MLSE 2019 POSTERS

Monday, June 10, 2019 • 1:15–2:00

Biomedical Engineering
1.) Shrikant Pawar (Georgia State)—“Predicting Prognosis of Cancer Patients with Interleukin Gene Expression Levels”

2.) Keren Zhang (Georgia Tech)—“Quantification of Synapses for C. elegans’s Connectome Using 3D Fluorescent Microscopy Images”

3.) Haejun Han (Georgia Tech)—“2.5D Computer Vision Approach to Quantify the Synaptic Connectivity of Caenorhabditis elegans”

4.) Jennifer Bone (CMU)—“Hierarchical Machine Learning and Statistical Algorithms for the Development of High-Fidelity Bio-Printed Constructs”

5.) Thosini Kumarika Bamunu Mudiyanelage (Georgia State)—“Relevant Gene Recognition for Cancer Detection Using a Deep Fuzzy Technique”

6.) Hongting Zhao (Georgia Tech)—“Out-of-Focus Deblurring for Whole Slide Images”

7.) Breanna Lee (Georgia Tech)—“Literature Mining to Improve Cellular Cardiovascular Therapies”

8.) Rameshbabu Manyam (Georgia State & Emory)—“A New Scalable, Portable, and Memory-Efficient Predictive Analytics Framework for Predicting Time-to-Event Outcomes in Healthcare”

9.) Kathleen Bates (Georgia Tech)—“Mapping the Behavior Space of the Worm”

10.) Shengli Jiang (Wisconsin-Madison)—“Endotoxin Detection Using Liquid Crystal Droplets and Machine Learning”

11.) Yilin Yang (CMU)—“Modeling Surface Segregation of PdCuAu Using DFT and Neural Network”

12.) Dilnoza Amirkulova (Rochester)—“HOOMD-TF: Experiment Directed Simulation Application”

13.) Xi Chen (Brown)—“Machine Learning Simulations on Charged Electro-Catalysis Interface”

14.) Maghesree Chakraborty (Rochester)—“Systematic Coarse-Grained Potential Learning”

15.) Yifan Wang (Delaware)—“Statistical-Learning-Assisted First-Principles Modeling of Single Atom Catalysts”

16.) Zhe Wu (UC, Los Angeles)—“Machine Learning-Based Predictive Control of Nonlinear Processes”

17.) William Bradley (Georgia Tech)—“Adding Mechanistic Inputs to Data-Driven Models: An Approach to Constrain Hybrid Models”

18.) Tianyou Mou (Virginia Tech) Revealing—“Active Site Evolution in CO2 Electroreduction via Data-Enabled Stochastic Modeling”

Chemistry
There are no posters for this track during this session.

Electrical and Computer Engineering
19.) Andres Felipe Alba Hernandez (Northern Illinois)—“Astronomical Sky Surveys Scheduling Using Reinforcement Learning”

20.) Yuwei Qin (CMU)—“Deep Neural Network: Data Detection Channel with High Degrees of Freedom”

21.) Tahiya Chowdhury (Rutgers)—“Change-Point Detection in Time Series Using Deep Learning”

22.) Amir Hossein Afsharinejad (Georgia Tech)—“Data Analytics for Resilience of Energy Infrastructure”

Industrial Engineering and Operations Research
There are no posters for this track during this session.

Materials Science and Engineering
23.) Srujana Rao Yarasi (CMU)—“Understanding Powder Morphology and Its Effect on Flowability through Computer Vision and Machine Learning in Additive Manufacturing”

24.) Abhirup Patra (Georgia Tech)—“High Throughput DFT Computations of Polymers Guided by Machine Learning Algorithms”

25.) Lihua Chen (Georgia Tech)—“Machine Learning Models for the Lattice Thermal Conductivity Prediction of Inorganic Materials”
26.) Christopher Childs (CMU)—“Machine Learning for Cementitious Systems”

27.) Matthew Connolly (NIST)—“Deep Convolutional Neural Network for Reconstruction of Strain Tensors from Transmission Bragg Edge Measurements”

28.) Aditya Menon (CMU)—“Hierarchical Machine Learning Model for Mechanical Property Predictions of Polyurethane Elastomers from Small Datasets”

**Mechanical Engineering**
29.) Haiguang Liao (CMU)—“A Deep Reinforcement Learning Approach for Global Routing”

30.) Wentai Zhang (CMU)—“Functionally-Based Conceptual Design Through Data-Driven Shape Analysis”

31.) Saksh Jaim (British Columbia)—“Spatiotemporal Modeling of PM2.5 Using Machine-Learning Enabled Land Use Models”

32.) S. Ashwin Renganathan (Georgia Tech)—“Deep Gaussian Process Enabled Emulation and Optimization for Aerospace Engineering Design”

33.) Ashok Goel (Georgia Tech)—“Towards Large-Scale Design Creativity”

**Physics**

There are no posters for this track during this session.

