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IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Image Processing Algorithms

Session: SM-1 Signal and Multimedia Processing

Monday May 5, 2014 Time: 9:50 a.m. - 12:00 p.m.

Room: ENG 101

Chair: Azadeh Safari

Proceedings Page No.

SM-1.1: Enhanced Linear Block Algorithm with Improved Similarity Measure [888415] 0964

Ekta Bhullar (South Asian University, New Delhi, IN); Pooja Saigal (South Asian University, , IN); Aman Pal (SAU, New Delhi, IN)

SM-1.2: Contourlet Domain Image Denoising Using Normal Inverse Gaussian Distribution [888291] 0954

Hamidreza Sadreazami (Concordia University, Montreal, CA); M. Omair Ahmad (Concordia University, Montreal, CA); M. N. S. Swamy (Concordia University, , CA)

SM-1.3: Operational Capability and Suitability of Image Compression Methods for Different Applications [887995] 0875

Azadeh Safari (Macquarie University, , AU); Yinan Kong (Macquarie University, , AU); Fujimi Bentley (Macquarie University, , AU)

SM-1.4: Scale Invariant Feature Transform using Oriented Pattern [879859] 0246

Mohammad Baghery Daneshvar (Sharif University of Technology-International Campus, , IR); Massoud Babaie-Zadeh (Sharif University of Technology, Tehran, IR); Seyed Ghorshi (Sharif University of Technology, , IR)

SM-1.5: Weighted Ratio-based Adaptive Lossless Image Coding [888655] 1126

AbdulWahab Kabani (The University of Western Ontario, , CA); Mahmoud El-Sakka (The University of Western Ontario, London, CA)

SM-1.6: Depth Map Compression Based on Platelet Coding and Quadratic Curve Fitting [880711] 0512

Yu Zhang (University of Ottawa, , CA); Han Wang (University of Ottawa, , CA); Jiyong Zhao (University of Ottawa, , CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: RF Techniques

Session: CS-1 Circuits

Monday May 5, 2014 Time: 9:50 a.m. - 12:00 p.m.

Room: ENG 102

Chair: TBA

Proceedings Page No.

CS-1.1: An algorithm for IMD Computation in Automated Tests of RFIC Power Amplifiers [879547] 0182

Smarjeet Sharma (École de Technologie Supérieure, Montréal, CA); Nicolas Constantin (Ecole de Technologie Supérieure, , CA)

CS-1.2: GaN Polar Transmitter Design for Base-station Applications [888835] 1241

Maryam Jouzdani (University of Calgary, , CA); Mohammad Mojtaba Ebrahimi (University of Calgary, Calgary, CA); Fadhel Ghannouchi (University of Calgary, , CA)

CS-1.3: Performance Enhancement of First Order Three-Level Envelope Delta Sigma Modulator Based Transmitter [880817] 0655

Fahmi Elsayed (University of Calgary, Calgary, CA); Mohammad Mojtaba Ebrahimi (University of Calgary, Calgary, CA); Mohamed Helaoui (University of Calgary, Calgary, CA); Fadhel Ghannouchi (University of Calgary, Calgary, CA)

CS-1.4: Distortion Analysis of Nano-scale CMOS RF Amplifier Using Volterra Series [880739] 0556

Haoran Yu (Dalhousie University, , CA); Kamal El-Sankary (Dalhousie University, , CA); Ezz El-masry (Dalhousie, , CA)

CS-1.5: Digital Predistortion of Concurrent Dual-Band Power Amplifier based on Two-dimensional Multi-Branch DPD [880687] 0486

Mayada Younes (University of Calgary, Calgary, CA); Andrew Kwan (University of Calgary, Calgary, CA); Fadhel Ghannouchi (University of Calgary, , CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Cognitive Radio Networks
Session: CN-1 Communications and Networking
Monday May 5, 2014 Time: 9:50 a.m. - 12:00 p.m.
Chair: TBA

Room: ENG 105

Proceedings Page No.

CN-1.1: Multiobjective memetic optimization for spectrum sensing and power allocation in cognitive wireless networks [888891]	1256
Hieu Dang (University of Manitoba, , CA); Witold Kinsner (University of Manitoba, Winnipeg, CA)	
CN-1.2: On the Connectivity of Multi-Band Cognitive Radio Ad Hoc Networks [888651]	1120
Mahmoud Gad (University of Ottawa, Ottawa, CA); Ahmed Farid (University of Ottawa, , CA); Hussein Mouftah (University of Ottawa, , CA)	
CN-1.3: A Spatial Reuse Media Access Protocol for Cooperative Spectrum Sensing [880099]	0292
Xiao Shao (McGill University, Montreal, CA); Harry Leib (McGill University, Montreal, CA)	
CN-1.4: Cooperative Spectrum Sensing in LTE Networks [879849]	0236
Gelareh Kokabian (University of New Haven, , US); Amir Esmailpour (University of New Haven, Toronto, US)	
CN-1.5: A Channel Assignment Scheme for Reliable Routing in Cognitive Radio Networks [876337]	0074
Hangsheng Zhao (Nanjing Telecommunication Technology Institute, , CN); Jianzhao Zhang (PLA University of Science and Technologies, , CN)	
CN-1.6: An Empirical Measurement of Jamming Attacks in CSS Cognitive Radio Networks [853769]	0007
Victor Balogun (University of Idaho, Moscow, US); Axel Krings (University of Idaho, , US)	

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Software Engineering
Session: Soft-1 Computers
Monday May 5, 2014 Time: 9:50 a.m. - 12:00 p.m.
Chair: TBA

Room: ENG 106

Proceedings Page No.

Soft-1.1: Capturing Non-functional Properties through Model Interlinking [887951]	0869
Mahdi Noorian (UNB, , CA); Ebrahim Bagheri (Ryerson University, , CA)	
Soft-1.2: Near-miss Software Clones in Open Source Games: An Empirical Study [880779]	0604
Yaowen Chen (University of Saskatchewan, , CA); Iman Keivanloo (Queen's University, , CA); Chanchal Roy (University of Saskatchewan, Saskatoon, CA)	
Soft-1.3: Semi-Automation for Ambiguity Resolution in Open Source Software Requirements [879951]	0260
Kanwal Gill (National University of Sciences and Technology, Rawalpindi, PK); Arif Raza (NUST, , PK); Athar Zaidi (NUST, , PK); Muhammad Muneeb Kiani (National University of Sciences and Technology, , PK)	
Soft-1.4: Cooperative Based Software Clustering on Dependency Graphs [866485]	0012
Ahmed Ibrahim (University of Waterloo, Waterloo, CA); Derek Rayside (University of Waterloo, , CA); Rasha Kashef (University of Waterloo, Waterloo, CA)	
Soft-1.5: Prediction of Changeability for Object Oriented Classes and Packages by Mining Change History [892825]	1355
Jitender Chhabra (NIT, Kurukshetra, , IN); Anshu Parashar (National Institute of Technology, Kaithal, IN)	

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Renewable Energy Generation - 1
Session: SG-1 Smart Grids and Renewable Energy
Monday May 5, 2014 Time: 9:50 a.m. - 12:00 p.m. Room: ENG LG05
Chair: Irtaza Syed

Proceedings Page No.

- SG-1.1: Smart Control of Reactive Power from PV Plants for Mitigating Voltage Fluctuation [888251]** **2; 5:**
Van Tu Dao (Hanoi University of Science and Technology, Hanoi, VN); Hanh Nguyen (Hanoi University of Science and Technology, Hanoi, VN)
- SG-1.2: Fuzzy-based Load Frequency Controller For Interconnected Power System With Wind Power Integration [885999]** **0767**
Hui Zhou (Beijing Jiaotong University, Beijing, CN)
- SG-1.3: Simple Mathematical Model of Photovoltaic Module for Simulation in Matlab/Simulink [880289]** **0380**
Irtaza Syed (Ryerson University, , CA); Amimaser Yazdani (Ryerson University, , CA)
- SG-1.4: An Intelligent FLC Method for Tracking the Maximum Power of Photovoltaic Systems [877563]** **0107**
Abdullah Noman (King Saud University, , YE)
- SG-1.5: Simulation and dSPACE Hardware Implementation of the MPPT Techniques Using Buck Boost Converter [877561]** **0099**
Abdullah Noman (King Saud University, , YE)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Power Electronic Converters & Controls
Session: PE-3 Power Electronics and Energy Systems
Monday May 5, 2014 Time: 9:50 a.m. - 12:00 p.m. Room: ENG LG06
Chair: Syed Qaseem Ali;Md Shakhawat Hossain

Proceedings Page No.

- PE-3.1: Integrated Battery Charger for Delta Connected Machines in Plug-in Hybrid Electric Vehicles [888237]** **0927**
Syed Qaseem Ali (McGill University, Montreal, CA); Diego Mascarella (McGill University, , CA); Geza Joos (McGill University, , CA)
- PE-3.2: Zero Voltage Switching Analysis of Modular Isolated Bidirectional DC-DC Converter [879775]** **0204**
Seyed Hossein Hosseini (University of Tabriz, Tabriz, IR); Farzad Sedaghati (University of Tabriz, , IR); Mehran Sabahi (University of Tabriz, , IR); Gevorg Gharehpetian (Amirkabir University, , IR)
- PE-3.3: A New Configuration of Modular Isolated Bidirectional DC-DC Converter [879773]** **0198**
Seyed Hossein Hosseini (University of Tabriz, Tabriz, IR); Farzad Sedaghati (University of Tabriz, , IR); Mehran Sabahi (University of Tabriz, , IR); Gevorg Gharehpetian (Amirkabir University, , IR)
- PE-3.4: An Interleaved High Step-Up DC-DC Converter with Reduced Voltage Stress Across Semiconductors [879107]** **0144**
Seyed Hossein Hosseini (University of Tabriz, Tabriz, IR); Ebrahim Babaei (University of Tabriz, Tabriz, IR); Tohid Nouri (University of Tabriz, , IR)
- PE-3.5: Efficiency Comparison of 2- and 3-level Inverter Based Power Conditioning System for Grid-Connected SOFC Application [875533]** **0058**
Md Arifujjaman (RES Americas, , US); Md Shakhawat Hossain (Memorial University of Newfoundland, , CA); Mohammad Tariq Iqbal (Memorial University of Newfoundland, St. John's, CA)
- PE-3.6: Research on Multi-objective Coordinated Control Strategy of UPFC [871015]** **0027**
Man Zhang (Tsinghua University, , CN); Chunpeng Zhang (Tsinghua University, , CN); Qirong Jiang (Tsinghua University, , CN); Xiaorong Xie (Tsinghua University, , CN)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Speech
Session: SM-2 Signal and Multimedia Processing
Monday May 5, 2014 Time: 1:00 p.m. - 3:00 p.m. Room: ENG 101
Chair: Seyed Ghorshi

Proceedings Page No.

