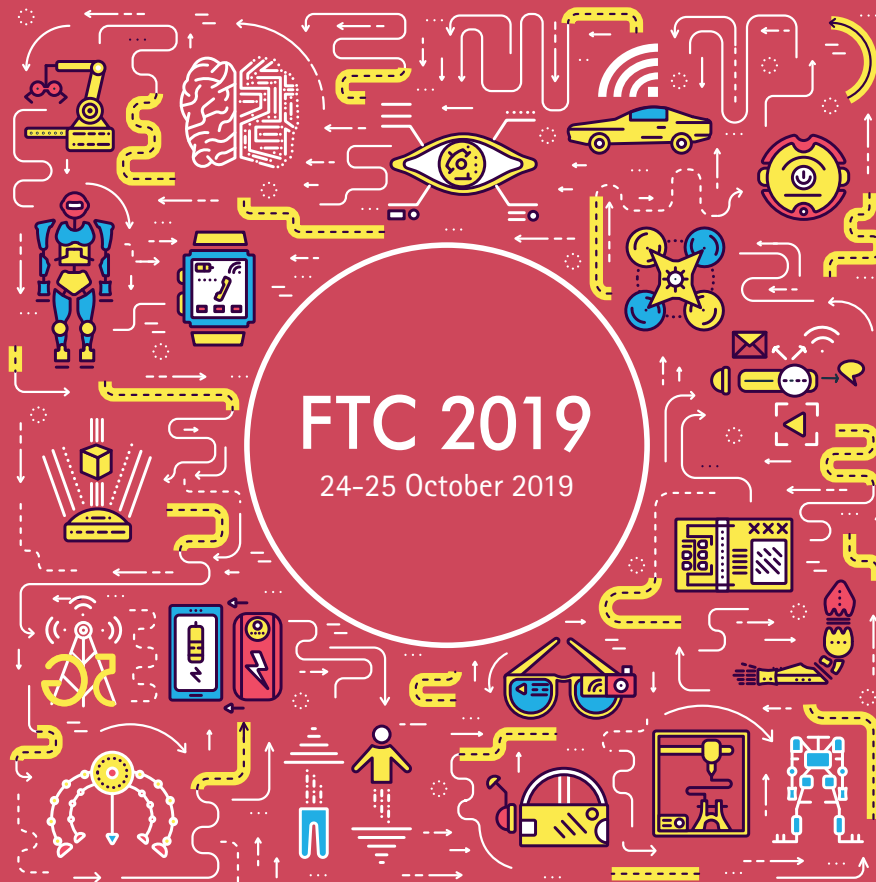


# Future Technologies Conference (FTC) 2019

24-25 October 2019 | San Francisco, United States



CONFERENCE AGENDA

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## DAY 1 (24<sup>th</sup> 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 – 11:00 am **POSTER PRESENTATIONS**
- 11:00 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 (25<sup>th</sup> 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**

## 24<sup>th</sup> OCTOBER (11:00 am – 12:30 pm)

### PAPER PRESENTATIONS

<b>Session 1 - Ambient Intelligence</b> Session Chair: Brian Whalley  (Room: Franciscan)	<b>Session 2 - Artificial Intelligence</b> Session Chair: Alireza Shojaei  (Room: Commonwealth)	<b>Session 3 - Internet of Things</b> Session Chair: Izhak Rubin  (Room: Cornell)
<p>201 - Determining a Framework for the Generation and Evaluation of Ambient Intelligent Agent System Designs (Presenter: Milica Pavlovic)</p> <p>31 - When Inclusion Means Smart City: Urban Planning Against Poverty (Presenter: Bolay Jean-Claude)</p> <p>161 - AntiOD: A Smart City Initiative to Fight the Opioid Crisis (Presenter: Sebastian Ramirez)</p> <p>396 - Food, Energy and Water (FEW) Nexus Modeling and Analysis (Presenter: Yemeserach Mekonnen)</p> <p>187 - Common data format in visual assembling guidance using augmented reality (Presenter: Dawid Pacholczyk)</p> <p>277 - Virtual reality rendered video precognition with deep learning for crowd management (Presenter: Howard Meadows)</p>	<p>63- Group Sales Forecasting, Polls vs Swarms (Presenter: Louis Rosenberg)</p> <p>60 - Knowledge-based Adaptative Hypermedia with Haries (Presenter: Yira Muñoz)</p> <p>117 - Machine Translation from Natural Language to Code using Long-Short Term Memory (Presenter: Md Hasibul Huq)</p> <p>119 - ML supported predictions for SAT solvers performance (Presenter: Anastasia-Maria Leventi-Peetz)</p> <p>142 - The Application of Artificial Neural Networks to Facilitate the Architectural Design Process (Presenter: Pao-Kuan Wu)</p> <p>153 - An agent-based simulation of corporate gender biases (Presenter: Paolo Gaudiano)</p>	<p>399 - Infrastructure-aided Networking for Autonomous Vehicular Systems (Presenter: Yulia Sunyoto, Izhak Rubin)</p> <p>160 - An Optimal Design of Contactless Power Transfer System Applied for Electric Vehicles Using Electromagnetic Resonant Coupling (Presenter: Junlong Duan)</p> <p>214 - Project BUMP: Developing Communication Tools for The Older Adult Population (Presenter: Shi He)</p> <p>198 - Industrial Cloud automation for interconnected factories - Application to remote control of water stations (Presenter: Lamine Chalal)</p> <p>21 - Securing Combined Fog-to-Cloud Systems: Challenges and Directions (Presenter: Alejandro Gomez Cardenas)</p> <p>408 - End-to-end drive by-wire PID lateral control of an Autonomous Vehicle (Presenter: Akash Baskaran)</p>

