Session 1: Network Protocols and Applications I

Influential Abortion Probability in a Flexible Read-Write Abortion Protocol

Shigenari Nakamura, Dilawaer Duolikun, Tomoya Enokido, and Makoto Takizawa

Characterizing Similarity Structure of Spatial Networks Based on Degree Mixing Patterns

Arief Maulana, Kazumi Saito, Tetsuo Ikeda, Hiroaki Yuze, Takayuki Watanabe, Seiya Okubo, and Nobuaki Muto

Disaster Information Gathering System Based on Web Caching and OpenFlow in Unstable Networks

Saki Tabata, Kohei Ueda, Ryotaro Fukui, Keiko Shimazu, and Hiroshi Shigeno

NEXT-FIT: Available Bandwidth Measurement over 4G/LTE Networks — A Curve-Fitting Approach

Anup Kumar Paul, Atsuo Tachibana, and Teruyuki Hasegawa

Monitoring Communication Quality Degradation in LTE Network Using Statistics of State Transition

Masaki Suzuki, Quentin Plessis, Takeshi Kitahara, and Shigehiro Ano
Session 2: Distributed Database and Data Mining

CICPV: A New Academic Expert Search Model ................................................................. 47
Zhijie Ban and Li Liu

Sentiment Analysis and Classification for Software as a Service Reviews .......................... 53
Asma Musabah Alkalbani, Ahmed Mohamed Ghamry, Farook Khadeer Hussain,
and Omar Khadeer Hussain

The Impact of Course Enrollment Sequences on Student Success ........................................ 59
Ahmad Slim, Gregory L. Heileman, Wisam Al-Doroubi, and Chaouki T. Abdallah

Mining and Visualizing Social Data to Inform Marketing Decisions .................................... 66
Jérôme Treboux, Fabian Cretton, Florian Evêquoz, Anne Le Calvé, and Dominique Genoud

Applying Data Mining to Explore Students’ Self-Regulation in Learning Contexts ................ 74
Chia-Yin Ko and Fang-Yie Leu

A New Model for Testing CRUD Operations in a NoSQL Database ..................................... 79
Maria Teresa González-Aparicio, Muhammad Younas, Javier Tuya, and Rubén Casado

Session 3: Content-Centric Networking

SDCCN: A Novel Software Defined Content-Centric Networking Approach ........................ 87
Sergio Charpinel, Celso Alberto Sabel Santos, Alex Borges Vieira, Rodolfo Villaca,
and Magnus Martinello

Experimental Results of a Raspberry Pi and OLSR Based Wireless Content Centric Network
Testbed Considering OpenWRT OS .............................................................................. 95
Admir Barolli, Tetsuya Oda, Leonard Barolli, and Makoto Takizawa

A Capital Market Metaphor for Content Delivery Network Resources ................................. 101
Elias Vathias, Dimitris Nikolopoulos, and Stathes Hadjiefthymiades

New Hierarchical Parent-Child Caching Strategy (H-CS) for CCN-Based Video Streaming .................... 109
Olfa Ben Rhaiem, Lamia Chaari Fourati, and Wessam Ajib

Designing an Analysis Procedure for Context Aware Applications in Ubiquitous Environments .................................................. 116
Nesrine Khabou, Ismael Bouassida Rodriguez, and Mohamed Jmaiel

RTT-Based Caching Policies to Improve User-Centric Performance in CCN .......................... 124
Kenji Yokota, Kohei Sugiyama, Jun Kurihara, and Atsushi Tagami

Session 4: Network Protocols and Applications II

Cluster-Head and Border-Node Based Cluster Routing Protocol for LR-WPAN .................... 132
Ying Huang, Hongli Ge, Jangsu Lee, Yuehua Dai, Dong Xu, Jin Zhang, Qiang Gao,
and Shaoying Zhao

Economic Viability of QoS in Software Defined Networks (SDNs) ...................................... 140
Murat Karakus and Arjan Durresi
Network Monitoring Using MMT: An Application Based on the User-Agent Field in HTTP

Vinh Hoa La, Raul Fuentes, and Ana R. Cavalli

A New Sensing Strategy for 5G Mobile Networks: Towards Spectral and Energy Efficiency Trade off

