Spring 2021 HiPerGator Symposium

Tuesday, March 30, 2021

9:00 a.m. – 2:00 p.m.

Virtual Event

Presented by:

UF UNIVERSITY of FLORIDA
Information Technology

UF Information Technology is hosting its second HiPerGator Symposium of the academic year this spring. Following the success of the previous symposium, the Spring 2021 HiPerGator Symposium focuses on research underway using HiPerGator with AI and machine learning. The symposium features presentations from UF's 19 Artificial Intelligence Research Catalyst Fund awardees, an introduction to UF's AI staff and the services they provide, and four panels (Agriculture & Environment, Art, Design,& Humanities, Engineering, and Medicine) at the close of the event.

Symposium Agenda

9:00 AM Welcome, Opening Remarks

Erik Deumens, Ph.D.
Director - UFIT Research Computing

9:10 AM Introduction to UFIT Research Computing's AI Support Team

AI Support Team – UFIT Research Computing

9:30 AM Catalyst Fund Winners Presentations

9:30 AM Fairness in Information Access through Culturally Competent AI Systems
Sylvia Chan-Olmsted, Ph.D., Professor – Department of Telecommunication, College of Journalism and Communications, Director of Media Consumer Research

9:40 AM Symbiosis of Machine Learning, Nonlinear Time Series Analysis, and Novel Supercomputing to Reconstruct Soil-biome Nonlinear Dynamics from Field and Remote-sensing Large Data
Ray Huffaker, Ph.D., Professor – Department of Agricultural and Biological Engineering, College of Agricultural and Life Sciences

9:50 AM Deep Learning Prediction of Autoimmune Disease from Early Childhood Gut Microbiome Composition
Eric Triplett, Ph.D., Professor and Chair – Department of Microbiology & Cell Science, College of Agricultural and Life Sciences

10:00 AM Artificial Neural Networks Meet Biological Neural Networks: Designing Personalized Stimulation for the Data-driven Control of Neural Dynamics
Shreya Saxena, Ph.D., Assistant Professor – Department of Electrical & Computer Engineering, Herbert Wertheim College of Engineering

10:10 AM Spatio-Temporal Modeling of Land-Use Changes Using Big Data
Emre Tepe, Ph.D., Assistant Professor – Department of Urban and Regional Planning, College of Design, Construction & Planning

10:20 AM A Machine Learning Approach to Drug Hit Optimization
Chenglong Li, Ph.D., The Nicholas Bodor Professor In Drug Discovery – Department of Medicinal Chemistry, College of Pharmacy

10:30 AM AI-assisted Accelerated Discovery of Novel Materials for Ballistic Applications
Salil Bavdekar (on behalf of Ghatu Subhash), Ph.D., Postdoctoral Research Associate – Department of Mechanical & Aerospace Engineering, Herbert Wertheim College of Engineering

10:40 AM 5-Minute Break

10:45 AM VCA-DNN: Neuroscience-Inspired Artificial Intelligence for Visual Emotion Recognition
Ruogu Fang, Ph.D., Assistant Professor – J. Crayton Pruitt Family Department of Biomedical Engineering, Herbert Wertheim College of Engineering

10:55 AM Fair AI Responding to Online Education "FAIR_EDU"
Wanli Xing, Ph.D., Assistant Professor – School of Teaching and Learning, College of Education

11:05 AM A Kernel Neural Network for High-dimensional Genomic Risk Prediction
Qing Lu, Ph.D., Professor – Department of Biostatistics, College of Public Health and Health Professions

11:15 AM AI-Enabled Imaging Biomarker Identification for Early Detection and Treatment of Alzheimer's Disease
Juan Nino, Ph.D., Alumni Professor – Department of Materials Science & Engineering, Herbert Wertheim College of Engineering

11:25 AM Application of Machine Learning in the Prediction and Modeling
Hassan Azad, Ph.D., Assistant Professor – School of Architecture, College of Design, Construction & Planning

11:35 AM The Artificial Intelligence Learns Optimal Treatment Strategies for Hypotension in Surgery
Tezcan Ozrazgat-Baslanti, Ph.D., Research Assistant Professor – Department of Anesthesiology, College of Medicine

11:45 AM AI-driven Movement Classification and Analysis across Clinical and Cultural Application Areas
Angelos Barmpoutis, Ph.D., Associate Professor – Digital Worlds Institute, College of the Arts