SM-2.1: Multimodal Emotion Recognition (MER) System [880653] 0465

Kevin Tang (Ryerson University, Toronto, CA); Yun Tie (Ryerson University, Toronto, CA); Cungang Yang (Ryerson University, Toronto, CA); Ling Guan (Ryerson University, , CA)

SM-2.2: A Bin-Based Ontological Framework for Low-Resource N-Gram Smoothing in Language Modeling [888225] PIC

Yacine Benahmed (INRS-Énergie-Matériaux-Télécommunications, , CA); Sid-Ahmed Selouani (Université de Moncton, Campus de Shippagan, Shippagan, CA); Douglas O'Shaughnessy (INRS-Énergie-Matériaux-Télécommunications, , CA)

SM-2.3: Pitch Estimation of Noisy Speech using Ensemble Empirical Mode Decomposition and Dominant Harmonic Modification [880261] 0354

Sujan Roy (Concordia University, Montreal, CA); Wei-Ping Zhu (Concordia University, , CA)

SM-2.4: Implementation of Bayesian Recursive State-Space Kalman Filter for Noise Reduction of Speech Signal [874171] 0049

Ali Sarafnia (Sharif University of Technology, International Campus, , IR); Seyed Ghorshi (Sharif University of Technology, , IR)

SM-2.5: Detection of Questions in Berber Language Using Prosodic Features [868123] PIC

Halimouche Ramzi (FEI, USTHB, , DZ); Teffahi Hocine (USTHB, FEI, Alger, , DZ); Leila Falek (Bab Ezzouar Alger, , DZ)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Mixed-Signal Circuits and Systems
Session: CS-5 Circuits
Monday May 5, 2014 Time: 1:00 p.m. - 3:00 p.m. Room: ENG 102
Chair: Glenn Cowan; Emanuel Istrate

Proceedings Page No.

CS-5.1: A Design Oriented Model for the Jitter/Skew of the Voltage-to-Time Converter (VTC) Circuits [877583] 0121

Hassan Mostafa (University of Toronto, Waterloo, CA); Yehea Ismail (Northwestern University, , US)

CS-5.2: Circuit Design Techniques for Increasing The Output Power of Switched Capacitor Charge Pumps [879873] 0251

Ayman Eltaliawy (The American University in Cairo, New Cairo, EG); Hassan Mostafa (University of Toronto, Waterloo, CA); Yehea Ismail (Northwestern University, , US)

CS-5.3: Multistage Electrostatic Energy Harvester Without Startup Battery [880813] 0646

Yin Li (University of Guelph, Guelph, CA); Manjusri Misra (University of Guelph, , CA); Stefano Gregori (University of Guelph, Guelph, CA)

CS-5.4: Extreme Wide-Temperature Range 8-bit Digital to Analog Converter in Bulk CMOS Process [880767] 0593

Kevin Greig (McGill University, Toronto, CA); Vamsy Chodavarapu (McGill University, Montreal, CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Sensor Networks - 1
Session: CN-2 Communications and Networking
Monday May 5, 2014 Time: 1:00 p.m. - 3:00 p.m. Room: ENG 105
Chair: TBA

Proceedings Page No.

CN-2.1: Coverage Maximization in Mobile Wireless Sensor Networks Utilizing Immune Node Deployment Algorithm [888203] 0905

Nabil Sabor (Assiut University, , EG); Mohammed Abo-Zahhad (Vice Dean for Graduate Studies, , EG); Sabah Ahmed (Professor, , EG); Shigenobu Sasaki (Niigata University, , JP)

CN-2.2: Cellular Automata and Mobile Wireless Sensor Networks [880597] 0450

Salimur Choudhury (Queen's University, Kingston, CA); Kai Salomaa (School of Computing Queen's University Canada, , CA); Selim Akl (Queen's University, Kingston, CA)

CN-2.3: City Traffic Management Model using Wireless Sensor Networks [889547] 1349

Mustazibur Rahman (University of Ottawa, Ottawa, CA); Nasir Ahmed (University of Ottawa, , CA); Hussein Mouftah (University of Ottawa, , CA)

CN-2.4: SESRT: Score based Event to Sink Reliable Transport In Wireless Sensor Networks [879325] 0164

Sima Abroshan (Ferdowsi University of Mashhad, , IR); Mohammad Hossein Yaghmaee (Ferdowsi university of mashad, , IR)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Big Data and Web Mining
Session: Soft-2 Computers
Monday May 5, 2014 Time: 1:00 p.m. - 3:00 p.m. Room: ENG 106
Chair: TBA

Proceedings Page No.

Soft-2.1: Multiscale Navigation in Large Trace Data [880781] 0611

Naser Ezzati Jivan (Ecole Polytechnique Montreal, , CA); Michel Dagenais (Ecole Polytechnique de Montreal, Montreal, CA)

Soft-2.2: Bitcoin mining acceleration and performance quantification [880529] 0444

Jega Anish Dev (Anna University, College of Engineering, Guindy, , IN)

Soft-2.3: A Framework for the Service Provisioning of Community-Contributed Web APIs [880107] 0298

Daniel Vijayakumar (University of Guelph, , CA); Qusay Mahmoud (University of Ontario Institute of Technology, Oshawa, CA)

Soft-2.4: A Sentiment Analysis Prototype System for Social Network Data [879851] 0241

Pitiphat Santidhanyaroj (University of Regina, , CA); Talha Khan (University of Regina, , CA); Craig Gelowitz (University of Regina, Regina, CA); Luigi Benedicenti (University of Regina, , CA)

Soft-2.5: Sentiment Miner: A Prototype for Sentiment Analysis of Unstructured Data and Text [888529] 1011

Muhammad Shahbaz (University of Engineering & Technology Lahore, , PK)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Renewable Energy Generation - 2

Session: SG-2 Smart Grids and Renewable Energy

Monday May 5, 2014 Time: 1:00 p.m. - 3:00 p.m.

Room: ENG LG05

Chair: Bala Venkatesh

Proceedings Page No.

SG-2.1: Performance Evaluation of a small scale variable speed marine current energy conversion system [888695]

1149

Nahidul Khan (Memorial University of Newfoundland, , CA)

SG-2.2: H-? Loopshaping Controller Design of Micro-Source Inverters [888593]

1064

Allal El Moubarek Bouzid (Université du Québec a Trois Rivières, Trois Rivières, CA); Pierre Sicard (Université du Québec à Trois-Rivières, Trois-Rivieres, CA); Ahmed Cheriti (Université du Québec a Trois Rivières, , CA); Mohamed Bouhamida (University of Science and Technology of Oran Algeria, Oran, Algeria, DZ)

SG-2.3: Predictive Speed Controller for Laboratory Size Wind Turbine Experiment System [888569]

1038

Adel Merabet (Saint Mary's University, Halifax, CA); Md. Aminul Islam (Saint Mary's University, Halifax, CA); Rachid Beguenane (Royal Military College of Canada, , CA)

SG-2.4: Wind Energy Forecast Error Estimation Using Black & Scholes Mathematical Model [883975]

0733

Reza Ghaffari (Ryerson University, , CA); Bala Venkatesh (Ryerson University, , CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Utility Power Control & Modeling

Session: PE-2 General Interest

Monday May 5, 2014 Time: 1:00 p.m. - 3:00 p.m.

Room: ENG LG06

Chair: Kaamran Raahemifar

Proceedings Page No.

PE-2.1: Performance Study of Electric Vehicles in Macau [880021]

0271

T. W. Ching (University of Macau, , MO)

PE-2.2: Optimization of Home Automation Systems Based on Human Motion and Behaviour [888623]

1081

Kaamran Raahemifar (Ryerson University, Waterloo, CA)

PE-2.3: Optimal Placement and Sizing of Multi Distributed Generations with Renewable Bus Available limits using Shuffled Bat Algorithm [888189]

0887

Chandrasekhar Yammani (National Institute of Technology, Warangal, Warangal, IN); Sydulu Maheswarapu (NIT Warangal, , IN); Matam Sailaja Kumari (National Institute of Technology, Warangal, , IN)

PE-2.4: A Fuzzy Logic System for Demand-Side Load Management in Residential Buildings [879985]

0266

Azim Keshtkar (Simon Fraser University, , CA)

PE-2.5: Wavelet-based Adaptive Nonlinear Power System Excitation Control [877573]

0115

Hasan Yousef (Sulatan Qaboos University, , OM); Hisham Soliman (Sultan Qaboos University, , OM)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Image Processing Applications

Session: SM-3 Signal and Multimedia Processing

Monday May 5, 2014 Time: 3:30 p.m. - 5:15 p.m.

Room: ENG 101

Chair: Kenneth Lai;Yun Tie

Proceedings Page No.

SM-3.1: Understanding the Significance of Radiometric Calibration for Synthetic Aperture Radar Imagery [888649] 1114
Khalid El-Darymli (Memorial University, St. John's, CA); Peter McGuire (C-Core, , CA); Eric Gill (Memorial University, , CA); Desmond Power (C-CORE, , CA); Cecilia Moloney (Memorial University of Newfoundland, St. John's, CA)

SM-3.2: One-Shot Facial Feature Extraction Based on Gauss-Laguerre Filter [888031] 0881
Kenneth Lai (University of Calgary, , CA); Ahmad Poursaberi (University of Calgary, , CA); Svetlana Yanushkevich (University of Calgary, Calgary, CA)

SM-3.3: Fine Granularity Spatially Adaptive Regularization for TVL1 Based Image Deblurring [887475] 0814
M. Omair Ahmad (Concordia University, Montreal, CA); Md. Zulfikar Bhotto (Concordia Victoria, Montreal, CA); M. N. S. Swamy (Concordia University, , CA)

SM-3.4: Real-Time Automatic Chroma-Key Matting using Perceptual Analysis and Prediction [880705] 0502
Ling Yin (University of Ottawa, Ottawa, CA); Jiying Zhao (University of Ottawa, , CA)

SM-3.5: 3-D Real-Time Image Matching Based on Kinect Skeleton [880439] 0416
Jingxuan Chen (University of California Irvine, , US)

SM-3.6: Automatic Ontario license plate recognition using local normalization and intelligent character classification [880319] 0391
Yun Tie (Ryerson University, Toronto, CA); Nazanin Yazdian (Ryerson University, , CA); Ling Guan (Ryerson University, , CA); Anastasios Venetsanopoulos (Ryerson University, Toronto, CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Wireline Communication and Clocking

Session: CS-6 Circuits

Monday May 5, 2014 Time: 3:30 p.m. - 5:15 p.m.

