

December 6 (JST)	Room A	Room B	GMT	EST	PST
10:20--10:25	Opening (Room A)				
	Chair: Shuichi Hirahara	Chair: Yusuke Kobayashi			
10:30--10:50	Online 1	Approximation 1	1:30	12/5	12/5
	<i>Streaming Algorithms for Graph k-Matching with Optimal or Near-Optimal Update Time</i>	<i>An Improved Approximation Algorithm for the Matching Augmentation Problem</i>	20:30	17:30	
	Jianer Chen, Qin Huang, Iyad Kanj, Qian Li, and Ge Xia	Joseph Cheriyan, Robert Cummings, Jack Dippel, and Jasper Zhu			
10:50--11:10	Geometry 2	Approximation 2			
	<i>Approximate Maximum Halfspace Discrepancy</i>	<i>Multimodal Transportation with Ridesharing of Personal Vehicles</i>			
	Michael Matheny and Jeff M. Phillips	Qian-Ping Gu and JiaJian Leo Liang			
11:10--11:30	Algorithm 1	Approximation 3			
	<i>Exact and Approximation Algorithms for Many-To-Many Point Matching in the Plane</i>	<i>Algorithms for Normalized Multiple Sequence Alignments</i>			
	Sayan Bandyopadhyay, Anil Maheshwari, and Michiel Smid	Eloi Araujo, Luiz Rozante, Diego P Rubert and Fabio V Martinez			
	Chair: Yoshio Okamoto				
13:00--13:20	Algorithm 2		4:00	12/5	12/5
	<i>Augmenting Graphs to Minimize the Radius</i>		23:00	20:00	
	Joachim Gudmundsson, Yuan Sha, and Fan Yao				
13:20--13:40	Algorithm 3				
	<i>Linear-Time Approximation Scheme for k-Means Clustering of Axis-Parallel Affine Subspaces</i>				
	Kyungjin Cho and Eunjin Oh				
13:40--14:00	Algorithm 4				
	<i>Feedback Vertex Set on Geometric Intersection Graphs</i>				
	Shinwoo An and Eunjin Oh				
	Chair: Hee-Kap Ahn				
14:25--14:45	Best Student Paper Presentation (Room A)		5:25	0:25	12/5
	<i>Interval Query Problem on Cube-free Median Graphs</i>			21:25	
	Soh Kumabe				
	Chair: Yu Nakahata	Chair: Hironori Kiya			
14:50--15:10	Graph 3	Game 1			
	<i>Algorithms and Complexity on Indexing Elastic Founder Graphs</i>	<i>Computing Shapley Values for Mean Width in 3-D</i>			
	Massimo Equi, Tuukka Norri, Jarno Alanko, Bastien Cazaux, Alexandru I. Tomescu, and Veli Mäkinen	Shuhao Tan			
15:10--15:30		Game 2			
		<i>Simple Envy-free and Truthful Mechanisms for Cake Cutting with a Small Number of Cuts</i>			
		Takao Asano			
	Chair: Hiro Ito	Chair: Hyung-Chan An			
16:00--16:20	Graph 4	Geometry 1	7:00	2:00	12/5
	<i>Partitioning H-Free Graphs of Bounded Diameter</i>	<i>Subquadratic Algorithms for Some 3Sum-Hard Geometric Problems in the Algebraic Decision Tree Model</i>		23:00	
	Christoph Brause, Petr Golovach, Barnaby Martin, Daniel Paulusma, and Siani Smith	Boris Aronov, Mark de Berg, Jean Cardinal, Esther Ezra, John Iacono, and Micha Sharir			
16:20--16:40	Graph 5	Approximation 5			
	<i>Clique-Based Separators for Geometric Intersection Graphs</i>	<i>On the Extended TSP Problem</i>			
	Mark de Berg, Sándor Kisfaludi-Bak, Morteza Monemizadeh, and Leonidas Theodorou	Julián Mestre, Sergey Pupyrev, and Seoun William Umboh			
16:40--17:00	Graph 6	Approximation 6			
