Future Technologies Conference (FTC) 2018

#FTC2018

13-14 November 2018, Vancouver, Canada

FTC 2018

13-14 November 2018

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CONFERENCE AGENDA

DAY 1 (13th November)

8:00 am – 8:30 am	**DELEGATES CHECK-IN**
8:30 am – 10:30 am	**KEYNOTE TALKS** Richard New, Western Digital Perry Lea, Microsoft
10:30 am – 11:00 am	**POSTERS/ DEMOS/ NETWORKING BREAK**
11:00 am – 12:45 pm	**PAPER PRESENTATIONS** Session 1 - Smart Cities Session 2 - Communication Systems Session 3 - e-Learning Session 4 - Social Computing
12:45 pm – 1:30 pm	**LUNCH**
1:30 pm – 3:15 pm	**PAPER PRESENTATIONS** Session 5 - Intelligent Systems Session 6 - Communication Systems Session 7 - e-Learning Session 8 - Electronics
3:15 pm – 3:30 pm	**POSTERS/ DEMOS/ NETWORKING BREAK**
3:30 pm – 5:30 pm	**PAPER PRESENTATIONS** Session 9 - Intelligent Systems Session 10 - Healthcare Technologies Session 11 - Data Science Session 12 - Electronics

DAY 2 (14th November)

8:00 am – 8:30 am	**DELEGATES CHECK-IN**
8:30 am – 10:30 am	**KEYNOTE TALKS** Murray Thom, D-Wave Peter Mueller, IBM Richard Vaughan, Simon Fraser University
10:30 am – 11:00am	**POSTERS/ DEMOS/ NETWORKING BREAK**
11:00 am – 12:45 pm	**PAPER PRESENTATIONS** Session 14 - Internet of Things Session 15 - Technology Trends Session 16 - Security and Privacy
12:45 pm – 1:30 pm	**LUNCH**
1:30 pm – 3:00 pm	**PAPER PRESENTATIONS** Session 17 - Intelligent Systems Session 18 - Internet of Things Session 19 - Machine Vision Session 20 - Security and Privacy
3:00 pm - 3:15 pm	**POSTERS/ DEMOS/ NETWORKING BREAK**
3:15 pm – 5:00 pm	**PAPER PRESENTATIONS** Session 21 - Communication Systems Session 22 - Software Engineering Session 23 - e-Business Session 24 - Security and Privacy
5:00 pm – 5:30 pm	**CONFERENCE CLOSING**

13th NOVEMBER (11:00 am – 12:45 pm)

