

MONDAY, May 3

Breakfast 7:00 to 8:00 AM Convention Centre – Rooms 201 to 203

Plenary – 8:00 – 8:45 Convention Centre – Rooms 201 to 203
Kimberly Douglas, NSERC/CRSNG

Exhibits Open – 9:45 – Marriott Hotel Foyer

TECHNICAL PROGRAM

SESSION One - 8:45 – 9:30

Track One – Circuits, Devices & Systems

Retimed Two-Step CRC Computation on FPGA

Christopher Kennedy (The University of Western Ontario, CA); Jonathan Manii (Independent, CA); Jeremy Gribben (University of Ottawa, CA)

Track Two – Controls & Robotics

Control Strategies for Visual Tracking From A Moving Platform

Jared Giesbrecht (Defence R&D Canada, CA); Peter Goldsmith (University of Calgary, CA); Jeff Pieper (University of Calgary, CA)

Robust Adaptive Control of Voltage Source Converter

Rasoul Milasi (ECERF University of Alberta, CA); Alan Lynch (ECERF, University of Alberta, CA); Yun Wei Li (University of Alberta, CA)

Track Three – Communications & Networking

Performance of UWB Devices in a metal turreted environment

Norbert Chan (General Dynamics Canada, CA); Yves Simoneau (Department of National Defence, CA)

Track Four – Computers, Software & Applications

Using genetic algorithms for test case generation and selection optimization

Izzat M Alsmadi (Yarmouk University, JO)

Using NAND Flash Memory to Improve the Performance of HDDs

Huang-Te Hsu (Fu Jen Catholic University, TW); Y. W. Bai (Fu Jen Catholic University, TW)

Track Five – Power Electronics & Energy Systems

CANDU System Load Cycling Mode
Fayyaz Ahmed (UOIT, CA)

Improved Sequential Quadratic Programming Approach for Optimal Distribution Generation Sizing in Distribution Networks
Mohamad AlHajri (College of Technological Studies, Paaet, Kuwait, KW);
Mohammed AlRashidi (College of Technological Studies, Paaet, Kuwait, KW);
Mohamed E. El-Hawary (Dalhousie University, CA)

Track Six – Signal & Multimedia Processing

The Okamoto Lower Bound for the Normalized Detection Threshold of the FFT Filter Bank-Based Summation Detector
Sichun Wang (Communications Research Centre, Industry Canada, CA); Robert J. Inkol (DRDC-Ottawa, CA); Sreeraman Rajan (DRDC-Ottawa, CA); François Patenaude (Communications Research Centre, CA)

Strategies for Improving Angle of Arrival Accuracy in Direction Finding Systems
Sichun Wang (Communications Research Centre, Industry Canada, CA); Robert J. Inkol (DRDC-Ottawa, CA); Sreeraman Rajan (DRDC-Ottawa, CA); François Patenaude (Communications Research Centre, CA)

Track Seven – Engineering in Medicine & Biology

Motion Artifact Removal from Muscle NIR Spectroscopy Measurements
Behnam Molavi (University of British Columbia, CA); Guy Dumont (University of British Columbia, CA); Babak Shadgan (Vancouver Coastal Health Research Institute, University of British Columbia, CA)

Analysis of time cost for alternatives to enhance efficiency within the medical emergency referral system in Alberta
Simon Ferrari (University of Calgary, CA); J. Patrick H. Wyse (University of Calgary, CA); Yaoping Hu (University of Calgary, CA)

SESSION Two – 9:30 – 10:15

Track One – Circuits, Devices & Systems

A Low-Power Low-Voltage Bandgap Reference in CMOS
Na Sun (The University of Western Ontario, CA); Robert Sobot (The University of Western Ontario, CA)

PWL Approximation of Hyperbolic Tangent and the First Derivative for VLSI Implementation
Ehsan Rasekh (University of Western Ontario, CA); Iman Rasekh (Islamic Azad University, IR); Mohammad Eshghi (Shahid Beheshti University, IR)

MONDAY cont'd

Track Two – Controls & Robotics

A Novel Technique for Estimating Intrinsic Camera Parameters in Geometric Camera Calibration

Swapna Puthukkudichalil (Memorial University of Newfoundland, CA); Nicholas Krouglicof (Memorial University of Newfoundland, CA); Ray Gosine (Memorial University of Newfoundland, CA)

Half-tone Control method in White Light LEDs by Using an Embedded Remote Controller with ZigBee Communication

Chi-Huang Hung (Fu Jen Catholic University, TW); Y. W. Bai (Fu Jen Catholic University, TW)

Track Three – Communications & Networking

Iterative Blind Linear Equalization in Time-Varying Dispersive Channels

Seyed Alireza Banani (Simon Fraser University, CA); Rodney Vaughan (Simon Fraser University, CA)

A Multi-stage Multi-user Decode-and-Forward Cooperative Communications Scheme using Linear Combination

Khuong Ho-Van (McGill University, CA); Tho Le-Ngoc (McGill University, CA)

Track Four – Computers, Software & Applications

A Directory-Based Cache Coherence Protocol for Power-Aware Chip-Multiprocessors

Rana Ahmed (American University of Sharjah, AE); Muhammad Dhodhi (Ross Video Ltd., CA)

Track Five – Power Electronics & Energy Systems

Generators Operating with Variable Frequency Drives in an Offshore Facility

Xiaodong Liang (Schlumberger, Edmonton Product Center, CA); Joe Liu (Schlumberger, US)

Communication System for the Remote Hybrid Power System In Ramea Newfoundland

Juan Acevedo (Memorial University of Newfoundland, CA); Tariq Iqbal (Associate Professor, CA)

Track Six – Signal & Multimedia Processing

Dense Stereo Disparity Map for Video by Sub-pixel Dynamic Time Warp Algorithm

Kunio Takaya (University of Saskatchewan, CA)

Frame Recursive Dynamic Mean Bias Removal Technique for Robust Environment-Aware Speech Recognition in Real World Applications
Md Foezur Rahman Chowdhury (INRS-EMT, Université du Québec, CA); Sid-Ahmed Selouani (Université de Moncton, campus of Shippagan, CA); Douglas O'Shaughnessy (INRS-Énergie-Matériaux-Télécommunications, CA)