	<i>Near-Optimal Distance Oracles for Vertex-Labeled Planar Graphs</i>	<i>Probabilistic Analysis of Euclidean Capacitated Vehicle Routing</i>			
	Jacob Evald, Viktor Fredslund-Hansen, and Christian Wulff-Nilsen	Claire Mathieu and Hang Zhou			
	Chair: Kunihiko Sadakane				
17:30--18:30	Invited Talk 1 (Room A)		8:30	3:30	0:30
	<i>Streaming Pattern Matching</i>				
	Tatiana Starikovskaya (École normale supérieure, Paris)				

December 7 (JST)	Room A	Room B	GMT	EST	PST
	Chair: Takeshi Tokuyama				
	Invited Talk 2 (Room A)				
9:30--10:30	<i>Spanning Properties of Variants of the Delaunay Graph</i> Prosenjit K. Bose (Carleton University)		0:30	12/6	12/6
			19:30	16:30	
	Chair: Takeshi Tokuyama	Chair: Francois Le Gall			
	Geometry 3	FPT 1	2:00	12/6	12/6
11:00--11:20	<i>The VC-Dimension of Limited Visibility Terrains</i> Matt Gibson-Lopez and Zhongxiu Yang	<i>Effective resistance and capacitance in simplicial complexes and a quantum algorithm</i> Mitchell Black and William Maxwell	21:00	18:00	
	Geometry 4	FPT 2			
11:20--11:40	<i>Clustering with Neighborhoods</i> Hongyao Huang, Georgiy Klimenko, and Benjamin Raichel	<i>Anonymity-Preserving Space Partitions</i> Ursula Hebert-Johnson, Chinmay Sonar, Subhash Suri, and Vaishali Surianarayanan			
	Geometry 5	FPT 3			
11:40--12:00	<i>Approximating longest spanning tree with neighborhoods</i> Ahmad Biniáz	<i>Impatient PPSZ - a Faster algorithm for CSP</i> Shibo Li and Dominik Scheder			
13:00--13:20			4:00	12/6	12/6
13:20--13:40			23:00	20:00	
	Chair: Harumichi Nishimura	Chair: Suguru Tamaki			
	Quantum 1	FPT 5			
13:40--14:00	<i>Quantum Advantage with Shallow Circuits under Arbitrary Corruption</i> Atsuya Hasegawa and Francois Le Gall	<i>Essentially Tight Kernels for (Weakly) Closed Graphs</i> Tomohiro Koana, Christian Komusiewicz, and Frank Sommer			
	Chair: Yutaro Yamaguchi	Chair: Hirotaka Ono			
	OR 1	Distributed 1	5:30	0:30	12/6
14:30--14:50	<i>A Faster Algorithm for Maximum Flow in Directed Planar Graphs with Vertex Capacities</i> Julian Enoch, Kyle Fox, Dor Mesica, and Shay Mozes	<i>Group Evacuation on a Line by Agents with Different Communication Abilities</i> Jurek Czyzowicz, Ryan Killick, Evangelos Kranakis, Danny Krizanc, Lata Narayanan, Jaroslav Opatrný, Denis Pankratov, and Sunil Shende	21:30		
	OR 2	Distributed 2			
14:50--15:10	<i>Maximum-Weight Matching in Sliding Windows and Beyond</i> Leyla Biabani, Mark de Berg, and Morteza Monemizadeh	<i>Lower Bounds for Induced Cycle Detection in Distributed Computing</i> François Le Gall and Masayuki Miyamoto			
	FPT 6	Distributed 3			
15:10--15:30	<i>Filling Crosswords is Very Hard</i> Laurent Gourves, Ararat Harutyunyan, Michael Lampis, and Nikolaos Melissinos	<i>Distributed approximations of f-matchings and b-matchings in graphs of sub-logarithmic expansion</i> Andrzej Czygrinow, Michał Hańcokowiak, and Marcin Witkowski			
	Chair: Yushi Uno	Chair: Wing-Kai Hon			
	Graph 7		7:00	2:00	12/6
