

Publications

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Articles in peer-reviewed journals

- [1] E. Arseneva, M.-K. Chiu, M. Korman, A. Markovic, Y. Okamoto, A. Ooms, A. van Renssen, and M. Roeloffzen. Rectilinear Link Diameter and Radius in a Rectilinear Polygonal Domain. *Computational Geometry*, 92:101685, 2021. DOI 10.1016/j.comgeo.2020.101685
- [2] E. Arseneva, J. Iacono, G. Koumoutsos, S. Langerman, B. Zolotov. Sublinear Explicit Incremental Planar Voronoi Diagrams. *Journal of Information Processing*, 28, pages 766–774, 2020. DOI 10.2197/ip-sjjip.28.766 Award: JIP Specially Selected Paper certificate.
- [3] E. Arseneva, S. Langerman, B. Zolotov. A complete list of all convex polyhedra made by gluing regular pentagons. *Journal of Information Processing*, 28, pages 791–799, 2020. DOI 10.2197/ipsjjip.28.791
- [4] E. Arseneva, and S. Langerman. Which convex polyhedra can be made by gluing regular hexagons? *Graphs and Combinatorics*, 36(2), pages 339–345, 2020.
- [5] E. Arseneva, P. Bose, P. Cano, A. D’Angelo, V. Dujmovic, F. Frati, S. Langerman, and A. Tappini. Pole Dancing: 3D Morphs for Tree Drawings. *Journal of Graph Algorithms and Applications (Special issue of selected papers from GD’18)*, 23(3), pages 579–602 DOI: 10.7155/jgaa.00503, 2019.
- [6] E. Arseneva and E. Papadopoulou. Randomized Incremental Construction for the Hausdorff Voronoi Diagram revisited and extended. *Journal of Combinatorial Optimization (Special issue of selected papers from COCOON’18)*, 37(2), 579–600, 2019.

*I have changed my name from Khramtcova to Arseneva because of certain personal reasons. A big portion of my publications are under the old name.

- [7] M. Claverol, E. Khramtcova, E. Papadopoulou, M. Saumell, and C. Seara. Stabbing circles for sets of segments in the plane. *Algorithmica (Special issue of selected papers from LATIN'16)*, 80(3), pages 849–884, 2018.
- [8] P. Cheilaris, E. Khramtcova, S. Langerman, and E. Papadopoulou. A randomized incremental algorithm for the Hausdorff Voronoi diagram of non-crossing clusters. *Algorithmica (Special issue of selected papers from LATIN'14)*, 76(4), pages 935–960, 2016.
- [9] E. Khramtcova. Presaccadic peak detection problem in electrooculography method of eye-tracking. *System Programming Journal*, 5, 2010. (in Russian).

Articles in peer-reviewed conference proceedings

- [1] A. Istomina, E. Arseneva, R. Gangopadhyay. Morphing tree drawings in a small 3D grid. In: The 16th International Conference and Workshop on Algorithms and Computation (WALCOM) 2022. LNCS vol. 13174, pages 85–96. DOI 10.1007/978-3-030-96731-4_8
- [2] E. Arseneva, L. Kleist, B. Klemz, M. Löffler, A. Schulz, B. Vogtenhuber, A. Wolff. Adjacency Graphs of Polyhedral Surfaces. In: *The 37th Symposium on Computational Geometry (SoCG) 2021*. LIPIcs, vol. 189, pages 11:1–11:17. DOI 10.4230/LIPIcs.SoCG.2021.11
- [3] E. Arseneva, P. Cano, L. Kleist, T. Mchedlidze, S. Mehrabi, I. Parada, P. Valtr. Upward Point Set Embeddings of Paths and Trees. In: *The 15th International Conference and Workshop on Algorithms and Computation (WALCOM) 2021*. LNCS, vol. 12635, pages 234–246. DOI 10.1007/978-3-030-68211-8_19
- [4] E. Arseneva, P. Bose, P. Cano, and R. Silveira. Flips in Higher Order Delaunay triangulations. In: *The 14th Latin American Theoretical Informatics Symposium (LATIN) 2020*. LNCS, vol 12118. DOI 10.1007/978-3-030-61792-9_18
- [5] E. Arseneva, P. Bose, J.-L. De Carufel, and S. Verdonschot. Reconstructing a convex polygon from its ω -cloud. In *The 14th Computer Science Symposium in Russia (CSR) 2019*, pages 25–37.
- [6] E. Arseneva, M.-K. Chiu, M. Korman, A. Markovic, Y. Okamoto, A. Ooms, A. van Renssen, and M. Roeloffzen. Rectilinear Link Diameter and Radius in a Rectilinear Polygonal Domain. In *Proc. Algorithms*

and Computation - 29th International Symposium, ISAAC 2018, pages 58:1–58:13.