Room: ENG 102

Chair: Glenn Cowan;Emanuel Istrate

Proceedings Page No.

CS-6.1: Behavioral and Transistor Modeling of Multi-Phase Injection Ring Oscillator [901751] 1388
Shahab Ardalan (San Jose State University, , CA); Shweta Panwalkar (Intel, , US); Muhammad Ali (San Jose State University, , US)

CS-6.2: Sub-Gate-Delay Edge-Control of a Clock Signal Using DLLs and Sigma-Delta Modulation Techniques [888577] 1049
Steven Bielby (McGill University, Montreal, CA); Gordon Roberts (McGill University, , CA)

CS-6.3: Optimization of LC-VCO Tuning Range under Different Inductor/Varactor Losses Limitations [888223] 0917
Omar Abdelfattah (McGill University, , CA); Ishiang Shih (McGill University, Montreal, CA); Gordon Roberts (McGill University, , CA); Yi-Chi Shih (University of California, Los Angeles US)

CS-6.4: Test Considerations for Jitter Tolerance of Wireline Receivers [880311] 0386
Roberto DiCecco (Semtech, Toronto, CA); Roman Pahuta (Semtech, , CA); Chris Holdenried (Semtech, , CA); Saman Sadr (Semtech, , CA)

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IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Sensor Networks - 2
Session: CN-3 Communications and Networking
Monday May 5, 2014 Time: 3:30 p.m. - 5:15 p.m.
Chair: TBA

Room: ENG 105

Proceedings Page No.

CN-3.1: Maximizing the Reliability of Clustered Sensor Networks by a Fault-Tolerant Service [889367] M. Mehdi Afsar (QIAU, , IR)	1308
CN-3.2: Effective Data Aggregation using a Hierarchical Multi-layered Scheme for Large-scale Sensor Networks [889379] Medhi Afsar (Tehran, , IR)	1316
CN-3.3: Design of Energy-aware QoS Routing Protocol in Wireless Sensor Networks Using Reinforcement Learning [880497] Sara Zafar Jafarzadeh (Ferdowsi University of Mashhad, Mashhad, IR); Mohammad Hossein Yaghmaee (Ferdowsi university of mashhad, , IR)	0439
CN-3.4: Semi-Persistent CSMA/CA for Efficient and Reliable Communication in Wireless Sensor Networks [901905] Mouheine Guennoun (University of Ottawa, Ottawa, CA); Hussein Mouftah (University of Ottawa, , CA)	1392
CN-3.5: Complex Networks: Study and Performance Evaluation with Hybrid Model for Wireless Sensor Networks [889103] Vincenzo Curia (University of Calabria, , IT); Mauro Tropea (University of Calabria, , IT); Peppino Fazio (University of Calabria, , IT); Salvatore Marano (University of Calabria, Cosenza, IT)	1281

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Innovative Computer Applications
Session: Soft-3 Computers
Monday May 5, 2014 Time: 3:30 p.m. - 5:15 p.m.
Chair: TBA

Room: ENG 106

Proceedings Page No.

Soft-3.1: Use of Kinect in a Multicamera setup for action recognition applications [888759] Omar Kayal (University of Western Ontario, London, CA); Jagath Samarabandu (University of Western Ontario, , CA)	1186
Soft-3.2: Enhanced Cobweb Clustering for Identifying Analog Galaxies in Astrophysics [880833] Ashwin Satyanarayana (New York City College of Technology, , US); Viviana Acquaviva (New York City College of Technology, , US)	0672
Soft-3.3: Consistent 3D Models from Unorganized RGB-D Images [880765] José Tascón (Universidad del Valle, Cali, CO); Humberto Loaiza (Universidad del Valle, , CO)	0587
Soft-3.4: Evaluation of an Online Shopping System under Preferences and Constraints [880273] Bandar Mohammed (University of Regina, Regina, Saskatchewan, Canada, CA); Malek Mouhoub (University of Regina, , CA)	0363
Soft-3.5: Design of Intelligent Database Program for an Interactive Auto-responsive SMS-based Opinion Poll System using Triggers and Stored Procedure [875739] Kehinde Adetiloye (IEEE, LaSalle, CA)	0064
Soft-3.6: Mobile Circular Keyboards [879653] Parham Aarabi (University of Toronto, , CA); Lawrence Leung (University of Toronto, , CA)	0188

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Power System Operation and Planning
Session: SG-3 Smart Grids and Renewable Energy
Monday May 5, 2014 Time: 3:30 p.m. - 5:15 p.m. Room: ENG LG05
Chair: Moein Manbachi; Swapan Sikdar

Proceedings Page No.

SG-3.1: Probabilistic Analysis of Wind Turbine Planning in Distribution Systems [880953] 0717

Mahmood Sadeghi (University of Science and Technology (IUST), Tehran, IR); Mohsen Kalantar (Iran University of Science and Technology, , IR)

SG-3.2: Two-Stage Stochastic Power Generation Scheduling in Microgrids [880799] 0624

Abdelsalam Eajal (University of Waterloo, , CA); Yousef Elrayani (Can-Technologies Inc., , CA); Ehab El-Saadany (Waterloo University, Waterloo, CA); Kumaraswamy Ponnambalam (University of Waterloo, , CA)

SG-3.3: Predictive Algorithm for Volt/VAR Optimization of Distribution Networks Using Neural Networks [880763] 0580

Moein Manbachi (Simon Fraser University, Surrey, CA); Hassan Farhangi (BCIT, , CA); Ali Palizban (British Columbia Institute of Technology (BCIT), , CA); Siamak Arzanpoor (SFU, , CA)

SG-3.4: A Decentralised Electricity Market Model: An Electric Vehicle Charging Example [880677] 0476

Swapan Sikdar (Queen's University, , CA); Karen Rudie (Queen's University, Kingston, CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Alternate Energy Converters and Systems
Session: PE-4 Power Electronics and Energy Systems
Monday May 5, 2014 Time: 3:30 p.m. - 5:15 p.m. Room: ENG LG06
Chair: Zuher Alnasir;Loic Boulon

Proceedings Page No.

PE-4.1: Standalone SCIG-Based Wind Energy Conversion System Using Z-Source Inverter with Energy Storage Integration [877049] 0093

Zuher Alnasir (University of Waterloo, , CA); Mehrdad Kazerani (University of Waterloo, , CA)

PE-4.2: Performance Comparison of Standalone SCIG and PMSG-Based Wind Energy Conversion Systems [877045] 0085

Zuher Alnasir (University of Waterloo, , CA); Mehrdad Kazerani (University of Waterloo, , CA)

PE-4.3: Grid Connected Energy Storage System to Profit from Net-Metering and Variable Rate Electricity [869353] 0022

Md Shakhawat Hossain (Memorial University of Newfoundland, , CA); Mohammad Tariq Iqbal (Memorial University of Newfoundland, St. John's, CA)

PE-4.4: Maximum Efficiency Point Tracking for Hydrogen Fuel Cells [847935] 0001

Daniel Herrera Vega (Université du Québec à Trois-Rivières, Trois Rivières, CA); Neigel Marx (Université du Québec à Trois-Rivières, , CA); Loic Boulon (UQTR, , CA); Andres Hernandez (Escuela Colombiana de Ingeniería Julio Garavito, , CA)

PE-4.5: Simulation of Adaptive Duty Cycling in Solar Powered Environmental Monitoring Systems [880729] 0545

Michal Prauzek (VSB - Technical University of Ostrava, Ostrava-Poruba, CZ); Asher Watts (University of Alberta, , CA); Petr Musilek (University of Alberta, , CA); Loren Wyard-Scott (University of Alberta, , CA); Jiri Koziorek (VSB - Technical University of Ostrava, , CZ)

PE-4.6: Analytical Model of A Wind Energy AC-DC-AC Scheme [892851] 1365

Roger Vieira (GreenBolt Consulting Limited, Maraval, TT); Adel Sharaf (University of New Brunswick, Frederiton, CA)

IEEE

May 4-7, Toronto, Canada

MONDAY, May 5, 2014 - 18.00-22.00 Marriot Eaton Centre

**The Conference Awards Banquet will honour recipients of IEEE Canada awards.
It begins with a cocktail reception at 18:00 and dinner at 18:30.**

OPEN TO ALL DELEGATES TICKET REQUIRED (included with full registration)
(Additional tickets may be purchased at the Registration booth.)

Awards Banquet - sponsored by IEEE Canada

IEEE

Plenary Session 2

**Tuesday, May 6, 2014 at 8:30-9:30 am in LG03
(Auditorium)**

Smarter Homes Towards Better Healthcare for the Elderly'

Prof. Jamal Deen

McMaster University

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Biometric and Biomedical Signal Processing
Session: SM-4 Signal and Multimedia Processing
Tuesday May 6, 2014 Time: 9:50 a.m. - 12:00 p.m.. Room: ENG 101
Chair: Bassma Ghali

Proceedings Page No.

