

# H P C I n s p i r e s

# SC18



2018 Chair  
Ralph McEldowney  
Dallas, TX



**SC18**  
Dallas, TX | hpc  
inspires.

## 2018

### Top-ten supercomputers:

- Summit
- Sunway TaihuLight
- Sierra
- Tianhe-2A
- AI Bridging Cloud Infrastructure
- Piz Daint
- Titan
- Sequoia
- Trinity
- Cori

(June 2018 top 10 systems)

### Best Student Paper Finalists:

- Doomsday: Predicting Which Node Will Fail When on Supercomputers  
*Authors: Anwesa Das, Frank Mueller, Paul Hargrove, Eric Roman, Scott Baden*
- Distributed-Memory Hierarchical Compression of Dense SPD Matrices  
*Authors: Chenhan D. Yu, Severin Reiz, George Biros*
- HiCOO: Hierarchical Storage of Sparse Tensors  
*Authors: Jiajia Li, Jimeng Sun, Richard Vuduc*
- Mitigating Inter-Job Interference Using Adaptive Flow-Aware Routing  
*Authors: Staci A. Smith, Clara E. Crome, David K. Lowenthal, Jens Domke, Nikhil Jain, Jayaraman J. Thiagarajan, Abhinav Bhatele*
- Cooperative Rendezvous Protocols for Improved Performance and Overlap  
*Authors: S. Chakraborty, M. Bayatpour, J. Hashmi, H. Subramoni, D. K. Panda*

### Best Paper Finalists:

- Exploiting Idle Resources in a High-Radix Switch for Supplemental Storage  
*Authors: Matthias A. Blumrich, Nan Jiang, Larry R. Dennison*
- Extreme Scale De Novo Metagenome Assembly  
*Authors: Evangelos Georganas, Rob Egan, Steven Hofmeyr, Eugene Goltsman, Bill Arndt, Andrew Tritt, Aydin Buluc, Leonid Oliker, Katherine Yelick*

### Test of Time Paper Winner

- M. S. Warren and J. K. Salmon. 1993. A parallel hashed Oct-Tree N-body algorithm. In *Proceedings of the 1993 ACM/IEEE conference on Supercomputing (Supercomputing '93)*. ACM, New York, NY, USA, 12-21.

### SCinet Network Architecture

- 3.92 Tbps Wide Area Network capacity
- 41 wide area connections  
- 39 100 Gigabit  
- 2 10 Gigabit
- 6 network carrier providers