## 24<sup>th</sup> OCTOBER (01:30 pm – 03:30 pm)

### PAPER PRESENTATIONS

<b>Session 4 - Healthcare Technologies</b> Session Chair: Suzanna Schmeelk  (Room: Franciscan)	<b>Session 5 - Data Science</b> Session Chair: Sherine Antoun  (Room: Commonwealth)	<b>Session 6 - Computing</b> Session Chair: Safwan Omari  (Room: Cornell)
<p>316 - Using Formal Languages to Elicit Requirements for Healthcare Blockchain Applications (Presenter: Vinitha Hannah Subburaj)</p> <p>58 - Diagnosis of Celiac Disease and Environmental Enteropathy on Biopsy Images Using Color Balancing on Convolutional Neural Networks (Presenter: Donald Brown)</p> <p>150 - Diagnosis of Obstructive Sleep Apnea: Logistic Regression and Artificial Neural Networks Models (Presenter: Alaa Sheta)</p> <p>400 - An intelligent System for Detecting a Person Sitting Position to Prevent Lumbar Diseases (Presenter: Vanessa Cristina Erazo Chamorro)</p> <p>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)</p> <p>380 - Bridging the user barriers of home telecare (Presenter: Anita Woll)</p> <p>306 - Building a Blockchain Application: A Show Case for Healthcare Providers and Insurance Companies (Presenter: Kawther Saeedi)</p>	<p>374 - Photofeeler-D3: A Neural Network with Voter Modeling for Dating Photo Impression Prediction (Presenter: Agastya Kalra)</p> <p>57 - Detecting Spam Tweets in Trending Topics using Graph-Based Approach (Presenter: Ramesh Paudel)</p> <p>151 - K-means Principal Geodesic Analysis on Riemannian Manifolds (Presenter: Youshan Zhang)</p> <p>218 - Document Clustering by Relevant Terms: An Approach (Presenter: Mireya Tovar Vidal)</p> <p>226 - Smart Consumption Study Using Data Analysis and IoT in Residential Level Refrigeration Machines (Presenter: Sergio Henrique Monte Santo Andrade)</p> <p>23 - A Hybrid Approach in Future-Oriented Technology Assessment (Presenter: Ewa Chodakowska)</p> <p>66 - Bottom-up strategy for data retrieval and data entry over front-end application Software (Presenter: Rusel Cierto Trinidad)</p> <p>125 - A Tickless AMP Distributed Core-Based Microkernel for Big Data (Presenter: Amr El-Kadi)</p>	<p>303 - Low power high performance computing on Arm system-on-chip in Astrophysics (Presenter: Sara Bertocco)</p> <p>47 - Cryptography in Quantum Computing (Presenter: Avery Leider)</p> <p>314 - Quantum Computer Search Algorithms; Can we outperform the classical search algorithms? (Presenter: Avery Leider)</p> <p>372 - Quantum recommendation system for image feature matching and pattern recognition (Presenter: Desislav Andreev)</p> <p>286 - The first quantum co-processor hybrid for processing quantum point cloud multimodal sensor data (Presenter: George Frangou)</p> <p>348 - Methodically Unified Procedures for Outlier Detection, Clustering, and Classification (Presenter: Piotr Kulczycki)</p> <p>147 - A Stealth Migration Approach to Moving Target Defense in Cloud Computing (Presenter: Saikat Das)</p> <p>370 - A Trust Model for Cloud: Results from a Survey (Presenter: Stephen Kirkman)</p>

