

Monday

08:45 - 09:00	Welcome
09:00 - 10:00	Invited Talk 1 Triangulations in CGAL: To Non-Euclidean Spaces... and Beyond! Monique Teillaud
10:00 - 10:15	Fast-Forward Session 1

	Session 1a Routing Chair: Sabine Storandt	Session 1b Trajectories and Curves Chair: Helmut Alt
10:45 - 11:00	Expected Complexity of Routing in Theta6 and Half-Theta6 Graphs Prosenjit Bose, Jean-Lou De Carufel and Olivier Devillers.	Fréchet Distance Between Uncertain Trajectories: Computing Expected Value and Upper Bound Kevin Buchin, Maarten Löffler, Aleksandr Popov and Marcel Roeloffzen.
11:00 - 11:15	Sometimes Reliable Spanners of Almost Linear Size Kevin Buchin, Sariel Har-Peled and Dániel Oláh.	Probing a Set of Trajectories to Maximize Captured Movement Sándor Fekete, Alexander Hill, Dominik Krupke, Tyler Mayer, Joseph Mitchell, Ojas Parekh and Cynthia Phillips.
11:15 - 11:30	Headerless Routing in Unit Disk Graphs Wolfgang Mulzer and Max Willert.	Improved space bounds for Fréchet distance queries Maïke Buchin, Ivor van der Hoog, Tim Ophelders, Rodrigo Silveira, Lena Schlipf and Frank Staals.
11:30 - 11:45	Spanners for Transmission Graphs Using the Path-Creedy Stav Ashur and Paz Carmi.	Computing the cut distance of two curves Maïke Buchin, Leonie Ryvkin and Jerome Urhausen.
11:45 - 12:00	Local Routing in a Tree Metric 1-Spanner Milutin Brankovic, Joachim Gudmundsson and André van Renssen.	On the complexity of the middle curve problem Maïke Buchin, Nicole Funk and Amer Krivosija.
12:00 - 12:15	Bitonicity of Euclidean TSP in Narrow Strips Henk Alkema, Mark de Berg and Sándor Kisfaludi-Bak.	Homotopic Curve Shortening and the Affine Curve-Shortening Flow Sergey Avvakumov and Gabriel Nivasch.
12:15 - 12:30	Fast-Forward Session 2+3	

	Session 2a Matchings and Spanning Trees Chair: Michael Hoffmann	Session 2b Voronoi and Delaunay Chair: TBA
14:00 - 14:15	The Very Best of Perfect Non-crossing Matchings Ioannis Mantas, Marko Savić and Hendrik Schrezenmaier.	On Implementing Multiplicatively Weighted Voronoi Diagrams Martin Held and Stefan de Lorenzo.
14:15 - 14:30	Augmenting Polygons with Matchings Alexander Pilz, Jonathan Rollin, Lena Schlipf and André Schulz.	On the Number of Delaunay Triangles occurring in all Contiguous Subsequences Stefan Funke and Felix Weitbrecht.
14:30 - 14:45	Disjoint tree-compatible plane perfect matchings Oswin Aichholzer, Julia Obmann, Pavel Paták, Daniel Perz and Josef Tkadlec.	Flips in higher order Delaunay triangulations Elena Arseneva, Prosenjit Bose, Pilar Cano and Rodrigo I. Silveira.
14:45 - 15:00	A better approximation for longest noncrossing spanning trees Sergio Cabello, Aruni Choudhary, Michael Hoffmann, Katharina Klost, Meghana M. Reddy, Wolfgang Mulzer, Felix Schröder and Josef Tkadlec.	Diverse Voronoi Partitions of 1D Colored Points Marc Van Kreveld, Bettina Speckmann and Jérôme Urhausen.