11:55 AM Using AI to Uncover Decades of Global Ecological Change
Brian Stucky, Ph.D., Assistant Scientist – Biodiversity Informatics, Florida Museum of Natural History

12:05 PM Real-Time Management of Micromobility Services for Smart Cities
Xilei Zhao, Ph.D., Assistant Professor – Department of Civil & Coastal Engineering, Herbert Wertheim College of Engineering

12:15 PM Combining Deep Neural Networks and Large-Scale Brain Data to Predict Human Cognition and Behavior
Brian Odegaard, Ph.D., Professor – Department of Psychology, College of Liberal Arts and Sciences

12:25 PM A New Stochastic Gradient Algorithmic Paradigm for Training Massive AI Models in Network-Wide Traffic Anomaly Warning
Hongcheng Liu, Ph.D., Assistant Professor – Department of Industrial & Systems Engineering, Herbert Wertheim College of Engineering

12:35 PM Parasitic Nematode Identification with Deep Learning
Alina Zare, Ph.D., Professor – Department of Electrical & Computer Engineering, Herbert Wertheim College of Engineering

12:45 PM 15-Minute Break

1:00 PM Virtual Panels

Agriculture & Environment:

***Ray Huffaker**, Ph.D., Professor – Department of Agricultural and Biological Engineering, College of Agricultural and Life Sciences*

***Alina Zare**, Ph.D., Professor – Department of Electrical & Computer Engineering, Herbert Wertheim College of Engineering*

***Peter DiGennaro**, Ph.D., Assistant Professor – Department of Entomology and Nematology, College of Agricultural and Life Sciences*

***Steven Weisberg**, Ph.D., Assistant Professor and Director of the Spatial Cognition and Navigational Neuroscience Lab – Department of Psychology, College of Liberal Arts and Sciences*

***Brian Stucky**, Ph.D., Assistant Scientist – Biodiversity Informatics, Florida Museum of Natural History*

Art, Design, & Humanities:

***Hassan Azad**, Ph.D., Assistant Professor – School of Architecture, College of Design, Construction & Planning*

***Emre Tepe**, Ph.D., Assistant Professor – Department of Urban and Regional Planning, College of Design, Construction & Planning*

***My T. Thai**, Ph.D., Professor, Associate Director of Warren B. Nelms Institute for the Connected World – Department of Computer & Information Science & Engineering, Herbert Wertheim College of Engineering*

***Angelos Barmpoutis**, Ph.D., Associate Professor – Digital Worlds Institute, College of the Arts*

***Wanli Xing**, Ph.D., Assistant Professor – School of Teaching and Learning, College of Education*

Engineering:

***Salil Bavdekar** (on behalf of Ghatu Subhash), Ph.D., Postdoctoral Research Associate – Department of Mechanical & Aerospace Engineering, Herbert Wertheim College of Engineering*

***Xilei Zhao**, Ph.D., Assistant Professor – Department of Civil & Coastal Engineering, Herbert Wertheim College of Engineering*

***Hongcheng Liu**, Ph.D., Assistant Professor – Department of Industrial & Systems Engineering, Herbert Wertheim College of Engineering*

***Shreya Saxena**, Ph.D., Assistant Professor – Department of Electrical & Computer Engineering, Herbert Wertheim College of Engineering*

Medicine & Bioengineering:

***Juan Nino**, Ph.D., Alumni Professor – Department of Materials Science & Engineering, Herbert Wertheim College of Engineering*

***Tezcan Ozrazgat-Baslanti**, Ph.D., Research Assistant Professor – Department of Anesthesiology, College of Medicine*

***Eric Triplett**, Ph.D., Professor and Chair – Department of Microbiology & Cell Science, College of Agricultural and Life Sciences*

***Ruogu Fang**, Ph.D., Assistant Professor – J. Crayton Pruitt Family Department of Biomedical Engineering, Herbert Wertheim College of Engineering*

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***Chenglong Li**, Ph.D., The Nicholas Bodor Professor In Drug Discovery – Department of Medicinal Chemistry, College of Pharmacy*

***Brian Odegaard**, Ph.D., Professor – Department of Psychology, College of Liberal Arts and Sciences*

2:00 PM 2021 Spring HiPerGator Symposium Concludes