Future Technologies Conference (FTC) 2019

24-25 October 2019 | San Francisco, United States

FTC 2019

24–25 October 2019

CONFERENCE AGENDA

DAY 1 (24th October)

8:00 am – 8:30 am   **DELEGATES CHECK-IN**

8:30 am – 10:30 am   **KEYNOTE TALKS**
A.J. Brush, Microsoft
Robinson Piramuthu, eBay

10:30 am – 11:15 am   **POSTER PRESENTATIONS**

11:15 am – 12:30 pm   **PAPER PRESENTATIONS**
Session 1 - Ambient Intelligence
Session 2 - Artificial Intelligence
Session 3 - Internet of Things

12:30 pm – 1:30 pm   **LUNCH**

1:30 pm – 3:30 pm   **PAPER PRESENTATIONS**
Session 4 - Healthcare Technologies
Session 5 - Data Science
Session 6 - Computing

3:30 pm – 3:45 pm   **NETWORKING BREAK**

3:45 pm – 5:45 pm   **PAPER PRESENTATIONS**
Session 7 - e-Learning
Session 8 - Data Science
Session 9 - Communication Systems

DAY 2 (25th October)

8:00 am – 8:30 am   **DELEGATES CHECK-IN**

8:30 am – 11:00 am   **KEYNOTE TALKS**
Shashank Prasanna, Amazon
Thomas L. Sterling, Indiana University
Michael Zyda, University of Southern California

11:00 am – 11:15 am   **NETWORKING BREAK**

11:15 am – 12:30 pm   **PAPER PRESENTATIONS**
Session 10 - Artificial Intelligence
Session 11 - Robotics
Session 12 - Internet of Things

12:30 pm – 1:30 pm   **LUNCH**

1:30 pm – 3:30 pm   **PAPER PRESENTATIONS**
Session 13 - Machine Vision
Session 14 - Social Computing
Session 15 - Security and Privacy

3:30 pm - 3:45 pm   **NETWORKING BREAK**

3:45 pm – 5:30 pm   **PAPER PRESENTATIONS**
Session 16 - Artificial Intelligence
Session 17 - Software Engineering and Quality
Session 18 - Security and Privacy

5:30 pm – 6:00 pm   **CONFERENCE CLOSING**

24th OCTOBER (11:15 am – 12:30 pm)

PAPER PRESENTATIONS

Session 1 - Ambient Intelligence Session Chair: Brian Whalley (Room: Franciscan)	Session 2 - Artificial Intelligence Session Chair: Alireza Shojaei (Room: Commonwealth)	Session 3 - Internet of Things Session Chair: Izhak Rubin (Room: Cornell)
201 - Determining a Framework for the Generation and Evaluation of Ambient Intelligent Agent System Designs (Presenter: Milica Pavlovic) 31 - When Inclusion Means Smart City: Urban Planning Against Poverty (Presenter: Bolay Jean-Claude) 161 - AntiOD: A Smart City Initiative to Fight the Opioid Crisis (Presenter: Sebastian Ramirez) 396 - Food, Energy and Water (FEW) Nexus Modeling and Analysis (Presenter: Yemeserach Mekonnen) 187 - Common data format in visual assembling guidance using augmented reality (Presenter: Dawid Pacholczyk)	63- Group Sales Forecasting, Polls vs Swarms (Presenter: Louis Rosenberg) 60 - Knowledge-based Adaptative Hypermedia with Haries (Presenter: Yira Muñoz) 117 - Machine Translation from Natural Language to Code using Long-Short Term Memory (Presenter: Md Hasibul Huq) 119 - ML supported predictions for SAT solvers performance (Presenter: Anastasia-Maria Leventi-Peetz) 153 - An agent-based simulation of corporate gender biases (Presenter: Paolo Gaudiano)	399 - Infrastructure-aided Networking for Autonomous Vehicular Systems (Presenter: Yulia Sunyoto, Izhak Rubin) 160 - An Optimal Design of Contactless Power Transfer System Applied for Electric Vehicles Using Electromagnetic Resonant Coupling (Presenter: Junlong Duan) 214 - Project BUMP: Developing Communication Tools for The Older Adult Population (Presenter: Shi He) 198 - Industrial Cloud automation for interconnected factories - Application to remote control of water stations (Presenter: Lamine Chalal) 21 - Securing Combined Fog-to-Cloud Systems: Challenges and Directions (Presenter: Alejandro Gomez Cardenas) 408 - End-to-end drive by-wire PID lateral control of an Autonomous Vehicle (Presenter: Akash Baskaran)

24th OCTOBER (01:30 pm – 03:30 pm)