16:00--16:20	<i>A Characterization of Individualization-Refinement Trees</i> Markus Anders, Jendrik Brachter, and Pascal Schweitzer		23:00		
	Graph 8	Online 2			
16:20--16:40	<i>Truly Subquadratic Exact Distance Oracles with Constant Query Time for Planar Graphs</i> Viktor Fredslund-Hansen, Shay Mozes, and Christian Wulff-Nilsen	<i>Making Three Out of Two: Three-Way Online Correlated Selection</i> Yongho Shin and Hyung-Chan An			
	Graph 9	Online 3			
16:40--17:00	<i>Interval edge coloring of bipartite graphs with small vertex degrees</i> Michał Małafiejski, Anna Małafiejska, Krzysztof Ocetkiewicz and Krzysztof Pastuszak	<i>Tight Competitive Analyses of Online Car-sharing Problems</i> Ya-Chun Liang, Kuan-Yun Lai, Ho-Lin Chen, and Kazuo Iwama			
	Chair: Hee-Kap Ahn	Chair: Akitoshi Kawamura			
	Geometry 6	FPT 4	8:30	3:30	0:30
17:30--17:50	<i>Self-Improving Voronoi Construction for a Hidden Mixture of Product Distributions</i> Siu-Wing Cheng and Man Ting Wong	<i>Fine-grained Meta-Theorems for Vertex Integrity</i> Michael Lampis and Valia Mitsou			
	Geometry 7	FPT 7			
17:50--18:10	<i>Connected Coordinated Motion Planning with Bounded Stretch</i> Sándor P. Fekete, Phillip Keldenich, Ramin Kosfeld, Christian Rieck, and Christian Scheffer	<i>Grid Recognition: Classical and Parameterized Computational Perspectives</i> Siddharth Gupta, Guy Sa'ar, and Meirav Zehavi			
	Geometry 8	Graph 12			
18:10--18:30	<i>Enclosing Depth and other Depth Measures</i> Patrick Schnider	<i>Selected Neighbor Degree Forest Realization</i> Amotz Bar-Noy, David Peleg, Dror Rawitz and Elad Yehezkel			
	Geometry 9	Graph 2			
18:30--18:50	<i>Illuminating the x-axis by α-floodlights</i> Bengt J. Nilsson, David Orden, Leonidas Palios, Carlos Seara, and Paweł Zylinski	<i>Untangling Circular Drawings: Algorithms and Complexity</i> Sujoy Bhore, Guangping Li, Martin Nollenburg, Ignaz Rutter, and Hsiang-Yun Wu			

December 8 (JST)	Room A	Room B	GMT	EST	PST
	Chair: Kunihiko Sadakane				
	Best Paper Presentation (Room A)				
9:55--10:25	<i>Shortest Beer Path Queries in Outerplanar Graphs</i> Joyce Bacic, Saeed Mehrabi, and Michiel Smid		0:55	12/7	12/7
				19:55	16:55
	Chair: Sang-il Oum	Chair: Takuya Mieno			
	Graph 10	Data structures 1	1:30	12/7	12/7
10:30--10:50	<i>Efficiently Partitioning the Edges of a 1-Planar Graph into a Planar Graph and a Forest</i> Sam Barr and Therese Biedl	<i>Inverse Suffix Array Queries for 2-Dimensional Pattern Matching in Near-Compact Space</i> Dhrumil Patel and Rahul Shah		20:30	17:30
	Graph 11	Data structures 2			
10:50--11:10	<i>On the kernel and related problems in interval digraphs</i> Mathew C. Francis, Pavol Hell, and Dalu Jacob	<i>Dynamic Boolean Formula Evaluation</i> Rathish Das, Andrea Lincoln, Jayson Lynch, and Ian Munro			
	Approximation 4				
11:10--11:30	<i>Separated Red Blue Center Clustering</i> Marzieh Eskandari, Bhavika Khare, and Nirman Kumar				
	Chair: Naonori Kakimura				
	OR 3		4:00	12/7	12/7
