

Friday 6/16		Workshops and Tutorials
9:00-11:00am	<a href="#">Tutorial: SpeedCode: Software performance engineering education via Coding of didactic exercises</a>	
11:00-11:15am	Break	
11:15am-12:30pm	<a href="#">Tutorial: Tutorial on Approximate Nearest Neighbor Search (ANNS) – Techniques and Open Problems</a>	
12:30-2pm	Lunch	
2:00-6:00pm	<a href="#">Workshop on Highlights of Parallel Computing (HOPC)</a> in parallel with <a href="#">Workshop on Filters: From Bloom to Quotient and Everything in Between</a>	
6:00-8:30pm	Welcome Reception / Poster Sessions for HOPC	

Saturday 6/17	
8:30-8:45am	<b>Opening remarks</b>
	<b>Session 1: Data Structures / Scheduling (Chair: Martin Farach-Colton)</b>
8:45-9:06am	PIM-Trie: A Skew-Resistant Trie for Processing-in-Memory
9:06-9:27am	Quancurrent: A Concurrent Quantiles Sketch
9:27-9:48am	An Efficient Scheduler for Interactive Task-Parallel Applications
9:48-10:09am	Efficient Synchronization-Light Work Stealing
10:09-10:30am	Balanced Allocations in Batches: The Tower of Two Choices
10:30-11am	Break
11am-12:15pm	<b>SPAA Parallel Computing Award Keynote - Guy Blelloch (Chair: Julian Shun)</b>
12:30-2pm	Lunch
	<b>Session 2: Distributed Algorithms (Chair: Mohsen Ghaffari)</b>
2:00-2:21pm	On Parallel k-Center Clustering
2:21-2:42pm	Massively Parallel Tree Embeddings for High Dimensional Spaces
2:42-3:03pm	Deterministic Massively Parallel Symmetry Breaking for Sparse Graphs
3:03-3:24pm	Location-Sensitive String Problems in MPC
3:24-3:30pm	Brief Announcement: Regular and Dyck Languages in MPC
3:30-4pm	Break
	<b>Session 3: Caching / Networks (Chair: Rathish Das)</b>
4:00-4:21pm	An Associativity Threshold Phenomenon in Set-Associative Caches
4:21-4:42pm	Increment-and-Freeze: Every Cache, Everywhere, All of the Time
4:42-5:03pm	Multidimensional Approximate Agreement with Asynchronous Fallback
5:03-5:24pm	A Tight Characterization of Fast Failover Routing: Resiliency to Two Link Failures is Possible
5:24-5:45pm	In-network Allreduce with Multiple Spanning Trees on PolarFly
6-8pm	<b>Business meeting</b>

Sunday 6/18

**Session 4: Concurrency (Chair: Laxman Dhulipala)**

- 8:45-9:06am Releasing Memory with Optimistic Access: A Hybrid Approach to Memory Reclamation and Allocation in Lock-Free Programs
- 9:06-9:27am Transactional Composition of Nonblocking Data Structures
- 9:27-9:48am Protecting Locks Against Unbalanced Unlock()
- 9:48-10:09am Applying Hazard Pointers to More Concurrent Data Structures
- 10:09-10:30am Constant RMR System-wide Failure Resilient Durable Locks with Dynamic Joining

10:30-11am Break

11am-12:15pm **SPAA Test-of-Time Award Keynote - Bradley Kuszmaul and Charles Leiserson (Chair: Julian Shun)**

12:30-2pm Lunch

**Session 5: Best Paper Candidates (Chair: Julian Shun)**

- 2:00-2:21pm Almost Optimal Massively Parallel Algorithms for k-Center Clustering and Diversity Maximization
- 2:21-2:42pm Nearly optimal parallel algorithms for longest increasing subsequence
- 2:42-3:03pm Provably-Efficient and Internally-Deterministic Parallel Union-Find
- 3:03-3:24pm Nearly Work-Efficient Parallel DFS in Undirected Graphs

3:30-4pm Break

**Session 6: Brief Announcements (Chair: Yan Gu)**

- 4:00-4:06pm Brief Announcement: On Solving Recoverable Mutual Exclusion Under System-Wide Failures
- 4:06-4:12pm Brief Announcement: A Parallel Architecture for Dynamic Approximate Membership
- 4:12-4:18pm Brief Announcement: Accelerate CNN Inference with Zoning Graph at Dynamic Granularity
- 4:18-4:24pm Brief Announcement: Optimized GPU-accelerated Feature Extraction for ORB-SLAM Systems
- 4:24-4:30pm Brief Announcement: Is the Problem-Based Benchmark Suite fearless with Rust?
- 4:30-4:36pm Brief Announcement: Dynamic Vector Bin Packing for Online Resource Allocation in the Cloud
- 4:36-4:42pm Brief Announcement: Streaming Balanced Clustering

5:15-6:30pm **FCRC Plenary Panel**

Monday 6/19

**Session 7: Parallel Algorithms (Chair: Rezaul Chowdhury)**

- 8:45-9:06am A Simple and Efficient Parallel Laplacian Solver
- 9:06-9:27am Parallel Longest Increasing Subsequence and van Emde Boas Trees
- 9:27-9:48am High-Performance and Flexible Parallel Algorithms for Semisort and Related Problems
- 9:48-10:09am Optimal Parallel Sorting with Comparison Errors
- 10:09-10:30am Quadratic Speedups in Parallel Sampling from Determinantal Distributions

10:30-11am Break

**11am-12:30pm FCRC Plenary Talk**

12:30-2pm Lunch

**Session 8: Linear Algebra / Graph Partitioning (Chair: Yihan Sun)**

- 2:00-2:21pm Multiplying 2 x 2 Sub-Blocks Using 4 Multiplications
- 2:21-2:42pm Parallel Memory-Independent Communication Bounds for SYRK
- 2:42-3:03pm Polylog-Competitive Algorithms for Dynamic Balanced Graph Partitioning for Ring Demands
- 3:03-3:24pm Partitioning Hypergraphs is Hard: Models, Inapproximability, and Applications
- 3:24-3:30pm Brief Announcement: Communication Optimal Sparse LU factorization for Planar Matrices

3:30-4pm Break

**Session 9: Distributed Algorithms (Chair: David Tench)**

- 4:00-4:21pm Adaptive Massively Parallel Connectivity in Optimal Space
- 4:21-4:42pm Fast dynamic programming in trees in the MPC model
- 4:42-5:03pm Coloring Fast with Broadcasts
- 5:03-5:24pm Optimal Round and Sample-Size Complexity for Partitioning in Parallel Sorting
- 5:24-5:45pm Distributed Multi-writer Multi-reader Atomic Register with Optimistically Fast Read and Write
- 5:45-5:51pm Brief Announcement: List Defective Colorings: Distributed Algorithms and Applications

Regular talks will be 18 minutes + 3 minutes for Q&A.

Brief announcement talks will be 5 minutes + 1 minute for Q&A.