Prof. Dr. Evanthia Papadopoulou

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RESEARCH INTERESTS

Design and Analysis of Algorithms, Computational Geometry and its Applications, Robust Geometric Computing, Data Structures, Algorithmic Aspects of VLSI Computer-Aided Design & Design for Manufacturability.

EDUCATION

Northwestern University , Department of EE/CS	Evanston, IL, USA
Ph.D. in Computer Science, December 1995.	
Thesis title: Path Optimization in Combined Metrics. Advisor:	Professor D.T. Lee.
University of Illinois at Chicago	Chicago, IL
Master of Science in Computer Science, December, 1989.	
University of Athens , Department of Mathematics	Athens, Greece
Bachelor of Science in Mathematics, June, 1986.	
PROFESSIONAL EXPERIENCE	
Università della Svizzera italiana (USI)	Lugano, Switzerland
Professor, Faculty of Informatics	$9/2016-\mathrm{present}$
Associate Professor, Faculty of Informatics	9/2008 - 8/2016

IBM T.J. Watson Research CenterYorktown Heights, NY, USAResearch Staff Member1998 – 2008 (on leave during academic years 2006–2008)Postdoctoral Research Fellow9/1996 – 4/1998

Athens University of Economics and Business	Athens, Greece
Assistant Professor	2004, 2006 - 2008 (tenure in 2007)
Northwestern University	Evanston, IL, USA
Postdoctoral Researcher	1/1996 - 7/1996
PhD student, Instructor, Teaching Assistant, Research	Assistant 1990 – 1995

FUNDING

SNF/DACH 200021E-154387 - VORONOI++, 2016-2019. Funding 212'686 CHF.

Hasler Foundation 16006 - EuroCG 2016, 2016. Funding 7'050 CHF. SNF 20CO21-164483, invited speakers, EuroCG 2016.

ESF/SNF 20GG21-134355 - Hausdorff and Higher-order Voronoi diagrams, 2011-2015. Part of ESF project EuroGIGA/VORONOI. Funding: 295'050CHF.

 $\rm SNF$ 2000 20-149658 - Higher order Voronoi diagrams of polygonal objects, 2013-2014. Funding 57'160 CHF.

SNF 200021-127137 - Generalized Voronoi diagrams of polygonal objects: algorithms and applications, 2010-2013. Funding: 157'692 CHF.

AWARDS

IBM Research Technical Accomplishment, Voronoi diagram based Critical Area Analysis, December 2006

IBM Outstanding Innovation Award, *Voronoi Critical Area Analysis*, August 2006 IBM Invention Achievement Awards: September 2007, March 2005, July 1999, May 1998

SHORT-TERM RESEARCH VISITS

Courant Institute, New York University, NY, USA (6-7/2014, 7/2015, 11/2016, 6-7/2017). Tohoku University, Sendai, Japan (11/2017). Universitat Politècnica de Catalunya (UPC), Spain (1/2013, 4/2017). Technion, Israel (10/2014). Bellairs Research Institute, McGill University, Barbados (2/2001, 1/2011, 3/2015). Academia Sinica, Taiwan, R.O.C (6-8/1993, 6/1996).

INSTITUTIONAL RESPONSIBILITIES

Università della Svizzera italiana (USI)

- Director Master of Science in Informatics, USI, 2017-present.
- Director of the Bachelor Program, USI, Faculty of Informatics, 2009-2013.
- Member of several Faculty promotion and hiring committees, 2013, 2015, 2017, 2021.

Athens University of Economics and Business:

- Academic coordinator of the Erasmus program in Computer Science, 2006-2008.
- Member of several committees (internal and external) for new Faculty hiring, Faculty promotion, tenure, and University student transfers.

SUPERVISING JUNIOR RESEARCHERS

Postdoctoral Researchers: Dr. Panagiotis Cheilaris, through the EuroCIGA/VORONOI project SNF 20GG21-134355, 2011-2014.

PhD students:

- Current: Ioannis Mantas; Martin Suderland, graduation expected 2021.
- Kolja Junginger. PhD dissertation: Voronoi-like diagrams Towards linear-time algorithms for tree-like abstract Voronoi diagrams, August 2020. After graduation at: Bellin, Germany.
- Elena (Khramtcova) Arseneva. PhD dissertation: Hausdorff, farthest, and cluster Voronoi diagrams, August 2016.

