

IEEE MIT Undergraduate Research Technology Conference 2021
Technical Paper Oral Presentation Schedule

<p style="text-align: center;">Saturday, October 9, 2021 Hopin: Session Room A Machine Learning / Artificial Intelligence (AI) Track #1 Track Chair: James Byleckie</p>		
EST TIME	PAPER TITLE	PRESENTERS
10:30AM	ID-7 ConflictClassifier: An Interpretable Pipeline to Identify Contradictions in Clinical Notes	Sharon Jiang (Massachusetts Institute of Technology)
10:40AM	ID-12 Document Classification with Termolator for COVID-19 Literature	Muyan Jiang (New York University, Abu Dhabi)
10:50AM	ID-14 Real-Time Forecasting of US COVID-19 Mortality : A Non-Mechanistic Approach Using Machine Learning and Novel Digital Data	Saketh Sundar (River Hill High School/MIT Laboratory for Computational Physiology)
11:00AM	ID-15 GLAS: A Global Landslide Analytics System	Ishaan Javali, Shrey Joshi (Plano East Senior High School)
11:10AM	ID-16 Investigating Federated Learning strategies for Pneumonia Image Classification	Nitin Nikamanth Appiah Balaji (SSN College of Engineering)
11:20AM	ID-19 AI For Bias Detection: Investigating the Existence of Racial Bias in Police Killings	Anaiy Somalwar (BASIS Independent Silicon Valley)
11:30AM	ID-28 Computing Movie Script Similarity with Neural Word Embeddings	Theodore Patsis (Athens College Psychico College)
11:40AM	ID-33 Recurrent Variational Open-Set Recognition	Amelia L Norman (University of Virginia); Benjamin Diamond (Worcester Polytechnic Institute); Sean C Jordan (University of Maryland)
11:50AM	ID-34 Robustness Testing of Artificial Intelligence-Driven Hand Biometric-Based User Authentication in Mobile Devices	Ethan S Li; Brian Zheng; Eric M Xie (Rutgers University); Emily C Liew (West Orange High School); Anushya Shankar (West Windsor-Plainsboro High School South)
12:00PM	ID-36 A Distributed Decision Tree on Hadoop	William Jones (SUNY New Paltz)

AM TRACK #1

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Saturday, October 9, 2021 Hopin: Session Room B Innovative Technologies Track Track Chair: Gianna Torpey		
EST TIME	PAPER TITLE	PRESENTERS
10:30AM	ID-18 Optimizing a Microgrid	Phevos Paschalidis (Boston University)
10:40AM	ID-23 Student Engagement Through a Web Application	Seth P Benson (United States Military Academy); Andrew C Bregman (West Point)
10:50AM	ID-31 Modeling Li-ion Battery Behavior to Identify Safety Limits	Rhea Kripalani (High Technology High School); Alice Gaehring (Seneca High School); Dakota Neuls ; Owen Rondeau (Rutgers University)
11:00AM	ID-40 Quantitative Analysis of Crowdsourced Platforms for Application in Higher Education	Julia C Patterson ; Aryan Gandhi ; Joey Avallone (Rutgers University)
11:10AM	ID-49 Forecasting Evictions to Determine Areas at High Risk of Housing Insecurity	James Houghton (The Pingry School); Nandini Swami ; Alexandra D Weber ; Hugh Keenan (Rutgers University)
11:20AM	ID-50 Constructing the Ideal Components of Crowdsourcing Platforms for Higher Education	Sarah E Bargfrede ; Aidan Ward (Rutgers University); Jack Finning (Delbarton School)
11:30AM	ID-52 A Novel Method for Protein-Protein Interface Analysis Using Sonification	Sophia E Meytin (Walter Johnson High School)
11:40AM	ID-58 A Novel Wildlife Poaching Detection Solution using Spatio-temporal Data with Dynamic Time Warping	Anika Puri (Horace Greeley High School)
11:50AM	ID-59 Hydroelectric Sensor System for Monitoring Stormwater Runoff Pollutants	Rishabh Jain (Old Bridge High School); Gabriel Z. Kigner ; Aneesh Nagalkar ; Samuel Ngiam ; Isha Wagle (Rutgers University)
12:00PM	ID-66 BEANNA: A Binary-Enabled Architecture for Neural Network Acceleration	Caleb Terrill ; Fred Chu (University of California, Los Angeles)

