

25th Annual Workshop on Computational Geometry

Program

Friday Oct. 23 (106 O'Brian Hall)

8:30 - 9:25 am: **Registration**

9:25 - 9:30 am: **Opening Remarks**

9:30 - 10:45 am: **4 Contributed Talks (Session chair: Donald Sheehy)**

- *Esther Arkin, Jie Gao, Adam Hesterberg, Joseph Mitchell, and Jiemin Zeng:*
The Minimum Length Separating Cycle Problem
- *Ziyun Huang, Danny Chen and Jinhui Xu:*
Influence Based Voronoi Diagrams of Clusters
- *Ge Xia, Iyad Kanj and Eric Sedgwick:*
Computing the Flip Distance between Triangulations
- *Haitao Wang and Jingru Zhang:*
Computing the Rectilinear Center of Uncertain Points in the Plane

10:45 - 11:00 am: **Coffee Break**

11:00 – 12:00 pm: **Invited Talk**

- *Piotr Indyk:*
Beyond Locality Sensitive Hashing

12:00 - 1:30 pm: **Lunch**

1:30 - 2:45 pm: **4 Contributed Talks (Session chair: Xin (Roger) He)**

- *Mahmoodreza Jahanseir and Donald R. Sheehy:*
From Cover Trees to Net-Trees
- *Nicholas Cavanna, Mahmoodreza Jahanseir and Don Sheehy:*
A Geometric Perspective on Sparse Filtrations
- *Iyad Kanj, Vincent Froese, Andre Nichterlein and Rolf Niedermeier:*
Finding Points in General Position
- *Sandor Fekete, Kan Huang, Joseph Mitchell, Ojas Parekh and Cynthia Phillips:*
Geometric Hitting Set for Segments of Few Orientations

2:45 - 3:45 pm: **Invited Talk**

- *Kenneth W. Regan:*
Using the Shape of Space for Shortcuts: Speeding up regressions on millions of chess positions

3:45 - 4:00 pm: **Coffee Break**

4:00 - 5:15 pm: **4 Contributed Talks (Session chair: Jie Gao)**

- *Elizabeth Munch and Bei Wang:*
Reeb Space Approximation with Guarantees
- *Vin de Silva, Elizabeth Munch and Anastasios Stefanou:*
A hom-tree lower bound for the Reeb graph interleaving distance
- *Marc Khoury, Marc van Kreveld, Bruno Levy and Jonathan Shewchuk:*
Restricted Constrained Delaunay Triangulations
- *Jason S. Ku and Erik D. Demaine:*
Efficient Foldings of Convex Polyhedra from Convex Paper

5:15 - 5:30 pm: **Coffee Break**

5:30 - 6:30 pm: **Open Problems**

Saturday Oct. 24 (101 Davis Hall)

9:10 - 10:45 am: **5 Contributed Talks (Session chair: Ge Xia)**

- *Esther Arkin, Aritra Banik, Paz Carmi, Gui Citovsky, Matthew Katz, Joseph Mitchell and Marina Simakov:*
Conflict-free Covering
- *Nicholas Cavanna, Kirk Gardner and Don Sheehy:*
Generalized Coverage in Homological Sensor Networks
- *Jianxu Chen, Mark Alber and Danny Z. Chen:*
A Geometric Matching Model Based on Earth Mover's Distance and Its Applications in Computer Vision
- *Esther Arkin, Jie Gao, Matthew Johnson, Joseph Mitchell and Jiemin Zeng:*
The r-Gather Problem in Euclidean Space

- *Nicole Debowski, Rene Weller and Gabriel Zachmann:*
A Geometric Predicate for Linear Time Collision Detection of Polygonal Objects

10:45 - 11:00 am: **Coffee Break**

11:00 – 12:00 pm: **Invited Talk**

- *Kenneth L. Clarkson:*
Input Sparsity and Hardness for Robust Subspace Approximation

12:00 - 1:30 pm: **Lunch**

1:30 - 3:00 pm: **5 Contributed Talks (Session chair: Iyad Kanj)**

- *Chenglin Fan and Binhai Zhu:*
Computing the discrete Frechet distance upper bound of imprecise input is NP-hard
- *Boris Aronov, Matias Korman, Simon Pratt, André van Renssen and Marcel Roeloffzen:*
Time-Space Trade-offs for Triangulating a Simple Polygon
- *Val Pinciu:*
Art Gallery Theorems for Polyhypercubes
- *Boris Aronov, Anirudh Reddy Donakonda and Esther Ezra:*
On Dominating Sets for Pseudo-disks
- *Gustavo Figueiredo, Matthew P. Johnson and Andreas Weise:*
Square Line-of-Sight Blocking

3:00 - 3:30 pm: **Coffee Break**

3:30 - 5:00 pm: **5 Contributed Talks (Session chair: Matthew Johnson)**

- *Yauheniya Lahoda, Hugo Alves Akitaya, Csaba D. Toth, Jonathan Castello and Anika Rounds:*
Augmenting Planar Straight Line Graphs to 2-Edge-Connectivity
- *Salles Viana Gomes Magalhaes, W. Randolph Franklin, Marcus Vinicius Alvim Andrade and Wenli Li:*
An efficient algorithm for computing the exact overlay of triangulations
- *Krzysztof Onak, Jonathan Lenchner and Liu Yang:*
How Much Distortion Can be Incurred from One Bad Point?
- *Wenli Li, W. Randolph Franklin and Salles V. G. Magalhães:*
Segmented ODETLAP Compression
- *Bahram Kouhestani, David Rappaport and Kai Salomaa:*

The Length of the Beacon Attraction Trajectory