24ᵀᴴ Annual Symposium on Computational Geometry

Except as noted, all presentations will take place in the **Tyser Auditorium** in **Van Munching Hall**, on the campus of the University of Maryland, College Park. This version reflects a minor correction to Sessions 5A/B.

Sunday, June 8	
7:00-9:00pm	**Welcome Reception and Registration (Reever's Hall, Rigg's Alumni Center)**

Monday, June 9	
8:15-9:00	**— Registration and Light breakfast —**
	Session 1
9:10-9:30	*Dynamic Coresets*, Timothy M. Chan
9:30-9:50	*Optimizing Active Ranges for Consistent Dynamic Map Labeling*, Ken Been, Martin Nöllenburg, Sheung-Hung Poon and Alexander Wolff
9:50-10:10	*Maximum Thick Paths in Static and Dynamic Environments*, Esther Arkin, Joseph Mitchell and Valentin Polishchuk
10:10-10:30	*Circular Partitions with Applications to Visualization and Embeddings*, Krzysztof Onak and Anastasios Sidiropoulos
10:30-11:00	**— Coffee break —**
11:00-12:00	**Invited Talk** **Delaunay Triangulations of Polyhedral Surfaces, a Discrete Laplace-Beltrami Operator and Applications** Alexander Bobenko (Technische Universität Berlin)
12:00-2:00	**— Lunch —**

	Session 2A (Tyser Auditorium)	**Session 2B (Van Munching 1330)**
2:00-2:20	*Tighter Bounds for Random Projections of Manifolds*, Ken Clarkson	*The Complexity of the Outer Face in Arrangements of Random Segments*, Noga Alon, Dan Halperin, Oren Nechushtan and Micha Sharir
2:25-2:45	*Markov Convexity and Local Rigidity of Distorted Metrics*, Manor Mendel and Assaf Naor	*On s-intersecting Curves and Related Problems*, Sarit Buzaglo, Ron Holzman and Rom Pinchasi
2:50-3:10	*Diameters, Centers, and Approximating Trees of δ-hyperbolic Geodesic Spaces and Graphs*, Victor Chepoi, Feodor Dragan, Bertrand Estellon, Michel Habib and Yann Vaxes	*On Levels in Arrangements of Curves, III: Further Improvements*, Timothy M. Chan

3:10-3:40	**— Coffee break —**
	Session 3
3:40-4:00	*A (Slightly) Faster Algorithm for Klee's Measure Problem*, Timothy M. Chan
4:00-4:20	*Walking Your Dog in the Woods in Polynomial Time*, Erin Chambers, Éric Colin de Verdière, Jeff Erickson, Sylvain Lazard, Francis Lazarus and Shripad Thite
4:20-4:40	*Hinged Dissections Exist*, Timothy G. Abbott, Zachary Abel, David Charlton, Erik D. Demaine, Martin L. Demaine and Scott D. Kominers
4:40-5:00	*Helly-type Theorems for Approximate Covering*, Julien Demouth, Olivier Devillers, Marc Glisse and Xavier Goaoc
5:10	**— Business Meeting (Tyser Auditorium) —**

Tuesday, June 10	
8:15-9:00	— Registration and Light breakfast —
	Session 4
9:00-9:20	*I/O Efficient Algorithms for Computing Contour Lines on a Terrain*, Pankaj Agarwal, Lars Arge, Thomas Mølhave and Bardia Sadri
9:20-9:40	*External Memory Planar Point Location with Logarithmic Updates*, Lars Arge, Gerth Stølting Brodal and S. Srinivasa Rao
9:40-10:00	*Self-Improving Algorithms for Delaunay Triangulations*, Kenneth L. Clarkson and C. Seshadhri
10:00-10:20	*Markov Incremental Constructions*, Bernard Chazelle and Wolfgang Mulzer
10:20-10:50	— Coffee break —

	Session 5A (Tyser Auditorium)	**Session 5B (Van Munching 1330)**
10:50-11:10	*Exact Geometric-Topological Analysis of Algebraic Surfaces*, Eric Berberich, Michael Kerber and Michael Sagraloff	*On the Complexity of Checking Self-duality of Polytopes and its Relations to Vertex Enumeration and Graph Isomorphism*, Hans Raj Tiwary and Khaled Elbassioni
11:15-11:35	*Predicates for Line Transversals to Lines and Line Segments in Three-dimensional Space*, Olivier Devillers, Marc Glisse and Sylvain Lazard	*New Existence Proofs for ε-Nets*, Evangelia Pyrga and Saurabh Ray
11:40-12:00	*Robust Construction of the Three-dimensional Flow Complex*, Frederic Cazals, Aditya Parameswaran and Sylvain Pion	*Extremal Problems on Triangle Areas in Two and Three Dimensions*, Adrian Dumitrescu, Micha Sharir and Csaba Toth