PAPER PRESENTATIONS

Session 1 - Smart Cities Session Chair: Shubhalaxmi Kher (Room: Pinnacle I)	Session 2 - Communication Systems Session Chair: Michael Filimowicz (Room: Pinnacle II)	Session 3 - e-Learning Session Chair: David Kaufman (Room: Shaughnessy I)	Session 4 - Social Computing Session Chair: Houwei Cao (Room: Shaughnessy II)
271 - Exploring the Quantified Experience: Finding Spaces for People and their Voices in Smarter, More Responsive Cities (Presenter: H. Patricia McKenna)	478 - A PAL in need is a PAL indeed: An Opioid Use Case for a Peer Alerting Lifeline (PAL) to Mitigate Risk Exposure (Presenter: Nico Preston)	407 - Design and Evaluation of an Online Digital Storytelling Course for Seniors (Presenter: David Kaufman)	220 - Predicting Disease Outbreaks Using Social Media: Finding Trustworthy Users (Presenter: David Liau)
276 - Prediction of Traffic-Violation Using Data Mining Techniques (Presenter: Md Amiruzzaman)	381 - Towards Filling the Gap of Routing Changes in Software-Defined Networks (Presenter: Ali Malik)	280 - Immersive and Collaborative Classroom Experiences in Virtual Reality (Presenter: Derek Jacoby)	267 - Twitter Analytics for Disaster Relevance and Disaster Phase Discovery (Presenter: Abeer Abdel Khaleq)
356 - Economic and Performance Based Approach to the Distribution System Expansion Planning Problem under Smart Grid Framework (Presenter: Hatem Zaki)	205 - Zero-copy Receive for Virtualized Network Devices (Presenter: Joel Nider)	459 - An Affective Sensitive Tutoring System for Improving Student's Engagement in CS (Presenter: Ruhe Agada)	239 - Detecting Comments Showing Risk for Suicide in YouTube (Presenter: Qijin Cheng)
368 - Connecting to Smart Cities: Analyzing Energy Times Series to Visualize Monthly Electricity Peak Load in Residential Buildings (Presenter: Shamaila Iram)	174 - An Incentive Compatible Mechanism for Lowest-cost Routing (Presenter: Donghong Qin)	115 - Accessibility and New Technology MOOC- Disability and Active Aging: Technological Support (Presenter: Samuel Navarro Ortega)	378 - Incorporating Code-switching and Borrowing in Dutch-English Automatic Language Detection on Twitter (Presenter: Samantha Kent)
353 - An Intelligent Traffic Management System Based on the Wi-Fi and Bluetooth Sensing and Data Clustering (Presenter: Shahrzad Jalali)	34 - Estimation of Phase, Range, Doppler of Targets using Maximum Likelihood Estimator (Presenter: Nauman Baig)	77 - Digital Collaboration with a Whiteboard in Virtual Reality (Presenter: Markus Petrykowski)	65 - A Study of Measurement of Audience in Social Networks (Presenter: Mohammed Al-Maitah)
194 - Dynamic Evolution of Simulated Autonomous Cars in the Open World through Tactics (Presenter: Germán H Alférez)	479 - Solving Startup-Delay-QoE Dilemma for Video Streaming Services in 5G Networks (Presenter: Khadija Bouraqia)	108 - Teaching Practices with Mobile in Different Contexts (Presenter: Patrícia Alejandra Behar)	
	117 - Improving Vacant Channel Utilization in Shared TV White Space Spectrum (Presenter: George Atta-Boateng)	272 - Insights into Design of Educational Games: Comparative Analysis of Design Models (Presenter: Rabail Tahir)	

13th NOVEMBER (1:30 pm – 3:15 pm)

