Wednesday Morning

Session 1. 9:00–10:00. Invited talk – Chair: Helmut Alt

Nina Amenta: **Rigidity and deformation**

10:00–10:35: Fast-forward session

Session 2. 11:05–12:30

Track A – Chair: Rodrigo Silveira	**Track B** – Chair: André van Renssen
Agglomerative clustering of growing squares Thom Castermans, Bettina Speckmann, Frank Staals and Kevin Verbeek	**Altitude terrain guarding and guarding uni-monotone polygon** Stephan Friedrichs, Valentin Polishchuk and Christiane Schmidt
Combinatorial and asymptotical results on the neighborhood grid data structure Martin Skrodzki, Ulrich Reitebuch and Konrad Polthier	**Maximal two-guard walks in a polygon** Franz Aurenhammer and Michael Steinkogler
A framework for algorithm stability and its application to kinetic euclidean MSTs Wouter Meulemans, Bettina Speckmann, Kevin Verbeek and Jules Wulms	**Combinatorics of beacon-based routing in three dimensions** Jonas Cleve and Wolfgang Mulzer
Balanced dynamic loading and unloading Sándor Fekete, Sven von Höveling, Joseph Mitchell, Christian Rieck, Christian Scheffer, Arne Schmidt and James Zuber	**On Romeo and Juliet problems: minimizing distance-to-sight** Fabian Stehn, Hee-Kap Ahn, Eunjin Oh, Lena Schlipf and Darren Strash
Approximate stabbing queries with sub-logarithmic local replacement Ivor Hoog v. d. and Maarten Löffler	**Guarding monotone polygons with vertex half-guards is NP-hard** Matt Gibson, Erik Krohn and Matthew Rayford

12:30–13:30: Lunch break

space for notes

Wednesday Afternoon

Session 3. 13:30–14:55

Track A – Chair: Christiane Schmidt	**Track B** – Chair: Maike Buchin
Data gathering in faulty sensor networks using a mule Stav Ashur	**Solving large-scale minimum-weight triangulation instances to provable optimality** Andreas Haas
Computing optimal shortcuts for networks Delia Garijo, Alberto Márquez, Natalia Rodríguez and Rodrigo Silveira	**The hardness of witness puzzles** Irina Kostitsyna, Maarten Löffler, Max Sondag, Willem Sonke and Jules Wulms
Protecting a highway from fire Rolf Klein, David Kübel, Elmar Langetepe and Barbara Schwarzwald	**A fully polynomial-time approximation scheme for the smallest diameter of imprecise points** Vahideh Keikha and Maarten Löffler
Shape recognition by a finite automaton robot Robert Gmyr, Kristian Hinnenthal, Irina Kostitsyna, Fabian Kuhn, Dorian Rudolph and Christian Scheideler	**Properties of minimal-perimeter polyominoes** Gill Barequet and Gil Ben-Shachar
Beam it up, Scotty: angular freeze-tag with directional antennas Sándor Fekete and Dominik Krupke	**Short plane support trees for hypergraphs** Thom Castermans, Mereke van Garderen, Wouter Meulemans, Martin Nöllenburg and Xiaoru Yuan