- SM-4.1: Tracking the Major Temporal Arcade in Retinal Fundus Images [881015] 0723**
Faraz Oloumi (University of Calgary, Schulich School of Engineering, , CA); Rangaraj Rangayyan (University of Calgary, Schulich School of Engineering, Calgary, CA); Anna Ellis (Alberta Children's Hospital, , CA)
- SM-4.2: Classification of Knee Joint Vibroarthrographic Signals Using k-Nearest Neighbor Algorithm [879159] 0150**
Kaizhi Liu (Xiamen University, , CN); Xin Luo (Xiamen University, , CN); Fang Zheng (Xiamen University, , CN); Shanshan Yang (Xiamen University, , CN); Suxian Cai (Xiamen University, , CN); Yunfeng Wu (Xiamen University, , CN)
- SM-4.3: Robust Identity Verification Based on Human Acoustic Signature with BioHashing [880811] 0640**
Yuxi Liu (University of Toronto, Toronto, CA); Dimitrios Hatzinakos (University of Toronto, , CA)
- SM-4.4: Variation of grip force profile during signature writing [889317] 1297**
Bassma Ghali (University of Toronto, Mississauga, CA); Khondaker Mamun (University of Toronto, , CA); Tom Chau (Bloorview Macmillan Children's Centre, , CA)
- SM-4.5: PCG Biometric Identification System Based on Feature Level Fusion Using Canonical Correlation Analysis [888201] 0899**
Sherif Abbas (Assiut University, , EG); Mohammed Abo-Zahhad (Vice Dean for Graduate Studies, , EG); Sabah Ahmed (Professor, , EG)
- SM-4.6: Uncovering Similarities in Biomedical Signals. A Time-Frequency and Information Theoretic Approach [888273] *****2; 66**
Devin Rotondo (Nipissing University, , CA); Mark Wachowiak (Nipissing University, North Bay, CA); Dean Hay (Nipissing University, , CA); Michel Johnson (Universite de Moncton, , CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Digital Circuits and Systems
Session: CS-4 Circuits
Tuesday May 6, 2014 Time: 9:50 a.m. - 12:00 p.m.. Room: ENG 102
Chair: TBA

Proceedings Page No.

- CS-4.1: Programmable Counter Based Approach To Intellectual Property Protection In Sequential Circuits And Comparison With Existing Approach [879793] 0214**
Siddhant Malik (Qualcomm, Jalandhar, IN)
- CS-4.2: A Novel Approach for Improving Error Detection and Correction in WSN [880277] 0370**
Davar Kheirandish Taleshmekaeil (Ayandegan Institute of Higher Education, , AU); Azadeh Safari (Macquarie University, , AU); Yinan Kong (Macquarie University, , AU)
- CS-4.3: A Novel Hybrid Topology for Network on Chip [888467] 0990**
Swaminathan Kathirvel (National Institute of Technology, Triruchirappalli, , IN); Rajkumar Jangre (National Institute of Technology, Triruchirappalli, , IN); Sandeep Gopi Nambiar (National Institute of Technology, Triruchirappalli, , IN); Seok-Bum Ko (University of Saskatchewan, Saskatoon, CA); G Narayanan (NIT Trichy, , IN)
- CS-4.4: QaMC - QoS Aware Multicast Router for NoC fabric [888563] 1025**
Sandeep Gopi Nambiar (National Institute of Technology, Triruchirappalli, , IN); Swaminathan Kathirvel (National Institute of Technology, Triruchirappalli, , IN); G Narayanan (NIT Trichy, , IN); Seok-Bum Ko (University of Saskatchewan, Saskatoon, CA)
- CS-4.5: LFSR Based Low Complexity Montgomery Multiplier in GF(2m) for A Class of Fields [880807] 0636**
Walid Mahmoud (University of Windsor, , CA); Bingxin Liu (University of Windsor, Windsor, CA); Raqib Asif (University of Windsor, , CA); Huapeng Wu (University of Windsor, Windsor, CA)
- CS-4.6: Hardware Implementation of a Real-time Genetic Algorithm for Adaptive Filtering Applications [880815] 0650**
Hocine Merabti (Université du Québec à Trois-Rivières, Trois-Rivieres, CA); Daniel Massicotte (Universite du Quebec a Trois-Rivieres, Trois-Rivieres, CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Modulation
Session: CN-4 Communications and Networking
Tuesday May 6, 2014 Time: 9:50 a.m. - 12:00 p.m..
Chair: TBA

Room: ENG 105

Proceedings Page No.

CN-4.1: Performance Evaluation of Time and Frequency Domain Equalizers [888783]	1213
Anis Souari (Concordia University, , CA); Mohamed Lassaad Ammari (Université Laval, , CA); Amjad Gawanmeh (Khalifa University of Science, Technology and Research, , AE); Sofiene Tahar (Concordia University, Montreal, CA)	
CN-4.2: Wavelet based OFDM for Power line Communication [892831]	1361
Sagar Kar (350 Victoria St, Toronto, Toronto, CA); Sattar Hussain (Ryerson University, Scarborough, CA); Xavier Fernando (Ryerson University, Toronto, CA)	
CN-4.3: A New Optimised Interleaver Structure for Turbo Coding [879789]	0209
Lahcene Hadj Abderrahmane (National Centre OF Space Technics-Arezw, Oran, DZ)	
CN-4.4: PAPR Reduction in OFDM Systems using Differentially Encoded Subcarriers [888571]	1044
Muhammad Ajmal Khan (University of Western Ontario, London, CA); Raveendra Rao (The University of Western Ontario, London, CA)	
CN-4.5: Adaptive Multidimensional Modulation over Faded Shadowing Channels [888523]	1007
Abdulbaset Hamed (University of Western Ontario, London, CA); Serguei Primak (University of Western Ontario, , CA); Raveendra Rao (The University of Western Ontario, London, CA)	
CN-4.6: Precise Error Rate Analysis of MIMO System with Interference and Imperfect Channel State Information [882157]	0728
Mahmoud Smadi (The Hashemite University, Zarqa, JO)	

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Cloud Computing
Session: Soft-4 Computers
Tuesday May 6, 2014 Time: 9:50 a.m. - 12:00 p.m..
Chair: Hamid Mcheick

Room: ENG 106

Proceedings Page No.

Soft-4.1: Frequency-based Constraint Relaxation for Private Query Processing in Cloud Databases [889011]	1275
Junpei Kawamoto (Kyushu University, Fukuoka, JP); Patricia Gillett (Ecole Polytechnique de Montreal, , CA)	
Soft-4.2: Predicting Effect of Workload Change on System Resources [887299]	0794
Mehul Vora (TATA Consultancy Services (TCS) Ltd, , IN)	
Soft-4.3: 'Be Safe' [880709]	0506
Dana Almatter (Ministry of Finance, , KW); Maryam Al Omar (Kuwait, , KW); Mohammed ElAbd (American University of Kuwait, , KW)	
Soft-4.4: Real Time Verification of Firewalls with Dynamic Rulebase Update [880057]	0276
Amjad Gawanmeh (Khalifa University of Science, Technology and Research, , AE); Sofiene Tahar (Concordia University, Montreal, CA)	
Soft-4.5: Analyzing The Impact of Provisioning Overhead Time in Cloud Computing Centers [884817]	0751
Haleh Khojasteh (Ryerson University, , CA); Jelena Miši? (Ryerson University, Toronto, CA); Vojislav Miši? (Ryerson University, Toronto, CA)	
Soft-4.6: Virtual Machines CPU Monitoring with Kernel Tracing [880805]	0630
Mohamad Gebai (Polytechnique Montreal, , CA); Michel Dagenais (Ecole Polytechnique de Montreal, Montreal, CA)	

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Power System Communication
Session: SG-4 Smart Grids and Renewable Energy
Tuesday May 6, 2014 Time: 9:50 a.m. - 12:00 p.m..
Chair: Azim Keshtkar

Room: ENG LG05

Proceedings Page No.

- SG-4.1: Proposing an Improved Optimal LQR Controller for Frequency Regulation of a Smart Microgrid in Case of Cyber Intrusions [880771]** 0598
Hessam Keshtkar (West Virginia University, , US); Farideh Doost Mohammadi (West Virginia University, , US); Javad Ghorbani (West Virginia University, , US); Jignesh Solanki (West Virginia University, , US); Ali Feliachi (West Virginia University, , US)
- SG-4.2: Application of Advanced Metering Infrastructure in Smart Grid: A Survey [888637]** 1098
Kaamran Raahemifar (Ryerson University, Waterloo, CA)
- SG-4.3: Optimization of Distributed Communication Architectures in Advanced Metering Infrastructure of Smart Grid [888615]** 1075
Kaamran Raahemifar (Ryerson University, Waterloo, CA)
- SG-4.4: Performance Investigation of Mobile WiMAX Protocol for Aggregator and Electrical Vehicle Communication in Vehicle-to-Grid(V2G) [880841]** 0676
Santosh Kumar (National Institute of Technology Karnataka, Surathkal, Surathkal, IN)
- SG-4.5: Design and Implementation of a Rule-based Learning Algorithm Using Zigbee Wireless Sensors for Energy Management [906291]** 1436
Azim Keshtkar (Simon Fraser University, , CA); Siamak Arzanpoor (SFU, , CA)
- SG-4.6: Authentication Mechanism for Mobile RFID based Smart Grid Network [889495]** 1337
Binod Vaidya (University of Ottawa, Ottawa, CA); Dimitrios Makrakis (University of Ottawa, , CA); Hussein Mouftah (University of Ottawa, Ottawa, CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Power Quality and Systems
Session: PE-5 Power Electronics and Energy Systems
Tuesday May 6, 2014 Time: 9:50 a.m. - 12:00 p.m..
Chair: Mohammad Uddin

Room: ENG LG06

Proceedings Page No.

- PE-5.1: Electromigration testing of wire bonds [888709]** 1154
Michael Hook (University of Waterloo, Waterloo, CA); Di Xu (University of Waterloo, , CA); Michael Mayer (University of Waterloo, , CA)
- PE-5.2: Mitigation of Power Quality Tribulations with LS-UPQC under Non-Sinusoidal Supply Condition [888449]** 0978
S Srinath (Velammal Engineering College, Chennai, IN)
- PE-5.3: Simultaneous Recording of CN Tower Lightning Current and Channel Luminosity [880875]** 0699
Savdulla Kazazi (University of Ryerson, Toronto, CA); Ali Hussein (Ryerson, , CA)
- PE-5.4: Prioritization of Underground Transmission Cable Renewal Projects in Power Electric Utility Companies [880271]** 0358
Kings Wong (Hydro One Networks Inc., Toronto, CA)
- PE-5.5: Enhancement of IEC 61850 AS Using Vendor-Natural System Tool [879189]** 0154
Mike Mekkanen (University of Vaasa Finland, Vaasa, FI)

IEEE

McNaughton Lecture

Tuesday, May 6, 2014 at 1:00pm in LG03
(Auditorium)

Raouf Boutaba (FIEEE)

Professor of Computer Science at the University of Waterloo.

2014 A.G.L. McNaughton Gold Medal Winner

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Multimedia & Human Computer Interactions
Session: SM-5 Signal and Multimedia Processing
Tuesday May 6, 2014 Time: 1:00 p.m. - 3:00 p.m.
Chair: TBA

Room: ENG 101

Proceedings Page No.