PAPER PRESENTATIONS

Session 4 - Healthcare Technologies Session Chair: Suzanna Schmeelk (Room: Franciscan)	Session 5 - Data Science Session Chair: Sherine Antoun (Room: Commonwealth)	Session 6 - Computing Session Chair: Safwan Omari (Room: Cornell)
316 - Using Formal Languages to Elicit Requirements for Healthcare Blockchain Applications (Presenter: Vinitha Hannah Subburaj)	374 - Photofeeler-D3: A Neural Network with Voter Modeling for Dating Photo Impression Prediction (Presenter: Agastya Kalra)	303 - Low power high performance computing on Arm system-on-chip in Astrophysics (Presenter: Sara Bertocco)
58 - Diagnosis of Celiac Disease and Environmental Enteropathy on Biopsy Images Using Color Balancing on Convolutional Neural Networks (Presenter: Donald Brown)	57 - Detecting Spam Tweets in Trending Topics using Graph-Based Approach (Presenter: Ramesh Paudel)	47 - Cryptography in Quantum Computing (Presenter: Avery Leider)
150 - Diagnosis of Obstructive Sleep Apnea: Logistic Regression and Artificial Neural Networks Models (Presenter: Alaa Sheta)	151 - K-means Principal Geodesic Analysis on Riemannian Manifolds (Presenter: Youshan Zhang)	314 - Quantum Computer Search Algorithms; Can we outperform the classical search algorithms? (Presenter: Avery Leider)
400 - An intelligent System for Detecting a Person Sitting Position to Prevent Lumbar Diseases (Presenter: Vanessa Cristina Erazo Chamorro)	218 - Document Clustering by Relevant Terms: An Approach (Presenter: Mireya Tovar Vidal)	372 - Quantum recommendation system for image feature matching and pattern recognition (Presenter: Desislav Andreev)
413 - In search of a decision-making framework for involving users who have learning disabilities or sensory impairments in the process of designing future technologies (Presenter: Jane Seale)	226 - Smart Consumption Study Using Data Analysis and IoT in Residential Level Refrigeration Machines (Presenter: Sergio Henrique Monte Santo Andrade)	348 - Methodically Unified Procedures for Outlier Detection, Clustering, and Classification (Presenter: Piotr Kulczycki)
380 - Bridging the user barriers of home telecare (Presenter: Anita Woll)	23 - A Hybrid Approach in Future-Oriented Technology Assessment (Presenter: Ewa Chodakowska)	147 - A Stealth Migration Approach to Moving Target Defense in Cloud Computing (Presenter: Saikat Das)
306 - Building a Blockchain Application: A Show Case for Healthcare Providers and Insurance Companies (Presenter: Kawther Saeedi)	66 - Bottom-up strategy for data retrieval and data entry over front-end application Software (Presenter: Rusel Cierto Trinidad)	370 - A Trust Model for Cloud: Results from a Survey (Presenter: Stephen Kirkman)
	125 - A Tickless AMP Distributed Core-Based Microkernel for Big Data (Presenter: Amr El-Kadi)	

24th OCTOBER (03:45 pm – 05:45 pm)

PAPER PRESENTATIONS

Session 7 - e-Learning Session Chair: Kohei Arai (Room: Franciscan)	Session 8 - Data Science Session Chair: Safwan Omari (Room: Commonwealth)	Session 9 - Communication Systems Session Chair: Pascal Lorenz (Room: Cornell)
46 - Assessing Collaborative Learning with E-Tools in Engineering and Computer Science Programs (Presenter: Steven Billis) 48 - School Leadership Preparation and Technology Implementation (Presenter: Ted Price) 54 - Arthur and Ada: developing active education and intelligent personal tutors on mobile devices (Presenter: Brian Whalley) 137 - How to Educate Kids and Youngsters to value art and science as equals. Pedagogy in practice (Presenter: Tomi Slotte Dufva) 166 - Effective and Innovative Interactives for icseBooks (Presenter: Yong Liang) 390 - Learning Analytics as Sociotechnical System (Presenter: Marcel Simonette)	250 - A Cutting-Edge unified and stable Rule Design Pattern (Presenter: Gaurav Kuppa) 300 - Space-filling curve, a robust data mining tool (Presenter: Valentin Owczarek) 311 - A Local-Network Guided Linear Discriminant Analysis for Classifying Lung Cancer Subtypes Using Individual Genome-Wide Methylation Profiles (Presenter: Yanming Li) 363 - Multiple Global Community Detection in Signed Graphs (Presenter: Jaspreet Oberoi, Daniel Crawford) 205 - Evaluation of Missing Data Imputation Methods for an Enhanced Distributed PV Generation Prediction (Presenter: Aditya Sundararajan) 397 - Simulation-based Analysis of Equalization Algorithms on Active Balancing Battery Topologies for Electric Vehicles (Presenter: Aditya Sundararajan) 402 - Deep Learning-Based Document Modeling for Personality Detection from Turkish Texts (Presenter: Bahar Ilgen)	3 - Energy Efficient Power Management Modes for Smartphone Battery Life Conservation (Presenter: Evelyn Sowells-Boone) 282 - Energy Efficient Balanced Tree-Based Routing Protocol for Wireless Sensor Network (EEBTR) (Presenter: Rafia Ghoul) 287 - Effect of Traffic Generator and Density on the Performance of Protocols in Mobile Wireless Networks (Presenter: Amine Kada) 224 - Effect of the silicon substrate in the response of MIS transistor sensor for nano-watts light signal (Presenter: Joaquín Hernández-Betanzos) 12 - Providing Some Minimum Guarantee for Real-time Secondary Users in Cognitive Radio Sensor Networks (Presenter: Bulega Tonny Eddie) 18 - Sparse Signal Reconstruction by Batch Orthogonal Matching Pursuit (Presenter: Lichun Li) 42 - Performance of cooperative system based on LDPC codes in wireless optical communication (Presenter: Ibrahima Gueye)