Track Seven – Engineering in Medicine & Biology

Morphological Differences of Sigmoidal Baroreflex in High-Reactive and Non-Reactive Individuals

Pedram Ataei (University of British Columbia, CA); Guy Dumont (University of British Columbia, CA); Thomas Boyce (University of British Columbia, CA)

Break 10:15 – 10:45 – Marriot Second Floor Foyer

SESSION Three – 10:45 AM to 11:30

Track One – Circuits, Devices & Systems

Sensitivity improvement of SOI-Based piezoresistive beams for tactile sensor
Youssef Kebbaty (Université d'Orléans, FR)

Photoconductive sensors for distributed optical sensing

Jason E Barg (University of British Columbia (UBC) Okanagan, CA); Xian Jin (University of British Columbia (UBC) Okanagan, CA); Mike Wiltshire (University of British Columbia (UBC) Okanagan, CA); Milad Abolhasani (University of British Columbia (UBC) Okanagan, CA); Jonathan F Holzman (University of British Columbia (UBC) Okanagan, CA)

Track Two – Controls & Robotics

A Graph-Theoretic Condition Necessary for the Stabilization of Crowds Using Cooperating Control Agents

Nasim Shams (University of Waterloo, CA); Daniel E. Davison (University of Waterloo, CA)

Robust Cascaded Feedback Linearizing Control of Nonholonomic Mobile Robot
Adel Merabet (Saint Mary's University, CA); Jason Gu (Dalhousie University, CA); Hichem Arioui (Université d'Evry Val d'Essonne, FR)

Track Three – Communications & Networking

The Impact of Narrowband Interference on the Performance of UWB Systems in the IEEE802.15.3a Channel Models

Ehab M. Shaheen (Carleton University, Ottawa, Canada, CA); Mohamed El-tanany (Carleton Univ, CA)

MONDAY cont'd

Track Four – Computers, Software & Applications

A Simple Method for Mining Association Rules

Roelof Kars Brouwer (Thompson Rivers University, CA); Christopher Graves (University of Alberta, CA)

Using Social Networks in Resolving Conflicts of Concept Learning Process

Shimaa El-Sherif (University of Calgary, CA); Behrouz Homayoun Far (University of Calgary, CA); Armin Eberlein (American University of Sharjah, AE)

Track Five – Power Electronics & Energy Systems

Modular dimmable light-emitting-diode driver for general illumination applications

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

Simulation of a House Heating System using C# - An Energy Conservation Perspective

Blerim Qela (University of Ottawa, CA); Hussein Mouftah (University of Ottawa, CA)

Track Six – Signal & Multimedia Processing

Spectral Verification of an Experimentally Derived Acoustical Impulse Response Function of a Music Performance Hall

Douglas Frey (University of Calgary, CA); Victor Coelho (Boston University, US); Rangaraj M. Rangayyan (University of Calgary, Schulich School of Engineering, CA)

Knowledge Based Blind Deconvolution of Non-minimum Phase FIR Systems

Milad Lankarany (Concordia University, Montreal, Canada, CA); Mohammad Hasan Savoji (ECEP, Shahid Beheshti Univ., Tehran, Iran, IR)

Track Seven – Engineering in Medicine & Biology

FPGA Based Pipelined Architecture for Action Potential Simulation in Biological Neural Systems

Hsiang-Yung Teng (University of Saskatchewan, CA); Peyman Pourhaj (University of Saskatchewan, CA)

An Intelligent CAD System for Automated Diagnosis of Active Tuberculosis on Chest Radiograph and CT Thorax: A Road Map

Halim Elamy (University of Alberta, CA); Behrouz Homayoun Far (University of Calgary, CA); Richard Long (University of Alberta, CA)

SESSION Four – 11:30 – 12:15

Track One – Circuits, Devices & Systems

Integrated photonic retroreflectors for lateral cross-connects and interconnects
Emily Landry (University of British Columbia (UBC) Okanagan, CA); Brandon Born (University of British Columbia (UBC) Okanagan, CA); Gordon Ross (University of British Columbia (UBC) Okanagan, CA); Jonathan F Holzman (University of British Columbia (UBC) Okanagan, CA)

A low power 12-bit 10MS/s Algorithmic ADC
Noman Hai ; David Nairn (University of Waterloo, CA)

Track Two – Controls & Robotics

Parking Control of an Active-Joint Center-Articulated Mobile Robot Based on Feedback from Beacons
Mehdi Delrobaei ; Kenneth McIsaac (The University of Western Ontario, CA)

Track Three – Communications & Networking

Quasi-Cyclic Low Density Parity Check (LDPC) Codes for Dedicated Short Range Communication (DSRC) Systems
T. Aaron Gulliver ; Najmeh Khosroshahi (University of Victoria, CA)

Track Four – Computers, Software & Applications

Automated Synthesis of Feature Functions for Pattern Detection
Pei-Fang Guo (Concordia University, CA); Prabir Bhattacharya (Concordia University, CA); Nawwaf Kharma (Concordia University, CA)

A Tool for Ontology Visualization in 3D Graphics: Onto3DViz
Suigen Guo ; Christine W. Chan (University of Regina, CA)

Track Five – Power Electronics & Energy Systems

Estimation of Reduced Order Equivalent Synchronous Generator Model Based on Phasor Measurements
Behnam Mohammadi-Ivatloo ; Mostafa Parniani ; Mojtaba Shiroei (Sharif University of Technology, IR)

Sensorless Vector Control of PMSG for Variable Speed Wind Energy Applications
Jogendra Singh Thongam (STAS Inc., CA); Pierre Bouchard (STAS Inc., CA); Valentin Giurgiu (PAVAC Industries in Richmond, British Columbia, CA); Hung Tien Bui (University of Quebec at Chicoutimi, CA); Mohand Ouhrouche (University of Quebec at Chicoutimi, CA)

MONDAY cont'd

Track Six – Signal & Multimedia Processing

An Approach to Recognize and Pronounce Words with Alternative Pronunciations in Farsi

