahn, University of São Paulo, Brazil
Renata Pontin Mattos Fortes, University of São Paulo, Brazil
Rudinei Goularte, University of São Paulo, Brazil

Layout Cross-Browser Incompatibility Detection using Machine Learning and DOM Segmentation 2159
Fagner Christian Paes, BestCode, Brazil
Willian Massami Watanabe, Universidade Tecnológica Federal do Paraná, Brazil

A Web-based Approach using Reactive Programming for Complex Event Processing in Internet of Things Applications 2167
Carlos Zimmerle, Universidade Federal de Pernambuco, Brazil
Kiev Gama, Universidade Federal de Pernambuco, Brazil

browserCloud.js - A Distributed Computing Fabric Powered by a P2P Overlay Network on top of the Web Platform 2175
David Dias, INESC-ID Lisboa, Portugal
Luís Veiga, INESC-ID Lisboa, Portugal

Customising LOD Views: A Declarative Approach 2185
Alice Graziosi, University of Bologna, Italy
Angelo Di Iorio, University of Bologna, Italy
Francesco Poggi, University of Bologna, Italy
Silvio Peroni, University of Bologna, Italy
Luca Bonini, University of Bologna, Italy

Poster Papers

Hiphop.js: A Language to Orchestrate Web Applications 2193
Colin Vidal, Université Nice Côte d'Azur Inria Sophia Méditerranée, France
Gérard Berry, Collège de France, France
Manuel Serrano, Université Nice Côte d'Azur Inria Sophia Méditerranée, France

Student Research Abstract

Student Research Abstract: Classification Pipeline for Automatic Identification of Widgets and its Parts 2196
Eduardo Henrique Rizo, Universidade Tecnológica Federal do Paraná, Brazil