After graduation postdoc at Université Libre de Bruxelles; now Assitant Professor at St Petersburg State University

- Sandeep Kumar Dey. PhD dissertation: Voronoi diagrams in the max-norm: Algorithms, Implementation, and Applications, June 2015. After graduation at: Intel, Portland OR, USA
- Maksym Zavershynskyi. PhD dissertation: *Higher-order Voronoi diagrams of polygonal objects*, December 2014. After graduation at: Google - Zurich.

External PhD Committee member :

- Barbara Schwarzwald, University of Bonn, September 2020.
- Sandip Banerjee Studies in Four Geometric Optimization Problem Based on Neighbourhood-Attributes of Point Sets, Indian Institute of Engineering Science and Technology, Shibpur, June 2018.
- Jonàs Martínez Bayona *Skeletal Representations of orthogonal shapes*, Universitat Politècnica de Catalunya, Spain, 2013.

PROFESSIONAL ACTIVITIES AND SERVICE

- Editorial Board Member, International Journal of Computational Geometry and Applications, World Scientific; since 2021.
- Conference Chair, 32nd European Workshop on Computational Geometry (EuroCG), Lugano, Switzerland, March 29 April 1, 2016.
- Program Committee member: ISVD'10, ISVD'13, ISAAC'13, EuroCG'14, ISAAC'15, EuroCG'15, EuroCG'16 (PC co-chair), SoCG'17, EuroCG'18, ISAAC'18, EGC'19, TAMC'20, CG:YRF'20, EuroCG'21.
- Have acted as a referee for the following journals (multiple times): Algorithmica (ALGO), SIAM Journal on Computing (SICOMP), Discrete and Computational Geometry (DCG), Computational Geometry: Theory and Applications (CGTA), International Journal of Computational Geometry and Applications (IJCGA), Computer Aided Geometric Design (CAGD), Discrete Applied Mathematics (DAM), Information Processing Letters (IPL), Optics and Lasers in Engineering (OLEN), Journal of Manufacturing Processes (SME-JMP), IEEE Transactions on Computer Aided Design (TCAD), Int. Journal of Computer Mathematics (IJCM), Networks, Wireless Communications and Mobile Computing.
- Have acted as a referee for the following conferences (multiple editions): SoCG, ESA, ISAAC, COCOON, EGC, TAMC, ISVD, STACS, WALCOM, Eurographics, DAC.
- Evaluator for national and international funding agencies.
- External committee member for faculty promotion cases abroad.
- Organiser, kickoff meeting of ESF EuroGIGA/VORONOI, Lugano, October 7-11, 2011.
- Holds 10 US patents.

Recent invited activities:

- Invited participant and speaker, Dagstuhl Seminar on Computational Geometry, 2021.
- Invited speaker, XIX Spanish Meeting on Computational Geometry, 2021.
- Invited tutorial speaker, AAAC Asian Assoc. for Algorithms and Computation, 2021.

TEACHING

Università della Svizzera italiana (USI)

Bachelor courses (designed and taught):

- Discrete Mathematics I: one semester each academic year, 2008–2014.
- Discrete Mathematics II: Spring 2009.
- Algorithms and Data Structures II Fall 2010; one semester per academic year, 2012– present.

Master courses (designed and taught):

- Algorithms and Complexity: one semester per academic year, 2015 present.
- Geometric Algorithms (Introduction to Computational Geometry): one semester per academic year, 2012 – present.

PhD courses:

- Introduction to Computational Geometry: Spring 2009; joint with Master Geometric Algorithms one semester per academic year, 2012 – present.
- Topics in Algorithms and Data Structures: Fall 2010.

Athens University of Economics and Business

Athens, Greece

Undergraduate courses:

- Computer Graphics: Spring 2004, Fall 2004.
- Data Structures: Fall 2006, 2007.
- Automata and Complexity: Spring 2007, 2008.

Graduate courses:

- Automata and Complexity: Spring 2004.
- Graphics and Computational Geometry: Fall 2004, 2006, 2007.

Northwestern University

Evanston, IL, USA

• EECS A20 - Introduction to Computers and Information Technology, three quarters per academic year, 1993 – 1995.

University of Illinois at Chicago

Chicago, IL, USA

• Math191 - Structured Programming with Pascal I, 1989 – 1990.