Iman Rasekh (Islamic Azad University, IR); Ehsan Rasekh (University of Western Ontario, CA); Mohammad Eshghi (Shahid Beheshti University, IR)

MCLJIT library for scalable live video in Max/MSP/Jitter

Ivan V. Bajic ; Xiaonan Ma (Simon Fraser University, CA)

Track Seven – Engineering in Medicine & Biology

A wearable real-time fall detector based on Naive Bayes classifier

Xiuxin Yang ; Anh Dinh ; Li Chen (University of Saskatchewan, CA)

Lunch – 12:15 – 1:30 - Convention Centre – Rooms 201 to 203

SESSION Five – 1:30 – 2:15

Track One – Circuits, Devices & Systems

Parametric Terahertz Frequency Multiplication Using CMOS Technology

Zhixing Zhao (University of Calgary, CA); Jean-Francois Bousquet (University of Calgary / TRILabs, CA); Sebastian Magierowski (University of Calgary, CA)

Implementation of an All-Analog Active Reflector

Jean-Francois Bousquet (University of Calgary / TRILabs, CA)

Track Two – Controls & Robotics

Towards Underground Mine Drift Mapping with RFID

N. James Lavigne (Carleton University, CA); Joshua Marshall (Carleton University, CA); Unal Artan (Carleton University, CA)

Propeller Dynamometer for Small Unmanned Aerial Vehicle

Mohammed Hossain (Memorial University of Newfoundland, CA); Nicholas Krouglicof (Memorial University of Newfoundland, CA)

Track Three – Communications & Networking

Adaptive resource allocation for real-time services in OFDMA systems

Changqin Huo (University of Calgary / TRILabs, CA); Abu B Sesay (University of Calgary, CA); Abraham O Fapojuwo (University of Calgary, CA)

Energy-Efficient Target Tracking Using Forced Handoffs in Wireless Sensor Networks

Nadia Khiadani (Isfahan University of Technology, IR); Faramarz Hendessi (Associate Prof., IR); T. Aaron Gulliver (University of Victoria, CA)

Track Four – Computers, Software & Applications

Statistical comparison between a real-time model and a FEM counterpart for visualization of breast phantom deformation during palpation
Antoine Widmer ; Yaoping Hu (University of Calgary, CA)

An Architectural Framework for Developing Intelligent Systems for the CO2 Capture Process
Chuansan Luo (University of Regina, CA)

Track Five – Power Electronics & Energy Systems

Design and Implementation of a Bidirectional HEV Energy Management Strategy using a Switched Capacitor Luo Converter
Zahra Amjadi ; Sheldon S Williamson (Concordia University, CA)

Track Six – Signal & Multimedia Processing

A Nonlinear Blind Equalizer Based on Modified Constant Modulus Algorithm
Donglin Wang (University of Calgary, CA)

Iterative Joint Source-Channel Decoding For H.264 Video Transmission Using Virtual Checking Method at the Source Decoder
Quang Nguyen (Concordia University, CA); William Lynch (Concordia University, CA); Tho Le-Ngoc (McGill University, CA)

SESSION Six – 2:15 – 3:00

Track One – Circuits, Devices & Systems

Fine Localization of Photons on the Pixelated Detectors Based on the Analytical Model
Fatemeh Aezinia (Simon Fraser University, CA); Mani Malekesmaeili (University of British Columbia, CA); Seyed Alireza Banani (Simon Fraser University, CA)

Design of a Six-port Junction Based on Single layer Technology for UWB Applications
Traii Mbarek (Faculty of sciences of Tunis Elmanar, TN); Mourad Nedil (UQAT, CA); Ali Gharsallah (Faculty of Science of Tunis, TN); Tayeb A. Denidni (INRS-EMT, CA)

Track Two – Controls & Robotics

Virtual Force Based Individual Particle Optimization for Coverage in Wireless Sensor Networks
Alireza Dirafzoon ; Seyyed Mohammad Amin Salehizadeh ; Saba Emrani;
Mohammad Bagher Menhaj (Amirkabir University of Technology, IR)
Kia Fallahi (University of Calgary, CA)

MONDAY cont'd

H_∞ filtering for nonuniformly sampled systems
Ghulam Mustafa (University of Alberta, CA); Tongwen Chen (University of Alberta, CA)

Track Three – Communications & Networking

Mode Transfer Architecture and Cross Layer Design for Connection Aware Applications in Wireless Communication Systems
Wei Li (University of Victoria, CA); Jing Zhong (University of Victoria, CA); T. Aaron Gulliver (University of Victoria, CA)

IEEE 802.11 WLANs: A Comparison on Indoor Coverage Models
Roger Pierre Fabris Hoefel (Federal University of Rio Grande do Sul (UFRGS), BR); Cassio Bento Andrade (UFRGS, BR)

Track Four – Computers, Software & Applications

Specification-Based Test Oracles With JUnit
Shadi G. Alawneh ; Dennis K. Peters (Memorial University of Newfoundland, CA)

Design of a Custom Vector Operation API Exploiting SIMD Intrinsics within Java
Jonathan Parri (University of Ottawa, CA); John-Marc Desmarais (University of Ottawa, CA); Daniel Shapiro (University of Ottawa, CA); Miodrag Bolic (University of Ottawa, CA); Voicu Z. Groza (University of Ottawa, CA)

Track Five – Power Electronics & Energy Systems

Impact of Maximum Power Point Tracking on Grid-Connected Photovoltaic System Dynamics
Prajna Dash ; Mehrdad Kazerani (University of Waterloo, CA)

Modeling and Simulation of Stand Alone Wind/Diesel System Connected to Estimated Variable Load
Behzad Sedaghat (Zanjan University, IR); Abolfazl Jalilvand (Zanjan University, IR); Reza Noroozian (Zanjan University, IR)

Track Six – Signal & Multimedia Processing

Highly Accurate Extraction of Faces and Facial Parts Taking into Consideration People with Glasses and the Specific Areas of the Face for Extracting Specific Features Used in the Recognition of Facial Expressions.
Teruaki Hirano (Kanto Gakuin University, JP); Yuuki Nakagawa (Kogakuin University, JP); Osamu Nakamura (Kogakuin University, JP)