	Session 3a Graph Drawing Chair: Sabine Cornelsen	Session 3b Point Sets Chair: Maarten Löffler
15:30 - 15:45	On the edge-length ratio of 2-trees Václav Blažej, Jiří Fiala and Giuseppe Liotta.	Holes and islands in random point sets Martin Balko, Manfred Scheucher and Pavel Valtr.
15:45 - 16:00	Monotone Arc Diagrams with few Biarcs Steven Chaplick, Henry Förster, Michael Hoffmann and Michael Kaufmann.	The Tree Stabbing Number is not Monotone Johannes Obenaus and Wolfgang Mulzer.
16:00 - 16:15	Graph Planarity Testing with Hierarchical Embedding Constraints Giuseppe Liotta, Ignaz Rutter and Alessandra Tappini.	Empty Rainbow Triangles in k-colored Point Sets Ruy Fabila-Monroy, Daniel Perz and Ana Laura Trujillo.
16:15 - 16:30	Rotational symmetric flexible placements of graphs Sean Dewar, Georg Grasegger and Jan Legetský.	Minimum Convex Partition of Degenerate Point Sets is NP-Hard Nicolas Grelier.
16:30 - 16:45	Simple Topological Drawings of k-Planar Graphs Chih-Hung Liu, Csaba D Toth and Meghana M. Reddy.	On Hard Instances of the Minimum-Weight Triangulation Problem Sándor Fekete, Andreas Haas, Yannic Lieder, Eike Niehs, Michael Perk, Victoria Sack and Christian Scheffer.

17:15 - 18:15	Business Meeting
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Tuesday

09:00 - 10:00	Invited Talk 2 <u>The Saga of the Skyline Points</u> Otfried Cheong
10:00 - 10:15	Fast-Forward Session 4

	Session 4a Packing and Covering Chair: Lena Schlipf	Session 4b Topology and Geometry Chair: Bettina Speckmann
10:45 - 11:00	<u>Packing Squares into a Disk with Optimal Worst-Case Density</u> Sándor Fekete, Vijaykrishna Gurunathan, Kushagra Juneja, Phillip Keldenich, Linda Kleist and Christian Scheffer.	<u>On the Average Complexity of the k-Level</u> Man Kwun Chiu, Stefan Felsner, Manfred Scheucher, Patrick Schnider, Raphael Steiner and Pavel Valtr.
11:00 - 11:15	<u>Worst-Case Optimal Covering of Rectangles by Disks</u> Sándor Fekete, Utkarsh Gupta, Phillip Keldenich, Christian Scheffer and Sahil Shah.	<u>Topological Drawings meet Classical Theorems from Convex Geometry</u> Helena Bergold, Stefan Felsner, Manfred Scheucher, Felix Schröder and Raphael Steiner.
11:15 - 11:30	<u>Covering a set of line segments with a few squares</u> Joachim Gudmundsson, Mees van de Kerkhof, Andre van Renssen, Frank Staals, Lionov Wiratma and Sampson Wong.	<u>Topologically correct PL-approximations of isomanifolds</u> Jean-Daniel Boissonnat and Mathijs Wintraecken.
11:30 - 11:45	<u>Efficiently stabbing convex polygons and variants of the Hadwiger-Debrunner (p, q)-theorem</u> Justin Dallant and Patrick Schnider.	<u>Enumerating isotopy classes of tilings of triply-periodic minimal surfaces</u> Benedikt Kolbe and Myfanwy Evans.
11:45 - 12:00	<u>Approximating the Packing of Unit Disks into Simple Containers</u> Helmut Alt and Nadja Seifert.	<u>Geometric bistellar moves relate triangulations of Euclidean, hyperbolic and spherical manifolds</u> Tejas Kalelkar and Advait Phanse.
12:00 - 12:15	<u>Smallest Universal Covers for Families of Triangles</u> Ji-won Park and Otfried Cheong.	<u>Weighted Epsilon-Nets</u> Daniel Bertschinger and Patrick Schnider.
12:15 - 12:30	Fast-Forward Sessions 5+6	