12:00-2:00	— Lunch —
	Session 6: Video and Multimedia Presentations
2:00-2:10	*Arrangements of Geodesic Arcs on the Sphere*, Efi Fogel, Ophir Setter and Dan Halperin
2:10-2:20	*DelPSC: A Delaunay Mesher for Piecewise Smooth Complexes*, Joshua Levine and Tamal Dey
2:20-2:30	*On the Computation of 3D Periodic Triangulations*, Manuel Caroli and Monique Teillaud
2:30-2:40	*Visualizing and Exploring Planar Algebraic Arrangements in the Web*, Pavel Emeliyanenko and Michael Kerber
2:40-2:50	*Analyzing Rigidity with Pebble Games*, Audrey Lee, Ileana Streinu and Louis Theran
2:50-3:00	*Minkowski Sums of Rotating Convex Polyhedra*, Jyh-Ming Lien
3:00-3:10	*Routing a Maximum Number of Disks through a Scene of Moving Obstacles*, Joodong Kim, Joseph S.B. Mitchell, Valentin Polishchuk and Arto Vihavainen
3:10-3:40	— Coffee break —
	Session 7
3:40-4:00	*Towards Persistence-Based Reconstruction in Euclidean Spaces*, Frederic Chazal and Steve Oudot
4:00-4:20	*Reeb Spaces of Piecewise Linear Mappings*, Herbert Edelsbrunner, John Harer and Amit Patel
4:20-4:40	*Testing Contractibility in Planar Rips Complexes*, Erin Chambers, Jeff Erickson and Pratik Worah
4:40-5:00	*Approximating the Pathway Axis and the Persistence Diagram of a Collection of Balls in 3-Space*, Eitan Yaffe and Dan Halperin
6:30	— Conference Banquet (University Golf Course Clubhouse) —

Wednesday, June 11	
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8:15-9:00	**— Registration and Light breakfast —**
	Session 8
9:00-9:20	*Locally Uniform Anisotropic Meshing*, Jean-Daniel Boissonnat, Camille Wormser and Mariette Yvinec
9:20-9:40	*Discrete Laplace Operator on Meshed Surfaces*, Misha Belkin, Jian Sun and Yusu Wang
9:40-10:00	*Untangling Triangulations through Local Explorations*, Pankaj Agarwal, Bardia Sadri and Hai Yu
10:00-10:20	*Delaunay Triangulations of Imprecise Points in Linear Time after Preprocessing*, Maarten Löffler and Jack Snoeyink
10:20-10:50	**— Coffee break —**
10:50-11:50	**Invited Talk** **Geometry is Everywhere, Part XLVII: Metrics, Nets, Dimensions, and Measures** Kenneth L. Clarkson (IBM Almaden Research Center)
11:50-2:00	**— Lunch —**

	Session 9A (Tyser Auditorium)	**Session 9B (Van Munching 1330)**
2:00-2:20	*A Simple and Efficient Kinetic Spanner*, Mohammad Ali Abam, Mark de Berg and Joachim Gudmundsson	*Fast Enumeration Algorithms for Non-crossing Geometric Graphs*, Naoki Katoh and Shin-ichi Tanigawa
2:25-2:45	*Schnyder Woods for Higher Genus Triangulated Surfaces*, Luca Castelli Aleardi, Eric Fusy and Thomas Lewiner	*Polychromatic Colorings of Plane Graphs*, Noga Alon, Robert Berke, Maike Buchin, Kevin Buchin, Peter Csorba, Saswata Shannigrahi, Bettina Speckmann and Philipp Zumstein
2:50-3:10	*Embedding and Similarity Search for Point Sets under Translation*, Minkyoung Cho and David Mount	*Coloring K_k-free Intersection Graphs of Geometric Objects in the Plane*, Jacob Fox and Janos Pach

3:10-3:40	**— Coffee break —**
	Session 10
3:40-4:00	*Consistent Digital Rays*, Jinhee Chun, Matias Korman, Martin Nöllenburg and Takeshi Tokuyama
4:00-4:20	*Combinatorial Genericity and Minimal Rigidity*, Ileana Streinu and Louis Theran
4:20-4:40	*Improved Upper Bounds on the Crossing Number*, Vida Dujmovic, Ken-ichi Kawarabayashi, Bojan Mohar and David R. Wood
4:40-5:00	*Intersecting Convex Sets by Rays*, Rado Fulek, Andreas Holmsen and János Pach
5:00	**— Conference Ends —**