SM-5.1: Video Processing Design for Wireless ADAS Applications [880475] Martin Stankus (VSB - Technical University of Ostrava, , CZ); Michal Prauzek (VSB - Technical University of Ostrava, Ostrava-Poruba, CZ)	0434
SM-5.2: Camouflaged target detection using real-time video fusion algorithm based on multi-scale transforms [888599] Sarith Somasekharan Pillai (Concordia University, , CA); M. N. S. Swamy (Concordia University, , CA)	1070
SM-5.3: Interactive User Oriented Visual Attention Based Video Summarization and Exploration Framework [888589] Yiming Qian (Ryerson University, Mississauga, CA); Matthew Kyan (Ryerson University, Toronto, CA)	1059
SM-5.4: Information Theoretic Design of Space-Constrained Touch-Based User Interfaces [879409] Parham Aarabi (University of Toronto, , CA)	0179
SM-5.5: Real-Time HDR Video Imaging on FPGA with Compressed Comparametric Lookup Tables [888815] Tao Ai (University of Toronto, , CA); Mir Adnan Ali (University of Toronto, , CA); Kalin Ovtcharov (University of Toronto, , CA); J. Steffan (University of Toronto, Toronto, CA); Sarmad Zulfiqar (University of Toronto, , CA); Steve Mann (University of Toronto, Toronto, CA)	1230

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: MEMS
Session: CS-2 Circuits
Tuesday May 6, 2014 Time: 1:00 p.m. - 3:00 p.m. Room: ENG 102
Chair: TBA

Proceedings Page No.

- CS-2.1: Dual-Band Split-Ring Resonator Using Composite Right-/Left-Handed Coplanar Waveguide Transmission Line-Based Elements [888717]** 1165
Ousama Abu Safia (Université du Québec en Outaouais, Gatineau, CA); Larbi Talbi (University of Quebec - Outaouais, , CA); Khelifa Hettak (Communications Research Centre, , CA)
- CS-2.2: A full distributed parameter model of a Blumlein-line laser circuit including the effect of time varying spark-gap inductance and resistance [880063]** 0282
Mohamed Twati (Alformage-Tripoli, Tripoli, LY)
- CS-2.3: High Performance Silicon Based Rotman Lens for Automotive Radar Applications [874189]** 0054
Ali Attaran (University of Windsor, Windsor, CA); Sazzadur Chowdhury (University of Windsor, Windsor, CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Security
Session: CN-5 Communications and Networking
Tuesday May 6, 2014 Time: 1:00 p.m. - 3:00 p.m. Room: ENG 105
Chair: TBA

Proceedings Page No.

- CN-5.1: Measurement-Based RSS-Multipath Neural Network Indoor Positioning Technique [879089]** 0137
Guofeng Chen (Tsinghua University, Beijing, CN); Yan Zhang (Tsinghua University, , CN); Limin Xiao (Tsinghua University, , CN); Jiahui Li (Tsinghua University, , CN); Lai Zhou (Tsinghua University, , CN); Shidong Zhou (Tsinghua University, , CN)
- CN-5.2: Novel Consultation Algorithm for Detecting Spam Email [889389]** 1327
Kaamran Raahemifar (Ryerson University, Waterloo, CA)
- CN-5.3: Preserving Privacy in Data-Publishing based on Attribute Weight and Sensitivity Rates [888565]** 1031
Behdad Heidarpour (ÉTS (Ecole De Technologie Supérieure), Montreal, CA); Shahin Vakili (Concordia University, Montreal, CA)
- CN-5.4: Comparative Mobile Platforms Security Solutions [880125]** 0305
Sasan Adibi (Royal Melbourne Institute of Technology (RMIT), Melbourne, AU)
- CN-5.5: LTE Security Potential Vulnerability and Algorithm Enhancements [879843]** 0224
Gautam Siwach (University of New Haven, , US); Amir Esmailpour (University of New Haven, Toronto, US)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Performance & Optimization

Session: Soft-5 Computers

Tuesday May 6, 2014 Time: 1:00 p.m. - 3:00 p.m.

Room: ENG 106

Chair: TBA

Proceedings Page No.

Soft-5.1: Intelligent Sampling for Big Data Using Bootstrap Sampling and Chebyshev Inequality [880827]

0666

Ashwin Satyanarayana (New York City College of Technology, , US)

Soft-5.2: Implementing a Population-based Harmony Search Algorithm on Graphic Processing Units [880673]

0471

Mohammed ElAbd (American University of Kuwait, , KW); Khaled Al-Ajmi (American University of Kuwait, , KW)

Soft-5.3: Automated Parallel Exploration of Datapath and Unrolling Factor in High Level Synthesis using Hyper-Dimensional Particle Swarm Encoding [876527]

0080

Anirban Sengupta (Indian Institute of Technology Indore, Indore, IN); Vipul Mishra (Indian Institute of Technology Indore, , IN)

Soft-5.4: Performance and Energy Consumption Analysis of Java Code utilizing Embedded GPU [888727]

1169

Iype P. Joseph (University of Ottawa, Ottawa, CA); Jonathan Parri (University of Ottawa, Ottawa, CA); Yu Wang (University of Ottawa, , CA); Miodrag Bolic (University of Ottawa, , CA); Amir Rajabzadeh (University of Ottawa, , CA); Voicu Groza (University of Ottawa, Ottawa, CA)

Soft-5.5: Simulated Raindrop Algorithm for Global Optimization [888639]

1106

Amin Ibrahim (University of Ontario Institute of Technology, , CA); Shahryar Rahnamayan (University of Ontario Institute of Technology (UOIT), Oshawa, CA); Miguel Vargas Martin (University of Ontario Institute of Technology, , CA)

Soft-5.6: Automated Exploration of Datapath in High Level Synthesis using Temperature Dependent Bacterial Foraging Optimization Algorithm [875973]

0069

Anirban Sengupta (Indian Institute of Technology Indore, Indore, IN); Saumya Bhadauria (Indian Institute of Technology Indore, , IN)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Power System Monitoring

Session: SG-5 Smart Grids and Renewable Energy

Tuesday May 6, 2014 Time: 1:00 p.m. - 3:00 p.m.

Room: ENG LG05

Chair: Santosh Kumar

Proceedings Page No.

SG-5.1: Laboratory for Teaching Synchrophasor Measurements and Applications [888625]

1086

Athula Rajapakse (University of Manitoba, Winnipeg, CA); Eduardo Almiron (Manitoba Hydro International, , CA)

SG-5.2: An Approach to Online Asynchronous Mode Prevention in Two-area Power Systems [888249]

0933

Hanh Nguyen (Hanoi University of Science and Technology, Hanoi, VN); Van Tu Dao (Hanoi University of Science and Technology, Hanoi, VN)

SG-5.3: Practical Aspects of Testing Phasor Data Concentrators for Wide Area Monitoring Systems [887901]

0857

Mital Kanabar (General Electric, , CA); Govind Rehal (General Electric, , US); Vijayasarithi Muthukrishnan (General Electric, , CA)

SG-5.4: An innovative electromagnetics sensor for partial discharge detection in cable joints and terminations [880453]

0430

Huang Zhiwei (North China Electrical Power University, , CN); Zhong Zheng (North China Electric Power University, Beijing, CN)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Biomedical Image Processing and Analysis
Session: BME-1 Biomedical and Health Informatics
Tuesday May 6, 2014 Time: 1:00 p.m. - 3:00 p.m. Room: ENG LG06
Chair: James Lacefield

Proceedings Page No.

- BME-1.1: Localization and Parameter Estimation of Tumor by Thermography [888779]** 1208
Md Shazzat Hossain (Ryerson University, East York, CA); Farah Mohammadi (Ryerson University, , CA)
- BME-1.2: Image Co-registration by Minimizing Cumulative Distortion [888711]** 1160
Eric Lum (University of Waterloo, , CA); Oleg Michailovich (University of Waterloo, , CA)
- BME-1.3: New Intensity Based Features for Classification of Mammograms [880859]** 0688
Mandeep Singh (Thapar University, Patiala, IN); Pratham Arora (Thapar University, , IN)
- BME-1.4: Brain Network Extraction From Probabilistic ICA Using Functional Magnetic Resonance Images and Advanced Template Matching Techniques [880717]** 0516
Saman Sarraf (Rotman Research Institute at Baycrest, Toronto, Toronto, CA); Cristina Saverino (Rotman Research Institute at Baycrest, Toronto, , CA); Halleh Ghaderi (Montreal Neurological Institute, , CA); John Anderson (Rotman Research Institute at Baycrest, Toronto, , CA)
- BME-1.5: Investigations on ROI selection for liver classification [879701]** 0192
Mandeep Singh (Thapar University, Patiala, IN); Sukhwinder Singh (UIET, Panjab University Chandigarh, , IN); Savita Gupta (UIET, Panjab University Chandigarh, , IN)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Signal Processing
Session: SM-6 Signal and Multimedia Processing
Tuesday May 6, 2014 Time: 3:30 p.m. - 5:15 p.m. Room: ENG 101
Chair: Soosan Beheshti;Mahdi Shahbaba

Proceedings Page No.

- SM-6.1: Model Verification of GMM Clustering Based on Signature Testing [888797]** 1219
Mahdi Shahbaba (Ryerson University, Toronto, CA); Soosan Beheshti (Ryerson University, Toronto, CA)
- SM-6.2: An Analysis of the Backscattered Electric Field from an Iceberg for a Pulsed High Frequency Radar [888497]** 0996
Bernard Ryan (Memorial University of Newfoundland, , CA); Eric Gill (Memorial University, , CA)
- SM-6.3: A New Partial-Update NLMS Adaptive-Filtering Algorithm [886231]** 0779
Md. Zulfiquar Bhotto (Concordia Victoria, Montreal, CA); Andreas Antoniou (University of Victoria, Victoria, CA)
- SM-6.4: Towards Hardware Implementation of Genetic Algorithms for Adaptive Filtering Applications [880605]** 0455
Hocine Merabti (Université du Québec à Trois-Rivières, Trois-Rivieres, CA); Daniel Massicotte (Université du Québec a Trois-Rivieres, Trois-Rivieres, CA)
- SM-6.5: Hybrid Localization of an Emitter by Combining Angle-of-Arrival and Received Signal Strength Measurements [880189]** 0333
Y. t. Chan (Royal Military College of Canada, , CA); Francois Chan (Royal Military College, , CA); William Read (Defence R&D Canada, , CA); Brad Jackson (Defence R&D Canada, Ottawa, CA); Bernard Lee (Royal Military College of Canada, Kingston, CA)
- SM-6.6: Reference Empirical Mode Decomposition [879403]** 0175
Jiexin Gao (University of Toronto, , CA); Sahar Javaher Haghighi (University of Toronto, Toronto, CA); Dimitrios Hatzinakos (University of Toronto, , CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Digital Devices and Circuits
Session: CS-3 Circuits
Tuesday May 6, 2014 Time: 3:30 p.m. - 5:15 p.m. Room: ENG 102
Chair: TBA

Proceedings Page No.