Awards Reception – 6:00 PM –

Awards Ceremony & Banquet – 6:30 PM

Macleod Hall A –Convention Centre (Lower Level)

Tuesday, May 4

Breakfast 7:00 to 8:00 AM Convention Centre – Rooms 201 to 203

Plenary – 8:00 – 8:45 Convention Centre – Rooms 201 to 203

Amir Banihashemi

Exhibits Open – 9:45 AM – Marriot Second Floor Foyer

SESSION One – 8:45 – 9:30 AM

Track One – Circuits, Devices & Systems

Multi-Variable Optimization For Q-Switched Double Clad Fiber Laser Systems
Angie Eldamak ; Kaamran Raahemifar (Ryerson University, CA)

Instruction Set Extension in the NIOS II: A Floating Point Divider for Complex Numbers

Philipp Digeser (DHBW Loerrach, DE); Marco Tubolino (DHBW Loerrach, DE);
Martin Klemm (DHBW Loerrach, DE); Daniel Shapiro (University of Ottawa, CA);
Miodrag Bolic (University of Ottawa, CA)

Track Three – Communications & Networking

Merger of Polarization and Spatial Diversity by Moving a Pair of Orthogonally Polarized Dipoles

Vahid Dehghanian ; John Nielsen; Gerard Lachapelle (University of Calgary, CA)

Diversity Gain through Synthesizing Multiple Polarizations

Vahid Dehghanian; John Nielsen; Gerard Lachapelle; Pouya Aflaki (University of Calgary, CA)

Track Four – Computers, Software & Applications

Towards the Performance Analysis of Reconfigurable Hardwares in Grid Networks

Mahmood Ahmadi (Delft University of Technology, NL); M Faisal Nadeem
(Technical University of Delft, NL)

Comparative Study of Heuristics for Reliability Optimization of Complex Systems

Graham Cheng ; Kaamran Raahemifar ; Olivia Das (Ryerson University, CA)

Track Five – Power Electronics & Energy Systems

An Overview of Offshore Wind Electric Energy Resources

Hamed Aly (Dalhousie University, CA); Mohamed E. El-Hawary (Dalhousie University, CA)

Tuesday cont'd

Small Signal Analysis of a Grid Connected Wind Turbine with DFIG

Sajjad Tohidi; Mostafa Parniani; Behnam Mohammadi-Ivatloo; Abbas Rabiee
(Sharif University of Technology, IR)

Track Six – Signal & Multimedia Processing

Efficient Implementation of FIR filters Based on a Novel Common Subexpression Elimination Algorithm

Mohsen Amiri Farahani; Eduardo Castillo Guerra; Bruce G. Colpitts (University of New Brunswick, CA)

A Robust Set-membership Normalized Least Mean-Square Adaptive Filter

Md. Zulfiquar Bhotto; Andreas Antoniou (University of Victoria, CA)

SESSION Two– 9:30 – 10:15 AM

Track One – Circuits, Devices & Systems

Tri-band CMOS Class-E Power Amplifier Design with Phase Compensations for Polar Systems

Chung-Min Lai (National Chiao Tung University, TW)

Using Autocorrelation Coefficients-based Cost Functions in ESOP-based Toffoli Gate Cascade Generation

Jacqueline E. Rice (University of Lethbridge, CA); Vivien Suen (University of Toronto, CA)

Track Two – Power Electronics & Energy Systems

Modeling and Analysis of a 5-Leg Inverter for an Electric Vehicle In-Wheel Motor Drive

Sheldon Williamson, Manu Jain (Concordia University, CA)

Track Three – Communications & Networking

Optimal Amplify-and-Forward Scheme based on Superposition Modulation over Relay Channels

Leonardo Jiménez Rodríguez (McGill University, CA); Nghi Tran (McGill University, CA); Tho Le-Ngoc (McGill University, CA)

Track Four – Computers, Software & Applications

A Low-Area and Low-Latency Network on Chip

Xiaofang Wang (Villanova University, US); Leeladhar Bandi (Villanova University, US)

Unconscious Mind: Authenticating with Something You Don't Know? Or Just an Infallible Liveness Test?

Miguel Vargas Martin (University of Ontario Institute of Technology, CA); Kamilla Johannsdottir (University of Akureyri, IS); Gerardo Reynaga (Carleton University, CA); Jayshiro Tashiro (University of Ontario Institute of Technology, CA); Miguel A. Garcia-Ruiz (University of Ontario Institute of Technology, CA)

Track Five – Power Electronics & Energy Systems

An Overview of the Operation of the Alberta Electricity Market
Arya Janjani (University of Calgary, CA)

An Enhanced Power Flow Solution Algorithm for Radial Distribution Feeder Systems
Fahad Abu-Mouti; Mohamed E. El-Hawary (Dalhousie University, CA)

Track Six – Signal & Multimedia Processing

Visual Sorting of Recyclable Goods Using a Support Vector Machine
Michael Nawrocky (Redeemer University College, CA); Derek C. Schuurman (Redeemer University College, CA); Jeff Fortuna (McMaster University, CA)

Adaptive Interference Cancellation System for a WCDMA repeater
Saad Mahboob; Shawn Stapleton; Sami Muhaidat (Simon Fraser University, CA)

Break – 10:15 – 10:45 – Marriot Second Floor Foyer

SESSION 3 – 10:45 – 11:30

Track One – Circuits, Devices & Systems

An Investigation of Parallel Memetic Algorithms for VLSI Circuit Partitioning on Multi-Core Computers
Edward Armstrong, Gary Grewal, Shawki Areibi, and Gerarda Darlington (University of Guelph, CA)

Comparative Analysis Between Various Microstrip Patch and Microstrip Slot Antennas for RFID Applications
Raied A.R. Ibrahim (Carleton University, CA)

Track Three – Communications & Networking

Tuesday cont'd

Impact of the Number of Sensors on the Network Cost and Accuracy of the Radio Environment Map

Stephanie Faint; Oktay Ureten; Tricia J. Willink (Communications Research Centre, CA)