Session 4. 15:20–17:00

Track A – Chair: Fabian Stehn	**Track B** – Chair: Mikkel Abrahamsen
Maximizing ink in symmetric partial edge drawings of k-plane graphs Michael Höller, Fabian Klute, Soeren Nickel, Martin Nöllenburg and Birgit Schreiber	**Subquadratic encodings for point configurations** Jean Cardinal, Timothy M. Chan, John Iacono, Stefan Langerman and Aurélien Ooms
The partition spanning forest problem Philipp Kindermann, Boris Klemz, Ignaz Rutter, Patrick Schnider and André Schulz	**Almost-equidistant sets** Martin Balko, Attila Pór, Manfred Scheucher, Konrad Swanepoel and Pavel Valtr
Convexity-increasing morphs of planar graphs Linda Kleist, Boris Klemz, Anna Lubiw, Lena Schlipf, Frank Staals and Darren Strash	**Minimal geometric graph representations of order types** Oswin Aichholzer, Martin Balko, Michael Hoffmann, Jan Kynčl, Wolfgang Mulzer, Irene Parada, Alexander Pilz, Manfred Scheucher, Pavel Valtr, Birgit Vogtenhuber and Emo Welzl
Efficient algorithms for ortho-radial graph drawing Benjamin Niedermann, Ignaz Rutter and Matthias Wolf	**A note on planar monohedral tilings** Oswin Aichholzer, Michael Kerber, Istvan Talata and Birgit Vogtenhuber
Automatic drawing for Tokyo metro map Masahiro Onda, Masaki Moriguchi and Keiko Imai	**Computing crossing-free configurations with minimum bottleneck** Sándor Fekete and Phillip Keldenich
On the weak line cover number Oksana Firman, Alexander Ravsky and Alexander Wolff	**A note on flips in diagonal rectangulations** Jean Cardinal, Vera Sacristan and Rodrigo Silveira

17:05–18:00: Business Meeting

Thursday

Session 5. 9:00–10:00. Invited talk – Chair: Wolfgang Mulzer

Prosenjit Bose: **Online competitive routing on Delaunay triangulations and their variants**

10:00–10:20: Fast-forward session

Session 6. 10:50–12:15

Track A – Chair: Kevin Buchin	**Track B** – Chair: Elena Khramtcova
Optimal algorithms for compact linear layouts Wouter Meulemans, Willem Sonke, Bettina Speckmann, Eric Verbeek and Kevin Verbeek	**A new lower bound on the maximum number of plane graphs using production matrices** Clemens Huemer, Alexander Pilz and Rodrigo Silveira
Drawing connected planar clustered graphs on disk arrangements Tamara Mchedlidze, Marcel Radermacher, Ignaz Rutter and Nina Zimbel	**Time-space trade-offs for computing Euclidean minimum spanning trees** Bahareh Banyassady, Luis Barba and Wolfgang Mulzer
Augmenting a tree to a k-arbor-connected graph with pagenumber k Toru Hasunuma	**Bottleneck bichromatic non-crossing matchings using orbits** Marko Savić and Miloš Stojaković
1-bend RAC drawings of NIC-planar graphs in quadratic area Steven Chaplick, Fabian Lipp, Alexander Wolff and Johannes Zink	**A combinatorial measure of closeness in point sets** Patrick Schnider and Alexander Pilz
NP-completeness of max-cut for segment intersection graphs Oswin Aichholzer, Wolfgang Mulzer, Patrick Schnider and Birgit Vogtenhuber	**Rollercoasters: long sequences without short runs** Therese Biedl, Ahmad Biniaz, Robert Cummings, Anna Lubiw, Florin Manea, Dirk Nowotka and Jeffrey Shallit

12:15–13:20: Lunch break

Session 7. 13:20–14:45

Track A – Chair: Evanthia Papadopoulou	**Track B** – Chair: Vera Sacristán
The topology of skeletons and offsets Stefan Huber	**Group diagrams for representing trajectories** Maike Buchin and Bernhard Kilgus
On merging straight skeletons Franz Aurenhammer and Michael Steinkogler	**The k-Fréchet distance of polygonal curves** Maike Buchin and Leonie Ryvkin
Coxeter triangulations have good quality Siargey Kachanovich, Mathijs Wintraecken and Aruni Choudhary	**Progressive simplification of polygonal curves** Kevin Buchin, Maximilian Konzack and Wim Reddingius
Integer and mixed integer Tverberg numbers Jesus De Loera, Thomas Hogan, Frederic Meunier and Nabil Mustafa	**Probabilistic embeddings of the Fréchet distance** Anne Driemel and Amer Krivosija
On the topology of walkable environments Benjamin Burton, Arne Hillebrand, Maarten Löffler, Saul Schleimer, Dylan Thurston, Stephan Tillmann and Wouter van Toll	**On optimal polyline simplification using the Hausdorff and Fréchet distance** Marc van Kreveld, Maarten Löffler and Lionov Wiratma