Lugano, Switzerland

PUBLICATIONS

Book Chapters

- E. Papadopoulou, J. Xu, and L. Xu. Map of geometric minimal cuts with applications. In P. M. Pardalos, D. Z. Du, and R. Graham, editors, *Handbook of Combinatorial Optimization*. Springer, 2nd edition, 2013.
- [2] P. Gupta and E. Papadopoulou. Yield analysis and optimization. In C.J. Alpert, D.P. Mehta, and S.S. Sapatnekar, editors, *The Handbook of Algorithms for VLSI Physical Design Automation*, chapter 7.3. Taylor & Francis CRC Press, 2008.

Refereed Papers in Journals

- [3] K. Junginger, I. Mantas, and E. Papadopoulou. On selecting a fraction of leaves with disjoint neighborhoods in a plane tree. *Discrete Applied Mathematics*, 2021. To appear.
- [4] E. Arseneva and E. Papadopoulou. Randomized incremental construction for the Hausdorff Voronoi diagram revisited and extended. *Journal of Combinatorial Optimization*, 37(2):579–600, February 2019.
- [5] M. Claverol, E. Khramtcova, E. Papadopoulou, M. Saumell, and C. Seara. Stabbing circles for sets of segments in the plane. *Algorithmica*, 80(3):849–884, March 2018.
- [6] C. Bohler, C. H. Liu, E. Papadopoulou, and M. Zavershynskyi. A randomized divide and conquer algorithm for higher-order abstract Voronoi diagrams. *Computational Geometry: Theory* and Applications, 59(C):26–38, December 2016.
- [7] P. Cheilaris, E. Khramtcova, S. Langerman, and E. Papadopoulou. A randomized incremental approach for the Hausdorff Voronoi diagram of non-crossing clusters. *Algorithmica*, 76(4):935– 960, December 2016.
- [8] S. K. Dey, P. Cheilaris, M. Gabrani, and E. Papadopoulou. Layout pattern analysis using the Voronoi diagram of line segments. *Journal of Micro/Nanolithography, MEMS, and MOEMS*, 15(1), February 2016.
- [9] C. Bohler, P. Cheilaris, R. Klein, C. H. Liu, E. Papadopoulou, and M. Zavershynskyi. On the complexity of higher order abstract Voronoi diagrams. *Computational Geometry: Theory and Applications*, 48(8):539–551, September 2015.
- [10] E. Papadopoulou and M. Zavershynskyi. The higher-order Voronoi diagram of line segments. Algorithmica, 74(1):415–439, 2016.
- [11] E. Papadopoulou and J. Xu. The L_{∞} Hausdorff Voronoi diagram revisited. International Journal of Computational Geometry and Applications, 25(2):123–141, 2015.
- [12] C.-H. Liu, E. Papadopoulou, and D. T. Lee. The k-Nearest-Neighbors Voronoi diagram revisited. Algorithmica, 71(2):429–449, February 2015.

- [13] J. Xu, L. Xu, and E. Papadopoulou. Computing the map of geometric minimal cuts. Algorithmica, 68:805–834, 2014.
- [14] E. Papadopoulou and S. K. Dey. On the farthest line-segment Voronoi diagram. International Journal of Computational Geometry and Applications, 23(6):443–459, 2013.
- [15] E. Papadopoulou. Net-aware critical area extraction for opens in VLSI circuits via higher-order Voronoi diagrams. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and* Systems, 30(5):704–716, 2011.
- [16] Z. Chen, E. Papadopoulou, and J. Xu. Robustness of k-gon Voronoi diagram construction. Information Processing Letters, 97(4):138–145, 2006.
- [17] E. Papadopoulou. The Hausdorff Voronoi diagram of point clusters in the plane. Algorithmica, 40:63–82, 2004.
- [18] E. Papadopoulou and D. T. Lee. The Hausdorff Voronoi diagram of polygonal objects: A divide and conquer approach. International Journal of Computational Geometry and Applications, 14(6):421–452, 2004.
- [19] E. Papadopoulou and D. T. Lee. The L_{∞} Voronoi diagram of segments and VLSI applications. International Journal of Computational Geometry and Applications, 11(5):503–528, 2001.
- [20] E. Papadopoulou. Critical area computation for missing material defects in VLSI circuits. *IEEE Transactions on Computer-Aided Design*, 20(5):583–597, May 2001.
- [21] E. Papadopoulou. k-Pairs non-crossing shortest paths in a simple polygon. International Journal of Computational Geometry and Applications, 9(6):533–552, December 1999.
- [22] O. Aichholzer, F. Aurenhammer, D. Chen, D. T. Lee, and E. Papadopoulou. Skew Voronoi diagrams. International Journal of Computational Geometry and Applications, 9(3):235–248, June 1999.
- [23] E. Papadopoulou and D. T. Lee. Critical area computation via Voronoi diagrams. IEEE Transactions on Computer-Aided Design, 18(4):463–474, April 1999.
- [24] E. Papadopoulou and D. T. Lee. A new approach for the geodesic Voronoi diagram of points in a simple polygon and other restricted polygonal domains. *Algorithmica*, 20(4):319–352, April 1998.
- [25] D. T. Lee and E. Papadopoulou. The all-pairs quickest path problem. Information Processing Letters, 45:261–267, April 1993.

