



## CONFERENCE INFORMATION

All events will take place in the **Hyatt Regency Bethesda**. The meeting rooms are located on the Ballroom Level of the Hotel (two levels below the main lobby). Coffee breaks and the continental breakfasts will be served in the **Ballroom Foyer**, on the Ballroom Level. The Cartier/Tiffany rooms will be used as a breakout area.

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### REGISTRATION DESK

The registration desk will be in the **Haverford Foyer**, two levels below the main lobby. It will be open Saturday from 6:00pm-8:00pm and Sun-Tue from 7:30am-6:00pm.

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### INTERNET ACCESS

Wireless internet access will be available in the Cartier/Tiffany room, the Ballroom Foyer, and the Crystal Ballroom (all on the Ballroom Level). Information on accessing the wireless will be available at the registration desk.

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### LUNCHESES

Due to space limitations, lunches will be split between two rooms. Attendees may go to either room.

- **Concours Terrace**, located one level above the main lobby in the center of the main atrium of the Hotel.
- **Diplomat/Ambassador rooms**, located on the Conference Level, one level above the ballroom.

## CONFERENCE PROGRAM

Saturday, May 30	
9:00am-6:00pm	<b>Les Valiant 60<sup>th</sup> Birthday Celebration</b> (Embassy/Chesapeake Suites)
6:00pm-8:00pm	<b>— Registration and Welcome Reception —</b> (Registration: Haverford Foyer) (Reception: Concours Terrace)

Sunday, May 31		
7:30-8:30	— Registration and Continental Breakfast — (Ballroom Foyer)	
	<b>Codes — Chair: Rocco Servedio</b> (Haverford/Baccarat)	<b>Complexity I — Chair: Chris Umans</b> (Waterford/Lalique)
8:30-8:50	Message Passing Algorithms and Improved LP Decoding <i>Sanjeev Arora, Constantinos Daskalakis and David Steurer</i>	Exact Learning of Random DNF Formulas Under the Uniform Distribution — <i>Linda Sellie</i>
8:55-9:15	List Decoding Tensor Products and Interleaved codes <i>P. Gopalan, V. Guruswami and P. Raghavendra</i>	Polynomial-time Theory of Matrix Groups <i>László Babai, Robert M. Beals and Ákos Seress</i>
9:20-9:40	Artin Automorphisms, Cyclotomic Function Fields, and Folded List-decodable Codes — <i>Venkatesan Guruswami</i>	Affine Dispersers from Subspace Polynomials <i>Eli Ben-Sasson and Swastik Kopparty</i>
9:45-10:05	A Deterministic Reduction for the Gap Minimum Distance Problem <i>Qi Cheng and Daqing Wan</i>	On Oblivious PTAS for Nash Equilibrium <i>Constantinos Daskalakis and Christos H. Papadimitriou</i>
10:10-10:30	(Empty)	The Extended BG-Simulation and the Characterization of t-Resiliency <i>Eli Gafni</i>
10:30-11:00	— Coffee break —	
	<b>Algorithms and Data Structures — Chair: Ravi Kumar</b> (Haverford/Baccarat)	<b>Property Testing — Chair: Anup Rao</b> (Waterford/Lalique)
11:00-11:20	An Efficient Algorithm for Partial Order Production <i>J. Cardinal, S. Fiorini, G. Joret, R. M. Jungers and J. Ian Munro</i>	Direct Product Testing: Improved and Derandomized <i>Russell Impagliazzo, Valentine Kabanets and Avi Wigderson</i>
11:25-11:45	A Nearly Optimal Oracle for Avoiding Failed Vertices and Edges <i>Aaron Bernstein and David Karger</i>	On Proximity Oblivious Testing <i>Oded Goldreich and Dana Ron</i>
11:50-12:10	Distributed $(\Delta+1)$ -Coloring in Linear (in $\Delta$ ) Time <i>Leonid Barenboim and Michael Elkin</i>	Testing Juntas Nearly Optimally <i>Eric Blais</i>
12:15-12:35	Near-Perfect Load Balancing by Randomized Rounding <i>Tobias Friedrich and Thomas Sauerwald</i>	Green's Conjecture and Testing Linear-Invariant Properties <i>Asaf Shapira</i>
12:40-2:10	— Lunch — (Concours Terrace and Diplomat/Ambassador)	
2:10-3:20	<b>Athena Lecture</b> <b>Shafi Goldwasser — Cryptography without (hardly any) Secrets?</b> Chair: Cynthia Dwork — (Haverford/Baccarat)	
3:20-3:50	— Coffee break —	
	<b>Crypto I — Chair: Shafi Goldwasser</b> (Haverford/Baccarat)	<b>Approximation Algorithms I — Chair: Nikhil Bansal</b> (Waterford/Lalique)
3:50-4:10	Fully Homomorphic Encryption Using Ideal Lattices <i>Craig Gentry</i>	Approximating Edit Distance in Near-Linear Time <i>Alexandr Andoni and Krzysztof Onak</i>
4:15-4:35	A Unified Framework for Concurrent Security: Universal Composability from Stand-alone Non-malleability <i>Huijia Lin, Rafael Pass and M. Venkatasubramanian</i>	Numerical Linear Algebra in the Streaming Model <i>Kenneth L. Clarkson and David P. Woodruff</i>
4:40-5:00	Non-Malleability Amplification <i>Huijia Lin and Rafael Pass</i>	A Fast and Efficient Algorithm for Low-rank Approximation of a Matrix — <i>Nam H. Nguyen, Thong T. Do and Trac D. Tran</i>
5:05-5:25	3-Query Locally Decodable Codes of Subexponential Length <i>Klim Efremenko</i>	An Improved Constant-Time Approximation Algorithm for Maximum Matchings <i>Yuichi Yoshida, Masaki Yamamoto and Hiro Ito</i>
8:30-10:00	— Business Meeting — (Haverford/Baccarat)	