## 24<sup>th</sup> OCTOBER (03:45 pm – 05:45 pm)

### PAPER PRESENTATIONS

<p><b>Session 7 - e-Learning</b> Session Chair: Kohei Arai</p> <p>(Room: Franciscan)</p>	<p><b>Session 8 - Data Science</b> Session Chair: Safwan Omari</p> <p>(Room: Commonwealth)</p>	<p><b>Session 9 - Communication Systems</b> Session Chair: Pascal Lorenz</p> <p>(Room: Cornell)</p>
<p>46 - Assessing Collaborative Learning with E-Tools in Engineering and Computer Science Programs (Presenter: Steven Billis)</p> <p>48 - School Leadership Preparation and Technology Implementation: Transformative Mind Shifts Can Ensure You Lead a Successful Change Process (Presenter: Ted Price)</p> <p>54 - Arthur and Ada: developing active education and intelligent personal tutors on mobile devices (Presenter: Brian Whalley)</p> <p>137 - How to Educate Kids and Youngsters to value art and science as equals. Pedagogy in practice (Presenter: Tomi Slotte Dufva)</p> <p>166 - Effective and Innovative Interactives for icseBooks (Presenter: Yong Liang)</p> <p>390 - Learning Analytics as Sociotechnical System (Presenter: Marcel Simonette)</p> <p>34 - Development of P2P educational service in Russia (Presenter: Sergey Avdoshin)</p> <p>410 - Cluster and Sentiment Analyses of YouTube Textual Feedback of Programming Language Learners to Enhance Learning in Programming (Presenter: Rex Bringula)</p>	<p>250 - A Cutting-Edge unified and stable Rule Design Pattern (Presenter: Gaurav Kuppa)</p> <p>300 - Space-filling curve, a robust data mining tool (Presenter: Valentin Owczarek)</p> <p>311 - A Local-Network Guided Linear Discriminant Analysis for Classifying Lung Cancer Subtypes Using Individual Genome-Wide Methylation Profiles (Presenter: Yanming Li)</p> <p>363 - Multiple Global Community Detection in Signed Graphs (Presenter: Jaspreet Oberoi, Daniel Crawford)</p> <p>205 - Evaluation of Missing Data Imputation Methods for an Enhanced Distributed PV Generation Prediction (Presenter: Aditya Sundararajan)</p> <p>397 - Simulation-based Analysis of Equalization Algorithms on Active Balancing Battery Topologies for Electric Vehicles (Presenter: Aditya Sundararajan)</p> <p>402 - Deep Learning-Based Document Modeling for Personality Detection from Turkish Texts (Presenter: Bahar Ilgen)</p>	<p>3 - Energy Efficient Power Management Modes for Smartphone Battery Life Conservation (Presenter: Evelyn Sowell-Boone)</p> <p>282 - Energy Efficient Balanced Tree-Based Routing Protocol for Wireless Sensor Network (EEBTR) (Presenter: Rafia Ghouli)</p> <p>287 - Effect of Traffic Generator and Density on the Performance of Protocols in Mobile Wireless Networks (Presenter: Amine Kada)</p> <p>224 - Effect of the silicon substrate in the response of MIS transistor sensor for nano-watts light signal (Presenter: Joaquín Hernández-Betanzos)</p> <p>12 - Providing Some Minimum Guarantee for Real-time Secondary Users in Cognitive Radio Sensor Networks (Presenter: Bulega Tonny Eddie)</p> <p>18 - Sparse Signal Reconstruction by Batch Orthogonal Matching Pursuit (Presenter: Lichun Li)</p> <p>42 - Performance of cooperative system based on LDPC codes in wireless optical communication (Presenter: Ibrahima Gueye)</p>

