

Conference schedule

Day 1: Wednesday, March 22, 2017

10AM-1PM	<u>Tutorial-I</u> Topic: Cyber Security threats, measures and control in a process plant Speaker: Dr. Sunny R Desai Room: Governor General Main (2nd floor)	<u>Tutorial-II</u> Topic : Internet of Things for Sustainable Future Smart Buildings Speaker: Dr. Muhammad Alam Room: Richmond (3rd floor)	<u>Tutorial-III</u> Topic : Dynamic Virtual Organizations Constriction Framework Speaker: Dr. Morcouc Room: Governor General Parlor (2nd floor)	<u>Workshop</u> Topic: Research-led Innovation into Commercialization Speaker: Dr. Nihal Kularatna and Dr. Marc Perron Room : Casson (Convention level)
LUNCH BREAK (1PM -2PM)				
2PM-5PM	<u>Tutorial-IV</u> Topic : Battery / Super-capacitor Management Systems Speaker: Dr. Eric Cheng Room: Richmond (3rd floor)	<u>Tutorial-V</u> Topic: Industrial Wireless Networking – Status, Challenges and Opportunities Speaker: Dr. Mikael Gidlund, Dr Johan Åkerberg and Dr Tomas Lennvall Room: Governor General Parlor (2nd floor)		
5PM-6:30PM	Welcome Reception (Governor General Main)			

Day 2: Thursday, March 23, 2017

7.15AM - 8AM	Opening Ceremony (Toronto I – II)						
8AM-9.30AM	<u>Plenary Talk-I</u> Topic: Issues and Challenges in Autonomous Microgrids Speaker: Dr. Mo El-Hawary Professor, Dalhousie University Room: Toronto I – II (Convention level)			<u>Plenary Talk-II</u> Topic: Multilevel Inverters for Induction Motor Drives and Grid Connected Applications Speaker : Dr. K. GopaKumar, Professor Indian Institute of Science (IISc) Room: Toronto I – II (Convention level)			
9.30AM-1.30PM	<u>Room no: 1</u> TT: Power Electronics and Energy Conversion-I Room: Jackson (Convention level)	<u>Room no: 2</u> TT:Control System, Robotics and Automation-I Room:Carmichael (Convention level)	<u>Room no: 3</u> TT: Renewable Energy Systems-I Room: Casson (Convention level)	<u>Room no: 4</u> TT: Signal and Image Processing and Computational Intelligence-I Room: Varley (Convention level)	<u>Room no: 5</u> TT:Control System, Robotics and Automation-II Room: Governor General Parlor (2nd floor)	<u>Room no: 6</u> TT:Control System, Robotics and Automation-III Room: Tom Thomson (Convention level)	<u>Room no: 7</u> TT: Power Systems and the Smart Grid -I Room: Governor General Main (2nd floor)
LUNCH BREAK (1.30PM-2.15PM)							
2.15PM-5.30PM	<u>Room no: 1</u> TT: Power Electronics and Energy Conversion-II Room: Jackson (Convention level)	<u>Room no:2</u> TT:Control System, Robotics and Automation-IV Room:Carmichael (Convention level)	<u>Room no:3</u> TT: Renewable Energy Systems- II Room: Casson (Convention level)	<u>Room no:4</u> TT: Motion Control and Mechatronics Room: Varley (Convention level)	<u>Room no:5</u> SS:Advanced Power Electronics for Power Quality in Distributed Systems SS:Impedance-Source Converters for Renewable Energy Conversion Systems Room: Governor General Parlor	<u>Room no:6</u> SS Wireless Sensor Networks Hardware Software Design Aspects for Industry: Room: Tom Thomson (Convention level) (2nd floor)	<u>Room no: 7</u> SS Human Factors and System Design in Factory Automation /Innovation and Commercialization in Industrial Electronics Room: Governor General Main (2nd floor)

Conference schedule (cont.):

Day 3: Friday, March 24, 2017

8AM-9.30AM	<u>Plenary Talk-III</u> Topic: Power Electronics for Microgrid Interface Speaker: Dr. Jih-Sheng (Jason) Lai, Virginia Polytechnic Institute and State University, Director, Future Energy Electronics Center Blacksburg, VA Room: Toronto I – II (Convention level)			<u>Plenary Talk-IV</u> Topic: High efficient energy conversion for mobile vehicles – contactless power transmission for electric train and series chopper power train for EV Speaker: Dr. Atsuo KAWAMURA Yokohama National University Room: Toronto I – II (Convention level)			
9.30AM-1.30PM	<u>Room no:1</u> TT: Power Electronics and Energy Conversion-III Room: Jackson (Convention level)	<u>Room no:2</u> TT: Industrial Automation, Communication and Informatics-I Room: Carmichael (Convention level)	<u>Room no: 3</u> TT: Signal and Image Processing and Computational Intelligence-II Room: Casson (Convention level)	<u>Room no:4</u> TT: Signal and Image Processing and Computational Intelligence-III Room: Varley (Convention level)	<u>Room no:5</u> TT: Power Systems and the Smart Grid -II Room: Governor General Parlor (2nd floor)	<u>Room no:6</u> TT: Electronic System on Chip and Real Time Embedded Control /Real-Time Aspects of Industrial Cyber-Physical Systems Room: Tom Thomson (Convention level)	<u>Room no 7:</u> TT: Power Electronics and Energy Conversion-IV Room: Governor General Main (2nd floor)
LUNCH BREAK (1.30PM -2.15PM)							
2.15PM-5.30PM	<u>Room no:1</u> TT: Industrial Automation, Communication and Informatics-II Room: Jackson (Convention level)	<u>Room no:2</u> TT: Cloud Computing, Data Analytics, and Software Engineering Room: Carmichael (Convention level)	<u>Room no:3</u> TT: Renewable Energy Systems-III TT: Energy Storage Room: Casson (Convention level)	<u>Room no:4</u> TT: Power Electronics and Energy Conversion-V Room: Varley (Convention level)	<u>Room no:5</u> SS IoT Technology for Industrial Applications /Dependable Wireless Communication for Industrial IoT Room: Governor General Parlor (2nd floor)	<u>Room no:6</u> SS Intelligent Control of Electrified Vehicles Room: Tom Thomson (Convention level)	<u>Room no 7:</u> TT: Industrial Automation, Communication and Informatics-III Room: Governor General Main
6PM-9.30PM	Gala Dinner (Toronto I – II)						

Day 4: Saturday, March 25, 2017

8AM-9.30AM	<u>Plenary Talk-V</u> Topic: Lightweight, Compact and High Performance Electric Vehicle Powertrain Speaker: Dr. Narayan Kar, Professor and NSERC CRC, University of Windsor. Room: Toronto I – II (Convention level)			<u>Plenary Talk-VI</u> Topic: Hardware in the loop testing, the key enabling technology for the rapid transformation of power systems and electrification transportation Speaker: Ivan Celanovic Chief Business Development Officer and Co-Founder of Typhoon-HIL, Inc. Room: Toronto I – II (Convention level)			
9.30AM-1.30 PM	<u>Room no:1</u> TT:Transportation Electrification and Vehicle Systems Room: Jackson (Convention level)	<u>Room no:2</u> TT:Electric Machines and Drives-I Room: Carmichael (Convention level)	<u>Room no:3</u> SS Industrial Wireless Networking Room: Casson (Convention level)	<u>Room no:4</u> TT:Electric Machines and Drives-II SS Energy Efficient Control of Converters and AC Drives Room: Tom Thomson (Convention level)	<u>Tutorial –VI</u> <u>Topic:</u> Tiny Energy-Harvesting Piezoelectric Chargers Speaker: Dr Gabriel A. Rincón-Mora Professor Georgia Institute of Technology Room: Varley (Convention level)		
LUNCH BREAK (1.30PM -2.15PM)							
2.15 PM-4.30 PM	<u>Room no:1</u> Room: Jackson (Convention level)	<u>Room no:2</u> Room: Carmichael (Convention level)	<u>Room no:3</u> SS Wireless Power Transfer for Industrial Electronics Room: Casson (Convention level)	<u>Room no:4:</u> TT: Sensors, Actuators, System Integration and Nano-Technologies Room : Tom Thomson (Convention level)			