CS-3.1: Developing Compact Thermal Model for Electronic Package [887527] 0825
Akram Hadeed (Ryerson University, , CA); Farah Mohammadi (Ryerson University, , CA)

CS-3.2: Comparative Review of the TiO₂ and the Spintronic Memristor Devices [880153] 0317
Mohamed Elshamy (Cairo University, , EG); Hassan Mostafa (University of Toronto, Waterloo, CA); Mohamed Sameh Said (Cairo University, , EG)

CS-3.3: A Novel Non-Destructive Readout Circuit for Memristor-Based Memory Arrays [880151] 0312
Mohamed Elshamy (Cairo University, , EG); Hassan Mostafa (University of Toronto, Waterloo, CA); Mohamed Sameh Said (Cairo University, , EG)

CS-3.4: Negative Capacitance Circuits for Process Variations Compensation and Timing Yield Improvement [877585] 0127
Hassan Mostafa (University of Toronto, Waterloo, CA); Mohab Anis (University of Waterloo, , CA); Mohammed Elmasry (University of Waterloo, , CA)

CS-3.5: Testing Current Mode Two-Input Logic Gates [887397] 0802
Hassanein Amer (American University in Cairo (AUC), Cairo, EG); Ahmed Madian (Egyptian atomic energy authority, NCRRT, Cairo, EG); Mohamed Abdelhalim (Arab Academy for Science, Technology & Maritime Transport, Cairo, EG); Mahmoud Fouad (Cairo University, , EG); Sherif Amer (American University in Cairo, , EG); Ahmed

CS-3.6: 10 GHz Throughput FinFET Dual-Edge Triggered Flip-Flops [879835] 0220
Seyed Ebrahim Esmaeili (American University of Kuwait, , KW); Asim Al-Khalili (Concordia Uni., , CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Enabling Communication Technologies
Session: CN-6 Communications and Networking
Tuesday May 6, 2014 Time: 3:30 p.m. - 5:15 p.m. Room: ENG 105
Chair: TBA

Proceedings Page No.

CN-6.1: New Structures for Modulation Classification and SNR Estimation with Applications to Cognitive Radio and Software Defined Radio [873339] 0041
Yair Linn (TRIUMF - Canada's National Laboratory for Particle and Nuclear Physics, Vancouver, CA)

CN-6.2: Modeling the Leaky Feeder as a Multi Antenna Array [901635] 1377
Hasan Farahneh (Ryerson University, Mississauga, CA); Xavier Fernando (Ryerson University, Toronto, CA)

CN-6.3: High Performance Homodyne Six Port Receiver using Memory Polynomial Calibration [888849] 1245
Abdullah Olopade (University of Calgary, Calgary, CA); Mohamed Helaoui (University of Calgary, Calgary, CA)

CN-6.4: optimized Subsampling Frequency Selection for Nonlinear systems [888733] 1175
Mohamed Anis Messaoud (University of Calgary, Calgary, CA); Rim Barrak (SUP'Com, , TN); Fadhel Ghannouchi (University of Calgary, , CA)

CN-6.5: Efficient M-PSK Lock Detectors and SNR Estimators [873183] 0033
Yair Linn (TRIUMF - Canada's National Laboratory for Particle and Nuclear Physics, Vancouver, CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Mobile Computing
Session: Soft-6 Computers
Tuesday May 6, 2014 Time: 3:30 p.m. - 5:15 p.m.
Chair: Hamid Mcheick

Room: ENG 106

Proceedings Page No.

Soft-6.1: Identification of Risks in Pakistani IT Companies: A Survey Paper [880701]

0497

Mishall Khan (National University of Sciences and Technology, , PK); Muhammad Abbas (Nust College of EME, , PK); Mahmood Khan (National University of Sciences and Technology, Rawalpindi, PK)

Soft-6.2: Collaborative Work in Class Rooms with Handheld Devices using Bluetooth and WLAN [880887]

0711

Saad Tanveer (CINVESTAV, Mexico D. F, MX); Waqas Zafar (UET Lahore, , PK); Mudassir Khalil (UET Lahore, , PK); Naeem Aslam (NFC IET Multan, , MX); Ayesha Shafqat (University of Engineering & Technology, , PK); Aslam Muhammad (University of Engineering & Technology, , PK); Martinez Ana Maria (D. F. Mexico, , MX)

Soft-6.3: Cooperative Data Manipulation in a Low-Connectivity Environment [887809]

0842

Roger Graves (Davion Systems Ltd, North Gower, CA)

Soft-6.4: Digital Signatures for Mobile Users [880203]

0338

Carlisle Adams (University of Ottawa, , CA); Guy-Vincent Jourdan (University of Ottawa, , CA)

Soft-6.5: Mobile Agent approach based on mobile strategic environmental Scanning using Android and JADE-LEAP [888747]

1179

Hamid Mcheick (University of Quebec at Chicoutimi, Chicoutimi, CA)

1221

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Distribution Automation and Energy Management
Session: SG-6 Smart Grids and Renewable Energy
Tuesday May 6, 2014 Time: 3:30 p.m. - 5:15 p.m.
Chair: Raman Paranjape

Room: ENG LG05

Proceedings Page No.

SG-6.1: Feeder Automation in Advanced Distribution Systems [888799]

1224

Andrew Waye (McMaster University, , CA); Alif Gilani (Siemens Canada, , CA); Stefan Flemming (Siemens Canada Limited, , CA); Nafia Al-Mutawaly (McMaster University, , CA)

SG-6.2: Distributed Generation Planning in Smart Distribution Grids via a Meta-Heuristic Approach [878723]

0131

Abdelsalam Eajal (University of Waterloo, , CA); Ehab El-Saadany (Waterloo University, Waterloo, CA); Mohamad AlHajri (College of Technological Studies, Paaet, , KW)

SG-6.3: Impacts of Modern Residential Loads on Power Grids [888503]

1001

Mark Coenen (Mohawk College, Hamilton, CA); Thomas Marshall (Mohawk College/McMaster University, , CA); Peter Sztur (Mohawk College/McMaster University, , CA); Nafia Al-Mutawaly (McMaster University, , CA)

SG-6.4: Distributed Multi-Agent Based Load Shedding in Power Distribution Systems [880727]

0539

M. Jawad Ghorbani (West Virginia University, Morgantown, US); Muhammad Choudhry (West Virginia University, , US); Feliachi Ali (LDCSEE, , US)

SG-6.5: Agent-Based Simulation of Home Energy Management System in Residential Demand [905613]

1430

Zhanle Wang (University of Regina, , CA); Raman Paranjape (University of Regina, Regina, CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Biomedical Signal Processing and Modeling

Session: BME-2 Biomedical and Health Informatics

Tuesday May 6, 2014 Time: 3:30 p.m. - 5:15 p.m.

Room: ENG LG06

Chair: Mike Eklund

Proceedings Page No.

BME-2.1: Mathematical Modeling for Predicting Betamethasone Profile and Burst Release From In Situ Forming Systems Based On PLGA [880787] 0618

Saman Sarraf (Rotman Research Institute at Baycrest, Toronto, Toronto, CA); Ehsan Marzbanrad (Department of Mechanical and Mechatronics Engineering, University of Waterloo, , CA); Hamid Mobedi (IPPI, , IR)

BME-2.2: Structural Analysis of Petri Nets for Modeling and Analyzing Signaling Pathways [880719] 0522

Behnam Behinaein Hamgini (Queen's University, Kingston, CA); Karen Rudie (Queen's University, Kingston, CA); Waheed Sangrar (Queen's University, , CA)

BME-2.3: A Hybrid Device for Electrical Impedance Tomography and Bioelectrical Impedance Spectroscopy Measurement [880443] 0420

Marketa Michalikova (VSB-Technical University of Ostrava, , CZ); Michal Prauzek (VSB - Technical University of Ostrava, Ostrava-Poruba, CZ)

BME-2.4: Adaptive Block SSA based ANC implementation for high performances ECG removal from sEMG signals [880869] 0693

Mohamed El Fares Djellatou (UQTR, Trois Rivières, CA); Daniel Massicotte (Université du Québec a Trois-Rivieres, Trois-Rivieres, CA); Mounir Boukadoum (Université du Québec à Montréal, Montreal, CA)

BME-2.5: Pulse Wave Analysis for Cardiovascular Disease Studies Using Subendocardial Viability Ratio [879947] 0256

Jingjing Xia (University of Winnipeg, Winnipeg, CA); Simon Liao (University of Winnipeg, Winnipeg, CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Network Virtualization

Session: CN-9 Communications and Networking

Tuesday May 6, 2014 Time: 3:30 p.m. - 5:15 p.m.

Room: ENG LG13

Chair: TBA

Proceedings Page No.