Afef Bohli and Ridha Bouallegue

Realization of Time Synchronization Protocol Based on Frequency Skew Bid and Dynamic Topology Using Embedded Linux System

Zhenqiang Huang, Enqing Dong, Yuan Yuan, and Wei Liu

Greedy Versus Limited Access Point Backhaul Resource Aggregation in Wireless Local Area Networks

Kawther Hassine, Mounir Frikha, and Tijani Chahed

Session 5: Ad Hoc and Mesh Networks

A GA-Based Simulation System for WMNs: Performance Analysis of WMN-GA System for Different WMN Architectures and Uniform Distribution Considering DCF and EDCA

Ilir Shinko, Tetsuya Oda, Evjola Spaho, Admir Barolli, Vladi Kolici, and Leonard Barolli

Evaluating Cross-Layer Cooperation of Congestion and Flow Control in IEEE 802.11s Networks

Michael Rethfeld, Peter Danielis, Benjamin Beichler, Björn Konieczek, Felix Uster, and Dirk Timmermann

MobiSink: Cooperative Routing Protocol for Underwater Sensor Networks with Sink Mobility

Pir Masoom Shah, Ikram Ullah, Tanveer Khan, Muhammad Sheraz Hussain, Zahoor Ali Khan, Umar Qasim, and Nadeem Javaid

Energy Concerns in Wireless Sensor and Actor Networks: A Simulation Case

Elis Kulla, Evjola Spaho, Makoto Ikeda, and Leonard Barolli

Implementation of a New Replacement Method in WMN-PSO Simulation System and Its Performance Evaluation

Shinji Sakamoto, Tetsuya Oda, Makoto Ikeda, Leonard Barolli, and Fatos Xhafa

Trusted Secure Adhoc On-demand Multipath Distance Vector Routing in MANET

Abrar Omar Alkhamisi and Seyed M. Buhari

Session 6: Multimedia Systems and Applications

SDN Based Architecture to Improve Video Streaming in Home Networks

Rabee Mustapha Abuteir, Anne Fladenmuller, and Olivier Fourmaux

New Educational Equipments for Networking Study by Physical Visualizations and Physical Direct Manipulations

Kazuaki Yoshihara, Kenzi Watanabe, and Nobukazu Iguchi

A Method to Describe Student Learning Status for Personalized Computer Programming e-Learning Environment

Yu Yan, Kohei Hara, Hiroto Nakano, Takenobu Kazuma, and Aiguo He
On the Evaluation of Quality of Situation (QoSi) in Situation-Aware Ubiquitous Learning Environment ..........................................................239
    Raoudha Souabni, Ines Bayoudh Saadi, Nesrine Ben Salah, Kinshuk, and Henda Ben Ghezala

Energy Minimization by Selecting Appropriate Modulation and Coding Scheme for MB-OFDM UWB Systems ..........................................................247
    Houida Chihi, Reza Mahin Zaeem, and Ridha Bouallegue

An Estimation Model on Stress and Relaxed States for QOL Visualization and Its Evaluation ..........................................................253
    Sayaka Akiyama and Yuka Kato

Session 7: Network Protocols and Applications III

Impact of SDN on Mobility Management ............................................................................................................................................260
    Kuljaree Tantayakul, Riadh Dhaou, and Beatrice Paillassa

SLEEPWELL: Energy Efficient Network Design for the Developing World Using Green Switches ............................................................................................................................................266
    Kshitiz Verma, Shmuel Zaks, and Alberto Garcia-Martinez

VISION — Interactive and Selective Visualization for Management of NFV-Enabled Networks ..........................................................274
    Muriel Figueredo Franco, Ricardo Luis dos Santos, Alberto Schaeffer-Filho, and Lisandro Zambenedetti Granville

A Scalability Metric for Control Planes in Software Defined Networks (SDNs) ..........................................................................................282
    Murat Karakus and Arjan Durresi

Explore and Analyze the Performance Factors on Wi-Fi Sensing Starvation Problems ............................................................................................................................................290
    Yean-Fu Wen, Shih-Yao Chen, Chie-Han Hsiao, and Frank Yeong-Sung Lin