**Day 1: 22nd March 2017
(Thursday)**

Day1: 22nd March 2017 (Wednesday)

Morning Session

Tutorials

TUTORIALS	SPEAKERS	TOPIC	TIME	ROOM
Tutorial-I	Dr. Sunny R Desai	Cyber Security threats, measures and control in a process plant	10 AM-1PM	Governor General Main (2 nd floor)
Tutorial-II	Dr. Muhammad Alam	Internet of Things for Sustainable Future Smart Buildings	10 AM-1PM	Richmond (3 rd floor)
Tutorial-III	Dr. Morcous	Dynamic Virtual Organizations Constriction Framework	10 AM-1PM	Governor General Parlor (2 nd floor)
		LUNCH BREAK	1PM-2PM	

Workshop	Dr. Nihal Kularatna and Dr. Marc Perron	Research-led Innovation into Commercialization	10 AM-1PM	Casson (conventional floor –one floor behind lobby)
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Day1: 22nd March 2017 (Wednesday)

Afternoon Session

TUTORIALS	SPEAKERS	TOPIC	TIME	ROOM
Tutorial-IV	Dr. Eric Cheng Professor and director of Power Electronics Research Centre of the university.	Battery / Super-capacitor Management Systems	2PM-5PM	Richmond (3 rd floor)
Tutorial-V	Dr. Mikael Gidlund, Professor in Computer Engineering Mid Sweden University Dr Johan Åkerberg senior principal scientist ABB Corporate Research Dr Tomas Lennvall, Senior Expert Swedish Institute for Computer Science	Industrial Wireless Networking – Status, Challenges and Opportunities	2PM-5PM	Governor General Parlor (2 nd floor)

**Day 2: 23rd March 2017
(Thursday)
Morning Session**

Day2: 23rd March 2017 (Thursday)
Morning Session

Plenary Talks:

PLENARY TALKS	SPEAKERS	TOPIC	TIME	ROOM
Plenary Talk-I	Dr. Mo El-Hawary Professor, Dalhousie University	Issues and Challenges in Autonomous Micro-grids	8.00 AM-8.45AM	Toronto I – II (convention level)
Plenary Talk-II	Dr. K. GopaKumar, Professor Indian Institute of Science (IISc)	Multilevel Inverters for Induction Motor Drives and Grid Connected Applications	8.45 AM-9.30AM	Toronto I – II (convention level)

**Day2: 23rd March 2017 (Thursday)
Morning Session**

**TT: Power Electronics and Energy Conversion –Session I
23rd March 2017**

**Session chairs: Dr. Hadi Kanaan, Dr. Hani Vahedi
Room: Jackson (convention level)**

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-007625	Three Phase One Switch Modular-Boost/Vienna Power Factor Corrected (PFC) Rectifier	9.30 AM
2.	TD- 000477	Microgrid Design with Renewable Energy Sources and Storage based on Power Conditioning System for Autonomous Island Operation	9.50 AM
3.	TD-007668	A Modular One-Switch Three-Phase Single Ended Primary Inductor (SEPIC) Rectifier	10.10 AM
4.	TD-004618	Experimental Stability Analysis of an Electromagnetic Levitation Melting System fed by a Series Resonant Converter	10.30AM
5.	TD-002429	Analysis and Control of a High Voltage Ratio and Low Stress DC-DC Converter for Fuel Cell Applications	10.50AM
		COFFEE BREAK	11.10AM-11.30AM
6.	TD-002909	Novel symmetric and asymmetric topology of multilevel inverter with reduced number of switches	11.30 AM
7.	TD-003646	A Novel DVR Based on Parallel-Connected Diode-Clamped Modular Multilevel Converters	11:50 AM
8.	TD-001368	Interleaved High Step-Up DC-DC Converter With Parallel-Input Series-Output Configuration and Voltage Multiplier Module	12:10 PM
9.	TD-004014	A Novel Series Input Parallel Output Soft-Switching High Step-Down Converter: Analysis and Implementation	12.30 PM
10.	TD-006335	Low-Power DC Energy Conversion System Based on a Novel Single-Switch Current-Fed Series-Parallel Resonant Converter	12.50 PM
		LUNCH BREAK	1.30 PM-2.15 PM

Day2: 23rd March 2017 (Thursday)
Morning Session

TT: Control System, Robotics and Automation –Session I
23rd March 2017

Session chairs: Dr. Eric Cheng and Dr. Sungbok Kim
Room: Carmichael (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-002585	Attitude Control of Re-entry Vehicles Using Adaptive SDRE Technique	9.30 AM
2.	TD-002658	Model based path planning using Q-Learning	9.50 AM
3.	TD-000132	Visual Servoing Based Pickup of Stationary Objects with a Dynamically Controlled Manipulator	10.10 AM
4.	TD-000876	Geogebra as a tool of design of ultrafast and robust controller	10.30AM
5.	TD-001589	Two Practical Simulators of a Traveling Mobile Robot Equipped with Optical Mice and Their Optimal Parameter Setting	10.50AM
		COFFEE BREAK	11.10AM-11.30AM
6.	TD-001686	Optimal collision free path planning for an autonomous articulated vehicle with two trailers	11.30 AM
7.	TD-001708	Bidirectional Fuzzy PD Control for Active Vibration Control of Building Structure	11:50 AM
8.	TD-002348	Adaptive Nonlinear Sliding Mode Control with a Nonlinear Sliding Surface for Feed Drive Systems	12:10 PM
9.	TD-002461	Minimizing rework costs in multistage production processes by modifying quality specification limits	12.30 PM
		LUNCH BREAK	1.30 PM-2.15 PM

Day2: 23rd March 2017 (Thursday)
Morning Session

TT: Renewable Energy Systems–Session I
23rd March 2017

Session chairs: Dr. Timothy M. Hansen and Dr. Adel Nasiri
Room: Casson (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-000698	Deterministic and Probabilistic Wind Power Forecasting Using a Hybrid Method	9.30 AM
2.	TD-005215	High Gain Grid Connected Single Stage Inverter System with Reactive Power Control	9.50 AM
3.	TD-001619	Generation Reliability Assessment of Stand-Alone Hybrid Power System - A Case Study	10.10 AM
4.	TD-002194	Using PHES to Facilitate Wind Power Integration In Isolated Systems – Case Study	10.30AM
5.	TD-004871	A Stand-Alone Hybrid Renewable Energy System Assessment Using Cost Optimization Method	10.50AM
		COFFEE BREAK	11.10AM-11.30AM
6.	TD-005649	Probabilistic Reliability Evaluation for Power Systems with High Penetration of Renewable Power Generation	11:30 AM
7.	TD-006696	A Novel Flicker-free AC-DC LED Driver Without Electrolytic Capacitor	11.50 AM
8.	TD-006718	Power density driven design methodology of power converters for photovoltaic applications	12.10 PM
		LUNCH BREAK	1.30 PM-2.15 PM