**Monday, June 1**

7:30-8:45	— Registration and Continental Breakfast — (Ballroom Foyer)	
	<b>Graph Cuts and Flows — Chair: Chris Umans</b> (Haverford/Baccarat)	<b>Optimization — Chair: Rocco Servedio</b> (Waterford/Lalique)
8:45-9:05	Finding Sparse Cuts Locally Using Evolving Sets <i>Reid Andersen and Yuval Peres</i>	Integrality Gaps for Sherali-Adams Relaxations <i>Moses Charikar, Konstantin Makarychev and Yury Makarychev</i>
9:10-9:30	On the Geometry of Graphs with a Forbidden Minor <i>James R. Lee and Anastasios Sidiropoulos</i>	Sherali-Adams Relaxations of the Matching Polytope <i>Claire Mathieu and Alistair Sinclair</i>
9:35-9:55	Twice-Ramanujan Sparsifiers <i>Joshua D. Batson, Daniel A. Spielman and Nikhil Srivastava</i>	CSP Gaps and Reductions in the Lasserre Hierarchy <i>Madhur Tulsiani</i>
10:00-10:20	Max Cut and the Smallest Eigenvalue <i>Luca Trevisan</i>	Linear Time Approximation Schemes for the Gale-Berlekamp Game and Related Minimization Problems <i>Marek Karpinski and Warren Schudy</i>
10:25-10:45	Homology Flows, Cohomology Cuts <i>Erin W. Chambers, Jeff Erickson and Amir Nayyeri</i>	Non-monotone Submodular Maximization under Matroid and Knapsack Constraints — <i>Jon Lee, Vahab S. Mirrokni, Viswanath Nagarajan and Maxim Sviridenko</i>
10:45-11:15	— Coffee break —	
	<b>Award Papers — Chair: Michael Mitzenmacher</b> (Haverford/Baccarat)	
11:15-11:40	Public-Key Cryptosystems from the Worst-Case Shortest Vector Problem — <i>Chris Peikert</i>	
11:40-12:05	A Constructive Proof of the Lovász Local Lemma — <i>Robin A. Moser</i>	
12:05-1:30	— Lunch — (Concours Terrace and Diplomat/Ambassador)	
	<b>Privacy — Chair: Ravi Kumar</b> (Haverford/Baccarat)	<b>Quantum — Chair: Anup Rao</b> (Waterford/Lalique)
1:30-1:50	Universally Utility-Maximizing Privacy Mechanisms <i>Arpita Ghosh, Tim Roughgarden and Mukund Sundararajan</i>	Quantum Algorithms Using the Curvelet Transform <i>Yi-Kai Liu</i>
1:55-2:15	Private Coresets <i>Dan Feldman, Amos Fiat, Haim Kaplan and Kobbi Nissim</i>	Short Seed Extractors against Quantum Storage <i>Amnon Ta-Shma</i>
2:20-2:40	Differential Privacy and Robust Statistics <i>Cynthia Dwork and Jing Lei</i>	Efficient Discrete-time Simulations of Continuous-time Quantum Query Algorithms — <i>Richard Cleve, Daniel Gottesman, Michele Mosca, Rolando Somma and David Yonge-Mallo</i>
2:45-3:05	On the Complexity of Differentially Private Data Release <i>Cynthia Dwork, Moni Naor, Omer Reingold, Guy Rothblum and Salil Vadhan</i>	The Detectability Lemma and Quantum Gap Amplification <i>Dorit Aharonov, Itai Arad, Zeph Landau and Umesh Vazirani</i>
3:05-3:35	— Coffee break —	
	<b>Graphs — Chair: Rasmus Pagh</b> (Haverford/Baccarat)	<b>Complexity II — Chair: Jonathan Katz</b> (Waterford/Lalique)
3:35-3:55	Affiliation Networks <i>Silvio Lattanzi and D. Sivakumar</i>	On the Complexity of Communication Complexity <i>Eyal Kushilevitz and Enav Weinreb</i>
4:00-4:20	Fault-Tolerant Spanners for General Graphs <i>S. Chechik, M. Langberg, D. Peleg and L. Roditty</i>	Bit-Probe Lower Bounds for Succinct Data Structures <i>Emanuele Viola</i>
4:25-4:45	Hadwiger's Conjecture is Decidable <i>Ken-ichi Kawarabayashi and Bruce Reed</i>	Randomly Supported Independence and Resistance <i>Per Austrin and Johan Håstad</i>
4:50-5:10	Finding, Minimizing, and Counting Weighted Subgraphs <i>Virginia Vassilevska and Ryan Williams</i>	Conditional Hardness for Satisfiable-3CSPs <i>Ryan O'Donnell and Yi Wu</i>

