7th International Workshop on Innovating the Network for Data-Intensive Science

**Contact us via:** scinet-workshop@scinet.supercomputing.org

**INDIS 2020 – Who are We**

Co-Chairs and Workshop Co-Organizers:

- **Michelle Zhu**, Montclair State University, USA
- **Sarah M. Neuwirth**, Heidelberg University, Germany
- **Mariam Kiran**, ESnet, Lawrence Berkeley National Laboratory, USA

+ 29 Program Committee Members from all over the world

**SCInet Team Collaboration Driving the Future Innovation**

- **XNET** pushes the boundaries of network technologies and sets the stage for SCInet’s continuous evolution.
- **NRE** empowers researchers, computer scientists, and network engineers to experiment using the state-of-the-art SCInet network.
- **INDIS** serves as the academic forum and provides a stage for SCInet to discuss state-of-the-art, cutting edge, and future network technologies with researchers and experts.
In Memoriam of Malathi Veeraraghavan

Milestones

- University of Virginia, 2003-2020, Professor of Electrical and Computer Engineering
- Polytechnic University, Brooklyn, New York, 1999-2002, Associate Professor
- Bell Laboratories, 1988-1998, Distinguished Member of Technical Staff
- Ph.D. Duke University, 1988
- M.S. Duke University, 1985
- B.S. Indian Institute of Technology, Madras, 1984

Thank you for your amazing work ethics and contributions!

Achievements

- Won over $17 million dollars in competitive research funding
- Graduated 13 PhD students and 16 Master's students
- Mentored six postdoctoral associates and research scientists
- Co-authored 30 patents and over 200 refereed research publications in journals, conferences and workshops
- Received six best paper awards, including one last year

INDIS Workshop Co-Chair in 2016 and 2017

Dr. Malathi Veeraraghavan
Champion of Ideas and Experiences
INDIS 2020 Workshop Program – A Full Day of Inspiration

- **10:00am** Welcome Message *(Live)*
- **10:05am** A Brief History of INDIS *(Video)*
- **10:10am** Keynote I: "Grand" Challenges for a Science Mission Network *(Live)*
- **10:55am** Introduction to SCinet *(Video)*
- **11:00am** SCinet Architecture – Past, Present, Future *(Video)*
- **11:05am** XNET: Panel Introduction *(Live)*
- **11:10am** XNET: Lightning Talks *(Live)*
- **11:30am** XNET: Panel Discussion *(Live)*
- **11:55am** INDIS “Morning” Break
- **12:10pm** Network Research Exhibition: An Introduction *(Live)*
- **12:15pm** NRE Demo Talk I: P4 Experimental Networks for the Global Research Platform *(Live)*
- **12:35pm** NRE Demo Talk II: Advanced Data Algorithms and Architectures for Security Monitoring *(Live)*
- **12:55pm** Paper 1: Using P4 and RDMA to collect Telemetry Data *(Video + Live Q&A)*
- **01:20pm** Paper 2: Application Aware Software Defined Flows of Workflow Ensembles *(Video + Live Q&A)*
- **01:45pm** INDIS “Lunch” Break
- **02:30pm** Keynote 2: Enhancing Distributed Computing with Programmable and Open Optical Networks *(Live)*
- **03:15pm** Paper 3: A Trial Deployment of a Reliable Network-Multicast Application across Internet2 *(Video + Live Q&A)*
- **03:40pm** Paper 4: ROBIN: A Next-Generation High-Performance Data Service Platform *(Video + Live Q&A)*
- **04:05pm** Paper 5: The NetSage Measurement Framework: Design, Development, and Discoveries *(Video + Live Q&A)*
- **04:30pm** INDIS “Afternoon” Break
- **04:45pm** Invited Talk: AI for Networking: the Engineering Perspective *(Live)*
- **05:15pm** Paper 6: An Evaluation of Ethernet Performance for Scientific Workloads *(Video + Live Q&A)*
- **05:40pm** Paper 7: Computing Bottleneck Structures at Scale for High-Precision Network Performance Analysis *(Video + Live Q&A)*
- **06:05pm** Awards Ceremony and Closing Remarks *(Live)*
- **06:30pm** 1st Virtual Happy Hour *(Zoom Meeting)*

All times are in Eastern Standard Time (EST).