Day2: 23rd March 2017 (Thursday)
Morning Session

TT: Signal and Image Processing and Computational Intelligence –Session I
23rd March 2017

Session chairs: Dr. Luis Gomes and Dr. Najath
Room: Varley (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-000051	Driving Event Detection and Driving Style Classification using Artificial Neural Networks	9.30 AM
2.	TD-003921	Proportional Data Clustering using K-Means Algorithm: A comparison of different distances	9.50 AM
3.	TD-001058	Image Super-resolution via Weighted Random Forest	10.10 AM
4	TD-000701	Real-time signal frequency analysis in variable speed drives using the sparse fast Fourier transform (sFFT)	10.30AM
5.	TD-004499	Unsupervised Learning of Finite Mixtures using Scaled Dirichlet Distribution and its Application to Software Modules categorization	10.50AM
		COFFEE BREAK	11.10AM-11.30AM
6.	TD-001503	Combining convolutional neural network and self-adaptive algorithm to defeat synthetic multi-digit text-based CAPTCHA	11.30 AM
7.	TD-001805	Integrating Spectral and Spatial Features for Hyperspectral Image Classification Using Low-Rank Representation	11:50 AM
8.	TD-001813	Rolling Fault Diagnosis via Robust Semi-supervised Model with Capped $L_{2,1}$-Norm Regularization	12:10 PM
		LUNCH BREAK	1.30 PM-2.15 PM

Day2: 23rd March 2017 (Thursday)
Morning Session

TT: Control System, Robotics and Automation –Session II
23rd March 2017

Session chairs: Dr. Qining Wang and Dr.Yigeng Huangfu
Room: Governor General Parlor (2nd floor)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-008931	Design and control of a sit-to-stand assistive device via EtherCAT fieldbus	9.30 AM
2.	TD-004731	Sliding Mode Control of Under actuated Five-Link Biped Robot for Climbing Stairs Based on Real Human Data	9.50 AM
3.	TD-004804	Design and Optimization of a Tendon-driven Robotic Hand	10.10 AM
4.	TD-004162	A fermenter model based on neural networks experimentally validated	10.30AM
5.	TD-004022	Robust and High-mobility Walking Control for Uneven Terrain without Zero-Moment-Point Feedback	10.50AM
		COFFEE BREAK	11.10AM-11.30AM
6.	TD-005584	Cointegration Analysis for IMU in a Fixed-Wing UAV	11.30 AM
7.	TD-005789	Mechatronic Design of An Ankle-Foot Rehabilitation Robot for Children with Cerebral Palsy and Preliminary Clinical Trial	11:50 AM
8.	TD-005991	Analysis of Virtual Environment Haptic Robotic Systems for a Rehabilitation of Post-Stroke Patients	12:10 PM
9.	TD-003069	Uncertain nonlinear system control with Fuzzy Differential Equations and Z-numbers	12.30 PM
10.	TD-005568	Adaptive Genetic Neuro-Fuzzy Attitude Control for a Fixed Wing UAV	12.50 PM
		LUNCH BREAK	1.30 PM-2.15 PM

Day2: 23rd March 2017 (Thursday)
Morning Session

TT: Control System, Robotics and Automation –Session III
23rd March 2017

Session chairs: Dr. Vijay pasupuleti and Dr. Lingxue Ren
Room: Tom Thomson (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-007536	Modified State Predictive Control of Continuous-Time Systems with Input Delay	9.30 AM
2.	TD-007951	Event Triggered Control of Singularly Perturbed Linear System Based on Its Slow and Fast Model	9.50 AM
3.	TD-007994	A Cyber-Attack on Communication Link in Distributed Systems and Detection Scheme Based on H-Infinity Filtering	10.10 AM
4.	TD-008877	A Novel Adaptive Controller Using Radial Basis Function Neural Network for Wind Turbines	10.30AM
5.	TD-008923	Neural-Adaptive Back stepping for Flexible-Joint Robots with neither Extra Parameters, Extra Networks, nor Robust Terms	10.50AM
		COFFEE BREAK	11.10AM-11.30AM
6.	TD-009717	A New Geometric Solution for Inverse Kinematics of Hyper-Redundant Snake Robot used in Real-Time Teleoperated Surgery	11.30 AM
7.	TD-010677	FAT-based Robust Adaptive Control of Flexible-Joint Robots: Singular Perturbation Approach	11:50 AM
8.	TD-010324	Dynamic Grinding Manipulation Based on Removal Volume Rate Control	12:10 PM
9.	TD-011797	Adaptive Formation Control of Robot Swarms using Optimized Potential Field Method	12.30 PM
		LUNCH BREAK	1.30 PM-2.15 PM

Day2: 23rd March 2017 (Thursday)
Morning Session

TT: Power system and Smart Grid- Session I
23rd March 2017

Room: Governor General Main (2nd floor)

Session chairs: Dr. Babak Nahid and Dr. Hatem Zeineldin

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-000302	A Novel Generic Architecture for the Implementation of Demand Response Programs in a Smart Grid	9.30 AM
2.	TD-001341	Towards a framework for cyber attack impact analysis of electric cyber physical systems	9.50 AM
3.	TD-001953	Integration of Step Voltage Regulators in Islanded Microgrids	10.10 AM
4.	TD-002968	An Adaptive P-f Droop Approach for Micro-grid Transition Detection	10.30AM
5.	TD-002984	Smart Distribution Systems Stakeholders Analysis and The Effects on Long-Term Planning	10.50AM
		COFFEE BREAK	11.10AM-11.30AM
6.	TD-004391	Security and Reliability Analysis of A Use case in Smart Grid Substation Automation Systems	11.30 AM
7.	TD-005576	Coordinated Design of PSS and TCSC Controllers using Colonal selection algorithm for stability enhancement of dynamical power system	11:50 AM
8.	TD-004375	Secure Layer 2 Tunneling Over IP for GOOSE-based Logic Selectivity	12:10 PM
		LUNCH BREAK	1.30 PM-2.15 PM

**Day 2: 23rd March 2017
(Thursday)
Afternoon Session**

Day2: 23rd March 2017 (Thursday)
Afternoon Session

TT: Power Electronics and Energy Conversion–Session II
23rd March 2017

Session chairs: : Dr. Marcelo Perez and Dr. Mohameed Uddin
Room: Jackson (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-007633	Diode-Bridge Enclosed One Switch Three-Phase Power Factor Corrected (PFC) Ćuk Rectifier	2.15 PM
2.	TD-004693	Single-Input, Dual Polarity, Dual Output DC-DC Converter Implementation Based on the SCALDO Technique	2.35 PM
3.	TD-004766	Back-to-back MOSFET switches to reduce the losses in SCALDO implementation	2.55 PM
4.	TD-011363	Discrete Sliding Mode control of Single Phase LCL Grid-Inverter	3.15 PM
5.	TD-002356	Study on Quasi Resonant Grid-connected Current Compensation Method with Controllable Switching Period	3.35 PM
		COFFEE BREAK	3.55 PM-4.10 PM
6.	TD-005436	Modeling and generalization of parallel multilevel converter for the design of the closed loop controller	4.10 PM
7.	TD-005797	Virtual Delay Unit Based Digital $n\pm m$-order Harmonic Repetitive Controller for PWM Converter	4.30 PM