PAPER PRESENTATIONS

Session 5 - Intelligent Systems Session Chair: Sudhanshu Semwal (Room: Pinnacle I)	Session 6 - Communication Systems Session Chair: Nico Preston (Room: Pinnacle II)	Session 7 - e-Learning Session Chair: David Kaufman (Room: Shaughnessy I)	Session 8 - Electronics Session Chair: Hatem Zaki (Room: Shaughnessy II)
293 - Music Recommender According to the User Current Mood (Presenter: Murtadha Al-Maliki)	319 - Bandwidth Estimation for Admission Control in MANET: Review and Conceptual MANET Admission Control Framework (Presenter: Folayo Aina)	50 - Some Barriers Regarding the Sustainability of Digital Technology for Long-term Teaching (Presenter: Oliver Moravcik)	15 - Design and Analysis of Cycloconverter to Run Split Phase Induction Motor using PWM Control (Presenter: Shubhalaxmi Kher)
365 - Intelligent Seating System with Haptic Feedback for Active Health Support (Presenter: Sebastian Kampa)	410 - Proof of Human Engagement on Decentralized Networks (Presenter: Shiyu Zhang)	223 - Development of Collaborative Virtual Learning Environments for Enhancing Deaf People's Learning in Jordan (Presenter: Ahmad Al-Jarrah)	442 - Electromagnetic Coupling Optimization by Coil Design Improvements for Contactless Power Transfer of Electric Vehicles (Presenter: Junlong Duan)
219 - Genetic Algorithm based on Enhanced Selection and Log-scaled Mutation Technique (Presenter: Nilesh Patel)	76 - Technological and Regulatory Developments for Electromagnetic Transmission into the Millimeter Wave and Terahertz Wave Spectrum (Presenter: Salim Hanna)	462 - Multimedia Interactive Boards as a Teaching and Learning Tool in Environmental Education: A Case-Study with Portuguese Students (Presenter: Cecília M. Antão da Silva)	346 - Comparative Study on Standardized Tests to Determine Energy Efficiency in Three-Phase Induction Motors Operating at Partial Load (Presenter: Alejandro Paz)
118 - Predicting head-to-head Games with a Similarity Metric and Genetic Algorithm (Presenter: Arisoa S. Randrianasolo)	120 - Investigation of the User Redial and its Effect on the Network Congestion in Call Admission: A Case Study in Ghana (Presenter: Willie Ofosu)	375 - Improving the use of Virtual Worlds in Education through Learning Analytics: A State of Art (Presenter: Fredy Gavilanes-Sagnay)	253 - On the Performability of Fault-Tolerant NCSs with Video Sensors (Presenter: Hassan Halawa)
481 - Implementing Dual Marching Square using Visualization Tool Kit (VTK) (Presenter: Sudhanshu Semwal)	6 - Pixelphonics: Colocating Sound and Image in Media Displays (Presenter: Michael Filimowicz)	255 - Game Framework to Improve English Language Learners' Motivation and Performance (Presenter: Abdulmonem Shennat)	93 - Real Time Comparative Analysis of Several Intelligent Speed Controllers Applied to the Direct Torque Control of Asynchronous Machine (Presenter: Chaymae Laoufi)
488 - Procedural 3D Tile Generation for Level Design (Presenter: Sudhanshu Semwal)	97 - Network Design, Simulations and Improvement, using Riverbed Academic Edition, Version 17.5 at the Universities: A Case Study of University of Technology, Jamaica (Presenter: Christopher Udeagha)	343 - Learning Analytics Research: Using Meta-Review to Inform Meta-Synthesis (Presenter: Brett Shelton)	113 - Honey Bees Repellent Device: Preliminary Experimental Research with the Bees Hearing Sensitivity (Presenter: David Costa)
259 - A Collaborative Multi-agent System for Oil Palm Pests and Diseases Global Situation Awareness (Presenter: Salama Alabdullah)	448 - Performance Analysis of Software Defined Network with Three Controllers (Presenter: Vijay Kumar Chaurasiya)	155 - Lecturing to Your Students: Is Their Heart In It? (Presenter: Aidan McGowan)	

13th NOVEMBER (3:30 pm – 5:30 pm)