	Session 5a Graph Algorithms Chair: André Schulz	Session 5b Polyominoes and Shapes Chair: Benjamin Niedermann
14:00 - 14:15	<u>Edge Guarding Plane Graphs</u> Paul Jungeblut and Torsten Ueckerdt.	<u>Shape Formation in a Three-dimensional Model for Hybrid Programmable Matter</u> Kristian Hinnenthal, Dorian Rudolph and Christian Scheideler.
14:15 - 14:30	<u>A polynomial-time partitioning algorithm for weighted cactus graphs</u> Maike Buchin and Leonie Selbach.	<u>Labeling Nonograms</u> Maarten Löffler and Martin Nöllenburg.
14:30 - 14:45	<u>Finding an Induced Subtree in an Intersection Graph is often hard</u> Hidefumi Hiraishi, Dejun Mao and Patrick Schnider.	<u>On Minimal-Perimeter Lattice Animals</u> Gill Barequet and Gil Ben-Shachar.
14:45 - 15:00	<u>Balanced Independent and Dominating Sets on Colored Interval Graphs</u> Sujoy Bhowmik, Jan-Henrik Haunert, Fabian Klute, Guangping Li and Martin Nöllenburg.	<u>Applications of Concatenation Arguments to Polyominoes and Polycubes</u> Gill Barequet, Gil Ben-Shachar and Martha Osegueda.

	Session 6a Similarity Measures Chair: Sándor Fekete	Session 6b Polygons Chair: Linda Kleist
15:30 - 15:45	<u>Computing the Frechet distance of trees and graphs of bounded tree width</u> Maike Buchin, Amer Krivosija and Alexander Neuhaus.	<u>Targeted Drug Delivery: Advanced Algorithmic Methods for Collecting a Swarm of Particles with Uniform, External Forces</u> Aaron Becker, Sándor Fekete, Li Huang, Phillip Keldenich, Linda Kleist, Dominik Krupke, Christian Rieck and Arne Schmidt.
15:45 - 16:00	<u>Between Two Shapes, Using the Hausdorff Distance</u> Marc van Kreveld, Till Miltzow, Tim Ophelders, Willem Sonke and Jordi Vermeulen.	<u>On the width of the monotone-visibility kernel of a simple polygon</u> David Orden, Leonidas Palios, Carlos Seara, Jorge Urrutia and Pawel Zylinski.
16:00 - 16:15	<u>Scaling and compressing melodies using geometric similarity measures</u> Luis Evaristo Caraballo de La Cruz, José-Miguel Díaz-Báñez, Fabio Rodríguez, Vanesa Sánchez-Canales and Inmaculada Ventura.	<u>Repulsion region in a simple polygon</u> Arthur van Goethem, Irina Kostitsyna, Kevin Verbeek and Jules Wulms.
16:15 - 16:30	<u>Distance Measures for Embedded Graphs - Optimal Graph Mappings</u> Maike Buchin and Bernhard Kilgus.	<u>One-Bend Drawings of Outerplanar Graphs Inside Simple Polygons</u> Patrizio Angelini, Philipp Kindermann, Andre Löffler, Lena Schlipf and Antonios Symvonis.

Wednesday

09:00 - 10:00	Invited Talk 3 Location & Information Maarten Löffler
10:00 - 10:15	Fast-Forward Session 7