Day2: 23rd March 2017 (Thursday)
Afternoon Session

TT: Control System, Robotics and Automation –Session IV
23rd March 2017
Session chairs: Dr. Eric Cheng and Dr.Yigeng Huangfu
Room: Carmichael (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-002593	Fractional Order Sliding Mode Controller for a Solid-core Magnetic Bearing System	2.15 PM
2.	TD-001627	Local Stability of Flat-Foot Dynamic Bipedal Walking with Compliant Joints	2.35 PM
3.	TD-002844	Efficient control of automotive R744 heat pump using Nelder-Mead simplex method	2.55 PM
4.	TD-002895	Universal Dynamic Tracking Control Law for Mobile Robot Trajectory Tracking	3.15 PM
5.	TD-002925	Edge Deletion Algorithm for Minimally Rigid Graph using Consensus Protocols	3.35 PM
		COFFEE BREAK	3.55 PM-4.10 PM
6.	TD-003328	Multirate Output Feedback Based Discrete- Time Sliding Mode Control for Fractional Delay Compensation in NCSs	4.10 PM
7.	TD-003824	Experimental implementation of loop closure detection using data dimensionality reduction by spectral method	4.30 PM
8.	TD-005312	Simplified Decoupling based control for processes having complex EOTF dynamics	4.50 PM

Day2: 23rd March 2017 (Thursday)
Afternoon Session

TT: Renewable Energy Systems–Session II
23rd March 2017

Session chairs: Dr. Hatem Zeineldin and Dr.Ehab El-saadany
Room: Casson (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-007943	Active and Reactive Power Support of MV Distribution Systems using Battery Energy Storage	2.15 PM
2.	TD-009385	ECO: An IoT platform for wireless data collection, energy control and optimization of a miniaturized wind turbine cluster Power analysis and Energy model of IoT platform	2.35 PM
3.	TD-009628	Electromagnetic Induction Generator toward Energy Harvesting for Dynamic Systems	2.55 PM
4.	TD-009784	An Adaptive Transmission Line Protection and Modelling of Numerical Distance relay with Analog Antialiasing Filter	3.15 PM
5.	TD-010138	A Data Driven Model for Accurate SOC Estimation in EVs	3.35 PM
		COFFEE BREAK	3.55 PM-4.10 PM
6.	TD-010243	Automated Cleaning of Wind Turbine Blades With No Downtime	4.10 PM
7.	TD-010375	Nonlinear Control of permanent magnet synchronous generator Applied to Wind Energy Conversion System Grid-Connected	4.30 PM
8.	TD-010936	Improvement of Power Quality using an Average Model of a New Hybrid PV-DSTATCOM	4.50 PM

Day2: 23rd March 2017 (Thursday)
Afternoon Session

TT: Motion Control and Mechatronics
23rd March 2017

Session chairs: Dr. Hatem Zeineldin and Dr.Ehab El-saadany
Room : Varley (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-000965	Disturbance Suppression Considering a Circle System for Rotational Work	2.15 PM
2.	TD-001171	PI consensus-based motor synchronization with input saturations	2.35 PM
3.	TD-002372	Micro/Macro-Positioning Control of a Novel Contactless Active Robotic Joint Using Active Magnetic Bearing	2.55 PM
4.	TD-002623	Kinematics for distance-based roll and pitch estimation in unmanned aerial vehicles	3.15 PM
5.	TD-007307	Balloon actuators based on the dielectric elastomer	3.35 PM
		COFFEE BREAK	3.55 PM-4.10 PM
6.	TD-008427	Contact Force Control of Dual-Rotor Helicopter with Protect Frame	4.10 PM
7.	TD-011266	Weight Estimation System Using Surface EMG Armband	4.30 PM
8.	TD-011312	New State Observer Gain Tuning Methodology Based on the Stable Margin Theory	4.50 PM

Day2: 23rd March 2017 (Thursday)
Afternoon Session

SS: Advanced Power Electronics for Power Quality in Distributed Systems

Room: Governor General Parlor (2nd floor)

23rd March 2017

Session chairs : Dr. Reinaldo Tonkoski and Dr. Haitham Abu-Rub

S.NO	PAPER ID	PAPER TITLE	TIME
1.	TD-007323	Grid Tie Indirect Matrix Converter Operating with Unity Power Factor Under Double Space Vector Modulation	2.15 PM
2.	TD-010839	Modeling and Control to Enhance a Grid On/Off Operation of a Single-Phase System	2.35 PM
3.	TD-013153	A Simple Closed-Loop Control Scheme for Modular Multilevel Converters	2.55 PM
4.	TD-010812	An Enhanced Standalone Single-Phase System with a SPFLI with a Resonant Controller	3.15 PM
5.	TD-009105	Nine-level Asymmetrical Single Phase Multilevel Inverter Topology with Low Switching Frequency and Reduce Device Counts	3.35 PM
		COFFEE BREAK	3.55 PM-4.10 PM
6.	TD-013358	Harmonic Power Flow in Unbalanced and Polluted Radial Distribution Systems	4.10 PM
7.	TD-009911	Photovoltaic System Modeling and Simulation	4.30 PM
8.	TD-013013	A Hybrid Maximum Power Point Tracking Method for Photovoltaic Applications with Reduced Offline Measurements	4.50 PM

SS: Impedance-Source Converters for Renewable Energy Conversion Systems

Room: Governor General Parlor

23rd March 2017

1.	TD-011924	A Model Predictive Control for Low-Frequency Ripple Power Eliminate of Active Power Filter Integrated Single-Phase Quasi-Z-Source Inverter	5.10 PM
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Day2: 23rd March 2017 (Thursday)
Afternoon Session

SS Wireless Sensor Networks Hardware Software Design Aspects for Industry
Room: Tom Thomson (convention level)
Session chairs: Dr. Mert Bal and Dr. Appala Ray
23rd March 2017

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-011703	On-Body Signal Propagation in WBAN for Firefighter's Personal Protective Equipment: Statistical Characterization and Performance Assessment	2.15 PM
2.	TD-011789	We-Care: An IoT-based Health Care System for Elderly People	2.35 PM
3.	TD-012041	Distributed Home Automation System Based on IEC61499 Function Blocks and Wireless Sensor Networks	2.55 PM
4	TD-012467	SWSN: A Safe Wireless Sensor Network Module for Fail-Silent Systems	3.15 PM
5	TD-012114	A System for Monitoring Hand Hygiene Compliance based-on Internet-of-Things	3.35 PM
		COFFEE BREAK	3.55-4.10 PM
6.	TD-001724	Planar Inverted-F Antenna Design for a Fully Implantable Mechanical Circulatory Support System	4.10 PM
7.	TD-002003	A Reconfigurable Scheme of Wireless Power Transmission in Fully-enclosed Box	4.30 PM

Day2: 23rd March 2017 (Thursday)
Afternoon Session

SS Human Factors and System Design in Factory Automation
Room: Governor General Main (2nd floor)
Session chairs: Dr. Sho Yokata and Dr. Nihal kulratna
23rd March 2017

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-012629	Development of Standing Assistive Walker for Domestic Use	2.15 PM
2.	TD-009946	Proposal of Communication Robot With Simple Motions	2.35 PM
3.	TD-012297	SeTTLE code --- a 2D code for 6-dof localization and its implementation on Android smartphone	2.55 PM
4.	TD-012734	A Novel Bayesian Network-Based Fault Prognostic Method for Semiconductor Manufacturing Process	3.15 PM
5.	TD-012521	Inflatable Arm with Rigidity for Safe Robots - 1st report : Proposal of Joint Structure -	3.35 PM
		COFFEE BREAK	3.55-4.10 PM

