

# Workshop on Algorithms for Processing Massive Data Sets

## December 18-20, 2009

All sessions to be held in CS101.

**17 December 2009**

19:30- Dinner along with FSTTCS delegates (Institute Guest House Lawns)

**18 December 2009**

**Session I, Chair : *Michael Mahoney***

*Joel Tropp*

08:45-09:45 Finding structure with randomness: Stochastic algorithms for computing approximate matrix decompositions

09:45-10:15 Coffee Break

**Session II, Chair : *Joel Tropp***

*Michael Mahoney*

10:15-11:15 Linear Algebra methods for heavy tailed informatics graphs

*Inderjit Dhillon*

11:15-12:15 Guaranteed Rank Minimization via Singular Value Projection

12:15-14:00 Lunch (CSE Lawns)

**Session III, Chair : *Andrew McGregor***

*Jelani Nelson*

14:00-14:55 A Space-Optimal Algorithm for Sketching Small Moments

*David Woodruff*

14:55-15:40 Moments and Sampling

15:40-16:10 Coffee Break

**Session IV, Chair : *David Woodruff***

*Rina Panigrahy*

16:10-16:40 Estimating PageRank on Graph Streams

*Krzysztof Onak*

16:40-17:20 Approximate Pattern Matching and the Query Complexity of Edit Distance

19:30- Dinner (Institute Guest House Lawns)

19 December 2009

**Session V, Chair : *Christian Sohler***

- 08:45-09:45 *Sudipto Guha*  
Beyond the Moraines: New Directions in Streaming
- 09:45-10:30 *Andrew McGregor*  
Annotations in Data Streams
- 10:30-11:00 Coffee Break

**Session VI, Chair : *Pankaj Agarwal***

- 11:00-11:45 *Christian Sohler*  
Comp. Geometry
- 11:45-12:15 *Christiane Lammersan*  
Comp. Geometry
- 12:15-14:00 Lunch (CSE Lawns)

**Session VII, Chair : *Piotr Indyk***

- 14:00-14:45 *Pankaj Agarwal*  
Comp. Geometry
- 14:45-15:15 *Dan Feldman*  
Comp. Geometry
- 15:15-15:40 Coffee Break

**Session VIII, Chair : *Sudipto Guha***

- 15:40-16:40 *Piotr Indyk*  
Compressed Sensing
- 16:40-17:00 Coffee Break
- 17:00- Open Problems Session (**Session Chair : *Sudipto Guha***)
- 19:30- Workshop Dinner (Institute Guest House Lawns)

20 December 2009

**Session IX, Chair : *Paul Beame***

08:45-09:30 *Amit Chakrabarti*  
Lower Bounds: Round Elimination

09:30-10:15 *T.S. Jayram*  
Information Complexity and the Geometry of Communication

10:15-10:40 Coffee Break

**Session X, Chair : *T.S. Jayram***

10:40-11:25 *Paul Beame*  
Lower bounds for read/write stream algorithms

11:25-12:10 *Matthias Westermann*  
The Power of Online Reordering

12:10-12:40 *Ely Porat*  
Real time pattern matching

12:40- Lunch (CSE Lawns)

19:30- Dinner (Institute Guest Dining Hall)