EDR: An Encounter and Distance Based Routing Protocol for Opportunistic Networks ..........................................................................................297
    Sanjay Kumar Dhurandher, Satya Borah, Isaac Woungang, Deepak Kumar Sharma, Kunal Arora, and Divyansh Agarwal

Session 8: Wireless Sensor Networks I

Dynamic Sensor Management: Extending Sensor Web for Near Real-Time Mobile Sensor Integration in Dynamic Scenarios ............................................................................................................................................303
    Luiz Fernando F. G. de Assis, Lucas P. Behnck, Dionisio Doering, Edison P. de Freitas, Carlos E. Pereira, Flávio E. A. Horita, Jô Ueyama, and João Porto de Albuquerque

A Transmit Power Efficient Non-Cooperative Game Design for Wireless Sensor Networks Based on the Utility and Cost Function ............................................................................................................................................311
    Anwar Khan, Hassan Mahmood, Zahoor Ali Khan, Umar Qasim, and Nadeem Javaid

An Opportunistic Void Avoidance Routing Protocol for Underwater Sensor Networks ............................................................................................................................................316
    Seyed Mohammad Ghoreyshi, Alireza Shahrabi, and Tuleen Boutaleb

    Abdul Majid, Irfan Azam, Abdul Waheed, Muhammad Zain-Ul-Abidin, Taimur Hafeez, Zahoor Ali Khan, Umar Qasim, and Nadeem Javaid

Three-Dimensional Sensor Localization Using Modified 3N Algorithm ............................................................................................................................................334
    Dogan Yildiz, Serap Karagol, Okan Ozgonenel, Satish Tadiparthi, and Marwan Bikdash
A Comparison of HEED Based Clustering Algorithms — Introducing ER-HEED ..................................................................................................................339
Zaib Ullah, Leonardo Mostarda, Roberto Gagliardi, Diletta Cacciagrano, and Flavio Corradini

Session 9: Pervasive and Ubiquitous Computing I

Positional Estimation of Obstacles and Aircraft by Using ISDB-T Signal Delay .................................................................346
Junichi Honda and Takuya Otsuyama

Irfan Azam, Abdul Majid, Ijaz Ahmad, Usman Shakeel, Hamad Maqsood, Zahoor Ali Khan, Umar Qasim, and Nadeem Javaid

Feasibility of Analyzing Wi-Fi Activity to Estimate Transit Passenger Population ..............................................................362
Thongtat Oransirikul, Ryo Nishide, Ian Piumarta, and Hideyuki Takada

Research on Never Die Network for Disaster Prevention Based on OpenFlow and Cognitive Wireless Technology ........................370
Goshi Sato, Noriki Uchida, Norio Shiratori, and Yoshitaka Shibata

Comparing Strategies to Construct Local Disaster Recovery Networks .............................................................................376
Matthias Herlich and Shigeki Yamada

necoMAC: Network Coding Aware MAC Protocol for Multirate Wireless Networks ..........................................................384
Nyan Lin, Rithea Ngeth, Krittanan Sriviriyakul, Yuto Lim, and Yasuo Tan

Session 10: Distributed and Parallel Systems I

An Energy-Efficient Load Balancing Algorithm for Virtual Machine Environments to Perform Communication Type Application Processes ..................................................................................................392
Tomoya Enokido and Makoto Takizawa

Energy-Aware Clusters of Servers for Storage and Computation Applications ......................................................................................400
Atsuhiro Sawada, Hiroki Kataoka, Dilawaer Duolikun, Tomoya Enokido, and Makoto Takizawa

Accelerating Packet Processing in a Xen Environment with OpenDataPlane ..............................................................................408
Tarek Rabia, Othmen Braham, and Guy Pujolle

Straggler Detection in Parallel Computing Systems through Dynamic Threshold Calculation ................................................414
Xue Ouyang, Peter Garraghan, David McKee, Paul Townend, and Jie Xu

eHSim: An Efficient Hybrid Similarity Search with MapReduce ............................................................................................422
Trong Nhan Phan, Josef Küng, and Tran Khanh Dang