SS Innovation and Commercialization in Industrial Electronics
Room: Governor General Main
23rd March 2017

1.	TD-012424	Smart Wearable Technologies: Current Status and Market Orientation Through a Patent Analysis	4.10 PM
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**Day 3:24th March 2017
(Friday)
Morning Session**

Day 3 : 24th March 2017 (Friday)
Morning Session

Plenary Talks:

PLENARY TALKS	SPEAKER	TOPIC	TIME	ROOM
Plenary Talk-III	Dr. Jih-Sheng (Jason) Lai, Virginia Polytechnic Institute and State University, Director, Future Energy Electronics Center Blacksburg, VA	Power Electronics for Micro-grid Interface	8.00 AM-8.45AM	Toronto I – II (convention level)
Plenary Talk-IV	Dr. Atsuo KAWAMURA Yokohama National University	High efficient energy conversion for mobile vehicles – contactless power transmission for electric train and series chopper power train for EV	8.45 AM-9.30AM	Toronto I – II (convention level)

Day 3 : 24th March 2017 (Friday)
Morning Session

TT: Power Electronics and Energy Conversion –Session III
24th March 2017

Session chairs: Dr. Farzad Rajaei Salmasi and Dr. Seima Shili
Room: Jackson (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-005401	Capacitor Voltage Balancing Method for Modular Multilevel Converter with Flying Capacitor Submodules	9.30 AM
2.	TD-002666	Photocatalytic Reactor with Multiphase Digital Control of Luminous Radiation	9.50 AM
3.	TD-006491	Microcontroller-Controlled Constant Current DC-DC Converter Modules for Driving a Multi-Wavelength LED Array	10.10 AM
4.	TD-011762	Validation of Inductors Sustainable-Saturation-Operation in Switching Power Supplies Design	10.30AM
5.	TD-000418	Design and Implementation of Feedback Controllers for A Power Converter Employing Three-Terminal Switch Mode	10.50AM
		COFFEE BREAK	11.10AM-11.30AM
6.	TD-003778	Study on Hybrid SVPWM sequences for Two level VSIs	11.30 AM
7.	TD-007986	New dc-link Balancing Algorithm for Multilevel Inverter in Photovoltaic System	11:50 AM
8.	TD-008281	Research on the Integrated Braking Energy Recovery Strategy Based on Super-capacitor Energy Storage	12:10 PM
9.	TD-008389	Research of the Loss and Gate Desaturation Control for RC-IGBT Used in Vehicle Power Converters	12:10 PM
10.	TD-008605	Programmable Digital IC for Sub-Nanosecond Dead-Time Adjustment Used in Synchronous Switching DC-DC Converters	12.50 PM
		LUNCH BREAK	1.30 -2.15 PM

**Day 3 : 24th March 2017 (Friday)
Morning Session**

**TT: Industrial Automation, Communication and Informatics –Session I
24th March 2017**

**Session chairs : Dr. Zhang Haijun and Dr. Xizheng Guo
Room: Carmichael (convention level)**

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-000787	An Intelligent Maintenance Planning Framework Prototype for Production Systems	9.30 AM
2.	TD-000795	Surveying the Features of Industrial SOAs	9.50 AM
3.	TD-001244	Development of an Engine Control Unit: Implementation of the Architecture of Tasks	10.10 AM
4.	TD-002038	A workflow support system for the process and automation engineering of production plants	10.30AM
5.	TD-009679	Translating IOPT Petri net models into PLC ladder diagrams	10.50AM
		COFFEE BREAK	11.10AM-11.30AM
6.	TD-004308	Handling Strategy of Dynamic Resource Events in Cyber-Physical Production Systems by a Multi-Criterial and Multi-Operational Approach	11.30 AM
7.	TD-004545	CLEAR - A Circuit Level Electric Appliance Radar for the Electric Cabinet	11:50 AM
8.	TD-005126	Towards an Integrated Plant Engineering Process Using a Data Conversion Tool for AutomationML	12:10 PM
9.	TD-005452	Model-Document Coupling in aPS Engineering: Challenges and Requirements Engineering Use Case	12.30 PM
		LUNCH BREAK	1.30 PM-2.15 PM

Day 3 : 24th March 2017 (Friday)
Morning Session

TT: Signal and Image Processing and Computational Intelligence –Session II
24th March 2017

Session chairs: Dr. Xianping Fu and Dr. Zheng Liu

Room: Casson (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-007293	The Demodulation Algorithm of Track Frequency Shift Signal Based on Windowed Interpolation FFT	9.30 AM
2.	TD-004537	Smoke Detection Using Simplified Descriptors of Video Information	9.50 AM
3.	TD-004049	When Sensor Meets Face: Facial Angle Model with Sensor Device	10.10 AM
4.	TD-004057	Convolutional Networks for Voting-based Anomaly Classification in Metal Surface Inspection	10.30AM
5.	TD-004103	Fusion-based underwater image enhancement by wavelet decomposition	10.50AM
		COFFEE BREAK	11.10AM-11.30AM
6.	TD-013242	A Quantitative Method for Selecting Denoising Filters, Based on a new Edge-Sensitive Metric	11.30 AM
		LUNCH BREAK	1.15 PM-2.15 PM

Day 3 : 24th March 2017 (Friday)
Morning Session

TT: Signal and Image Processing and Computational Intelligence –Session III
24th March 2017

Session chairs: Dr. Nizar Bouguila and Dr. Akshaya Mishra
Room: Varley (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-007331	Prognostics of Damage Growth in Composite Material Using Machine Learning Techniques	9.30 AM
2.	TD-009652	Multi-Class SVM Based Gradient Feature for Banknote Recognition	9.50 AM
3.	TD-010162	VeNICE: A Very Deep Neural Network Approach to No-Reference Image Assessment	10.10 AM
4.	TD-013285	Far-field light imaging in the presence of atmospheric turbulence with rotating anti-phase apertures: theoretical investigation	10.30AM
5.	TD-010448	Tactile Texture Recognition using Convolutional Neural Networks for Time-series data of Pressure and 6-axis Acceleration Sensor	10.50AM
		COFFEE BREAK	11.10AM-11.30AM
6.	TD-011681	Recent Advances in Features Extraction and Description Algorithms: A Comprehensive Survey	11.30 AM
7.	TD-011878	Detection and Tracking of Targets under Low SNR	11:50 AM
8.	TD-012025	On the Applicability of Inverse Perspective Mapping for the Forward Distance Estimation based on the HSV Color Map	12:10 PM
		LUNCH BREAK	1.30 PM-2.15 PM

Day 3 : 24th March 2017 (Friday)
Morning Session

TT: Power system and Smart Grid - Session II
24th March 2017

Session chairs: Dr. Hany Farag and Dr. Hatem Zeineldin
Room: Governor General Parlor (2nd floor)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-005681	Optimal Power Flow for Converter-Dominated AC/DC Hybrid Microgrids	9.30 AM
2.	TD-013234	Dynamic VAR Planning for Rotor-Angle and Short-Term Voltage Stability Enhancement	9.50 AM
3.	TD-007692	Taylor Series Approximation of ZIP Model for On-line Estimation of Residential Loads Parameters	10.10 AM
4.	TD-008869	Stabilization of A Distributed Generation Unit with Constant Power Load in Islanding Mode	10.30AM
5.	TD-008443	Domestic Peak-load Management Including Vehicle-to-Grid and Battery Storage Using an Artificial Neural Network	10.50AM
		COFFEE BREAK	11.10AM-11.30AM
6.	TD-009695	Classification of Generators Participating in the Bulk-Power Market	11.30 AM
7.	TD-011371	A semi-synthetic dataset development tool for household energy consumption analysis	11:50 AM
		LUNCH BREAK	1.30 -2.15 PM