PAPER PRESENTATIONS

Session 9 - Intelligent Systems Session Chair: Shubhalaxmi Kher (Room: Pinnacle I)	Session 10 - Healthcare Technologies Session Chair: Sudhanshu Semwal (Room: Pinnacle II)	Session 11 - Data Science Session Chair: Nico Preston (Room: Shaughnessy I)	Session 12 - Electronics Session Chair: Hatem Zaki (Room: Shaughnessy II)
414 - Towards the Blockchain-enabled Offshore Wind Energy Supply Chain (Presenter: Samira Keivanpour) 103 - Taxonomy and Resource Modeling in Combined Fog-to-Cloud Systems (Presenter: Souvik Sengupta) 392 - Biometric System based on Kinect Skeletal, Facial and Vocal Features (Presenter: Gaddi Blumrosen) 231 - Second-Generation Web Interface to Correct ASR Output (Presenter: Oldrich Kruza) 341 - Multi-layer Mangrove Species Identification (Presenter: Abdullah Zawawi Talib) 261 - Using Mouse Dynamics for Continuous User Authentication (Presenter: Osama A. Salman)	133 - Predicting Concussion Symptoms using Computer Simulations (Presenter: Milan Toma) 428 - Blockchain Revolution in the Healthcare Industry (Presenter: Sergey Avdoshin) 427 - Applying Waterjet Technology in Surgical Procedures (Presenter: Georgre Abdou) 215 - Integrating Markov Model, Bivariate Gaussian Distribution and GPU based Parallelization for Accurate Real-time Diagnosis of Arrhythmia Subclasses (Presenter: Arvind Bansal) 359 - Array of Things for Smart Health Solutions Injury Prevention, Performance Enhancement and Rehabilitation (Presenter: SMN Arosha Senanayake) 84 - Non-Subsampled Complex Wavelet Transform based Medical Image Fusion (Presenter: Sanjay Talbar) 435 - Effective Reversible Data Hiding in Electrocardiogram Based on Fast Discrete Cosine Transform (Presenter: Ching-Yu Yang) 287 - Identification of Glioma from MR Images using Convolutional Neural Network (Presenter: Nidhi Saxena)	224 - Visualization tool for JADE platform (JEX) (Presenter: Halim Djerroud) 208 - Implementing Clustering and Classification Approaches for Big Data with MATLAB (Presenter: Katrin Pitz) 345 - Impact of Context on Keyword Identification and Use in Biomedical Literature Mining (Presenter: Venu Dasigi) 7 - A Systematic Review of Time Series based Spam Identification Techniques (Presenter: Jennifer Yeh) 438 - A Cloud-Based Decision Support System Framework for Hydropower Biological Evaluation (Presenter: Hongfei Hou) 201 - CNN with Limit Order Book Data for Stock Price Prediction (Presenter: Jaime Nino) 454 - An Attempt to Forecast All Different Rainfall Series by Dynamic Programming Approach (Presenter: Swe Swe Aung) 270 - Decision Tree-based Approach for Defect Detection and Classification in Oil and Gas Pipelines (Presenter: Abduljalil Mohamed)	413 - RF Biometric for Wireless Devices (Presenter: Page Heller) 433 - A Digital Transmitter Architecture with Enhanced Delay, Power and Noise Performance for Sensors and IoT Applications (Presenter: Mohsen Sarraf) 425 - Remotely Operated Underwater Vehicle (ROV) using Wireless Communication Protocol over a Floating Unit (Presenter: Mustajab Ahmad) 39 - Robust Control of Physiologically Relevant Sit-to-Stand Motion using Reduced Order Measurements (Presenter: Samina Rafique) 139 - Design of Photonic Crystal Fiber Surface Plasmon Resonance Sensor with External Channel Approach (Presenter: Veerpal Kaur) 234 - S2A Architecture with Sift-Out at the Sensor Level (Presenter: Rana ElMaraashly) 214 - Infrared Sensor Controlled Wheelchair for Physically Disabled People (Presenter: Nadia Nowshin, Tasneema Akhtar) 249 - Embedded System for Access Control Based on Facial Biometry and RFID (Presenter: Cristian Souza)

14th NOVEMBER (11:00 am – 12:45 pm)

PAPER PRESENTATIONS

Session 14 - Internet of Things Session Chair: Judy Zaichkowsky (Room: Pinnacle II)	Session 15 - Technology Trends Session Chair: Gaddi Blumrosen (Room: Shaughnessy I)	Session 16 - Security and Privacy Session Chair: ChenFu Chiang (Room: Shaughnessy II)
379 - A Multi-Agent Model for Security Awareness Driven by Home User's Behaviours (Presenter: Farhad Foroughi) 295 - The Internet of Toys, Connectedness and Character-based Play in Early Education (Presenter: Katriina Heljakka) 331 - Toys that Talk to Strangers: A Look at the Privacy Policies of Connected Toys (Presenter: Wahida Chowdhury) 363 - Real-Time Air Pollution Monitoring Systems Using Wireless Sensor Networks Connected in a Cloud-Computing, Wrapped up Web Services (Presenter: Walter Fuertes) 471 - Personal Branding and Digital Citizenry: Harnessing the Power of Data and IoT (Presenter: Fawzi BenMessaoud) 229 - A Novel and Scalable Naming Strategy for IoT Scenarios (Presenter: Alejandro Gomez Cardenas) 334 - A Reinforcement Learning Multiagent Architecture Prototype for Smart Homes (IoT) (Presenter: Mario Rivas)	483 - Teaching Quantum Computing (Presenter: Lewis Westfall) 221 - WOWcube Puzzle: A Transreality Object of Mixed Reality (Presenter: Ilya Osipov) 422 - Investigating the Impact of Data Volume and Domain Similarity on Transfer Learning Applications (Presenter: Michael Bernico) 354 - Wetware and the Cyborg Era: The Future of Modifications on the Human Body According to Science Fiction (Presenter: Hermano Moura) 183 - Ranking and Visualization of Experts for Communication using Linkedin (Presenter: Muhammad Iqbal) 439 - Systolic Design Space Exploration of Polynomial Division over GF(3m) (Presenter: Ibrahim Hazmi)	437 - Financial Risks of the Blockchain Industry: A Survey of Cyberattacks (Presenter: Aleksandr Lazarenko) 12 - Design and Implementation of Challenge Response Protocol for Enhanced e-Commerce Security (Presenter: Hamzah F. Zmezm) 256 - Malware Forensic Analytics Framework using Big Data Platform (Presenter: Suriayati Chuprat, Aswami Ariffin, Mohd Zabri Adil Talib) 279 - Efficient LFSR based Distance Bounding Protocol for Contactless EMV Payments (Presenter: Trishla Shah) 216 - Network Aware Defenses for Intrusion Recognition and Response (NADIR) (Presenter: Houwei Cao)