CN-9.1: CPM: A Congestion Control Method for Interplanetary Network [886891] 0789

Maryam Ghotbi Ravandi (Sharif University of Technology, International Campus, , IR); Mohammad Mortazavi (Sharif University of Technology, , IR); Seyed Ghorshi (Sharif University of Technology, , IR)

CN-9.2: Transparent Real time Service on Connected Trains [886865] 0784

Seifeddine Bouallegue (Qatar University, , QA); Nozha Cherif (ESPRIT, , TN); Kaouthar Sethom (SUPCOM/ESTI, Tunis, FR)

CN-9.3: Bacterial Foraging Search in Unstructured P2P Networks [880431] 0408

Fatemeh Sharifkhani (Azad University, , IR); Mohammad Reza Pakravan (Sharif University of Technology, Tehran, IR)

CN-9.4: A Map of the Clouds: Virtual Network Mapping in Cloud Computing Data Centers [887449] 0808

Khaled Alhazmi (University of Western Ontario, London, CA); Mohamed Abusharkh (Western University, , CA); Daehyun Ban (Samsung Electronics, Seoul, KR); Abdallah Shami (The University of Western Ontario, London, CA)

CN-9.5: Leaky Bucket Like Packet Controller for SAVI [885661] 0763

Muhammad Alam (University of Toronto, , CA)

IEEE

Plenary Session 3

Wednesday, May 7, 2014 at 8:30-9:30 am in LG03
(Auditorium)

**“Canada's role in the Development of the First mass produced accurate
Anti Aircraft Gun Laying Radar”**

Brian Mendes

Industrial Chemist (ret.), CIL, Celanese

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: General Interest
Session: GI-1 General Interest
Wednesday May 7, 2014 Time: 9:50 a.m. - 12:00 p.m.. Room: ENG 102
Chair: TBA

Proceedings Page No.

- GI-1.1: Improved Performance of Naive Creature Learning to Cross a Highway [888973]** 1269
Anna Lawniczak (University of Guelph, Guelph, CA); Jason Ernst (University of Guelph, Waterloo, CA); Bruno Di Stefano (Nuptek Systems Ltd, Toronto, CA)
- GI-1.2: Biomimicri Based Cognitive Agent and its Simulator [888933]** 1262
Anna Lawniczak (University of Guelph, Guelph, CA); Jason Ernst (University of Guelph, Waterloo, CA); Bruno Di Stefano (Nuptek Systems Ltd, Toronto, CA)
- GI-1.3: Toposculpting [888769]** 1192
Steve Mann (University of Toronto, Toronto, CA); Ryan Janzen (University of Toronto, , CA); Tao Ai (University of Toronto, , CA); Nima Yasrebi (University of Toronto, , CA);
Jad Kawwa (University of Toronto, , CA); Mir Adnan Ali (University of Toronto, , CA)
- GI-1.4: Personal Efficiency in Highway Driving: An Agent-Based Model of Driving Behaviour from a System Design Viewpoint [888631]** 1092
Sylvia Nguyen (University of Guelph, , CA); Monica Cojocaru (University of Guelph, , CA); Edward Thommes (University of Guelph, Guelph, CA)
- GI-1.5: Understanding, Quantifying, and Measuring Veillance, Surveillance and Sousveillance [887821]** 0847
Ryan Janzen (University of Toronto, , CA); Steve Mann (University of Toronto, Toronto, CA)
- GI-1.6: Prediction Of Exhaust Gas Temperature In GTE By Multivariate Regression Analysis and Anomaly Detection [880173]** PIC
Amar Kumar (Tecsis Corporation, , CA); Nita Goel (Cistel Technology, , CA); Alka Srivastava (Tecsis Corporation, , CA); Avisekh Banerjee (LPTI, , CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Cellular Networks
Session: CN-7 Communications and Networking
Wednesday May 7, 2014 Time: 9:50 a.m. - 12:00 p.m.. Room: ENG 105
Chair: TBA

Proceedings Page No.

- CN-7.1: Achievable RF Coverage and System Capacity using Millimeter Wave Cellular Technologies in 5G Networks [889273] 1291**
AlMuthanna Nassar (Mobily Telecom Company, , SA); Ahmed Iyanda Sulyman (King Saud University, Riyadh, SA); Abdulhameed Alsanie (King Saud University, , SA)
- CN-7.2: Percentage of Gaussianly Distributed Users With Adequate Quality of Service in a Circular Cell [889383] 1323**
Sami Baroudi (Concordia University, Montreal, CA); Yousef Shayan (Concordia University, Montreal, CA)
- CN-7.3: Fair and Delay Adaptive Scheduler for UC and NGN Networks [880213] 0343**
Abdelwaha Elnaka (University of Guelph, , CA); Qusay Mahmoud (University of Ontario Institute of Technology, Oshawa, CA); Xining Li (University of Guelph, , CA)
- CN-7.4: Using Memetic Algorithm to Optimize Location Estimate of Mobile Station in Non-Line-of-Sight Environment [880447] 0424**
Chien-Sheng Chen (Tainan University of Technology, Tainan, TW); Jen-Fa Huang (National Cheng Kung University, Tainan, TW); Chun-Chieh Liu (National Cheng Kung University, , TW); Nan-chuang Huang (National Cheng Kung University, , TW)
- CN-7.5: An Efficient Hybrid Scheduling Algorithm for High Speed Cellular Networks [888281] 0950**
Essam Altubaishi (King Saud University, , SA)
- CN-7.6: Mobility Prediction in Wireless Cellular Networks for the Optimization of Call Admission Control Schemes [880423] 0403**
Peppino Fazio (University of Calabria, , IT); Mauro Tropea (University of Calabria, , IT); Cesare Sottile (University of Calabria, , IT); Salvatore Marano (University of Calabria, Cosenza, IT); Miroslav Voznak (VSB – Technical University of Ostrava, Ostrava, CZ); Francesco Strangis (University of Calabria, , IT)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Magnetics
Session: PE-1 Power Electronics and Energy Systems
Wednesday May 7, 2014 Time: 9:50 a.m. - 12:00 p.m.. Room: ENG LG05
Chair: TBA

Proceedings Page No.

- PE-1.1: Comparative Study Between Decoupled Control with Sliding Mode & Feedback Linearization Control Applied to STATCOM [888205] 0911**
Allal El Moubarek Bouzid (Université du Québec a Trois Rivières, Trois Rivières, CA); Mamadou Lamine Doumbia (Université de Québec à Trois-Rivières, Trois-Rivières, CA); Mohamed Bouhamida (University of Science and Technology of Oran Algeria, Oran, Algeria, DZ); Ahmed Cheriti (Université du Québec a Trois Rivières, , CA); Mustapha Benghanem (University of Science and Technology of Oran Algeria, , DZ)
- PE-1.2: Steady-State Analysis of Self-Excited Induction Generator Using Real and Reactive Power Balances [880139] 0311**
Saad Alghuwainem (King Saud University, , SA)
- PE-1.3: Comparison of DTFC and Vector Control Techniques for PMSM Drive with Loss Minimization Approach [880231] 0349**
Mohammad Uddin (Lakehead University, Thunder Bay, CA); HongBin Zou (Lakehead University, , CA)
- PE-1.4: Equivalent Circuit Modeling of an Interior Permanent Magnet Hysteresis Motor [888669] 1132**
Sheikh Rabbi (Memorial University of Newfoundland, St. John's, CA); Aziz Rahman (IEMD - Chair, , CA)
- PE-1.5: Transformer Windings Hot Spot Temperature Modeling and Simulation [888579] 1054**
Asaad Elmoudi (Red River College, , CA)
- PE-1.6: Eddy Current Losses in Permanent Magnets of Permanent Magnet Synchronous Machines - Analytical Calculation Methods and High Order Finite Element Analyses [879375] 0170**
Erich Schmidt (Vienna University of Technology, , AT)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Health Informatics
Session: BME-3 Biomedical and Health Informatics
Wednesday May 7, 2014 Time: 9:50 a.m. - 12:00 p.m.. Room: ENG LG06
Chair: Carolyn McGregor TBA

Proceedings Page No.

BME-3.1: A Model for Delivering Smart Healthcare using Patient-Facing Dashboards 0482
O Arinze (Drexel University, Voorhees, US)

BME-3.2: A Simulation Model for A Continuous Review Inventory Policy for Healthcare Systems [880723] 0527
Rasha Kashef (University of Waterloo, Waterloo, CA); Nidarsha Attanayake (University of Waterloo, , CA); Tariq Andrea (Soleeds LLC, , US)

BME-3.3: Characterization of Human Emotions and Preferences for Text-to-Speech Systems Using Multimodal Neuroimaging Methods [889429] 1332
Khalil Laghari (INRS-EMT, Montreal, CA); Rishabh Gupta (EMT-INRS, , CA); Sebastian Arndt (Berlin Institute of Technology, , DE); Jan-Niklas Antons (TU Berlin, Deutsche Telekom Laboratories, , DE); Sebastian Möller (Quality and Usability Lab, Telekom Innovation Labs, TU Berlin, Berlin, DE); Tiago Falk (INRS-EMT, , CA)

BME-3.4: Mobile Health (mHealth) Emergency-based Vehicular System [888859] 1249
Sasan Adibi (Royal Melbourne Institute of Technology (RMIT), Melbourne, AU)

BME-3.5: Using a Three-Axis Accelerometer and GPS Module in a Smart Phone to Measure Walking Steps and Distance [884091] 0739
Y. Bai (Fu Jen Catholic University, Taipei, TW); Chia-Hao Yu (Fu Jen Catholic University, , TW); Siao-Cian Wu (Fu Jen Catholic University, , TW)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Wireless Networks
Session: CN-10 Communications and Networking
Wednesday May 7, 2014 Time: 9:50 a.m. - 12:00 p.m.. Room: ENG LG13
Chair: TBA TBA

Proceedings Page No.

CN-10.1: An Energy Efficient Multipath Routing Scheme by Preventing Threats in Wireless Sensor Networks [910383] 1453
Selvamani Kadirvelu (College of Engineering, Guindy, Chennai, IN); Anbuchelian S (Anna University Chennai, , IN)

CN-10.2: Unified provisioning solution for heterogeneous wireless networks [879845] 0231
Joswill Victor Pajaro Rodriguez (University of New Haven, , US); Amir Esmailpour (University of New Haven, Toronto, US)

CN-10.3: Experimental Study of Direction-of-Arrival Estimation Using Reconfigurable Antennas [880157] 0323
Vida Vakilian (Ecole Polytechnique de Montreal, , CA); Hoang Nguyen (Ecole Polytechnique de Montreal, , CA); Samer Abielmona (Ecole Polytechnique de Montreal, , CA); Sebastien Roy (University of Sherbrooke, , CA); Jean-François Frigon (Ecole Polytechnique de Montreal and GERAD, Montr?al, CA)

CN-10.4: Reduced Packet Loss Vertical Handover Between 3GPP IMS And Mobile IP [888685] 1137
Abdullah Arafat (RMIT University, Melbourne, AU); M. m. Khan (University of Malaya, , MY); Mark Gregory (RMIT University, Melbourne, AU)

CN-10.5: WiMAX Architecture Priority Scheduling for Multimedia Applications [880823] 0660
Ricky Wong (Algonquin College, , CA); Emmanuel Jean-Pierre (Algonquin College, , CA); Wahab Almuhtadi (Algonquin College, Ottawa, CA); Anand Srinivasan (Carleton University, Kanata, CA)

CN-10.6: Hybrid threshold-based distributed discovery service for the EPCglobal network [889343] 1302
Mazen Khair (University of Ottawa, , CA); Burak Kantarci (University of Ottawa, Ottawa, CA); Hussein Mouftah (University of Ottawa, Ottawa, CA)

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Humanitarian Initiatives Workshop
Session: WS-3a Humanitarian Initiatives Workshop
Sunday May 4, 2014 Time: 10:00 a.m. - 4:00 p.m.. Room: ENG LG06
Chair: TBA

Proceedings Page No.