AM TRACK #2

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Saturday, October 9, 2021 Hopin: Breakout Room C Robotics and Controls Track, Space Application and Technologies Track Track Chair: Karen Liberman		
EST TIME	PAPER TITLE	PRESENTERS
10:30AM	ID-6 Development of an autonomously navigating robot capable of conversing and scanning body temperature to help screen for COVID-19	Ryan Kim (Choate Rosemary Hall)
10:40AM	ID-61 An Efficient and Reliable Multi-Robot Navigation Platform with Collision Avoidance	David J Crafts; Jake Sousa (Wentworth Institute of Technology)
10:50AM	ID-1 Modeling the Effects of J ₂ Perturbation on Orbital Debris and Satellite Motion	Kristina M Hughes (United States Military Academy)
11:00AM	ID-8 Unscented Filtering of Angles-Only Measurements of Orbital Debris	Ethan Rabb (United States Military Academy)
11:10AM	ID-26 Mechanical Design of a ROVER prototype for Exploration tasks on Mars: Structural and Transient Dynamics simulation analysis	Johan J. Nuñez-Quispe (Universidad Nacional de Ingeniería)
11:20AM	ID-45 Low-Friction Demonstrator for Magnetic Actuation of Spacecraft	Guadalupe Bernal (Cornell University)
11:30AM	ID-62 The Applications of Subsurface Assemblies on Thermoelectric Generators for Lunar Processes	Eliazar Q Montemayor III; Teresa Doley; Kane Timlin (Montgomery College); Matthew Lewton (Purdue University Student)
11:40AM	ID-120 SALT: Spacecraft Air Leak Technology	Stephanie Wan, Alyssa Wan, Hannah Robinson (Windham High School)
11:50AM		
12:00PM		
12:10PM		

AM TRACK #3

IEEE MIT Undergraduate Research Technology Conference 2021
Technical Paper Oral Presentation Schedule

Saturday, October 9, 2021
Hopin: Breakout Room A
Machine Learning / Artificial Intelligence (AI) Track #2
Track Chair: James Byleckie

EST TIME	PAPER TITLE	PRESENTERS
1:00PM	ID-37 Assessing Paper Texture Similarity in Matisse Lithographs Using a Triplet Neural Network	Karen M Aguilar; Shelby Powers (Western Washington University)
1:10PM	ID-38 Energy and Cost Considerations for GPU Accelerated AI Inference Workloads	Tergel Molom-Ochir (University of Massachusetts Amherst); Rohan P Shenoy (Amherst Regional High School)
1:20PM	ID-41 Regression Based Machine Learning to Generate and Validate a Metric for Food Insecurity	Matthew Balestier; Myra Cui; Riya Nandakumar; Anaika Tyagi; Cristian A Vintimilla (Rutgers University)
1:30PM	ID-43 Emotion-Based Style Transfer On Visual Art Using Gram Matrices	Nidhi Jadhav; Daniel H Bossett; Leilani Johnson; David Heimowitz; Helen Zheng; Arti Singh (Rutgers University)
1:40PM	ID-46 Using Deep Learning for Urban Pedestrian Counting	Edward W Deleu; Stefan Elez; Ansh Gadodia; Kyra Macvaugh; Grace Zhao (Rutgers University)
1:50PM	ID-51 Effects of Pressure on Acoustic Hand Biometric Authentication	Angela A Claveria; Raina E Maldonado; Akshay Mistry; Siddharth Parikh; Kevin Y Song; Srinidhi Venkatesh (Rutgers University)
2:00PM	ID-55 Using Fused Neural Networks for a Multi-Sensory Approach to Human Emotion Classification	Kevin Yang (Union County Magnet High School); Timothy Ninan; Jack T O'Donnell; Saniya Srivastava; Vasumathi Venkat; Haley Kahn (Rutgers University)
2:10PM	ID-57 Human Context Recognition: A Controllable GAN Approach	Harrison Y Kim (Northeastern University)
2:20PM	ID-63 A Novel Method for Automated Identification and Prediction of Invasive Species Using Deep Learning	Nathan Elias (Liberal Arts and Science Academy)
2:30PM	ID-67 Sentiment Analysis on the News to Improve Mental Health	Saurav Kumar (Stanford University); Rushil Jayant (Homestead High School)