Day 3 : 24th March 2017 (Friday)
Morning Session

TT: Electronic System on Chip and Real Time Embedded Control
24th March 2017 - Day 3
Session chairs: Dr. Apala Ray and Dr. Max Mauro Santos
Room : Tom Thomson (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-013293	Characterization of FPGA-Master ARM Communication Delays in Xilinx Zynq Devices	9.30 AM
2.	TD-001201	Hardware Implementation of Enhanced Virtual Release Advancing Algorithm for Real-Time Task Scheduling	9.50 AM
3.	TD-002887	Universal Real-Time Control Framework and Internet of Things for Fast-Paced Research and Development based Production Environments	10.10 AM
4.	TD-002917	National Instrument-Based Experimental Validation of a Nonlinear Real-Time Induction Motor Model in an EV Simulation System	10.30AM
5.	TD-004227	Control and Monitoring Systems Update for Thermal Printers	10.50AM
		COFFEE BREAK	11.10AM-11.30AM

SS Real-Time Aspects of Industrial Cyber-Physical Systems
24th March 2017 - Day 3
Room : Tom Thomson (convention level)

1.	TD-012327	Supporting Security Protocols on CAN-Based Networks	11:30 AM
2.	TD-012432	RTOS Support in C-Language Toolchains	11:50 AM

Day 3 : 24th March 2017 (Friday)
Morning Session

Power Electronics and Energy Conversion –Session IV
24th March 2017 - Day 3
Session chairs : Dr. Hadi Kannan and Dr. Hani vahedi
Room: Governor General Main (2nd floor)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-009172	Turn-off Energy Minimization for Soft-Switching Power Converters with Wide Bandgap Devices	9.30 AM
2.	TD-009431	Experimental Verification of Virtual Inertia in Diesel Generator based Microgrids	9.50 AM
3.	TD-009458	Stator-Flux-Oriented Sliding Mode Controller for DFIG with Variable Hysteresis Loop for Limiting Switch Frequency of Rotor-Side Power Converter	10.10 AM
4.	TD-009857	A Cost-Effective Technique for Dynamic Testing of DC-DC Power Supplies	10.30AM
5.	TD-010006	Investigation of Load Parasitic Inductance on Switching Performance of SiC MOSFETs in a Switching Power Pole	10.50AM
		COFFEE BREAK	11.10AM-11.30AM
6.	TD-010413	Application of Y-cap on Noise Attenuation in Low Power Part of Power Converter	11.30 AM
7.	TD-010715	A Filterless Single-Phase AC-AC Converter Based on T-Structure with Shared Ground and Continuous Input Current	11:50 AM
8.	TD-010774	IGBT Open-Circuit Fault Diagnosis Based on the Current Prediction in the Line-Side AC/DC Converter	12:10 PM
9.	TD-009881	A Generalized Formulation of SHM-PAM for Cascaded H-Bridge Inverters with Non-Equal DC Sources	12.30 PM
10.	TD-010332	General Impedance Representation of Passive Devices Based on Measurement	12.50 PM
		LUNCH BREAK	1.30 -2.15 PM

**Day 3:24th March 2017
(Friday)
Afternoon Session**

Day 3 : 24th March 2017 (Friday)
Afternoon Session

TT: Industrial Automation, Communication and Informatics –Session II
24th March 2017

Session chairs : Dr. Xizheng Guo and Dr.Chowdhury Andalib-Bin-Karim
Room: Jackson (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-006149	Research and Design of MVB Bus Administrator Based on SOPC Technology	2.15 PM
2.	TD-006165	A Flexible Architecture for Data Mining from Heterogeneous Data Sources in Automated Production Systems	2.35 PM
3.	TD-006564	Development of the Cross-Linked Integrated Information System	2.55 PM
4.	TD-006599	Generating metamodel-based descriptions of automation components in AutomationML	3.15 PM
5.	TD-003735	New Method for Definition of Organized Driving Chains in Industrial Product Model	3.35 PM
		COFFEE BREAK	3.55 PM-4.10 PM
6.	TD-005606	A Flexible Communication Stack Design for Time Sensitive Embedded Systems	4.10 PM

Day 3 : 24th March 2017 (Friday)
Afternoon Session

TT: Cloud Computing, Data Analytics, and Software Engineering
24th March 2017

Session chairs : Dr.Thu-Trang Nguyen and Dr. Kim Fung Tsang
Room : Carmichael (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-007358	Designing Combo Recharge Plans for Telecom Subscribers using Itemset Mining Technique	2.15 PM
2.	TD-010502	Job Seeker to Vacancy Matching using Social Network Analysis	2.35 PM
3.	TD-003743	Anomaly Detection in Self-Organizing Industrial Systems Using Pathlets	2.55 PM
4.	TD-004596	Improving Collaborative Filtering by Selecting an Effective User Neighborhood for Recommender Systems	3.15 PM
5.	TD-006246	Distributed Data Recovery Architecture Based on Schema Segregation	3.35 PM
		COFFEE BREAK	3.55 PM-4.10 PM
6.	TD-006661	Sensor SelComp, a Smart Component for the Industrial Sensor Cloud of the future	4.10 PM

Day 3 : 24th March 2017 (Friday)
Afternoon Session

Renewable Energy Systems–Session III
24th March 2017

Session chairs : Dr.Ali sari and Dr. Reinaldo Tonkoski
Room: Casson (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-011207	A novel control strategy for ORC system with unsteady heat source	2.15 PM
2.	TD-011258	A Flux coupling Type Superconducting Fault Current Limiter in a Transmission and Wind Energy system	2.35 PM
3.	TD-011606	New Adapted Forms of P-V Optimal Slope MPPT For a Better Grid Connected PV System Integration	2.55 PM
4.	TD-013056	Double Voltage Step-up Photovoltaic Microinverter	3.15 PM
5.	TD-012262	Explicit Double-exponential Modeling Methods for Photovoltaic Cells	3.35 PM
		COFFEE BREAK	3.55 PM-4.10 PM

TT: Energy Storage
24 March 2017
Room: Casson

1.	TD-010545	Application of Two Stage Rate Limit Control for Different Operating Modes of Battery	4.10 PM
2.	TD-012726	Online Lithium-ion Batterie Health Monitoring Using Balancing Circuits	4.30 PM

Day 3 : 24th March 2017 (Friday)
Afternoon Session

Power Electronics and Energy Conversion –Session V
24th March 2017

Session chairs: Dr. Marcelo Perez and Dr. Appa rao dekka
Room: Varley (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-004286	Predictive Current Control for Neutral-Point Voltage Regulation and Load Balancing In Three-Level Grid Connected Compensator	2.15 PM
2.	TD-006017	Exploring a Modulation Strategy by Experiments for Modular Multilevel Converter in Faulty Operation	2.35 PM
3.	TD-011169	Multi-cell Solid-State Transformer with Extended Functions	2.55 PM
4.	TD-013099	Medium Voltage 4-level Double-Star Multilevel Converter under Model Predictive Control	3.15 PM
5.	TD-006483	Comparative Assessment of Three-Phase Transformerless Grid-Connected Solar Inverters	3.35 PM
		COFFEE BREAK	3.55 PM-4.10 PM
6.	TD-013188	Operating Region of a Three-Phase Quasi-Z-Source Inverter	4.10 PM