**Public Policy**

34.) Neil Hwang (City College of NY)—“Dynamic Community Detection for Organizational Leadership”

**Biomedical Engineering**

1.) Minliang Liu (Georgia Tech)—“A Machine Learning-Based Constitutive Model for Characterizing Hyperelastic Soft Biological Tissues”

2.) Ashok Goel (Georgia Tech)—“VERA Goes to College: Inquiry-Based Modeling for Learning in College-Level Biology”

3.) Jayant Prakash (Georgia Tech)—“Machine Learning Applications to Alzheimer’s Disease Clinical Feature Prediction”

4.) Albert Lee (Georgia Tech)—“Machine Learning Enhanced Dynamic Meta-Analysis for Multi-Factorial Disease Prediction”

5.) Ryan Hoffman (Georgia Tech)—“Intelligent Mortality Reporting with FHIR”

6.) Yuanda Zhu (Georgia Tech)—“Identifying Causal Chain of Death Using Graph Embedding”

7.) Hang Wu (Georgia Tech)—“Learning Whole-Slide Image Classification via Graph Convolutional Neural Networks”

8.) Hemant Pillai (Virginia Tech)—“Accelerating Discovery of High-Performance Electrocatalysts for Ammonia Oxidation via Machine Learning”

9.) Noushin Omidvar (Virginia Tech)—“Developing First-Principles Embedded-Atom Method Potentials with Bayesian Inference”

10.) Jianyuan Zhai (Georgia Tech)—“Machine-Learning Assisted Data-Driven Optimization”

11.) Shih-Han Wang (Virginia Tech)—“Development of Physics-Informed Neural Network Potentials for Molecular Simulations”

12.) Yingjie Chen (Rutgers)—“Data-Driven Modeling of Unit Operations in Continuous Pharmaceutical Manufacturing Line under the Industry 4.0 Framework”

13.) Jangwon Lee (Auburn)—“A Guided Genetic Algorithm for Variable Selection”

14.) Kiumars Badr (Auburn)—“Kinetic Modeling of a Novel Methanotroph-Cyanobacterium Coculture for Biogas Conversion”

15.) Chaitanya Sampat (Rutgers)—“Machine Learning Based Spectroscopic Framework for Prediction of Tablet Content Uniformity”

16.) Matthew Hilliard (Auburn)—“Alternative Optimal Solutions in Flux Balance Analysis Give Rise to Hidden Phenotypes”

17.) Uche Anene (Connecticut)—“Ligand Functionalization for Enhanced Selective Gas Adsorption of Hydrostable STAM-17-OEt MOF”
Chemistry

18.) Lixue Cheng (Cal Tech)—“Transferability in Machine Learning for Electronic Structure via the Molecular Orbital Basis”

19.) Rainier Barrett (Rochester)—“Online Machine Learning in Molecular Dynamics Simulations with HOOMD-Blue and TensorFlow”

20.) Aditya Sonpal (Buffalo, SUNY)—“Machine Learning Models for Hansen Solubility Parameters and Their Application in Predicting Solvent-Polymer Interactions”

21.) Gaurav Vishwakarma (Buffalo, SUNY)—“Tailoring Genetic Algorithm for Data-Driven Research in Chemistry”

22.) Jacob Townsend (Tennessee)—“Data-Driven Acceleration of the Coupled-Cluster Eigensolver”

23.) Derek Metcalf (Georgia Tech)—“Approaches for Machine Learning of Ab Initio Intermolecular Properties”

24.) Raman Dutt (Shiv Nadar)—“Application of Capsule Networks in Pharmacophore-Based Virtual High-Throughput Screening”

25.) Zach Glick (Georgia Tech)—“Improving Self-Consistent Field Guess Electron Densities with Neural Networks”


27.) Xiangyun Lei (Georgia Tech)—“Design and Analysis of Machine Learning Exchange-Correlation Functionals via Rotationally Invariant Convolutional Descriptors”

28.) Apurba Nandi (Emory)—“Permutationally Invariant Polynomial Approach Breaks 10-Atom Barrier”

Materials Science and Engineering

29.) Shruti Venkatram (Georgia Tech)—“Prediction of Solvents and Non-Solvents for Polymers Using Machine Learning Techniques”

30.) Sezen Yucel (Georgia Tech)—“Automated Analysis of Particle Morphology of Cellulose Nanocrystals”

31.) Tess Hellebrekers (CMU)—“Soft Robot Gripper with Integrated Sensing Skin for Predicting Grasp Success and Stability”

32.) Siwen Wang (Virginia Tech)—“Predicting High-Entropy Alloys for Catalysis via Ab-Initio Machine Learning”

33.) Chiho Kim (Georgia Tech)—“Machine Learning Assisted Prediction of Polymer Glass Transition Temperatures”

34.) Almambet Iskakov (Georgia Tech)—“Systematic Segmentation, Evaluation, and Characterization of Experimentally Acquired Microstructure Images”

35.) Tim Rose (CMU)—“Evolutionary Niching in the GAtor Genetic Algorithm for Molecular Crystal Structure Prediction”

36.) Gozde Tutuncuoglu (Georgia Tech)—“Crystal Phase Prediction of GaAs Nanowires with Machine Learning”

37.) Natalia Syzochenko (Dartmouth & Tech U Dublin)—“Predictive Modeling of Critical Temperatures in Superconducting Materials”

Mechanical Engineering

There are no posters for this track during this session.

Physics

There are no posters for this track during this session.

Public Policy

38.) Kristen Allen (CMU)—“Using Post-Level Sentiment Features for Suicide Risk Prediction on Reddit”

39.) Sooji Ha (Georgia Tech)—“Detecting Behavioral Failures in Emerging Electric Vehicle Infrastructure Using Supervised Text Classification Algorithms”

40.) Theresa Gebert (CMU)—“The Efficacy of Shallow Learning Models in Modeling Adverse Pregnancy Events in the Numom2b Study”

Electrical and Computer Engineering

There are no posters for this track during this session.

Industrial Engineering and Operations Research

There are no posters for this track during this session.