14th NOVEMBER (1:30 pm – 3:00 pm)

PAPER PRESENTATIONS

Session 17 - Intelligent Systems Session Chair: ChenFu Chiang (Room: Pinnacle I)	Session 18 - Internet of Things Session Chair: Michael Filimowicz (Room: Pinnacle II)	Session 19 - Machine Vision Session Chair: Ahmad Ghafarian (Room: Shaughnessy I)	Session 20 - Security and Privacy Session Chair: Arvind Bansal (Room: Shaughnessy II)
456 – Optimal Dimensionality Reduced Quantum Walk and Noise Characterization (Presenter: Chen-Fu Chiang) 274 – Ten Guidelines for Intelligent Systems Futures (Presenter: Daria Loi) 192 – Artificial Human Swarms Outperform Vegas Betting Markets (Presenter: Louis Rosenberg) 58 – The Next Generation of Artificial Intelligence: Synthesizable AI (Presenter: Sitharama Iyengar) 338 – Development of Extreme Learning Machine Radial Basis Function Neural Network Models to Predict Residual Aluminum for Water Treatment Plants (Presenter: Chamanthi Jayaweera) 387 – Intelligence in Embedded Systems: Overview and Applications (Presenter: Paul Rosero)	457 – A Framework for Ranking IoMT Solutions Based on Measuring Security and Privacy (Presenter: Faisal Alsubaei) 251 – The IoT and Unpacking the Heffalump's Trunk (Presenter: Joseph Lindley) 419 – Light Weight Cryptography for Resource Constrained IoT Devices (Presenter: Babak Dastgheib-Beheshti) 101 – Electronic Kintsugi: An Investigation of Everyday Crafted Objects in Tangible Interaction Design (Presenter: Vanessa Carpenter) 461 – CUSTODY: An IoT based Patient Surveillance Device (Presenter: MD Manirul Islam) 110 – Ontology-based Intelligent Security Framework for Smart Video Surveillance (Presenter: Amna Shifa)	284 – Image-based Wheel-base Measurement in Vehicles: A Sensitivity Analysis to Depth and Camera's Intrinsic Parameters (Presenter: Mehran Mehrandezh) 298 – Generic Paper and Plastic Recognition by Fusion of NIR and VIS Data and Redundancy-aware Feature Ranking (Presenter: Claudius Schnörr) 474 – Towards Reduced Latency in Saccade Landing Position Prediction using Velocity Profile Methods (Presenter: Henry Griffith) 382 – A Fast and Simple Sample-based T-shirt Image Search Engine (Presenter: Houwei Cao)	285 – Performance Evaluation of a Pseudo-Random Number Generator Against Various Attacks (Presenter: Trishla Shah) 237 – Critical Workload Deployment in Public Clouds with Guaranteed Security Levels and Optimized Resource Usage and Energy Cost (Presenter: Soamar Homsi) 210 – Secure Feature Extraction in Computational Vision using Fully Homomorphic Encryption (Presenter: Thomas Shortell) 207 – A Lightweight DDoS Attack Mitigation System within the ISP Domain Utilising Self-Organizing Map (Presenter: Ili Ko) 187 – Vehicle Communication using Secrecy Capacity (Presenter: Na-Young Ahn) 70 – Collaborative Intelligence Analysis for Industrial Control Systems Threat Profiling (Presenter: Ke Li, Limin Sun)