Data-Driven Workflows for Microservices: Genericity in Jolie ..............................................................................................430
Larisa Safina, Manuel Mazzara, Fabrizio Montesi, and Victor Rivera

Session 11: Wireless Sensor Networks II

Void Avoidance Scheme for Real-Time Data Dissemination in Irregular Wireless Sensor Networks .........................................................438
Sangdae Kim, Cheonyong Kim, Hyunchong Cho, Yongbin Yim, and Sang-Ha Kim

A Precision Operation Optimization for Detection-Based Sensor Networks ..................................................................444
Frank Yeong-Sung Lin, Chiu-Han Hsiao, and Yean-Fu Wen
Sink Mobility Support Scheme for Continuous Object Tracking in Wireless Sensor Networks .........................................................452
Cheonyong Kim, Hyunchong Cho, Sangdae Kim, Taehun Yang, and Sang-Ha Kim

A Preamble Ahead Anycast Protocol for WSNs ..........................................................................................................................458
Tales Heimfarth, João Carlos Giacomini, João Paulo de Araújo, and Edison Pignaton de Freitas

Development of Analytical Model for Data Trustworthiness in Sensor Networks .................................................................467
Sami J. Habib and Paulvanna N. Marimuthu

Energy Efficient and Reliable Data Gathering in Underwater WSNs ........................................................................................473
Tayyaba Liaqat, Nadeem Javaid, Ashfaq Ahmad, Zahoor Ali Khan, Umar Qasim, and Muhammad Imran

Session 12: Pervasive and Ubiquitous Computing II

Energy Considerations for Continuous Group Activity Recognition Using Mobile Devices: The Case of GroupSense .........................................................................................................................479
Amin B. Abkenar, Seng W. Loke, Wenny Rahayu, and Arkady Zaslavsky

A Positioning Handoff Decision Algorithm for Ubiquitous Pedestrian Navigation Systems ....................................................487
Wiem Fekih Hassen and Faiza Najjar

Microinteractions in Mobile and Wearable Computing ................................................................................................................495
Markus Aleksy, Jonas Bronmark, and Shakeel Mahate

Soft Fall Detection Using Machine Learning in Wearable Devices ...........................................................................................501
Dominique Genoud, Vincent Cuendet, and Julien Torrent

Clustering Depth Based Routing for Underwater Wireless Sensor Networks ........................................................................506
Tanveer Khan, Israr Ahmad, Waqas Aman, Irfan Azam, Zahoor Ali Khan, Umar Qasim, Sanam Avais, and Nadeem Javaid

A QoS-Guaranteed Adaptive Cooperation Scheme in Cognitive Radio Network ......................................................................516
Yufeng Wang, Feilong Tang, Yanqin Yang, Jie Li, Wenchao Xu, and Jinsong Wu

Session 13: Distributed and Parallel Systems II

An Autonomic Majority Quorum System ........................................................................................................................................524

ContentSDN: A Content-Based Transparent Proxy Architecture in Software-Defined Networking ...........................................................532
Alex F. R. Trajano and Marcial P. Fernandez

Priority-Based State Machine Replication with PRaxos ................................................................................................................540
Paulo R. Pinho Filho, Luciana de Oliveira Rech, Lau Cheuk Lung, Miguel Correia, and Lásaro Jonas Camargos

Approximate-Centroid Election in Large-Scale Distributed Embedded Systems .......................................................................548
André Naz, Benoit Piranda, Seth Copen Goldstein, and Julien Bourgeois

An Energy-Aware Migration of Virtual Machines ..........................................................................................................................557
Dilawaer Duolikun, Ryo Watanabe, Hiroki Kataoka, Shigenari Nakamura, Tomoya Enokido, and Makoto Takizawa
Session 14: Vehicular Networks and Applications I

An Enhanced Message Suppression Controller for Vehicular-Delay Tolerant Networks ........................................... 573
Makoto Ikeda, Seiichiro Ishikawa, and Leonard Barolli