25th OCTOBER (11:15 am – 12:30 pm)

PAPER PRESENTATIONS

Session 10 - Artificial Intelligence Session Chair: Alireza Shojaei (Room: Franciscan)	Session 11 - Robotics Session Chair: Alaa Sheta (Room: Commonwealth)	Session 12 - Internet of Things Session Chair: Kohei Arai (Room: Cornell)
105 – Machine Learning Classification and Segmentation of Forest Fires in Wide Area Motion Imagery (Presenter: Melonie Richey, Meredith Gregory, Kendall Ocasio, Zachary Mostowsky) 194 – Preventing overfitting by training derivatives (Presenter: Vsevolod Avrutskiy) 167 – Machine Learning Credit Risk (Presenter: Sivakumar Pillai) 219 – Machine learning for the identification and classification of key phrases from clinical documents in Spanish (Presenter: Mireya Tovar Vidal) 141 – VEDAR: Accountable Behavioural Change Detection (Presenter: Rajesh Kumar Madabhattula) 228 – Butterfly, Larvae and Pupae Defects Detection Using Convolutional Neural Network and Apriori Algorithm (Presenter: Jerwin Montellano)	64 – Human-Augmented Robotic Intelligence (HARI) for Human-Robot Interaction (Presenter: Vishwas Mruthyunjaya) 221 – Automatic Grasping Using Tactile Sensing and Deep Calibration (Presenter: Masoud Baghbahari) 109 – Wearable Gait Rehabilitation Robotic System Designed with Compliant Actuation Mechanism for Smart and Connected Health (Presenter: S M Mizanoor Rahman) 110 – Grasp Rehabilitation of Stroke Patients through Object Manipulation with an Intelligent Power Assist Robotic System (Presenter: S M Mizanoor Rahman) 211 – The Future of Socially Assistive Robotics: Considering an Exploratory Governance Framework (EGF) (Presenter: Hock Chuan Lim) 193 – Autonomous Navigation with Fuzzy Logic (Presenter: Sherine Antoun)	203 – Multi-Layer Perceptron Artificial Neural Network Based IoT Botnet Traffic Classification (Presenter: Navid Rajabi) 258 – Enhancing the Linguistic Landscape with the Proper Deployment of the Internet of Things Technologies: A Case Study of Smart Malls (Presenter: Azmat Ullah) 259 – Design and Fabrication of Smart Bandeau Bra for Breathing Pattern Measurement (Presenter: Raji Rafiu King) 239 – Mutually Authenticated Group Key Management Protocol for Healthcare IoT Networks (Presenter: Firdous Kausar)

25th OCTOBER (01:30 pm – 03:30 pm)