- [7] E. Arseneva, P. Bose, P. Cano, A. D’Angelo, V. Dujmovic, F. Frati, S. Langerman, and A. Tappini. Pole Dancing: 3D Morphs for Tree Drawings. In *Proc. GD 2018: The 26th International Symposium on Graph Drawing and Network Visualization*, pages 371–384. Award: the best paper in GD 2018 Track 1: Combinatorial and algorithmic aspects.
- [8] I. van der Hoog, E. Khramtcova, M. Löffler. Dynamic smooth compressed quadtrees
In *Proc. SOCG 2018: The 34th International Symposium on Computational Geometry*, pages 45:1–45:15.
- [9] J. Iacono, E. Khramtcova, S. Langerman. Searching edges in the overlap of two plane graphs. In *Proc. WADS 2017: Algorithms and Data Structures 15th International Symposium*, pages 473–484.
Preprint: arXiv:1701.02229
Invited to Computational Geometry Theory and Applications (under review).
- [10] E. Khramtcova and E. Papadopoulou. Randomized Incremental Construction for the Hausdorff Voronoi Diagram revisited and extended. In *Proc. COCOON 2017: The 23rd Annual Computing and Combinatorics Conference*, pages 321–332.
- [11] E. Khramtcova, M. Löffler. Dynamic stabbing queries with sub-logarithmic local updates for overlapping intervals. In *Proc. CSR 2017: 12th International Computer Science Symposium in Russia*, pages 176–190.
- [12] M. Claverol, E. Khramtcova, E. Papadopoulou, M. Saumell, and C. Seara. Stabbing circles for sets of segments in the plane. In *Proc. LATIN 2016: Theoretical Informatics - 12th Latin American Symposium*, pages 290–305.
- [13] E. Khramtcova and E. Papadopoulou. Linear-time algorithms for the farthest-segment Voronoi diagram and related tree structures. In *Proc. Algorithms and Computation - 26th International Symposium, ISAAC*, pages 404–414, 2015.
- [14] P. Cheilaris, E. Khramtcova, S. Langerman, and E. Papadopoulou. A randomized incremental approach for the Hausdorff Voronoi diagram of non-crossing clusters. In *Proc. LATIN 2014: Theoretical Informatics - 11th Latin American Symposium*, volume 8392 of *LNCS*, pages 96–107. Springer, 2014.

Abstracts in workshops without formal proceedings

- [1] E. Arseneva, L. Kleist, B. Klemz, M. Löffler, A. Schulz, B. Vogtenhuber and A. Wolff Representing Graphs by Polygons with Edge Contacts in 3D
In *Abstracts of the 36th European Workshop on Computational Geometry (EuroCG'20)*, 2020.
- [2] E. Arseneva, J. Iacono, G. Koumoutsos, S. Langerman, and B. Zolotov. Sublinear Explicit incremental planar Voronoi diagrams *Abstracts of the 22th Japan Conference on Discrete and Computational Geometry, Graphs, and Games (JCDCG³)*, 2019, pages 35-36.
- [3] E. Arseneva, S. Langerman, and B. Zolotov. A complete list of all convex shapes made by gluing regular pentagons. In *Abstracts of 20th Spanish Meeting on Computational Geometry (EGC'19)*.
- [4] E. Arseneva, Y. Bahoo, A. Biniiaz, P. Cano, F. Chanchary, J. Iacono, K. Jain, D. Mondal, A. Lubiw, K. Sheikhan, and C. Toth. Compatible Paths on Labelled Point Sets. In *Proc. CCCG 2018: The 30th Canadian Conference on Computational Geometry*, pages 54-60.
- [5] P. Bose, J.-L. De Carufel, E. Khramtcova, and S. Verdonshot. Reconstructing a convex polygon from its ω -cloud.
In *Abstracts of the 34th European Workshop on Computational Geometry (EuroCG'18)*, 2018.
- [6] M.-K. Chiu, E. Khramtcova, M. Korman, A. Markovic, Y. Okamoto, A. Ooms, A. van Renssen, and M. Roeloffzen. Rectilinear Link Diameter and Radius in a Rectilinear Polygonal Domain.
In *Abstracts of the 34th European Workshop on Computational Geometry (EuroCG'18)*, 2018.
- [7] E. Khramtcova, and S. Langerman. Which convex polyhedra can be made by gluing regular hexagons? In *Abstracts of the 20th Japan Conference on Discrete and Computational Geometry, Graphs, and Games (JCDCG³)*, 2017.
- [8] J. Iacono, E. Khramtcova, S. Langerman. Searching edges in the overlap of two plane graphs. In *Abstracts of the 33th European Workshop on Computational Geometry (EuroCG'17)*, 2017.
- [9] M. Claverol, E. Khramtcova, E. Papadopoulou, M. Saumell, and C. Seara. Stabbing circles for some sets of delaunay segments. In *Abstracts of the 32th European Workshop on Computational Geometry (EuroCG'16)*, pages 139–143, 2016.

- [10] M. Claverol, E. Khramtcova, E. Papadopoulou, M. Saumell, and C. Seara. Stabbing circles for sets of segments in the plane. In *Abstracts of 16th Spanish Meeting on Computational Geometry (EGC'15)*, pages 112–115, 2015.
- [11] E. Khramtcova and E. Papadopoulou. Randomized incremental construction for the Hausdorff Voronoi diagram. In *Young Researchers Forum of Computational Geometry Week (CG YRF'15)*
- [12] E. Khramtcova and E. Papadopoulou. Linear-time algorithms for the farthest-segment Voronoi diagram and related tree structures. In *Abstracts of the 31th European Workshop on Computational Geometry (EuroCG'15)*, pages 252–255, 2015.
- [13] E. Khramtcova and E. Papadopoulou. A simple RIC for the Hausdorff Voronoi diagram of non-crossing clusters. In *Abstracts of the 31th European Workshop on Computational Geometry (EuroCG'14)*.
- [14] P. Cheilaris, E. Khramtcova, and E. Papadopoulou. Randomized incremental construction of the Hausdorff Voronoi diagram of non-crossing clusters. In *Abstracts of the 29th European Workshop on Computational Geometry (EuroCG'13)*, pages 159–162, 2013.

Theses

- [1] E. Khramtcova. Title: *On the Hausdorff and Other Cluster Voronoi Diagrams*. Università della Svizzera Italiana (USI), Lugano, Switzerland, 2016. PhD thesis.
- [2] E. Khramtcova. Title: *Presaccadic peak detection problem in electrooculography method of eye-tracking*. Saint-Petersburg State University (SPbSU), Russia, 2010. Specialist diploma thesis.