13:00--13:20	<i>Adaptive Regularized Submodular Maximization</i> Shaojie Tang and Jing Yuan			23:00	20:00
	OR 4				
13:20--13:40	<i>Γ-graphic delta-matroids and their applications</i> Donggyu Kim, Duksang Lee, and Sang-il Oum				
	OR 5				
13:40--14:00	<i>An Approximation Algorithm for Maximum Stable Matching with Ties and Constraints</i> Yu Yokoi				
	Chair: Chung-Shou Liao				
	Online 4		5:30	0:30	12/7
14:30--14:50	<i>Skeletons and Minimum Energy Scheduling</i> Antonios Antoniadis, Gunjan Kumar, and Nikhil Kumar				21:30
	Online 5				
14:50--15:10	<i>Machine Covering in the Random-Order Model</i> Susanne Albers, Waldo Gálvez, and Maximilian Janke				
	Online 6				
15:10--15:30	<i>Nearly-Tight Lower Bounds for Set Cover and Network Design with Deadlines/Delay</i> Noam Touitou				
	Chair: Kazuhisa Makino	Chair: Kunihiko Sadakane			
	Complexity 1	Random Graph 1	7:00	2:00	12/7
16:00--16:20	<i>Cryptographic Hardness under Projections for Time-Bounded Kolmogorov Complexity</i> Eric Allender, John Gouwar, Shuichi Hirahara, and Caleb Robelle	<i>MAX CUT in Weighted Random Intersection Graphs and Discrepancy of Sparse Random Set Systems</i> Sotiris Nikolettseas, Christoforos Raptopoulos, and Paul Spirakis			23:00
	Complexity 2	Random Graph 2			
16:20--16:40	<i>Identity testing under label mismatch</i> Clément L. Canonne and Karl Wimmer	<i>The Impact of Geometry on Monochrome Regions in the Flip Schelling Process</i> Thomas Bläsius, Tobias Friedrich, Martin S. Krejca, and Louise Molitor			
	Complexity 3	Random Graph 3			
16:40--17:00	<i>Unique-Neighbor-Like Expansion and Group-Independent Cystolic Expansion</i> Tali Kaufman and David Mass	<i>Piecewise-Linear Farthest-Site Voronoi Diagrams</i> Franz Aurenhammer, Evanthia Papadopoulou, and Martin Suderland			
	Chair: Siu-Wing Cheng	Chair: Srinivasa Rao Satti			
	Geometry 10	Data structures 4	8:30	3:30	0:30
17:30--17:50	<i>On geometric priority set cover problems</i> Aritra Banik, Rajiv Raman, and Saurabh Ray	<i>Space-Efficient Algorithms for Reachability in Directed Geometric Graphs</i> Sujoy Bhore and Rahul Jain			
	Geometry 11	Data structures 5			
17:50--18:10	<i>The complexity of sharing a pizza</i> Patrick Schneider	<i>Repetition- and Linearity-Aware Rank/Select Dictionaries</i> Paolo Ferragina, Giovanni Manzini, and Giorgio Vinciguerra			
	Geometry 12	Data structures 6			
18:10--18:30	<i>Dynamic Data Structures for k-Nearest Neighbor Queries</i> Sarita de Berg and Frank Staals	<i>Pattern Masking for Dictionary Matching</i> Panagiotis Charalampopoulos, Huiping Chen, Peter Christen, Grigorios Loukides, Nadia Pisanti, Solon P. Pissis, and Jakub Radoszewski			
	Geometry 13	Data structures 7			
18:30--18:50	<i>Preference-based Trajectory Clustering - An Application of Geometric Hitting Sets</i> Florian Barth, Stefan Funke, and Claudius Proissl	<i>Resilient Level Ancestor, Bottleneck, and Lowest Common Ancestor Queries in Dynamic Trees</i> Luciano Gualà, Stefano Leucci, and Isabella Ziccardi			