PM TRACK #1

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<p style="text-align: center;">Saturday, October 9, 2021 Hopin: Breakout Room B BioEECS Track; Computer Systems, Theoretical Computer Science & Math Track Circuits, Materials, & NanotechTrack Track Chair: Jones Yu</p>		
EST TIME	PAPER TITLE	PRESENTERS
1:00PM	ID-21 Enhancing the Bionic Eye: A Real-time Image Optimization Framework to Encode Color and Spatial Information Into Retinal Prostheses	William Huang (Palos Verdes Peninsula High School)
1:10PM	ID-35 The Eagle Hand: Innovations in 3D Printing Prosthetic Hands	Kristen E Kelly; Reilly N Desai; Vijay Sreenivasan; Karis A Lewis (Rutgers University - New Brunswick)
1:20PM	ID-64 Engineering a Functional and Affordable 3D Printed Prosthetic Hand	Aarav Patel; Elizabete Grigalinovica-Leja; Nikhil Arayath (Rutgers University); Naysa Douglas (Willingboro High School); Lana Duke (Florence Township Memorial High School)
1:30PM	ID-25 A Simple Microfluidics Design for Rapid Quantification of E. Coli in Contaminated Water	Sreya Vangara (Massachusetts Institute of Technology)
1:40PM	ID-20 Enhanced Mobile Microclimate System	QianYing Zeng (Wentworth Institute of Technology)
1:50PM	ID-39 Mobile Question System for TCM Data Collection	Yen Le (Wentworth Institute of Technology)
2:00PM	ID-44 A Study of Illumination Filtering and Movement Detection in Video Streaming Processing	Mai Phuong Nguyen (University of North Carolina at Charlotte)
2:10PM	ID-60 NoteTogether: Distributed Note Taking with Blockchain	James D Kerr (Wentworth Institute of Technology)
2:20PM	ID-22 ECG Data Analysis with MSE and Machine Learning	Abhigya Pote Shrestha (Wentworth Institute of Technology)
2:30PM	ID-42 Enhancing Pulse Measurement with IoT Technologies for TCM	Tung Pham (Wentworth Institute of Technology)
2:40PM		

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Saturday, October 9, 2021 Hopin: Breakout Room C FIRST FLL Project Innovation Track Chair: Soon Wan		
EST TIME	PAPER TITLE	PRESENTERS
1:00PM		
1:10PM		
1:20PM		
1:30PM		
1:40PM		
1:50PM		
2:00PM	FIRST LEGO League: Team Blue Box - Project Research	Jocelyn Mcgarry, Govind Valiyodiyil, Sasha Luchanok, Matthew Dona, Stafen Barbu, Aditya Biju, Layla Conwey
2:10PM	FIRST LEGO League: Team ICE Box - Project Research	Haashini Gounder, Harsha Gounder, Rayhan Riaz, Tarek Benzerrouk, Hassiba Benzerrouk, Kiaan Mehta, Aryan Sharma
2:20PM		
2:30PM		
2:40PM		