An Architecture for Traffic Sign Management in Smart Cities ................................................................................. 580
Everton R. Lira, Enrique Fynn, Paulo R. S. L. Coelho, Luis F. Faina, Lasaro Camargos, Rodolfo S. Villaça, and Rafael Pasquini

Handover Decision in Heterogeneous Networks ........................................................................................................ 588
Sassi Maaloul, Mériem Afif, and Sami Tabbane

Experimental Evaluation on Quality of VoIP over Aero MACS ............................................................................. 596
Kazuyuki Morioka, Junichi Nagano, Junichi Honda, Naoki Kanada, Shanichi Futatsumori, Akiko Kohmura, Takeshi Tomita, Naruto Yonemoto, and Yasuto Sumiya

Channel-Aware ECDSA Signature Verification of Basic Safety Messages with K-Means
Clustering in VANETs ...................................................................................................................................................... 603
Elyes Ben Hamida and Muhammad Awais Javed

Spectrum Sensing in Cognitive Radio Networks and Capacity Analysis for Vehicular Network ................................ 611
Wencheng Chen, Xiangming Wen, and Wei Li

Session 15: Data Centers and Cloud Computing I

An Openstack Based Accounting and Billing Service for Future Internet Applications ............................................ 618
Oladotun Omosebi, Stelios Sotiriadis, and Nik Bessis

Service Oriented Verification Integrated Fault Reasoning for SDNs .......................................................................... 624
Yongning Tang, Guang Cheng, Zhiwei Xu, and Feng Chen

Examination of the Implementation Method of the Cloud Type Virtual Policy Based Network
Management Scheme for the Common Use between Plural Organizations ............................................................... 630
Kazuya Odgairi, Shogo Shimizu, Naohiro Ishii, and Makoto Takizawa

Advance Reservation System for Datacenters ........................................................................................................ 637
Roxana Istrate, Andrei Poenaru, and Florin Pop

Partitioning-Based Workflow Scheduling in Clouds .................................................................................................. 645
Khaled Almi’ani and Young Choon Lee

Session 16: Security and Privacy I

Privacy Preservation for Participatory Sensing Applications ...................................................................................... 653
Yuichi Sei and Akihiko Ohsuga

A Proposal of a Password Manager Satisfying Security and Usability by Using the Secret Sharing and a Personal Server .................................................................................................................. 661
Masayuki Fukumitsu, Shingo Hasegawa, Jun-Ya Iwazaki, Masao Sakai, and Daiki Takahashi
Tightly-Secure Identity-Based Structured Aggregate Signature Scheme under the Computational Diffie-Hellman Assumption .................................................................669
Tomoya Iwasaki, Naoto Yanai, Masaki Inamura, and Keiichi Iwamura

Preferential Attachment Model with Degree Bound and Its Application to Key Predistribution in WSN .................................................................677
Sushmita Ruj and Arindam Pal

OS and Application Identification by Installed Fonts .................................................................684
Takamichi Saito, Kazushi Takahashi, Koki Yasuda, Takayuki Ishikawa, Ko Takasu, Tomotaka Yamada, Naoki Takei, and Rio Hosoi

An (n, n)-Multi Secret Image Sharing Scheme Using Boolean XOR and Modular Arithmetic .................................................................690
Maroti Deshmukh, Neeta Nain, and Mushtaq Ahmed

**Session 17: Vehicular Networks and Applications II**

Performance Comparison of Different Routing Protocols in Sparse and Dense VDTNs .................................................................698
Evjola Spaho, Leonard Barolli, Vladi Kolici, and Algenti Lala

A Method for Recognizing Driver's Location Context with a Vehicle Information Device .................................................................704
Seiji Matsuyama, Takatomo Yamabe, Yuki Nakayama, Yu Okawaki, and Ryozo Kiyohara

Experimentation of V2X Communication in Real Environment for Road Alert Information Sharing System .................................................................711
Kenta Ito, Go Hirakawa, and Yoshitaka Shibata

Content and Context Aware Strategies for QoS Support in VANETs .................................................................717
Gianluca Rizzo, Maria Rita Palattella, Torsten Braun, and Thomas Engel