**Tuesday, June 2**

7:30-8:45	<b>— Registration and Continental Breakfast —</b> (Ballroom Foyer)	
	<b>Economics — Chair: Nicole Immorlica</b> (Haverford/Baccarat)	<b>Markov Chains — Chair: Michael Mitzenmacher</b> (Waterford/Lalique)
8:45-9:05	A New Approach to Auctions and Resilient Mechanism Design <i>Jing Chen and Silvio Micali</i>	How Long Does it Take to Catch a Wild Kangaroo? <i>Ravi Montenegro and Prasad Tetali</i>
9:10-9:30	Intrinsic Robustness of the Price of Anarchy <i>Tim Roughgarden</i>	Random Walks on Polytopes and an Affine Interior Point Method for Linear Programming <i>Ravi Kannan and Hariharan Narayanan</i>
9:35-9:55	On the Convergence of Regret Minimization Dynamics in Concave Games <i>Eyal Even-Dar, Yishay Mansour and Uri Nadav</i>	Mixing Time for the Solid-on-Solid Model <i>Fabio Martinelli and Alistair Sinclair</i>
10:00-10:20	Multiplicative Updates Outperform Generic No-regret Learning in Congestion Games <i>Robert Kleinberg, Georgios Piliouras and Eva Tardos</i>	Reconstruction for the Potts Model <i>Allan Sly</i>
10:25-10:45	MaxMin Allocation via Degree Lower-bounded Arborescences <i>MohammadHossein Bateni, Moses Charikar and Venkatesan Guruswami</i>	Tight Lower Bounds for Greedy Routing in Uniform Small World Rings <i>Martin Dietzfelbinger and Philipp Woelfel</i>
10:45-11:15	<b>— Coffee break —</b>	
	<b>Crypto II — Chair: Jonathan Katz</b> (Haverford/Baccarat)	<b>Geometry — Chair: Rasmus Pagh</b> (Waterford/Lalique)
11:15-11:35	Non-Malleable Extractors and Symmetric Key Cryptography from Weak Secrets <i>Yevgeniy Dodis and Daniel Wichs</i>	Every Planar Graph is the Intersection Graph of Segments in the Plane <i>Jeremie Chalopin and Daniel Goncalves</i>
11:40-12:00	Inaccessible Entropy <i>Iftach Haitner, Omer Reingold, Salil Vadhan and Hoeteck Wee</i>	Small-size $\epsilon$ -nets for Axis-Parallel Rectangles and Boxes <i>Boris Aronov, Esther Ezra and Micha Sharir</i>
12:05-12:25	On Cryptography with Auxiliary Input <i>Yevgeniy Dodis, Yael Tauman Kalai and Shachar Lovett</i>	Explicit Construction of a Small $\epsilon$ -net for Linear Threshold Functions <i>Yuval Rabani and Amir Shpilka</i>
12:30-2:00	<b>— Lunch —</b> (Concours Terrace and Diplomat/Ambassador)	
	<b>Approximation Algorithms II — Chair: Michael Mitzenmacher</b> (Haverford/Baccarat)	<b>Complexity III — Chair: Jonathan Kelner</b> (Waterford/Lalique)
2:00-2:20	A Constant-Factor Approximation for Stochastic Steiner Forest <i>Anupam Gupta and Amit Kumar</i>	An Axiomatic Approach to Algebrization <i>Russell Impagliazzo, Valentine Kabanets and Antonina Kolokolova</i>
2:25-2:45	Multiple Intents Re-Ranking <i>Yossi Azar, Iftah Gamzu and Xiaoxin Yin</i>	Random Graphs and the Parity Quantifier <i>Phokion Kolaitis, Swastik Kopparty</i>
2:50-3:10	A Competitive Algorithm for Minimizing Weighted Flow Time on Unrelated Machines with Speed Augmentation <i>Jivitej S. Chadha, Naveen Garg, Amit Kumar and V. N. Muralidhara</i>	Holant Problems and Counting CSP <i>Jin-Yi Cai, Pinyan Lu and Mingji Xia</i>
3:15-3:35	Online and Stochastic Survivable Network Design <i>Anupam Gupta, Ravishankar Krishnaswamy and R. Ravi</i>	A New Line of Attack on the Dichotomy Conjecture <i>Gabor Kun and Mario Szegedy</i>
3:35	<b>— Conference Ends —</b>	