Peak Power Control of MC-CDMA with Special Classes of Binary Sequences
Xin Gao (Lakehead University, CA); Nam Yul Yu (Lakehead University, CA);
Zhiwei Mao (Fairleigh Dickinson University, US)

Track Four – Computers, Software & Applications

A Game-theoretical Model for Intrusion Detection in Wireless Sensor Networks
Mohsen Estiri (University of South Tehran Azad, IR)

Estimation of Missing Data Points From Remotely Sensed Datasets
James Rodway; Petr Musilek (University of Alberta, CA)

Track Five – Power Electronics & Energy Systems

A Priority-ordered Constrained Search Technique for Optimal Distributed Generation Allocation in Radial Distribution Feeder Systems
Fahad Abu-Mouti; Mohamed E. El-Hawary (Dalhousie University, CA)

Prototype Design and Experimental Verification of an Electromagnetic Actuator for Parametric Stiffness Excitation
Erich Schmidt (Vienna University of Technology, AT)

Track Six – Signal & Multimedia Processing

DCT-domain Watermark Detector using a normal inverse Gaussian Prior
Mohammed Bhuiyan; Rubaiya Rahman (Bangladesh University of Engineering and Technology, BD)

A Cellular Automata Based Semi-automatic algorithm for segmentation of choroidal blood vessels from ultrahigh resolution optical coherence images of rat retina
Akshaya Mishra; Sepideh Hariri; Moayed Alireza; Kostadinka Bizheva; Paul Fieguth ; David Clausi (University of Waterloo, CA)

SESSION Four – 11:30 – 12:15

Track One – Circuits, Devices & Systems

A High Resolution Serializer and DeSerializer Architecture for Mobile Image Sensor
Eung-Ju Kim (Korea University, KR)

CMOS Interleaved Distributed 2 x 3 Matrix Amplifier Employing Active Post Distortion and Optimum Gate Bias Linearization Technique
Ziad El-Khatib; Leonard MacEachern; Samy Mahmoud (Carleton University, CA)

Track Two – Power Electronics & Energy Systems

Impact of Wind Turbine Generators on Network Resonance and Harmonic Distortion

Dhaval D Patel (University of Western Ontario, CA); Rajiv Varma (University of Western Ontario, CA); Ravi Seethapathy (Hydro One Networks Inc., CA); Michael Dang (Hydro One Networks Inc., CA)

Influence of Distributed Generation Interface Transformer and DG configurations on Temporary Overvoltage (TOV)

Pouyan Saifi (Hydro One Networks Inc., CA); Akshaya Moharana (University of Western Ontario, CA); Rajiv Varma (University of Western Ontario, CA); Ravi Seethapathy (Hydro One Networks Inc., CA)

Track Three – Communications & Networking

SVD-Based Joint Transceiver Design for Uplink MIMO MC-CDMA Systems

Hossein Zamiri-Jafarian (University of Toronto, CA); Morteza Rajabzadeh (Ferdowsi University of Mashhad, IR)

DMT Analysis of Coherent Free-Space Optical Systems over Atmospheric Turbulence Channels

Sahar Molla Aghajanzadeh; Murat Uysal (University of Waterloo, CA)

Track Four – Computers, Software & Applications

Condition-Based Reliability Modeling for Systems with Partial and Standby Redundancy

Halim Elamy (University of Alberta, CA); Behrouz Homayoun Far (University of Calgary, CA)

A Knowledge-Base Tool for Testing VoIP Gateway

Marzia Zaman (Cistel Technology Inc., CA)

Track Five – Power Electronics & Energy Systems

Transformer-less five-level diode-clamped converter based active power filter

Sebastien Gauthier ; Francis Aim Okou (Royal Military College of Canada, CA)

Track Six – Signal & Multimedia Processing

Subspace-Based LMS Algorithm for MIMO Channel SVD Estimation

Hossein Zamiri-Jafarian (University of Toronto, CA); Mohammad Moghaddari (University of Manitoba, CA)

Tuesday cont'd

Bandwidth Extension for Speech Enhancement
Frederic Mustiere; Martin Bouchard; Miodrag Bolic (University of Ottawa, CA)

Lunch - 12:15 – 1:30PM - Convention Centre – Rooms 201 to 203

SESSION Five – 1:30 – 2:15

Track One – Circuits, Devices & Systems

LTCC-Based Optically Tunable Microwave Filter
Langis Roy (Carleton University, CA); Jose Gonzalez (Universite de Limoges, FR); Dominique Baillargeat (LIM UMR 6172, Université de Limoges/CNRS, FR)

Estimating Test Cost During Data Path and Controller Synthesis with Low Power Overhead
Haidar M. Harmanani ; Maya Kodeih (Lebanese American University, LB)

Track Two – Power Electronics & Energy Systems

Power Management with Energy Harvesting Devices
Demian Pimentel ; Petr Musilek (University of Alberta, CA)

Micro-grid System Based on Renewable Power Generation Units
Ahshan ; Mohammad Iqbal ; George Mann; John Quaicoe (Memorial University of Newfoundland, CA)

Track Three – Communications & Networking

Gains by a Space-Time-Code Based Signaling Scheme for Multiple-Antenna RFID Tags
Chen He ; Z. Jane Wang (University of British Columbia, CA)

Track Four – Computers, Software & Applications

Segmentation and Analysis of the Tissue Composition of Dermatological Ulcers
Ederson Dorileo (University of Sao Paulo, BR); Marco Frade (University of Sao Paulo, BR); Rangaraj M. Rangayyan (University of Calgary, Schulich School of Engineering, CA); Paulo M. Azevedo-Marques (University of Sao Paulo, BR)

Evaluating Thermal Aging Characteristics of Electric Power Transmission Lines
Md MI Bhuiyan ; Petr Musilek; Jana Heckenbergerova ; Don Koval (University of Alberta, CA)

Track Five – Power Electronics & Energy Systems

Application of SVC for Grid Integration of Wind Farm Using Fuzzy Controller
Mehdi Narimani (University of Western Ontario, CA); Rajiv Verma (Univ of Western Ontario, CA)

