4th GLOBAL RESEARCH PLATFORM WORKSHOP

Co-Located with IEEE International Conference On eScience 2023
October 9-10, 2023

PROGRAM – October 6, 2023

	MONDAY, OCTOBER 9, 2023
9:00-9:10am **10 min**	**Welcome and 4GRP Introduction – Maxine Brown,** UIC
9:10 – 9:30am **20 min**	**Workshop Overview** Global Research Platform (GRP): A Software Defined, Globally Distributed, Multi-Domain Computational Science Environment – Architectural Framework, Innovations, Future Directions – **Joe Mambretti**, StarLight/iCAIR/NU
9:30-10:30am **60 min** including Q&A	**Session 1: Large-Scale Global Science (Part 1)** **Moderator: Joe Mambretti,** StarLight, iCAIR/NU **KEYNOTE:** Services for Large Scale Distributed Data Intensive Science – **Ian Foster,** Argonne National Laboratory, University of Chicago
10:30-11:00am **30 min**	**Break**
11:00-12:30pm **90 min** 3 talks @ 30 min each	**Session 1: Large-Scale Global Science *(continued)*** **Moderator: Maxine Brown,** UIC Distributed Computing Challenges at the LHC and HL-LHC – **Marian Babik,** CERN IceCube – **Mahidhar Tatineni,** UC San Diego, San Diego Supercomputer Center National Supercomputing Center (NSCC) Singapore/South Asia International R&E Networking/APOnet – **Francis Lee**, SingAREN, Nanyang Technological University
12:30-2:00pm **90 min**	**Lunch**
2:00-3:30pm **90 min** 4 talks @ ~22 min each	**Session 2: Next-Generation Research Platforms** **Moderator: Joe Mambretti,** StarLight/iCAIR/NU SLICES – **Panayiotis Andreou,** Center of Interdisciplinary Science Promotion and Innovative Research Exploration (INSPIRE), University of Central Lancashire (UCLan) National Research Platform – **Mahidhar Tatineni,** UC San Diego, San Diego Supercomputer Center Introduction to Asi@Connect and APAN APRP WG Activities – **Jeonghoon Moon**, KISTI Introduction to Korea Research Platform – **Jeonghoon Moon**, KISTI
3:30-4:00pm **30 min**	**Break**

4:00-5:15pm **75 min** 3 talks @ 25 min each	**Session 3: Orchestration Among Multiple Domains** **Moderator: Francis Lee,** SingAREN, Nanyang Technological University AutoGOLE/NSI/ MEICAN/SENSE/Open Exchanges – **Joe Mambretti**, iCAIR/NU/StarLight SURFnetNG: Moving Towards Intelligent Networks Through Orchestration – **Peter Boers**, SURFnet Nautilus Distributed Hypercluster – **Mahidhar Tatineni**, UC San Diego, San Diego Supercomputer Center
5:15-5:25pm **10 min**	**Closing Session for Day 1 – Joe Mambretti,** StarLight/iCAIR/NU
	TUESDAY, OCTOBER 10, 2023
9:00-9:10am **10 min**	**Introduction to Day 2 – Joe Mambretti,** StarLight/iCAIR/NU
9:10-10:25am **75 min** 3 talks @ 25 min each	**Session 4: High-Fidelity Data Flow Monitoring, Visualization, Analytics, Diagnostic Algorithms, Event Correlation AI/ML/DL** **Moderator: Joe Mambretti,** iCAIR/NU/StarLight ESnet6 High-Touch: A Flexible Programmable Network Platform – **Chin Guok**, ESnet Packet and Flow Marking for Global Science Domains – **Marian Babik**, CERN GÉANT Services for EU Large-Scale Data-Intensive Science Facilities – **Ivana Golub**, GÉANT
10:25-11:00am **35 min**	**Break**
11:00-12:00pm **60 min** 2 talks @ 30 min each	**Session 1** ***(continued due to scheduling conflict)*** **Moderator: Joe Mambretti,** StarLight/iCAIR/NU Advanced Photon Source (APS) & APS Upgrade – **Rajkumar Kettimuthu,** Argonne National Laboratory, University of Chicago **Session 3** ***(continued due to scheduling conflict)*** SciStream: Architecture and Toolkit for Data Streaming between Federated Science Instruments – **Rajkumar Kettimuthu,** Argonne National Laboratory, University of Chicago
12:00-12:30 **30 min**	**Session 5: International Testbeds for Data-Intensive Science and the Transition to Tbps-800G-400G WANs (Part 1)** **Moderator: Maxine Brown,** UIC Singapore Open Exchange and the Data Mover Challenge – **Francis Lee**, SingAREN, Nanyang Technological University
12:30-2:00pm **90 min**	**Lunch**

2:00-3:40pm **100 min** 4 talks @ 25 min each	**Session 5: International Testbeds for Data-Intensive Science and the Transition to Tbps-800G-400G WANs (Part 2)** **Moderator: Maxine Brown,** UIC Implementing Testbeds for the Transition to Tbps-800G-400G WANs and OFCnet – **Marc Lyonnais**, Ciena Research Advanced Infrastructure for Science – **Susumu Date**, Osaka University Global P4 Lab – **Ivana Golub**, GÉANT ORNL Quantum Networking Testbed – **Nageswara Rao**, Oak Ridge National Laboratory
3:40-4:00pm **20 min**	**Break**
4:00-4:50pm **50 min** 2 talks @ 25 min each	**Session 5: International Testbeds for Data-Intensive Science and the Transition to Tbps-800G-400G WANs (Part 3)** **Moderator: Maxine Brown,** UIC Fundamental Technologies Supporting the Transition to Tbp-800G-400G WANs – **Rod Wilson,** Ciena Research Chameleon Cloud Testbed and Science Research – **Kate Keahey**, University of Chicago, Argonne National Laboratory
4:50-6:05pm **75 min** 3 talks @ 25 min each	**Session 6: Enhancements of Major R&E Networks and Open Exchange Points** **Moderator: Marc Lyonnais,** Ciena Research Challenges and Collaborative Planning in R&E Networks – **Chin Guok**, ESnet Internet2 and AP-REX 2.0 – **Matt Zekauskas**, Internet2 StarLight Software Defined Exchange Testbeds for Data Intensive Science – **Joe Mambretti**, StarLight/iCAIR/NU/MREN
6:05-6:15pm **10 min**	**Closing Session for Day 2 – Joe Mambretti,** StarLight/iCAIR/NU