TrAD: Traffic Adaptive Data Dissemination Protocol for Both Urban and Highway VANETs .................................................................724
Bin Tian, Kun Mean Hou, and Jianjin Li

**Session 18: Data Centers and Cloud Computing II**

Implementing a Cloud-Based Service Supporting Biological Network Simulations .................................................................732
Fabrizio Bertone, Giuseppe Caragnano, Lorenzo Mossucca, Olivier Terzo, Alfredo Benso, Gianfranco Politano, and Alessandro Savino

QoS-Aware Scheduling of Workflows in Cloud Computing Environments .................................................................737
Khadija Bousselmi, Zaki Brahmi, and Mohamed Mohsen Gammoudi

Formal Verification of Cloud Resource Allocation in Business Processes Using Event-B .................................................................746
Souha Boubaker, Amel Mammar, Mohamed Graiet, and Walid Gaaloul

A Cloud-Based Energy Efficient System for Enhancing the Detection and Prevention of Modern Malware .................................................................754
Qublai Khan Ali Mirza, Ghulam Mohi-Ud-Din, and Irfan Awan

Practical Single Node Failure Recovery Using Fractional Repetition Codes in Data Centers .................................................................762
May Itani, Sanaa Sharafeddeen, and Islam Elkabbani
Session 19: Security and Privacy II

Analysis of “Receipt-Freeness” and “Coercion-Resistance” in Biometric Authentication
Yoshifumi Ueshige and Kouichi Sakurai

Game-Theoretic Security of Commitment Protocols under a Realistic Cost Model
Tsuyoshi Komatsubara and Yoshifumi Manabe

Resistance to Chaff Attack through TCP/IP Packet Cross-Matching and RTT-Based Random Walk
Jianhua Yang

Application of HAZOP to the Design of Cyber Security Experiments
Masood Mansoori, Ian Welch, Kim-Kwang Raymond Choo, and Roy A. Maxion

Preventing Pass-the-Hash and Similar Impersonation Attacks in Enterprise Infrastructures
Alexander Oberle, Pedro Larbig, Ronald Marx, Frank G. Weber, Dirk Scheuermann, Daniel Fages, and Fabien Thomas

Network Packet Filtering and Deep Packet Inspection Hybrid Mechanism for IDS Early Packet Matching
Zouheir Trabelsi, Safaa Zeidan, and Mohammad M. Masud

Session 20: Internet Computing and Web Applications

A Location-Based Attendance Confirming System
Masaki Kohana and Shusuke Okamoto

A Web Interface for Satellite Scheduling Problems
Fatos Xhafa, Carlos Garcia, Admir Barolli, and Makoto Takizawa

Connection Management Using the Locality of Application Traffic
Hui-Hwan Park, Kyung-Min Park, and Hoon Choi

A Framework for Massively Multiplayer Online Game Content Generation
Tiago Alves and Jorge Coelho

On Cooperative On-Path and Off-Path Caching Policy for Information Centric Networks (ICN)
Hemant Kumar Rath, Bighnaraj Panigrahi, and Anantha Simha

Addressing Challenges in Browser Based P2P Content Sharing Framework Using WebRTC
Shikhar Vashishth, Yash Sinha, and K. Hari Babu

Session 21: Smart Home and Smart Cities

A Smart Home Energy Management Strategy Based on Demand Side Management
Zafar Iqbal, Nadeem Javaid, Mobushir Riaz Khan, Farman Ali Khan, Zahoor Ali Khan, and Umar Qasim

Soft Real-Time Hadoop Scheduler for Big Data Processing in Smart Cities
Ciprian Barbieriu and Florin Pop

An Architecture for Monitoring and Improving Public Transportation Systems
Pedro H. S. Duarte, Luis F. Faina, Lasaro J. Camargos, Luciano B. de Paula, and Rafael Pasquini
Water Level Meter for Alerting Population about Floods