Day 3 : 24th March 2017 (Friday)
Afternoon Session

SS IoT Technology for Industrial Applications
Session Chairs: Dr. Muhammad Alam and Dr. Apala Ray
Room: Governor General Parlor (2nd floor)
24th March 2017

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-013005	A Session Hijacking Attack on Physical Layer Key Generation Agreement	2.15 PM
2.	TD-012939	Characterization of non-line-of-sight paths using 802,15,4a	2.35 PM
3.	TD-013048	Energy Efficient Irrigation Scheduling System Based on the ISSO/IEC/IEEE 21451 Standards	2.55 PM
4.	TD-007722	Between a Control Area Network and a Cyber Physical System	3.15 PM
5.	TD-012084	Bring Your Own Key for the Industrial Internet of Things	3.35 PM
		COFFEE BREAK	3.55 PM-4.10 PM
6.	TD-008346	A Performance Evaluation of Distributed Control with STDMA Switches	4.10 PM

SS Dependable Wireless Communication for Industrial IoT
Room: Governor General Parlor (2nd floor)
24th March 2017 (4.50 PM-5.10PM)

1.	TD-012742	Orchestration of Containerized Micro services for IIoT using Docker	4.50 PM
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Day 3 : 24th March 2017 (Friday)
Afternoon Session

SS Intelligent Control of Electrified Vehicles
Room: Casson (convention level)
Session Chairs: Dr. Ramesh Tripathi and Dr. Beena nalini
24th March 2017

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-011754	Fuzzy Sliding Mode Control of Networked Control Systems: Application to Networks Electric Vehicles	2.15 PM
2.	TD-008583	An Analysis on Plug-in Electric Vehicle's Operating Cost Considering Cost of Battery Capacity Degradation	2.35 PM
3.	TD-006084	MPC-based Power Management Strategy for a Series Hybrid Electric Tracked Bulldozer	2.55 PM
4.	TD-002046	Manufacturing Ontology Development	3.15 PM
		COFFEE BREAK	3.55 PM-4.10 PM

Day 3 : 24th March 2017 (Friday)
Afternoon Session

TT: Industrial Automation, Communication and Informatics –Session III
24th March 2017

Session chairs : Dr. Zhang Haijun and Dr.Bita Arabsalmanabadi
Room: Room: Governor General Main (2nd floor)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-011002	Delay Attack versus Clock Synchronization – A Time Chase	2.15 PM
2.	TD-011452	Unified Analytical Modeling of the Error Rates and the Ergodic Channel Capacity in η-μ Generalized Fading Channels with Integer μ and Maximal Ratio Combining Receiver	2.35 PM
3.	TD-006106	Integration of Existing Ethernet Devices into Time-Division-Multiplexing Ethernet	2.55 PM
4.	TD-008826	Evaluation of a Formalized Encryption Library for Safety-Critical Embedded Systems	3.15 PM
5.	TD-008834	Re-transmission Diversity with Fast Channel Selectivity for Reliable Industrial WLAN System	3.35 PM
		COFFEE BREAK	3.55 PM-4.10 PM
6.	TD-002747	A comparison of neural network-based methods for load forecasting with selected input candidates	4.10 PM

**Day 4:25th March 2017
(Saturday)
Morning Session**

Day 4 : 25th March 2017 (Saturday)
Morning Session

Plenary Talks:

PLENARY TALKS	SPEAKERS	TOPIC	TIME	ROOM
Plenary Talk-V	Dr. Narayan Kar, Professor and NSERC CRC, University of Windsor.	Lightweight, Compact and High Performance Electric Vehicle Powertrain	8.00 AM-8.45AM	Toronto I – II (convention level)
Plenary Talk-VI	Ivan Celanovic Chief Business Development Officer and Co-Founder of Typhoon-HIL, Inc.	Hardware in the loop testing, the key enabling technology for the rapid transformation of power systems and electrification of transportation	8.45 AM-9.30AM	Toronto I – II (convention level)

Day 4 : 25th March 2017 (Saturday)
Morning Session

Tutorials :

TUTORIALS	SPEAKER	TOPIC	TIME	ROOM
Tutorial -VI	Dr. Gabriel A. Rincón-Mora Professor Georgia Institute of Technology	Tiny Energy-Harvesting Piezoelectric Chargers	10.00 AM-1.00PM	Varley (convention level)

Day 4 : 25th March 2017 (Saturday)**Morning Session****Transportation Electrification and Vehicle Systems****25th March 2017****Session chairs : Dr. Fei. Gao and Dr. Farzad Rajaei Salmasi****Room: Jackson (convention level)**

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-006955	Design of a New Switched-Stator BLDC Drive to improve the energy efficiency of an Electric Vehicle	9.30 AM
2.	TD-002364	Single-Phase Bidirectional Integrated Onboard Battery Charger for EVs Featuring a Battery-Supercapacitor Hybrid Energy Storage System	9.50 AM
3.	TD-004529	Computation of Rectifier Transformers employed in Railway Networks	10.10 AM
4.	TD-004979	An Integrated Topology for On-board Charger and Driven of Electric Vehicle	10.30AM
5.	TD-000027	Comparative Analysis of DITC and DTFC of Switched Reluctance Motor for EV Application	10.50AM
		COFFEE BREAK	11.10 AM-11.30 AM
6.	TD-008044	Comparison between Isolated and Non-Isolated DC/DC Converters for Bidirectional EV Chargers	11.30 AM
7.	TD-008117	Adaptive, Sparse, and Multi-rate LQR Control of an MVDC Shipboard Power System with Constant Power Loads	11:50 AM
8.	TD-009644	A Neural Network for Predicting Unintentional Lane Departures	12:10 PM
9.	TD-009768	Technical and economical evaluation of hybrid flash-charging stations for electric public transport	12.30 PM
10.	TD-011916	Probabilistic Approach to Analyze the Impact of DG Penetration with Electric Vehicles in Distribution Network	12.50 PM
11.	TD-005258	Design of a Bi-direction Power Converter for Charging Pile based on V2G	1.10 PM
		LUNCH BREAK	1.30PM-2.15PM

Day 4 : 25th March 2017 (Saturday)
Morning Session

TT: Electric Machines and Drives–Session I
25th March 2017

Session chairs: Dr. Narayan Kar and Dr. Xiaodong Liang
Room: Carmichael (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-008567	Initial Study on the Magnetic Field Characteristics of a Novel Magnetized Air Scroll Expander	9.30 AM
2.	TD-000329	Stacked Multilevel Inverter fed Six Phase Induction Motor with Reduced DC Link and Lower Voltage Devices	9.50 AM
3.	TD-000485	Design of an Adaptive Estimator for the Speed and Load Torque of the PMSM using an Extended Dynamic Model	10.10 AM
4.	TD-000671	Design of a Pseudo-MRAS Sliding Mode Observer with Double Feedback for Estimation of the Rotor Time Constant of the Induction Motor	10.30AM
5.	TD-002232	Method research of permanent magnet synchronous motor position sensorless control over full speed range	10.50AM
		COFFEE BREAK	11.10 AM-11.30 AM
6.	TD-002542	Electromagnetic Design Optimization and Sensitivity Analysis for IPM Synchronous Motors	11.30 AM
7.	TD-004111	A Five speed 45-Phase Induction motor Drive with Pole Phase Modulation for Electric Vehicles	11:50 AM
8.	TD-009709	Intelligent Flux Predictive Control through Online Stator Inter-turn Fault Detection for Fault-tolerant Control of Induction Motor	12:10 PM
9.	TD-007498	Sensorless Control of a SynRM for the Whole Speed Range Based on a Nonlinear Observability Analysis	12.30 PM
		LUNCH BREAK	1.30PM -2.15 PM