	Session 7a Crossings and Scheduling Chair: Birgit Vogtenhuber	Session 7b Robots Chair: Frank Staals
10:45 - 11:00	Simple Drawings of $K_{m,n}$ Contain Shooting Stars Oswin Aichholzer, Alfredo García, Irene Parada, Birgit Vogtenhuber and Alexandra Weinberger.	Connected Coordinated Motion Planning with Bounded Stretch Sándor Fekete, Phillip Keldenich, Ramin Kosfeld, Christian Rieck and Christian Scheffer.
11:00 - 11:15	Improved constant factor for the unit distance problem Péter Ágoston and Dömötör Pálvölgyi.	Recognition and Reconfiguration of Lattice-Based Cellular Structures by Simple Robots Amira Abdel-Rahman, Aaron Becker, Daniel E. Biediger, Kenneth Cheung, Sándor Fekete, Benjamin Jenett, Eike Niehs, Christian Scheffer, Arne Schmidt and Mike Yanuzzi.
11:15 - 11:30	On the maximum number of crossings in star-simple drawings of K_n with no empty lens Stefan Felsner, Michael Hoffmann, Kristin Knorr and Irene Parada.	Coordinated Particle Relocation Using Finite Static Friction with Boundary Walls Victor Baez, Aaron Becker, Sándor Fekete and Arne Schmidt.
11:30 - 11:45	The angular blowing-a-kiss problem Kevin Buchin, Irina Kostitsyna, Roel Lambers and Martijn Struijs.	Scheduling drones to cover outdoor events Oswin Aichholzer, Luis Evaristo Caraballo de La Cruz, José-Miguel Díaz-Báñez, Ruy Fabila-Monroy, Irene Parada, Inmaculada Ventura and Birgit Vogtenhuber.
11:45 - 12:00	The Complexity of Finding Tangles Oksana Firman, Stefan Felsner, Philipp Kindermann, Alexander Ravsky, Alexander Wolff and Johannes Zink.	Reconfiguring sliding squares in-place by flooding Joel Moreno and Vera Sacristán.
12:00 - 12:15	Fast-Forward Sessions 8+9	

	Session 8a Graph Representations and Schematization Chair: Maike Buchin	Session 8b Complexity and Combinatorics Chair: Elena Arseneva
13:45 - 14:00	Representing Graphs by Polygons with Edge Contacts in 3D Elena Arseneva, Linda Kleist, Boris Klemz, Maarten Löffler, André Schulz, Birgit Vogtenhuber and Alexander Wolff.	Smoothed Analysis of Resource Augmentation Jeff Erickson, Ivor van der Hoog and Till Miltzow.
14:00 - 14:15	Weak Unit Disk Contact Representations for Graphs without Embedding Jonas Cleve.	The Multivariate Schwartz-Zippel Lemma Mahmut Levent Doğan, Alperen Ergur, Elias Tsigaridas and Jake D. Mundo.
14:15 - 14:30	Tight Rectilinear Hulls of Simple Polygons Annika Bonerath, Jan-Henrik Haunert and Benjamin Niedermann.	Colouring bottomless rectangles and arborescences Dömötör Pálvölgyi and Narmada Varadarajan.
14:30 - 14:45	Orthogonal Schematization with Minimum Homotopy Area Bram Custers, Jeff Erickson, Irina Kostitsyna, Wouter Meulemans, Bettina Speckmann and Kevin Verbeek.	Computational Complexity of the α-Ham-Sandwich Problem Man Kwun Chiu, Aruni Choudhary and Wolfgang Mulzer.

	Session 9a Algorithm Engineering Chair: Stefan Funke	Session 9b Approximation Algorithms Chair: Rodrigo Silvera
14:45 - 15:00	Computing Area-Optimal Simple Polygonalizations Sándor Fekete, Andreas Haas, Phillip Keldenich, Michael Perk and Arne Schmidt.	Certified approximation algorithms for the Fermat point and k-ellipses Kolja Junginger, Ioannis Mantas, Evanthia Papadopoulou, Martin Suderland and Chee Yap.
15:30 - 15:45	Experimental Evaluation of Straight Skeleton Implementations Based on Exact Arithmetic Günther Eder, Martin Held and Peter Palfrader.	A $(1 + \epsilon)$-approximation for the minimum enclosing ball problem in \mathbb{R}^d Sang-Sub Kim and Barbara Schwarzwald.
15:45 - 16:00	On Generating Polygons: Introducing the Salzburg Database Günther Eder, Martin Held, Steinþór Jasonarson, Philipp Mayer and Peter Palfrader.	Sparse Regression via Range Counting Jean Cardinal and Aurélien Ooms.
16:00 - 16:30	Best Student Presentation Award & Closing	