J. A. Hernández-Nolasco, Miguel A. Wister Ovando, Francisco D. Acosta, and Pablo Pancardo

Defeasible Reasoning about Electric Consumptions

Matteo Cristani, Claudio Tomazzoli, Erisa Karafili, and Francesco Olivieri

HVAC System for Maintaining Pleasant Sleep During Warm Nights in Japan

Kanae Matsui

**Session 22: Security and Privacy III**

Intersection Automata Based Model for Android Application Collusion

Shweta Bhandari, Vijay Laxmi, Akka Zemmari, and Manoj Singh Gaur

A Data Usage Control System Using Dynamic Taint Tracking

Julian Schütte and Gerd Stefan Brost

Privacy-Preserving Triangle Counting in Distributed Graphs

Hoang Giang Do and Wee Keong Ng

Failure Tolerant Rational Secret Sharing

Sourya Joyee De and Sushmita Raj

Secure Neighbor Discovery in Mobile Ad Hoc Networks through Local Topology Visualization

Somayeh Taheri, Radu Stoleru, and Dieter Hogrefe

Empirical Analysis of Impact of HTTP Referer on Malicious Website Behaviour and Delivery

Masood Mansoori, Yuichi Hirose, Ian Welch, and Kim-Kwang Raymond Choo

**Session 23: Intelligent Computing**

QoE-Fuzzy VHO Approach for Heterogeneous Wireless Networks (HWNs)

Aymen Ben Zineb, Mohamed Ayadi, and Sami Tabbane

Effect of Security Parameter for Selection of Actor Nodes in WSAN: A Comparison Study of Two Fuzzy-Based Systems

Donald Elmazi, Shinji Sakamoto, Tetsuya Oda, Elis Kulla, Evjola Spaho, and Leonard Barolli

Fuzzy-Based Trust Model for Detection of Selfish Nodes in MANETs

Zia Ullah, Muhammad Saleem Khan, Idrees Ahmed, Nadeem Javaid, and Majid I. Khan

A Machine Learning Based Web Spam Filtering Approach

Santosh Kumar, Xiaoying Gao, Ian Welch, and Masood Mansoori

Experimental Results of a Raspberry Pi Based WMN Testbed Considering CPU Frequency

Tetsuya Oda and Leonard Barolli

A Python Framework for Exhaustive Machine Learning Algorithms and Features Evaluations

Fabien Dubossson, Stefano Bromuri, and Michael Schumacher

**Session 24: Internet of Things**

IoT Healthcare Analytics: The Importance of Anomaly Detection

Arijit Ukil, Soma Bandyopadhyay, Chetanya Puri, and Arpan Pal

Efficient Broadcast Protocol for the Internet of Things

Hicham Lakhlef, Michel Raynal, and Julien Bourgeois
Multi-master Replication of Enhanced Learning Assistant System in IoT Cluster .................................................................1006
   Bishnu Prasad Gautam, Katsumi Wasaki, Amit Batajoo, Suresh Shrestha, and Sato Kazuhiko

Trust Management Framework for Internet of Things ..........................................................................................................................1013
   Yefeng Ruan, Arjan Durresi, and Lina Alfantoukh

Dynamic Street-Parking Optimisation .................................................................................................................................................1020
   N. Pazos, M. Müller, M. Favre-Bulle, K. Brandt-Dit-Grieurin, O. Hüsser, M. Aeberli, and N. Ouerhani

Performance Analysis of 6LoWPAN and CoAP for Secure Communications in Smart Homes .........................................................1027
   Rafael de Jesus Martins, Vinicius Garcez Schaurich, Luis Augusto Dias Knob, Juliano Araujo Wickboldt, Alberto Schaeffer Filho, Lisandro Zambenedetti Granville, and Marcelo Pias

Session 25: Security and Privacy IV

Ice and Fire: Quantifying the Risk of Re-identification and Utility in Data Anonymization .........................................................1035
   Hiroaki Kikuchi, Takayasu Yamaguchi, Koki Hamada, Yuji Yamaoka, Hidenobu Oguri, and Jun Sakama

Detecting Stepping-Stone Intruders by Identifying Crossover Packets in SSH Connections ..........................................................1043
   Shou-Hsuan Stephen Huang, Hongyang Zhang, and Michael Phay

Hardware Covert Attacks and Countermeasures ...............................................................................................................................1051
   Jahnabi Phukan, Kin Fun Li, and Fayez Gebali