PAPER PRESENTATIONS

Session 13 - Machine Vision Session Chair: Brian Whalley (Room: Franciscan)	Session 14 - Social Computing Session Chair: Izzat Alsmadi (Room: Commonwealth)	Session 15 - Security and Privacy Session Chair: Sherine Antoun (Room: Cornell)
131 - A Fast Multi-phases Demon Image Registration For Atlas Building (Presenter: Youshan Zhang) 260 - Understanding Dynamic Logic using 2D images (Presenter: Sudhanshu Semwal) 267 - 3D Distance Transformations with Feature Subtraction (Presenter: Sudhanshu Semwal) 309 - Screens Affordances in Image Consumption (Presenter: Ema Rolo) 50 - Image segmentation based on cumulative residual entropy (Presenter: Bader Almohaimeed) 149 - Hand sign language feature extraction using image processing (Presenter: Abdelkader Chabchoub) 143 - Reasonably Optimal Utilisation Through Evolution (ROUTE) in Airspace Design (Presenter: Yanyan Yang)	85 - Using Maximum Weighted Cliques in the Detection of Sub-Communities' behaviors in OSNs (Presenter: Izzat Alsmadi) 285 - An Experiment with Link Prediction in Social Network – two new link prediction methods (Presenter: Ahmad Rawashdeh) 329 - Buddha Bot: The Exploration of Embodied Spiritual Machine in Chatbot (Presenter: Pat Pataranutaporn) 409 - My Personal Brand and My Web Presence: Mining Digital Footprints and Analyzing Personas in the World of IOT and Digital Citizenry (Presenter: Dwight Hall, Fawzi Benmessaoud) 55 - Are esports the next big varsity draw? An exploratory study of 522 university e-athletes (Presenter: Thierry Karsenti) 420 - Formalizing Graph Database and Graph Warehouse for On-Line Analytical Processing in Social Networks (Presenter: Frank S.C. Tseng) 319 - Dynamic User Modeling in the Context of Customer Churn Prediction in Loyalty Program Marketing (Presenter: Ishani Chakraborty)	255 - New Residue Signed-Digit Addition Algorithm (Presenter: Shugang Wei) 391 - A ZigBee based Architecture for Public Safety Communication in Hurricane Scenario (Presenter: Yemeserach Mekonnen) 383 - Decentralized Autonomous Video Copyright Protection (Presenter: Shiyu Zhang) 419 - An Implementation of Smart Contracts by Integrating BIM and Blockchain (Presenter: Alireza Shojaei) 404 - An Efficient Singularity Detector Network for Fingerprint Images (Presenter: Caneo Jinshong Hwang) 76 - Some Cyberpsychology techniques to distinguish Human and Robot Authentication (Presenter: Ishaani Priyadarshini) 115 - Multi Criteria Method for Determining the Failure Resistance of Information System Components (Presenter: Askar Boranbayev) 116 - Time-Invariant Cryptographic Key Generation from Cardiac Signals (Presenter: Sarah Alharbi)

25th OCTOBER (03:45 pm – 05:30 pm)

PAPER PRESENTATIONS

Session 16 - Artificial Intelligence Session Chair: Alaa Sheta (Room: Franciscan)	Session 17 - Software Engineering and Quality Session Chair: Pascal Lorenz (Room: Commonwealth)	Session 18 - Security and Privacy Session Chair: Suzanna Schmeelk (Room: Cornell)
333 - Neuroscience of Creativity in Human Computer Interaction (Presenter: Ali Algarni) 273 - Internet Memes: A Novel Approach to Distinguish Human and Bot Authentication (Presenter: Ishaani Priyadarshini) 35 - AI Embedded Transparent Health and Medicine System (Presenter: Yichi Gu) 191 - Efficient Bayesian Expert Models for Fever in Neutropenia and Fever in Neutropenia with Bacteremia (Presenter: Bekzhan Darmeshov) 327- Making Food with the Mind: Integrating Brain-Computer Interface and 3D Food Fabrication (Presenter: Pat Pataranutaporn) 231 - Negative Log Likelihood Ratio Loss for Deep Neural Network Classification (Presenter: Bei Jiang) 302 - Emerging Technology of Man's Life-long Partnership with Artificial Intelligence (Presenter: Nicolay Vasilyev)	367 - ICTs adoption in SMEs located in Less Favoured Regions: Case study of Northern of Portugal and Castela and Leão (Spain) (Presenter: Joao Paulo Pereira) 139 - Blending Six Sigma and Software Development (Presenter: Hassan Pournaghshband) 281 - Unified and Stable Project – "Ushering in the Future" (Presenter: Gaurav Kuppa) 291 - Enabling Empirical Research: A Corpus of Large-Scale Python Systems (Presenter: Safwan Omari) 375 - Kaizen 4.0 - Towards an Integrated Framework for the Lean-Industry 4.0 Transformation (Presenter: Tim Weisser) 156 - Toys that Mobilize: Past, Present and Future of Phygital Playful Technology (Presenter: Katriina Heljakka) 283 - Global Logistics in the Era of Industry 4.0 (Presenter: Ayodeji Dennis Adeitan)	154 - Privacy Implication and Technical Requirements toward GDPR Compliance (Presenter: Zih-Shiuan Yuan) 215 - STRIDE-Based Threat Modeling for MySQL Databases (Presenter: Bryson Payne) 223 - Efficient RSA crypto processor using Montgomery multiplier in FPGA (Presenter: Lavanya Gnanasekaran) 341 - Where are We Looking for Security Concerns? Understanding Android Security Static Analysis (Presenter: Suzanna Schmeelk) 265 - Study and Evaluation of Unsupervised Algorithms used in Network Anomaly Detection (Presenter: Philippe Owezarski) 276 - Recurrent Binary Patterns and CNNs for Offline Signature Verification (Presenter: Mustafa Berkay Yilmaz)