Fuzzy Logic (FL) Controlled HVDC System - Influence of Shape, Width & Distribution of Membership Functions (MFs)
Munish Multani (UOIT, CA); Jing Ren (UOIT, CA); Vijay K Sood (University of Ontario Institute of Technology, CA)

Track Six – Signal & Multimedia Processing

A Single Microphone Noise Canceller Based on an Adaptive Kalman Filter
Marcel Gabrea (Ecole de technologie superieure, CA)

SESSION Six – 2:15 – 3:00

Track One – Circuits, Devices & Systems (S12T1)

A High-Throughput, Low-Latency VLSI Realization of 4×4 Complex K-Best MIMO Detectors
Mojtaba Mahdavi (Sharif University of Technology, IR); Mahdi Shabany (University of Toronto, CA)

Static and Dynamic Analysis Of A 2D MEMS Micromirror
Hasan Imam (Dalhousie University, CA); Yuan Ma (Dalhousie University, CA)

Track Three – Communications & Networking

Implementing Trend Identification with Least Squares Method into CommTest on an Intelligent Satellite Services Network for Throughput Measurement
Wahab Almuhtadi (Algonquin College, CA); Devin R. Murphy (Algonquin College, CA); Mike Rosberg (Telesat, CA)

Performance of passive and semi-passive UHF RFID systems
Tzu Hao Li (University of Ottawa, CA); Miodrag Bolic (University of Ottawa, CA)

Track Four – Computers, Software & Applications

A Study of Optimal Topologies in Swarm Intelligence
Dario Schor ; Witold Kinsner ; John Anderson (University of Manitoba, CA)

A Large Scale Empirical Study on the Cognitive Complexity of Software
Vincent Chiew (University of Calgary, CA); Yingxu Wang (University of Calgary, CA)

Tuesday cont'd

Track Five – Power Electronics & Energy Systems

Design Studies on an External Rotor Permanent Magnet Synchronous Machine for a Position Sensorless Control --- Comparison of Star- and Delta-connected Stator Winding

Erich Schmidt (Vienna University of Technology, AT)

A Permanent Magnet Synchronous Motor Drive Employing a Three-Level Very Spars Matrix Converter with Soft Switching and SVM Hysteresis Current Control

Mohamed F Aner ; Ed Nowicki (University of Calgary, CA)

Track Six – Signal & Multimedia Processing

On Identification of Multivariate Hammerstein Systems

Jiaqing Lv ; Mirek Pawlak (University of Manitoba, CA)

Segmentation of cell nuclei in images of renal biopsy samples

Sansira Seminowich (University of Calgary, Schulich School of Engineering, CA);

Aylin Sar (University of Calgary, CA); Serdar Yilmaz (University of Calgary, CA);

Rangaraj M. Rangayyan (University of Calgary, Schulich School of Engineering,

CA)

Wednesday, May 5th, 2010

Breakfast 7:00 to 8:00 AM Convention Centre – Rooms 201 to 203

Plenary – 8:00 – 8:45 Convention Centre – Rooms 201 to 203

Prabir Bhattacharya

Exhibits Open – 9:45 AM – Marriot Second Floor Foyer

SESSION One – 8:45 – 9:30 AM

Track One – Circuits, Devices & Systems

A New Bulk Built-in Current Sensing Circuit for Single-event Transient Detection
Zhichao Zhang (University of Saskatchewan, CA)

Evaluation of packaging options for very low noise amplifiers
Donuwan Navaratne; Leonid Belostotski (University of Calgary, CA)

Track Two – Power Electronics & Energy Systems

OPTIMAL REACTIVE/VOLTAGE CONTROL by a improved harmony search
Amirhossein Khazali ; Ali Parizad ; Mohsen Kalantar (Iran University of Science and Technology, IR)

Track Three – Communications & Networking

Fast Authentication for Mobile Clients in Wireless Mesh Networks
Celia Li (York University, CA)

A DTN Wireless Sensor Network for Wildlife Habitat Monitoring
Alejandro Tovar; Travis Friesen; Ken Ferens; Bob McLeod (University of Manitoba, CA)

Track Four – Computers, Software & Applications

Computation-Efficient FPGA Implementation for Flexible Triangle Search Block-Based Motion Estimation Algorithm
Mohamed Mohamed Rehan ; Rasha El-Ashry (British University in Egypt, EG); Hassan El Kamchouchi (Alexandria University, EG)

Applications of Three Data Analysis Techniques for Modeling the Carbon Dioxide Capture Process
Qing Zhou, Y. Wu, C.W. Chan, P. Tontiwachwuthikkul (University of Regina, CA)

Track Five – Power Electronics & Energy Systems

Impedance-based Ground Fault Location for Transmission Lines
Hongling Sun (Hydro One Network Inc., CA); Vijay K Sood (University of Ontario Institute of Technology, CA)

Wednesday, cont'd

Track Six – Signal & Multimedia Processing

Enclosed Spectrogram Moments for the Measurement of Non-Stationary Signals
Ryan Janzen (University of Toronto, CA)

A Spatio-Temporal Stacking Approach for Estimating Two-Dimensional Direction-of-Arrival
Jian-Feng Gu; Wei-Ping Zhu; M. N. S. Swamy (Concordia University, CA)

SESSION Two – 9:30 – 10:15n

Track Three – Communications & Networking

Reliability Of ZigBee Networks Under Broadband Electromagnetic Noise Interference
Lily Woo; Ken Ferens ; Witold Kinsner (University of Manitoba, CA)

Soft Output Detector for MIMO-CDMA Systems with Parity Bit Selected and Permutation Spreading
Alireza Mirzaee (University of Ottawa, CA); Claude D'Amours (School of Information Technology and Engineering(SITE), University of Ottawa, CA)

Track Four – Computers, Software & Applications

Model-free Approach and Methodology for Data Anomaly Detection for Real Time Diagnostic Solution
Amar Kumar (University of Ottawa, CA); Amiya Nayak (SITE, University of Ottawa, CA); Alka Srivastava (Tecsis Corporation, CA)

A HW/SW Codesign of WZ Factorization to Improve Time to Solve Matrices
Hsiang-Yung Teng (University of Saskatchewan, CA)