Submitted to Journal

[26] K. Junginger and E. Papadopoulou. Deletion in abstract Voronoi diagrams in expected linear time and related problems. Submitted to *Discrete and Computational Geometry*, July 2020.

Pre-prints

- [27] K. Junginger and E. Papadopoulou. Deletion in abstract Voronoi diagrams in expected linear time and related problems. arXiv:1803.05372v2 [cs.CG], 2020.
- [28] E. Khramtcova and E. Papadopoulou. An expected linear-time algorithm for the farthestsegment Voronoi diagram. arXiv:1411.2816v3 [cs.CG], 2017.

Refereed Papers in Conference Proceedings

- [29] I. Mantas, E. Papadopoulou, V. Sacristán, and R. Silveira. Farthest color Voronoi diagrams: complexity and algorithms. In Proc. 14th Latin American Theoretical INformatics Symposium (LATIN), LNCS, May 2020.
- [30] G. Barequet, E. Papadopoulou, and M. Suderland. Unbounded regions of high-order Voronoi diagrams of lines and segments in higher dimensions. In Proc. 30th International Symposium on Algorithms and Computation (ISAAC), volume 149 of LIPIcs, December 2019.
- [31] K. Junginger, I. Mantas, and E. Papadopoulou. On selecting leaves with disjoint neighborhoods in embedded trees. In Proc. Conference on Algorithms and Discrete Applied Mathematics (CALDAM), volume 11394 of LNCS, pages 189–200, February 2019.
- [32] K. Junginger and E. Papadopoulou. Deletion in abstract Voronoi diagrams in expected linear time. In Proc. 34th International Symposium on Computational Geometry (SoCG), volume 99 of LIPIcs, pages 50:1–50:14, 2018.
- [33] E. Khramtcova and E. Papadopoulou. Randomized incremental construction for the Hausdorff Voronoi diagram revisited and extended. In Proc. 23rd Annual International Computing and Combinatorics Conference (COCOON), volume 10392 of LNCS, pages 321–332, July 2017.
- [34] H. Bennett, E. Papadopoulou, and C. Yap. Planar minimization diagrams via subdivision with applications to anisotropic Voronoi diagrams. In *Eurographics Symposium on Geometry Processing*, volume 35, June 2016.
- [35] M. Claverol, E. Khramtcova, E. Papadopoulou, M. Saumell, and C. Seara. Stabbing circles for sets of segments in the plane. In Proc. 12th Latin American Theoretical INformatics Symposium (LATIN), volume 9644 of LNCS, pages 290–305, April 2016.
- [36] E. Khramtcova and E. Papadopoulou. Linear-time algorithms for the farthest segment Voronoi diagram and related tree-structures. In Proc. 26th International Symposium on Algorithms and Computation (ISAAC), volume 9472 of LNCS, pages 404–414, December 2015.
- [37] S. K. Dey, P. Cheilaris, N. Casati, M. Gabrani, and E. Papadopoulou. Topology and contextbased pattern extraction using line-segment Voronoi diagrams. In Proc. SPIE Advanced Lithography, Design-Process-Technology Co-optimization for Manufacturability IX, volume 9427, March 2015. Luigi Franco Cerrina Memorial Best Student Paper Award.
- [38] C. Bohler, C. H. Liu, E. Papadopoulou, and M. Zavershynskyi. A randomized divide and conquer algorithm for higher-order abstract Voronoi diagrams. In *Proc. 25th International*

Symposium on Algorithms and Computation (ISAAC), volume 8889 of LNCS, pages 27–37, December 2014.

