5th GLOBAL RESEARCH PLATFORM WORKSHOP

Co-Located with 20th IEEE International Conference on eScience 2024
September 16-17, 2024

PROGRAM – June 28, 2024

	MONDAY, September 16, 2024
8:15-8:25am **10 min**	**Welcome and 4GRP Introduction – Maxine Brown,** UIC
8:25-8:45am **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
8:45-9:35am **50 min** including Q&A	**Moderator: Joe Mambretti,** StarLight, iCAIR/NU **KEYNOTE:** Bridging the Data Gaps to Democratize AI in Science, Education and Society – **Ilkay Altinas**, UC San Diego, San Diego Supercomputer Center
9:35-10:35am **30 min** 2 talks @ 30 min each	**Session 1: Large-Scale Global Science (Part 1)** **Moderator: Maxine Brown,** UIC SINET: High-Speed Academic Network as Scientific Information Infrastructure – **Osamu Akashi**, NII CloudEdge Fusion Project – **Jason Haga**, AIST
10:35-11:00am **25 min**	**Break**
11:00-12:30pm **120 min** 3 talks @ 30 min each	**Session 1: Large-Scale Global Science (Part 2)** **Moderator: Maxine Brown,** UIC IRI Facility – **Chin Guok**, ESnet ATLAS Network Data Challenge 2024 (DC24): Results and Plans for DC26 – **Shawn McKee**, University of Michigan UseGalaxy.ca: Implementing the Canadian Branch of the UseGalaxy Consortium – **Carol Gauthier**, Université de Sherbrooke
12:30-2:00 **90 min**	**Lunch**
2:00-3:30pm **90 min** 3 talks @ 30 min each	**Session 2: Next-Generation Research Platforms** **Moderator: Jim Chen,** StarLight/iCAIR/NU National Research Platform – **Mahidhar Tatineni**, UC San Diego, San Diego Supercomputer Center Introduction to APAN APRP WG and Korea Research Platform Activities – **Jeonghoon Moon**, KREONET Center, KISTI National Data eXchange and KREONET with Korea Research Platform – **Buseung Cho**, KISTI/KREONET

3:30-4:00pm **30 min**	**Break**
4:00-5:12pm **72 min** 3 talks @ 24 min each	**Session 3: Orchestration Among Multiple Domains** **Moderator: Francis Lee,** SingAREN; Nanyang Technological University, College of Computing and Data Science Overview and Progress of the RED ONION Project – **Susumu Date**, Cybermedia Center, Osaka University, Japan AutoGOLE/NSI/ MEICAN/SENSE/Open Exchanges – **Christopher Bruton**, CENIC/Pacific Wave Non-IP Network Services in the GÉANT Community – **Ivana Golub**, PSNC/GÉANT
5:12-6:00pm **48 min** 2 talks @ 24 min each	**Session 4: High-Capacity WAN Services, High-Fidelity Flow Monitoring, Visualization, Analytics, Diagnostic Algorithms, Event Correlation AI/ML/DL** **Moderator: Christopher Bruton, CENIC/Pacific Wave** Faster, Smarter, and Greener High-Capacity Networks – **Rod Wilson**, External Research, Ciena R&D DTN-as-a-Service and AIDTN – **Jim Chen**, StarLight/iCAIR/NU
6:00-6:10pm **10 min**	**Closing Session for Day 1 – Joe Mambretti,** StarLight/iCAIR/NU
	TUESDAY, September 17, 2024
8:30-8:35am **5 min**	**Introduction to Day 2 – Joe Mambretti,** StarLight/iCAIR/NU
8:35-10:35am **120 min** 4 talks @ 30 min each	**Session 5: International Testbeds for Data-Intensive Science and the Transition to Tbps-800G-400G WANs (Part 1)** **Moderator: Jeonghoon Moon, The KREONET Center, KISTI** Research and Development: Beyond 5G/IoT Testbed with High-Reliability and High-Elasticity – **Hidehisa Nagano**, National Institute of Information and Communications Technology (NICT) Next-Generation Cyberinfrastructure – **Aki Nakao**, Graduate School of Engineering, University of Tokyo SciStream: Enabling Applications to Stream Data between Science Instruments and HPC – **Rajkumar Kettimuthu,** Argonne National Laboratory, University of Chicago Resilience High-Speed Network to Support Global Science Research – **Francis Lee**, SingAREN; Nanyang Technological University, College of Computing and Data Science
10:35-11:00am **25 min**	**Break**

11:00-12:30pm **90 min** 3 talks @ 30 min each	**Session 5: International Testbeds for Data-Intensive Science and the Transition to Tbps-800G-400G WANs (Part 2)** **Moderator: Michal Krsek, CESNET** FPGA-Accelerated Parameter Estimation in Weibull Distribution for Network Traffic Flow Analysis – **Yu-Kuen Lai**, Computer Networks & Systems Research Lab, Dept. of Electrical Engineering, Chung-Yuan Christian University ArQNet: Argonne Quantum Network Testbed – **Rajkumar Kettimuthu**, Argonne National Laboratory, University of Chicago SCinet, OFCnet, and CENI – **Marc Lyonnais**, External Research, Ciena R&D
12:30-2:00pm **90 min**	**Lunch**
2:00-2:30pm **30 min** 1 talk @ 30 min each	**Session 5: International Testbeds for Data-Intensive Science and the Transition to Tbps-800G-400G WANs (Part 3)** **Moderator: Michal Krsek, CESNET** Oak Ridge National Laboratory (ORNL) Quantum Networking Testbed – **Speaker (invited)**
2:30-3:30pm **60 min** 2 talks @ 30 min each	**Session 6: Enhancements of Major R&E Networks and Open Exchange Points (Part 1)** **Moderator: Marc Lyonnais,** External Research, Ciena R&D ESnet's 10-year Strategic Plan – **Chin Guok**, ESnet Research Network Infrastructure Update in Taiwan – **Te-Lung Liu,** National Applied Research Laboratories/National Center for High-Performance Computing
3:30-4:00pm **30 min**	**Break**
4:00-5:30pm **9 min** 3 talks @ 30 min each	**Session 6: Enhancements of Major R&E Networks and Open Exchange Points (Part 2)** **Moderator: Marc Lyonnais,** External Research, Ciena R&D Internet2 and NA REX – **Speaker (invited)** CzechLight and Other CESNET Activities – **Michal Krsek**, CESNET StarLight Software Defined Exchange Testbeds for Data Intensive Science – **Joe Mambretti**, StarLight/iCAIR/NU/MREN
5:30-5:40pm **10 min**	**Closing Session for Day 2 – Joe Mambretti,** StarLight/iCAIR/NU