Track Five – Power Electronics & Energy Systems

Design and Analysis of High-inductance PMSG for Wind system
Meiqin Mao (Hefei University of Technology, CN); Jidong Lai (Hefei University of Technology, CN); Ronggeng Huang (Hefei University of Technology, CN); Liuchen Chang (University of New Brunswick, CA); Zhimao Zhang (Hefei University of Technology, CN); Chem Nayar (Curtin University of Technology, AU)

Track Six – Signal & Multimedia Processing

Instrumental Variable Algorithms for Two Microphones Speech Enhancement Systems
Marcel Gabrea (Ecole de technologie superieure, CA)

QIM Data Hiding for Tamper Detection and Correction in Digital Images Using Wavelet Transform

Amit Phadikar (MCKV Institute of Engineering, IN); Santi Prasad Maity (Bengal Engineering & Science University, Shibpur, IN); Mrinal Mandal (University of Alberta, CA)

Break - 10:15 – 10:45 AM – Marriot Second Floor Foyer

SESSION Three – 10:45 – 11:30

Track Three – Communications & Networking

Practical Result of Wireless Indoor Position Estimation by using Hybrid TDOA/RSS Algorithm

Smita Tiwari ; Ramzi Darraji ; Seyed Aidin Bassam ; Andrew Kwan ; Karun Rawat ; Meenakshi Rawat; Michel Fattouche ; Fadhel Ghannouchi (University of Calgary, CA)

Blind Channel Estimation for MRC Systems with Maneuvering Transmit/Receive Terminals

Seyed Alireza Banani ; Rodney Vaughan (Simon Fraser University, CA)

Track Four – Computers, Software & Applications

Consistent Device Communication in Restartable Transactional Distributed Memory Systems

Steffen Gerhold (Ulm University, DE)

Toward Spatial Tracking in Multiple Camera Environment

Xiaochen Dai (Simon Fraser University, CA)

Track Five – Power Electronics & Energy Systems

Optimal Placement of Distributed Generation with Sensitivity Factors Considering Voltage Stability and Losses Indices

Ali Parizad ; Amirhossein Khazali ; Mohsen Kalantar (Iran University of Science and Technology, IR)

Track Six – Signal & Multimedia Processing

A video navigation model based on a genetic algorithm

Wei ; Xiao-Ping Zhang ; Junfeng Jiang (Ryerson University, CA)

Two dimensional analytic wavelet thresholding and its application to ultrasonic pulse-echo B-scan denoising

Mohammad Hoseini ; Ming Jian Zuo Xiaodong Wang (University of Alberta, CA)

Wednesday, cont'd

SESSION Four– 11:30 AM to 12:15

Track Three – Communications & Networking

Performance optimization of the initialization process of IEEE 802.16 mesh networks

Victor Rangel (National University of Mexico, MX); Yasmine Macedo (National University of Mexico, MX); Javier Gomez (National University of Mexico, MX); Miguel Lopez-Guerrero (Universidad Autonoma Metropolitana, MX); Raul Santos (University of Colima, MX); Arthur Edwards (University of Colima, MX)

Near-Optimal and Efficient MIMO Detectors for 64-QAM Symbols

Bruce Cockburn ; Arsene Pankeu Yomi (University of Alberta, CA)

Track Four – Computers, Software & Applications

Using Search-Based Metric Selection and Oversampling to Predict Fault Prone Modules

Rodrigo Vivanco (University of Manitoba, CA)

Track Five – Power Electronics & Energy Systems

Comparative Study of Sliding Mode and ANFIS Based Observers for Speed & Position Sensor-less Control of Variable Speed PMSG

Mukhtiar Singh (Ecole de Technologie Superieure, Montreal, Quebec, Canada, CA); Ambrish Chandra (ÉTS, 1100, rue Notre-Dame Ouest, Montréal, Québec, CA)

Modeling of Planar Transformer Parasitics Using Design of Experiment Methodology

Samuel Cove (Memorial University of Newfoundland, CA); Martin Ordonez (Memorial University of Newfoundland, CA); John Quaicoe (Professor, CA)

Track Six – Signal & Multimedia Processing

Global Design of Perfect-Reconstruction Orthogonal Cosine-Modulated Filter Banks

Jie Yan (University of Victoria, CA); Wu-Sheng Lu (University of Victoria, CA)

A Scalability Study of Fractional Motion Estimation for H.264 Encoding

Jasmina Vasiljevic (Ryerson University, CA); Andy Ye (Ryerson University, CA)

Lunch 12:15 – 1:30 PM - Convention Centre – Rooms 201 to 203

SESSION Five – 1:30 – 2:15

Track Five – Power Electronics & Energy Systems

Tight Mixed Integer Linear Programming Formulations for Generator Self-Scheduling

James Ostrowski (University of Waterloo, CA); Miguel F Anjos (University of Waterloo, CA); Anthony Vannelli (University of Guelph, CA)

Towards DFIG Control for Power Generation and Harmonic Current Mitigation

Rene Wamkeue (Université du Québec en Abitibi-Témiscamingue, CA); Djilali Kairous (Université de Hasiba Ben-Bouali de Chlef (UHBC), Chlef, DZ); Bachir Belmadani (Université de Chlef, CA)

Track Six – Signal & Multimedia Processing

GLRT Signal Detection Performance of a Synthetic Array

Ali Broumandan ; John Nielsen ; Gerard Lachapelle (University of Calgary, CA)

A Robust Digital Audio Watermarking Algorithm Using Empirical Mode Decomposition

A N K Zaman ; Wahedul Islam (University of Northern BC, CA)

SESSION Six – 2:15 – 3:00

Track Three – Communications & Networking

Zero-forcing Incremental Beamforming Transmission for Multiuser MIMO Systems

Jun Zhu; Hong-Chuan Yang (University of Victoria, CA)

Track Five – Power Electronics & Energy Systems

Wind Turbine Rotor Modelling Using Response Surface Methodology

Lucas Sinopoli ; Martin Ordonez ;John Quaicoe (Memorial University of Newfoundland, CA);

Reconstruction of Effective Wind Speed for Fixed-Speed Wind Turbines Based on Frequency Data Fusion