- WS-3a.1: intelliChair: Assistive Technology for Powered Wheelchair Users [934341]** **PIC**
Raymon Atienza (Ryerson University, , CA); Stephanie Iossifidis (Ryerson University, , CA); Danny Porthiyas (Ryerson University, , CA); Xavier Fernando (Ryerson University, Toronto, CA)
- WS-3a.2: Reactive Face Geocast in Spatially Separated Wireless Sensor Actor Network [933113]** **PIC**
Selvi Ravindran (Anna University, Chennai, IN)
- WS-3a.3: Abnormal GAIT Classification [911573]** **1464**
Mariathangam Pushpa Rani (Mother Teresa Women's University Madurai, Madurai - 625016, IN)
- WS-3a.4: An Intelligent Agent Based Privacy Perserving Model for Web Service Security [910569]** **1459**
Chakaravarthi S (College of Engineering, Chennai, IN)
- WS-3a.5: Hand Gesture Recognition Framework for Recognizing Sign Gestures and Handling Movement Epenthesis Using Level Building Nested Dynamic Programming Approach [909771]** **1447**
Elakkiya R (Anna University, , IN); Selvamani Kadirvelu (College of Engineering, Guindy, Chennai, IN)
- WS-3a.6: The Evident Use of Evidence Theory in Big Data Analytics using Cloud Computing [905409]** **1424**
Hamid Mcheick (University of Quebec at Chicoutimi, Chicoutimi, CA); Atif Mohamad (The University of North Dakota, , CA)
- 0803**

IEEE Canadian Conference on Electrical and Computer Engineering

Symposium: Humanitarian Initiatives Workshop
Session: WS-3b Humanitarian Initiatives Workshop
Sunday May 4, 2014 Time: 10:00 a.m. - 4:00 p.m.. Room: ENG LG06
Chair: TBA

Proceedings Page No.

- WS-3b.1: Vision based keyboard system using webcam and laser pointer [945001]** **1495**
Aarti Prabhu (National Institute of Technology Karnataka, , IN)
- WS-3b.2: Smart Garbage Bin [944441]** **1493**
Layth Al Ani (University of Ottawa, Ottawa, CA); Mohamed Foolad (Author, , AE); Ahmad Hassan (Author, , AE); Ahmed Elwakil (University of Sharjah, , AE)
- WS-3b.3: Reliability Centered Maintenance: The Key to Successful Operation of Power Distribution Systems [942133]** **1491**
Payman Dehghanian (Texas A&M University, College Station, US); Mahmud Fotuhi-Firuzabad (Sharif University of Technology, Tehran, IR); Moein Moeini-aghtaie (Sharif University of Technology, , IR)
- WS-3b.4: Prediction Of Exhaust Gas Temperature In GTE By Multivariate Regression Analysis and Anomaly Detection [941747]** **1485**
Amar Kumar (Tecsis Corporation, , CA); Avisekh Banerjee (LPTI, , CA); Alka Srivastava (Tecsis Corporation, , CA); Nita Goel (Cistel Technology, , CA)
- WS-3b.5: intelliChair: Assistive Technology for Powered Wheelchair Users [934341]** **PIC**
Raymon Atienza (Ryerson University, , CA); Stephanie Iossifidis (Ryerson University, , CA); Danny Porthiyas (Ryerson University, , CA); Xavier Fernando (Ryerson University, Toronto, CA)

CF F KWQP CN'RCRGTU

Extended and Unscented Kalman Filtering for Attitude Estimation Application to the Active Control System for Microsatellite - A Comparative Study	158
<i>A.M. Si Mohammed, A Bellar, Y. Bentouton, A. Boudjemai, R. Roubache, N. Taleb</i>	
Modelling and Control of Hybrid Systems - A Forward Look	286
<i>Jiamei Deng, Andrew Ordys</i>	
LMI-Based Computation of the Instability Measure of Continuous-Time Linear Systems with a Scalar Parameter	374
Comparative Analysis on Performances of Adjustable-Gain Single-Neuron PID Controllers Based on General Fuzzy Logic and Normal Cloud Model	459
<i>Lin-lin Xia, Hong-lei Wei, Jason Gu</i>	
Distributed Collaborative Localization for a Heterogeneous Multi-Robot System	491
<i>Thumeera, R. Wanasinghe, George K.I. Mann, Raymond G. Gosine</i>	
Simulation of Aided AUV Navigation and Adaptive Plume Tracking	533
<i>Awantha Jayasiri, Ramond G. Gosing, George K.I. Mann, Peter Mcguire</i>	
Data-Driven Modeling of Thermal Energy Storage Tank	551
<i>Abdul Afram, Farrokh Janabi-Sharifi, Giuseppe Giorgio</i>	
Formation Stabilization of Nonholonomic Robots Using Nonlinear Model Predictive Control	562
<i>Mohamed W. Mehrez, George K.I. Mann, Raymond G. Gosine</i>	
Effect of HELLO Interval Duration on Stable Routing For Mobile Ad Hoc Networks	568
<i>Abedalmotaleb Zadin, Thomas Fevens</i>	
A Jacobian Free Approach for Multi-Robot Relative Localization	574
<i>Thumeera R. Wanasinghe, George K.I. Mann, Raymond G. Gosine</i>	
Relative Localization with Symmetry Preserving Observers	682
<i>Oscar De Silva, George K.I. Mann, Raymond G. Gosine</i>	
Multivariable Adaptive Sliding Mode Structure For An Observer-Based Control of a Perturbed Mechanical System	745
<i>Karim Khayati</i>	
PI/Backstepping Control of Snake Robot Optimized by Genetic Algorithm	757
<i>Maryam Jafari, Aref Shahmansoorian</i>	
Application of Parallel Redundancy in a Wi-Fi-based WNCs using OPNET	773
<i>Mostafa Hendawy, Mohamed ElMansoury, Karim N. Tawfik, Mohamed M. Elshenawy, Alia H. Nagui, Ahmed T. ElSayed, Markus, Rentschler, Hany M. ElSayed</i>	
Two DOF Controller for Decoupled Image-Based Visual Servoing	819
<i>Akbar Assa, Farrokh Janabi-Sharifi</i>	
Optimizing Particle Swarm Optimization Algorithm	831
<i>Iraj Koohi, Voicu Z. Groza</i>	
Automatic Code Generation From Matlab/Simulink for Critical Applications	836
<i>J. Krizan, L. Ertl, M. Bradac, M. Jasansky, A. Andreev</i>	
An Efficient Static Model For Steerabl'e Catheters	863
<i>Shahir Hasanzadeh, Farrokh Janabi-Sharifi</i>	
Adaptive Sliding Mode Control with Smooth Switching Gain	893
<i>Jiang Zhu, Karim Khayati</i>	
Visual Servoing of a Robotic Manipulator Using an Optimized Trajectory Planning Technique	958
<i>Mohammad Keshmiri, Wen-Fang Xie</i>	
Robust Monocular SLAM Using One 3D Point	971
<i>Weiwei Zhao, Jinfu Yang, Mingai Li, Guanghui Wang</i>	
An Adaptive Compression Technique Based on Real-Time RTT Feedback	985
<i>Fuad Shamieh, Ahmed Refaey, Xianbin Wang</i>	
HOBOT: A Customizable Home Management System With a Surveillance RoBOT	1018
<i>Mohammed El-Shafei, Adel Al Shalati, Maher Rehayel, Issam Damaj</i>	
Obstacle Avoidance in Real Time With Nonlinear Model Predictive Control of Autonomous Vehicles	1143
<i>Muhammad Awais Abbas, Ruth Milman, J. Mikael Eklund</i>	
IBVS of a Rotary wing UAV Using Line Features	1202
<i>Hui Xie, Alan Lynch, Martin Jagersand</i>	
A Comparison Between Fuzzy, Fractional-, and Integer-Order Controllers For Small Satellites Attitude Control	1236
<i>Mohamed Temam Nasri, Witold Kinsner</i>	

Nonlinear Moving Horizon State Estimation For Multi-Robot Relative Localization	1286
<i>Mohamed W. Mehrez, George K.I. Mann, Raymond G. Gosine</i>	
Detection of Side-Channel Communication in Ad Hoc Networks Using Request to Send (RTS) Messages	1343
<i>N. Madtha, M. Vargas Martin, R. Liscano, B. Moore, M. Salmanian, M. Li, P. Mason</i>	
A New Optimization Method For Distribution System Reconfiguration	1373
<i>K. Masteri, B. Venkatesh</i>	
NPC Based Dual Active Bridge Topology for Integrating Battery Energy Storage To Utility Grid	1382
<i>Srinivas Bhaskar Karanki, David Xu</i>	
Overview of Connection Topologies for Grid-Connected PV Systems	1398
<i>H. Abdel-Gawad, Vijay K. Sood</i>	
A Probabilistic Approach to Assess Wind Generation Penetration and Market Prices	1406
<i>A.S.A. Awad, Mohamed Hassan Ahmed, M.M.A. Salama, T.H.M. El-Fouly</i>	
Literature Survey and Comparison of Consumer Interruption Costs in North America and Europe	1411
<i>Daniel Cheng, Bala Venkatesh</i>	
Optimal Real-Time Coordinated Voltage And Reactive Power Control in Smart Grids	1418
<i>Mohamed E. Elkhatab, M.H. Ahmed, Ramadan El-Shatshat, M.M.A. Salama</i>	
A Delay-Based Optimum Routing Protocol Scheme For Collision Avoidance Applications in VANETs	1442
<i>Neethu Sathianadhan, Sruthi Sanjib Gangadharan, Gayathri Narayanan</i>	