14th NOVEMBER (3:15 pm – 5:00 pm)

PAPER PRESENTATIONS

Session 21 - Communication Systems Session Chair: Matthew Reyes (Room: Pinnacle I)	Session 22 - Software Engineering Session Chair: Milan Toma (Room: Pinnacle II)	Session 23 - e-Business Session Chair: Judy Zaichkowsky (Room: Shaughnessy I)	Session 24 - Security and Privacy Session Chair: Gaddi Blumrosen (Room: Shaughnessy II)
383 - Local Conditioning: Exact Message Passing for Cyclic Undirected Distributed Networks (Presenter: Matthew Reyes) 83 - A Resource Allocation Scheme for Multi-User MmWave Vehicle-to-Infrastructure Communication (Presenter: Ramanathan Subramanian) 449 - Reconfiguring Computer-Generated Holographic Coding Patterns to Enhance Optical Access Network Security (Presenter: ChunChieh Liu) 81 - SwICh: A Channel Assignment Technique for Self Coexistence of Cognitive Radio Networks (Presenter: Komalpreet Kaur) 82 - A Comparison of Modern Localization Techniques in Wireless Sensor Networks (WSNs) (Presenter: Usman Qamar) 350 - Investigation of Wireless Communication from Under Seawater to Open Air with Xbee Pro S2B Based on IEEE 802.15.4 (Presenter: Nurul Hiron) 199 - Path Loss Propagation Prediction and Optimization using Walfisch–Bertoni Model at 900 and 1800 MHz over Macro-cellular Western regions of Nigeria (Presenter: Pelumi Akinyemi)	80 - OBJS: Forking Javascript to OOP Paradigms (Presenter: Alessandro Rosa) 324 - A Usability Framework for Diabetic Health Applications in South Africa (Presenter: Liezel Cilliers) 358 - Research and Develop of AGV Platform for the Logistics Warehouse Environment (Presenter: Ha Quang Thinh Ngo) 340 - Meta-Requirement Method towards Analyzing Completeness of Requirements Specification (Presenter: Mohamed Ariff Ameedeen) 294 - Solving the Linear Ordering Problem via a Memetic Algorithm (Presenter: Jingyu Song) 395 - Transformation of UML Activity Diagram for Enhanced Reasoning (Presenter: Irfan Chishti) 161 - SIMS: A Stakeholder Information Management System for Successful Projects (Presenter: Kassem Saleh)	431 - The Impact of Distributed Data in Big Data Platforms on Organizations (Presenter: Oded Koren) 49 - Just-in-time Project Task Scheduling (Presenter: Malcolm Ferrier) 288 - RecSmart: Data Augmentation to Facilitate Recommendation using Skewed and Sparse Data of Restaurant Loyalty Programs (Presenter: Ishani Chakraborty) 296 - Modern Chatbot Systems: A Technical Review (Presenter: Mohamed Ariff Ameedeen) 112 - How Bots Have Taken Over Brand Choice Decisions (Presenter: Judy Zaichkowsky) 244 - A Cluster Based Collaborative Filtering Method for Improving the Performance of Recommender Systems in E-Commerce (Presenter: Bahman Sassani)	290 - Detection: Definition of New Model to Reveal Advanced Persistent Threat (Presenter: Matteo Sagratella) 377 - Using Kali Linux Security Tools to Create Laboratory Projects for Cybersecurity Education (Presenter: Ahmad Ghafarian) 147 - The Role of Trust and Control in Managing Privacy when Photos and Videos are Stored or Shared (Presenter: Srinivas Madhisetty) 369 - The Online Identity Detection via Keyboard Dynamics (Presenter: Giuseppe Sartori) 98 - Copyright Declaration for Leaked Numeric Data (Presenter: Che-Wei Lee) 184 - Cloud Data Security Solution Based on Data Access Classification, Advanced Encryption Standard and Message Authentication Code (Presenter: Mohammed Saeed Jawad) 213 - Behavioral Detection of Scanning Worm in Cyber Defense (Presenter: Munadil Al-Sammarraie)