Zhiqiang Xu (Texas A&M University, US); Mark Ehsani (Texas A&M, US)

Track Six – Signal & Multimedia Processing

Novel image registration method using gradient based algorithm along with multi-resolution wavelet transform

Mehrnaz Fani (Electrical and Computer Engineering shiraz university, IR); Mehran Yazdi (Shiraz University, IR)

Monday, May 3

Breakfast	7:00 - 08:00	Convention Centre 201-203
Plenary	8:00- 8:45	Convention Centre 201-203 Kimberly Douglas - <i>NSERC/CRSNG</i>
Session 1	8:45- 9:30	Tracks 1 - 7
Session 2	9:30 – 10:15	Tracks 1 - 7
Coffee Break	10:15- 10:45	In the foyer
Session 3	10:45- 11:30	Tracks 1 - 7
Session 4	11:30- 12:15	Tracks 1 - 7
Lunch	12:15 1:30	Convention Centre 201-203
Session 5	1:30- 2:15	Tracks 1 - 6
Session 6	2:15 – 3:00	Tracks 1 - 6
Exhibits	9:45 – 3:00	Marriott Second Floor Foyer
Awards Banquet	18:00 18:30	Reception (Cash Bar) Dinner (wine provided) Macleod Hall A – Lower Level Convention Centre

Rooms in Use: (CC = Convention Centre)

Track 1 - CC 204
Track 2 - Woodbine
Track 3 - CC 206
Track 4 – Kensington C

Track 5- Kensington A/B
Track 6 – Mt. Royal
Track 7 - Mackenzie

Tuesday, May 4

Breakfast	7:00 - 08:00	Convention Centre 201-203
Plenary	8:00- 8:45	Convention Centre 201-203 Amir Banihashemi
Session 1	8:45- 9:30	Tracks 1, 3 - 6
Session 2	9:30 – 10:15	Tracks 1 - 6
Coffee Break	10:15- 10:45	In the foyer
Session 3	10:45- 11:30	Tracks 1, 3 - 6
Session 4	11:30- 12:15	Tracks 1 - 6
Lunch	12:15 1:30	Convention Centre 201-203 McNaughton Gold Medal Winner Presentation
Session 5	1:30- 2:15	Tracks 1 - 6
Session 6	2:15 – 3:00	Tracks 1, 3-6
Exhibits Daily	9:45 – 3:00	Marriot Second Floor Foyer

Rooms in Use:

(CC = Convention Centre)

Track 1 - CC 204
Track 2 - Woodbine
Track 3 - CC 206

Track 4- Kensington C
Track 5- Kensington A/B
Track 6- Mt Royal

Wednesday, May 5

Breakfast	7:00 - 08:00	Convention Centre 201-203
Plenary	8:00- 8:45	Convention Centre 201-203 Prabir Bhattacharya
Session 1	8:45- 9:30	Tracks 1 - 6
Session 2	9:30 – 10:15	Tracks 3-6
Coffee Break	10:15- 10:45	In the foyer
Session 3	10:45- 11:30	Tracks 3-6
Session 4	11:30- 12:15	Tracks 3-6
Lunch	12:15 1:30	Convention Centre 201-203
Session 5	1:30- 2:15	Tracks 5, 6
Session 6	2:15 – 3:00	Tracks 3, 5, 6
Exhibits	9:45 – 3:00	Marriot Second Floor Foyer

Rooms in Use: (CC = Convention Centre)

Track 1 - CC 201-203

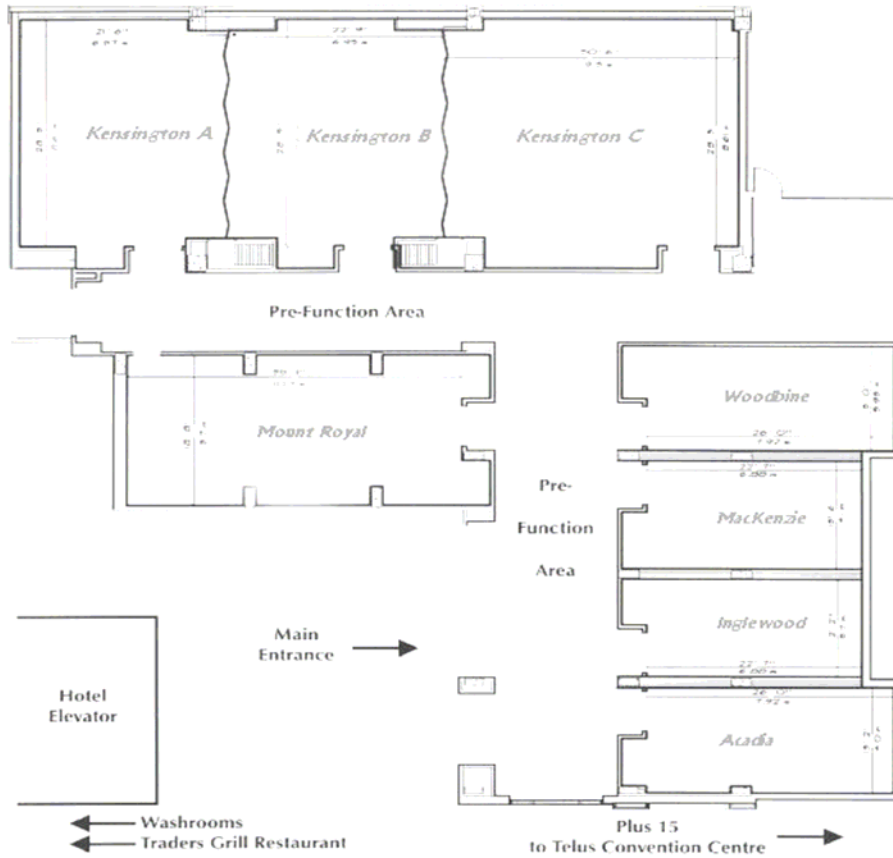
Track 2 - Woodbine

Track 3 - Kensington B

Track 4- Inglewood

Track 5- Kensington A

Track 6 - McKenzie



Breakfast & Lunch	Room 203
Session Rooms	204, 206,
Banquet Lower Level	Macleod A