On Using Cognitive Models in Cryptography .................................................................................................................................1055
   Marek R. Ogiela and Lidia Ogiela

Bio-Inspired Cryptographic Techniques in Information Management Applications .................................................................1059
   Lidia Ogiela and Marek R. Ogiela

Towards Better Attack Path Visualizations Based on Deep Normalization of Host/Network IDS Alerts ..................................................1064
   Amir Azodi, Feng Cheng, and Christoph Meinel

Session 26: Social Networking and Collaborative Systems

LinkedPolitics: Incremental Semantic Lifting of Political Facts ................................................................................................................1072
   Julien Tscherrig, Elena Mugellini, Omar Abou Khaled, and Philippe Cudré-Mauroux

Leveraging Co-authorship and Biographical Information for Author Ambiguity Resolution in DBLP ................................................................1080
   Hussein Hazimeh, Iman Youness, Jawad Makki, Hassan Noureddine, Julien Tscherrig, Elena Mugellini, and Omar Abou Khaled

Distributed Cooperative Reasoning in Ambient Environment ............................................................................................................1085
   Amina Jarraya, Khedija Arour, Amel Borgi, and Amel Bouzeghoub

Towards a General Architecture for Social Media Data Capture from a Multi-Domain Perspective ..................................................1093
   Alessio Bechini, Davide Gazzè, Andrea Marchetti, and Maurizio Tesconi

Defining Human Behaviors Using Big Data Analytics in Social Internet of Things ..............................................................................1101
   Awais Ahmad, M. Mazhar Rathore, Anand Paul, and Suengmin Rho
Session 27: Semantic Computing

Leveraging Structural Information in Ontology Matching .................................................................1108
Cheng Xie, Melisachew Wudage Chekol, Blerina Spahiu, and Hongming Cai

Ontology-Based Information Extraction for Knowledge Enrichment and Validation ...............................................1116
Dhomas Hatta Fudholi, Wenny Rahayu, and Eric Pardede

An Ontology Driven Model Approach for the Creation and Evaluation of Models in the Electricity Retail Market: A Research in Progress .................................................................1124
Geovanny Poveda and René Schumann

An Ontology Based Approach for Satisfying User Requests in Context Aware Settings ..................................................1130
Sujata Swain and Rajdeep Niyogi

A Blocking Scheme for Entity Resolution in the Semantic Web ........................................................................1138
Gustavo de Assis Costa and José Maria Parente de Oliveira

Session 28: Grid, P2P and Scalable Computing

Towards Peer-to-Peer Solution for Utilization of Volunteer Resources to Provide Computation-as-a-Service ...........................................................................................................................1146
Shashwati Banerjea, Mayank Pandey, and M. M. Gore

Ant Colony Optimization Based Energy Management Controller for Smart Grid ................................................................1154
Sahar Rahim, Zafar Iqbal, Nusrat Shaheen, Zahoor Ali Khan, Umar Qasim, Shahid Ahmed Khan, and Nadeem Javaid

Reduction of Unnecessarily Ordered Event Messages in Peer-to-Peer Model of Topic-Based Publish/Subscribe Systems ................................................................................................................1160
Hiroki Nakayama, Dilawaer Duolikun, Tomoya Enokido, and Makoto Takizawa

A Fuzzy-Based Reliability System for JXTA-Overlay P2P Platform Considering as New Parameter Sustained Communication Time .........................................................................................1168
Yi Liu, Shinji Sakamoto, Eviola Spaho, Keita Matsuo, Leonard Barolli, and Fatos Xhafa

Trustworthy P2P Data Delivery for Moving Objects in Wireless Ad-Hoc Networks ............................................................1176
Agustinus Borgy Waluyo, David Taniar, Bala Srinivasan, and Wenny Rahayu

On Utilizing Static Courier Nodes to Achieve Energy Efficiency with Depth Based Routing for Underwater Wireless Sensor Networks ......................................................................................1184
Zia ur Rahman, Zaheer Ahmad, Amir Murad, Tanveer Khan, Zahoor Ali Khan, Umar Qasim, and Nadeem Javaid

Author Index