

4th GLOBAL RESEARCH PLATFORM WORKSHOP

Co-Located with IEEE International Conference On eScience 2023

October 9-10, 2023

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

<p>2:00-3:40pm 100 min 4 talks @ 25 min each</p>	<p>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, PSNC/GÉANT ORNL Quantum Networking Testbed – Nageswara Rao, Oak Ridge National Laboratory</p>
<p>3:40-4:00pm 20 min</p>	<p>Break</p>
<p>4:00-4:50pm 50 min 2 talks @ 25 min each</p>	<p>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</p>
<p>4:50-6:05pm 75 min 3 talks @ 25 min each</p>	<p>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</p>
<p>6:05-6:15pm 10 min</p>	<p>Closing Session for Day 2 – Joe Mambretti, StarLight/iCAIR/NU</p>