## 25<sup>th</sup> OCTOBER (11:15 am – 12:30 pm)

### PAPER PRESENTATIONS

<b>Session 10 - Artificial Intelligence</b> Session Chair: Alireza Shojaei  (Room: Franciscan)	<b>Session 11 - Robotics</b> Session Chair: Alaa Sheta  (Room: Commonwealth)	<b>Session 12 - Internet of Things</b> Session Chair: Kohei Arai  (Room: Cornell)
<p>105 - Machine Learning Classification and Segmentation of Forest Fires in Wide Area Motion Imagery (Presenter: Melonie Richey, Meredith Gregory, Kendall Ocasio, Zachary Mostowsky)</p> <p>194 - Preventing overfitting by training derivatives (Presenter: Vsevolod Avrutskiy)</p> <p>167 - Machine Learning Credit Risk (Presenter: Sivakumar Pillai)</p> <p>219 - Machine learning for the identification and classification of key phrases from clinical documents in Spanish (Presenter: Mireya Tovar Vidal)</p> <p>141 - VEDAR: Accountable Behavioural Change Detection (Presenter: Rajesh Kumar Madabhattula)</p> <p>228 - Butterfly, Larvae and Pupae Defects Detection Using Convolutional Neural Network and Apriori Algorithm (Presenter: Jerwin Montellano)</p>	<p>64 - Human-Augmented Robotic Intelligence (HARI) for Human-Robot Interaction (Presenter: Vishwas Mruthyunjaya)</p> <p>221 - Automatic Grasping Using Tactile Sensing and Deep Calibration (Presenter: Masoud Baghbahari)</p> <p>109 - Wearable Gait Rehabilitation Robotic System Designed with Compliant Actuation Mechanism for Smart and Connected Health (Presenter: S M Mizanoor Rahman)</p> <p>110 - Grasp Rehabilitation of Stroke Patients through Object Manipulation with an Intelligent Power Assist Robotic System (Presenter: S M Mizanoor Rahman)</p> <p>211 - The Future of Socially Assistive Robotics: Considering an Exploratory Governance Framework (EGF) (Presenter: Hock Chuan Lim)</p> <p>193 - Autonomous Navigation with Fuzzy Logic (Presenter: Sherine Antoun)</p>	<p>188 - PROBE: Preparing for Roads in Advance of Barriers and Errors (Presenter: Mohammed Alharbi)</p> <p>203 - Multi-Layer Perceptron Artificial Neural Network Based IoT Botnet Traffic Classification (Presenter: Navid Rajabi)</p> <p>258 - Enhancing the Linguistic Landscape with the Proper Deployment of the Internet of Things Technologies: A Case Study of Smart Malls (Presenter: Azmat Ullah)</p> <p>259 - Design and Fabrication of Smart Bandeau Bra for Breathing Pattern Measurement (Presenter: Raji Rafiu King)</p> <p>239 - Mutually Authenticated Group Key Management Protocol for Healthcare IoT Networks (Presenter: Firdous Kausar)</p>

## 25<sup>th</sup> OCTOBER (01:30 pm – 03:30 pm)

### PAPER PRESENTATIONS

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

## 25<sup>th</sup> OCTOBER (03:45 pm – 05:30 pm)

### PAPER PRESENTATIONS

<b>Session 16 - Artificial Intelligence</b> Session Chair: Alaa Sheta  (Room: Franciscan)	<b>Session 17 - Software Engineering and Quality</b> Session Chair: Pascal Lorenz  (Room: Commonwealth)	<b>Session 18 - Security and Privacy</b> Session Chair: Suzanna Schmeelk  (Room: Cornell)
<p>333 - Neuroscience of Creativity in Human Computer Interaction (Presenter: Ali Algarni)</p> <p>273 - Internet Memes: A Novel Approach to Distinguish Human and Bot Authentication (Presenter: Ishaani Priyadarshini)</p> <p>35 - AI Embedded Transparent Health and Medicine System (Presenter: Yichi Gu)</p> <p>191 - Efficient Bayesian Expert Models for Fever in Neutropenia and Fever in Neutropenia with Bacteremia (Presenter: Bekzhan Darmeshov)</p> <p>327- Making Food with the Mind: Integrating Brain-Computer Interface and 3D Food Fabrication (Presenter: Pat Pataranutaporn)</p> <p>231 - Negative Log Likelihood Ratio Loss for Deep Neural Network Classification (Presenter: Bei Jiang)</p> <p>302 - Emerging Technology of Man's Life-long Partnership with Artificial Intelligence (Presenter: Nicolay Vasilyev)</p>	<p>139 - Blending Six Sigma and Software Development (Presenter: Hassan Pournaghshband)</p> <p>281 - Unified and Stable Project - "Ushering in the Future" (Presenter: Gaurav Kuppa)</p> <p>291 - Enabling Empirical Research: A Corpus of Large-Scale Python Systems (Presenter: Safwan Omari)</p> <p>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)</p> <p>375 - Kaizen 4.0 - Towards an Integrated Framework for the Lean-Industry 4.0 Transformation (Presenter: Tim Weisser)</p> <p>156 - Toys that Mobilize: Past, Present and Future of Phygital Playful Technology (Presenter: Katriina Heljakka)</p> <p>283 - Global Logistics in the Era of Industry 4.0 (Presenter: Ayodeji Dennis Adeitan)</p>	<p>154 - Privacy Implication and Technical Requirements toward GDPR Compliance (Presenter: Zih-Shiuan Yuan)</p> <p>215 - STRIDE-Based Threat Modeling for MySQL Databases (Presenter: Bryson Payne)</p> <p>223 - Efficient RSA crypto processor using Montgomery multiplier in FPGA (Presenter: Lavanya Gnanasekaran)</p> <p>310 - Application of Siamese neural networks for fast vulnerability detection in MIPS executable code (Presenter: Alexander Pechenkin)</p> <p>341 - Where are We Looking for Security Concerns? Understanding Android Security Static Analysis (Presenter: Suzanna Schmeelk)</p> <p>265 - Study and Evaluation of Unsupervised Algorithms used in Network Anomaly Detection (Presenter: Philippe Owezarski)</p> <p>276 - Recurrent Binary Patterns and CNNs for Offline Signature Verification (Presenter: Mustafa Berkay Yilmaz)</p>