15:00: Meet in the lecture hall for the social event

19:00: Conference dinner

Friday

Session 8. 9:00–10:00. Invited talk – Chair: Günter Rote

Raúl Rojas: **Geometric issues for self-driving cars**

10:00–10:25: Slow-motion session

Session 9. 10:50–12:15

Track A – Chair: Christian Knauer	**Track B** – Chair: Lena Schlipf
L(2,1)-labeling of disk intersection graphs Konstanty Junosza-Szaniawski and Joanna Sokół	**Non-monochromatic and conflict-free colorings in tree spaces** Boris Aronov, Mark de Berg, Aleksandar Markovic and Gerhard J. Woeginger
Stabbing pairwise disks by five points Sariel Har-Peled, Haim Kaplan, Wolfgang Mulzer, Liam Roditty, Paul Seiferth, Micha Sharir and Max Willert	**Arrangements of pseudocircles: on circularizability** Stefan Felsner and Manfred Scheucher
Finding the girth in disk graphs and a directed triangle in transmission graphs Haim Kaplan, Katharina Klost, Wolfgang Mulzer and Liam Roditty	**Sequences of spanning trees for L_∞-Delaunay triangulations** Pilar Cano, Prosenjit Bose and Rodrigo I. Silveira
QPTAS and subexponential algorithm for maximum clique on disk graphs Edouard Bonnet, Panos Giannopoulos, Eun Jung Kim, Paweł Rzążewski and Florian Sikora	**3D disk packing** Helmut Alt, Otfried Cheong, Ji-Won Park and Nadja Scharf
Geometric clustering in normed planes Pedro Martín and Diego Yáñez	**Lower bounds for coloring of the plane** Konstanty Junosza-Szaniawski and Krzysztof Węsek

12:15–13:20: Lunch break

Session 10. 13:20–15:00

Track A – Chair: Panos Giannopoulos	**Track B** – Chair: Rolf Klein
Reconstructing a convex polygon from its ω-cloud Prosenjit Bose, Jean-Lou De Carufel, Elena Khramtcova and Sander Verdonschot	**An FPTAS for an elastic shape matching problem with cyclic neighborhoods** Christian Knauer, Luise Sommer and Fabian Stehn
On convex polygons in Cartesian products Jean-Lou De Carufel, Adrian Dumitrescu, Wouter Meulemans, Tim Ophelders, Claire Pennarun, Csaba Tóth and Sander Verdonschot	**A polynomial algorithm for balanced clustering via graph partitioning** Luis Evaristo Caraballo de La Cruz, José Miguel Díaz Báñez and Nadine Kroher
Mitered offsets and straight skeletons for circular arc polygons Bastian Weiß, Bert Jüttler and Franz Aurenhammer	**Deletion in abstract Voronoi diagrams in expected linear time** Kolja Junginger and Evanthia Papadopoulou
Generalized kernels of polygons under rotation David Orden, Leonidas Palios, Carlos Seara and Paweł Żyliński	**Fair Voronoi split-screen for N-player games** Tobias Lenz
Generalized visibility kernel Eyüp Serdar Ayaz and Alper Üngör	**A new algorithm for finding polygonal voids in Delaunay triangulations and its parallelization** Nancy Hitschfeld, José Ojeda and Rodrigo Alonso
Rectilinear link diameter and radius in a rectilinear polygonal domain Man-Kwun Chiu, Elena Khramtcova, Aleksandar Markovic, Yoshio Okamoto, Aurélien Ooms, André van Renssen and Marcel Roeloffzen	**On primal-dual circle representations** Stefan Felsner and Günter Rote