Day 4 : 25th March 2017 (Saturday)**Morning Session****SS Industrial Wireless Networking****25th March 2017****Session chairs : Dr. Johan Akerberg and Dr. Mikael Gidlund****Room: Casson (convention level)**

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-010154	Will 5G Become Yet Another Wireless Technology for Industrial Automation	9.30 AM
2.	TD-011673	Hybrid MAC Mechanism for Energy Efficient Communication in IEEE 802,11ah	9.50 AM
3.	TD-001511	Feasibility of Large Antenna Arrays Towards Low Latency Ultra Reliable Communication	10.10 AM
4.	TD-011959	Evaluation of a Software Defined GFDM Implementation for Industry 4,0 Applications	10.30AM
5.	TD-011932	Augmented Reality based on Edge Computing using the Example of Remote Live Support	10.50AM
		COFFEE BREAK	11.10AM-11.30AM
6.	TD-012076	Reliable Wireless Communication and Positioning enabling Mobile Control and Safety Applications in Industrial Environments	11.30 AM
7	TD-001139	Universal Internet of Things Solution: Protocol Independent	11:50 AM
8.	TD-005371	A Zero Human-Intervention Provisioning for Industrial IoT Devices	12:10 PM
9.	TD-012122	A Sub-Microsecond Clock Synchronization Protocol for Wireless Industrial Monitoring and Control Networks	12:30 PM
10.	TD-004847	Suitability of WiFi Based Communication Devices in Low Power Industrial Applications	12.50 PM
		LUNCH BREAK	1.30 -2.15 PM

Day 4 : 25th March 2017 (Saturday)

Morning Session

TT: Electric Machines and Drives–Session II

25th March 2017

Session chairs: Dr. Chandan Chakraborty and Dr. Haitham Abu-Rub

Room: Tom Thomson (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-000043	Investigation into the Effect of Unbalanced Supply Voltage on Detection of Stator Winding Turn Fault in PMSM	9.30 AM
2.	TD-008664	A Lorentz Actuator for High-Precision Magnetically Levitated Planar Systems	9.50 AM
3.	TD-005118	Development of a Methodology for Bearing Fault Scrutiny and Diagnosis using SVM	10.10 AM
4.	TD-009814	Improved Voltage Regulation of Dual Stator Induction Generator using Series and Shunt Capacitors	10.30AM
5.	TD-010499	Model Predictive Control of SPMSM based on FPGA and processor	10.50AM
		COFFEE BREAK	11.10 AM-11.30 AM
6.	TD-011231	Novel Back EMF Zero Difference Point Detection Based Sensorless Technique for BLDC Motor	11.30AM

SS Energy Efficient Control of Converters and AC Drives

25th March 2017

Room: Tom Thomson

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-008788	Open Switch Fault Diagnosis Method for an AC/DC Line-Side Converter	11.50 AM
		LUNCH BREAK	1.30 -2.15 PM

**Day 4:25th March 2017
(Saturday)
Afternoon Session**

Day 4 : 25th March 2017 (Saturday)
Afternoon Session

SS Wireless Power Transfer for Industrial Electronics
Session chairs : Dr. Kunwar Aditya and Dr. Kishore Naik Mude
Room: Casson (convention level)
25th March 2017

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-012289	In-motion Wireless Power Transfer: Technology, Infrastructure, Challenges and Market Scenario	2.00 PM
2.	TD-012068	Interleaved DC/DC Charger for Wireless Power Transfer	2.20 PM
3.	TD-012246	Optimal Design of Resonant Coupled Multi-Receiver Wireless Power Transfer Systems	2.40 PM
4.	TD-011851	Inductive Characteristics of Asymmetrical Coils for Wireless Power Transfer	3.00 PM
		COFFEE BREAK	3.40 - 3.55 PM

Day 4 : 25th March 2017 (Saturday)
Afternoon Session

TT Sensors, Actuators, System Integration and Nano-Technologies
25th March 2017

Session chairs : Dr.Yigeng Huangfu and Dr. Zhang Haijun
Room : Tom Thomson (convention level)

S.No	PAPER ID	PAPER TITLE	TIME
1.	TD-001457	Double Stage FPCB Scanning Micromirror for Laser Pattern Generation	2.00 PM
2.	TD-005819	Design and Development a Water Quality Monitoring Network and System	2.20 PM
3.	TD-007404	Tactile and Proximity Sensor Using Self-Capacitance Measurement on Curved Surface	2.40 PM
4.	TD-007501	Experimenting Capacitive Sensing Technique for Structural Integrity Assessment	3.00 PM
5.	TD-008893	Reduction of drift impact in gas sensor response to improve quantitative odor analysis	3.20 PM
		COFFEE BREAK	3.40 - 3.55 PM

Day2: 23rd March 2017 (Thursday)

Opening Ceremony (Toronto I-II) (7.15AM-8AM)

Plenary Talks:

PLENARY TALKS	SPEAKERS	TOPIC	TIME	ROOM
Plenary Talk-I	Dr. Mo El-Hawary Professor, Dalhousie University	Issues and Challenges in Autonomous Micro-grids	8.00 AM-8.45AM	Toronto I – II (convention level)
Plenary Talk-II	Dr. K. GopaKumar, Professor Indian Institute of Science (IISc)	Multilevel Inverters for Induction Motor Drives and Grid Connected Applications	8.45 AM-9.30AM	Toronto I – II (convention level)

9.30AM-1.30PM	<u>Room no: 1</u> TT: Power Electronics and Energy Conversion-I Room: Jackson (Convention level)	<u>Room no: 2</u> TT:Control System, Robotics and Automation-I Room:Carmichael (Convention level)	<u>Room no: 3</u> TT: Renewable Energy Systems-I Room: Casson (Convention level)	<u>Room no: 4</u> TT: Signal and Image Processing and Computational Intelligence-I Room: Varley (Convention level)	<u>Room no: 5</u> TT:Control System, Robotics and Automation-II Room: Governor General Parlor (2 nd floor)	<u>Room no: 6</u> TT:Control System, Robotics and Automation-III Room: Tom Thomson (Convention level)	<u>Room no: 7</u> TT: Power Systems and the Smart Grid -I Room: Governor General Main (2 nd floor)
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LUNCH BREAK (1.30PM-2.15PM)

2.15PM-5.30PM	<u>Room no: 1</u> TT: Power Electronics and Energy Conversion-II Room: Jackson (Convention level)	<u>Room no:2</u> TT:Control System, Robotics and Automation-IV Room:Carmichael (Convention level)	<u>Room no:3</u> TT: Renewable Energy Systems- II Room: Casson (Convention level)	<u>Room no:4</u> TT: Motion Control and Mechatronics Room: Varley (Convention level)	<u>Room no:5</u> SS:Advanced Power Electronics for Power Quality in Distributed Systems SS:Impedance-Source Converters for Renewable Energy Conversion Systems Room: Governor General Parlor	<u>Room no:6</u> SS Wireless Sensor Networks Hardware Software Design Aspects for Industry: Room: Tom Thomson (Convention level) (2 nd floor)	<u>Room no: 7</u> SS Human Factors and System Design in Factory Automation /Innovation and Commercialization in Industrial Electronics Room: Governor General Main (2 nd floor)
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