Fall 2022 HiPerGator Symposium
Tuesday, November 1, 2022
9:00 a.m. – 12:30 p.m.
Virtual Event

Presented by:

UF | UNIVERSITY of FLORIDA
Information Technology

Symposium Agenda

9:00 AM   Welcome, Opening Remarks

Erik Deumens, Ph.D.
Senior Director – UFIT Research Computing

9:20 AM   Keynote: What Can One Do with the Entire Supercomputer? – New Science and Digital Twins

Sivaramakrishnan Balachandar, Ph.D., Newton C. Ebaugh Professor, Distinguished Professor - Department of Mechanical & Aerospace Engineering, Herbert Wertheim College of Engineering

9:40 AM   Lightning Talks

9:40 AM   High Performance Computing Used in Identifying Mechanisms of PARP Inhibitor Resistance in Cancer
Adriana Del Pino Herrera, Graduate Research Assistant – Department of Biomedical Engineering, Herbert Wertheim College of Engineering

9:50 AM   Simulating the Fission Gas Behavior and Release in UO2 Nuclear Fuel Using HiPerGator
Md Ali Muntaha, Graduate Research Assistant – Department of Materials Science & Engineering, Herbert Wertheim College of Engineering

10:00 AM   Genome-wide Detection of Copy Number Variation in U.S. Holstein Dairy Cattle
Giovanni Ladeira, Graduate Research Assistant – Department of Animal Science, College of Agriculture and Life Sciences

10:10 AM   Phase Transitions May have Induced Plume and Slab Stagnation in Earth's Past: Modeling with a New Entropy Method and Visco-plastic Rheology
Ranpeng Li, Graduate Research Assistant – Department of Geological Science, College of Liberal Arts and Sciences

10:20 AM   Simulations of Black Hole Fueling in Isolated and Merging Galaxies with an Explicit, Multiphase ISM
Aneesh Sivasankaran, Graduate Research Assistant – Department of Physics, College of Liberal Arts and Sciences

10:30 AM   10-Minute Break

10:40 AM   DOMINO: Domain-aware Calibration in Medical Image Segmentation
Skylar Stolte, Graduate Research Assistant – Department of Biomedical Engineering, Herbert Wertheim College of Engineering

10:50 AM   Gator Glaciology
Nathan Schoedl, Undergraduate Research Assistant – Major in Math, Statistics and Computing Science, College of Liberal Arts and Sciences

11:00 AM	High Resolution Mantle Flow Models Constrain Balance of Plate-tectonic Forces by Matching GPS Velocities
	Arushi Saxena, Ph.D., Postdoctoral Researcher – Department of Geological Sciences, College of Liberal Arts and Sciences

11:10 AM	Novel Analytical Methods for Discovery with qCLASH Chimeric miRNA/Target Sequence Data
	Daniel Stribling, Graduate Research Assistant – Department of Molecular Genetics & Microbiology, College of Medicine

11:20 AM	Recycled Basaltic Material in Mantle Plumes Explains the Appearance of the X-discontinuity in the Upper Mantle: 2D Geodynamic Numerical Models
	Martina Monaco, Graduate Research Assistant – Department of Geology, College of Liberal Arts and Sciences

11:30 AM	Genome Wide Association Studies for Sweat Gland Properties in a Multibreed Angus-Brahman Herd
	Aakilah Hernandez, Graduate Research Assistant – Department of Animal Science, College of Agriculture and Life Sciences

11:40 PM	10-Minute Break

11:50 PM	Poster Session

High Performance Computing Used in Identifying Mechanisms of PARP Inhibitor Resistance in Cancer
Adriana Del Pino Herrera, Graduate Research Assistant – Department of Biomedical Engineering, Herbert Wertheim College of Engineering

Computer Assisted Prostate Annotation on Micro-Ultrasound Image Using Deep Neural Networks
Wenbin Guo, Ph.D., Postdoctoral Associate – UF Digital Worlds Institute, College of the Arts

Genome-wide Detection of Copy Number Variation in U.S. Holstein Dairy Cattle
Giovanni Ladeira, Graduate Research Assistant – Department of Animal Science, College of Agriculture and Life Sciences

Phase Transitions May have Induced Plume and Slab Stagnation in Earth's Past: Modeling with a New Entropy Method and Visco-plastic Rheology
Ranpeng Li, Graduate Research Assistant – Department of Geological Science, College of Liberal Arts and Sciences

Recycled Basaltic Material in Mantle Plumes Explains the Appearance of the X-discontinuity in the Upper Mantle: 2D Geodynamic Numerical Models
Martina Monaco, Graduate Research Assistant – Department of Geology, College of Liberal Arts and Sciences

High Resolution Mantle Flow Models Constrain Balance of Plate-tectonic Forces by Matching GPS Velocities
Arushi Saxena, Ph.D., Postdoctoral Researcher – Department of Geological Sciences, College of Liberal Arts and Sciences

DOMINO: Domain-aware Calibration in Medical Image Segmentation
Skylar Stolte, Graduate Research Assistant – Department of Biomedical Engineering, Herbert Wertheim College of Engineering

12:30 PM   2022 Fall HiPerGator Symposium Concludes