MIT IEEE UNDERGRADUATE RESEARCH TECHNOLOGY CONFERENCE

MEET INNOVATIVE TECHNOLOGY

NOVEMBER 4-6 STATA CENTER & BUILDING 34

MACHINE LEARNING AND CLOUD COMPUTING

Jinny Yan	Applying Clustering Algorithms to Determine Authorship of Chinese Twitter Messages
Shuyang Li	Exploring Rich Features for Sentiment Analysis with Various Machine Learning Models
Akanksha Atrey	Twitter Popularity Diffusion of Presidential Candidates Through Detection of Twitter Bots
Charles Lovering	INSIGHT: Interactive Time Series Analytics System
James Conley	XPilot-AI and a GPU based Neural Network Library
John Knollmeyer	DeltaSherlock: Identifying Changes in the Cloud
Vimig Socrates	Project MEFA: A Meta Extraction Framework for Text Mining of Unstructured FDA Narratives
Eiman Ahmed	The Ins and Outs of the New York City Subway System
L. McCall Saltzman	Transactors: An Actor Language for Fault Tolerant Distributed Computing

ROBOTICS AND AUTOMATION TECHNOLOGY

Ryan Mecham	Tele-operating collaborative robot with Virtual Reality for repair jobs in space
Grant Rudd	Intelligent Human-in-the-Loop Gesture Based Control System for 6-DOF Robotic Manipulator
Stephanie Haro	Sonar Processing Framework based on the SCAT Model of Bat Biosonar
Kevin Doherty	Bayesian Learning with Generalized Kernels for Occupancy Map Prediction
Amanda Castonguay	Adaptive Underwater Drone Propulsion Using a Collaborative Virtual Training Environment
Priya Persaud	Common Sense Knowledge, Humanoid Robots and Human Rights
Diego Rios	Eulerian vs. Lagrangian Data Assimilation
Rumana Hassin Syed	Controlling the Movements of a Robotic Mannequin through Kinematics
Tahiya Salam	Multiple Robot Multiple Task Allocation
Rosemarie Day	Design and Implementation of an Interior Automated Environmental Analyzer with App
Tim Nguyen	Design and Evaluation of High Order Polyphase Induction Motor for Power Density Improvement

Wearable Technology

Macall McQueen	Interoperability Framework for Wearable Sensing Devices
Ranine Haidous	Electrically Stimulated Sensations in Virtual Reality
Lauren Plant	Wearable E-Textiles for Clinical Assessments of Movement Disorders
Chanyeol Choi	Enhanced Quantum Electronic States and its Application in Nano-thick van der Waals Heterostructures
Angela Bertolino	Analysis of the Head Related Transfer Function and its Application to Personalized Spatial Audio
Macall McQueen	Interoperability Framework for Wearable Sensing Devices

Communications and Security

Max Robertson	Implementation of a Wideband Spectrum Sensing Algorithm using a Software Defined Radio (SDR)
Giovanni Malloy	Secure Remote Storage Using Oblivious RAM
James Lu	LaRend: Lightweight Array Radars with Energy-harvesting Noise-canceling Drones
Lianghua Xu	AMuSe - Adaptive Video Delivery in Crowded Areas through WiFi Multicast
Jeffrey Yuan	RF Spectrum Crunch: Compressive Sampling for Rapid Scanning
Dmytro Bogatov	Data MATTERS: Customizing Economic Indices to Measure State Competitiveness
Alexis Julian	Developing a Mobile App to aid First Responders After a Tornado

Biological and Biomedical Engineering and Technology

Alyssa Dayan	Accelerating Graph Sequence Alignment with Tarhio-Ukkonen string-matching algorithm Tuned for Dense Regions
George Wang	Genomic Analysis of NonBDNA motifs
Anubhuti Mathur	Improvement of CRISPR/Cas9 Editing of SNPs Modulating Gene Expression in the IRF1 Locus
Carlton Rice	Therapeutic Recruitment of Thermoregulation in Humans by Spinal Selective Thermal Stimulation
Hieu Nguyen	Predicting Left Ventricular Assist Device (LVAD) Performance With Human Circulatory System Model

Innovative Technologies X-Track

Jessica Mele	Tools for the characterization and improvement of the electron beam orbit stability for the National Synchrotron Light Source - II storage ring
Amit Kadan	MATCHMAKERS: A game for crowdsourcing solutions to an NP-hard problem
Jonathan Harvey-Buschel	Partial Hash Collisions for a Memory-Hard Proof-of-Work Function
Virginia Gresham	CamelTours: Preserving Cultural Heritage through a Mobile Web-App