- [39] P. Cheilaris, S. K. Dey, M. Gabrani, and E. Papadopoulou. Implementing the L_{∞} segment Voronoi diagram in CGAL and applying in VLSI pattern analysis. In *Proc. 4th International Congress on Mathematical software (ICMS)*, volume 8592 of *LNCS*, pages 198–205, 2014.
- [40] P. Cheilaris, E. Khramtcova, S. Langerman, and E. Papadopoulou. A randomized incremental approach for the Hausdorff Voronoi diagram of non-crossing clusters. In *Proc. 11th Latin American Theoretical INformatics Symposium (LATIN)*, volume 8392 of *LNCS*, pages 96–107, March 2014.
- [41] G. Barequet and E. Papadopoulou. On the farthest Voronoi diagram of line segments in three dimensions. In Proc. 10th International Symposium on Voronoi Diagrams in Science and Engineering (ISVD), pages 31–36. IEEE-CS, July 2013.
- [42] M. Zavershynskyi and E. Papadopoulou. A sweepline algorithm for higher order Voronoi diagrams. In Proc. 10th International Symposium on Voronoi Diagrams in Science and Engineering, (ISVD), pages 16–22. IEEE-CS, July 2013.
- [43] C. Bohler, P. Cheilaris, R. Klein, C. H. Liu, E. Papadopoulou, and M. Zavershynskyi. On the complexity of higher order abstract Voronoi diagrams. In Proc. 40th International Colloquium on Automata, Languages and Programming (ICALP), volume 7965 of LNCS, pages 208–219, July 2013.
- [44] E. Papadopoulou and M. Zavershynskyi. On higher-order Voronoi diagrams of line segments. In Proc. 23rd International Symposium on Algorithms and Computation (ISAAC), volume 7676 of LNCS, pages 177–186, 2012.
- [45] E. Papadopoulou and S. K. Dey. On the farthest line segment Voronoi diagram. In Proc. 23rd International Symposium on Algorithms and Computation (ISAAC), volume 7676 of LNCS, pages 187–196, 2012.
- [46] S. K. Dey and E. Papadopoulou. The L_{∞} (L_1) farthest line segment Voronoi diagram. In *Proc. 9th International Symposium on Voronoi Diagrams in Science and Engineering (ISVD)*, pages 49–55. IEEE-CS, 2012.
- [47] C.-H. Liu, E. Papadopoulou, and D. T. Lee. An output-sensitive approach for the L_1/L_{∞} k-Nearest-Neighbor Voronoi diagram. In Proc. 19th Annual European Symposium on Algorithms (ESA), volume 6942 of LNCS, pages 70–81, September 2011.
- [48] E. Papadopoulou and J. Xu. The L_{∞} Hausdorff Voronoi diagram revisited. In Proc. Int. Symposium on Voronoi Diagrams in Science and Engineering (ISVD), pages 67–74. IEEE-CS, 2011.
- [49] J. Xu, L. Xu, and E. Papadopoulou. Computing the map of geometric minimal cuts. In Proc. 20th International Symposium on Algorithms and Computation, volume 5878 of LNCS, pages 244–254, 2009.
- [50] E. Papadopoulou. The higher order Hausdorff Voronoi diagram and VLSI critical area extraction for via-blocks. In Proc. 5th Int. Symposium on Voronoi diagrams in Science and Engineering (ISVD), pages 181–191, 2008.

- [51] E. Papadopoulou. Higher order Voronoi diagrams of segments for VLSI critical area extraction. In Proc. 18th International Symposium on Algorithms and Computation (ISAAC), volume 4835 of LNCS, pages 716–727, 2007.
- [52] M. Mukherjee, S. Mansfield, Z. Zhao, L. Liebmann, M. Lavin, A. Lvov, and E. Papadopoulou. The problem of optimal placement of sub-resolution assist features (SRAF). In *Proc. SPIE–Optical Microlithography XVIII*, volume 5754, pages 1417–1429, 2005.
- [53] E. Papadopoulou. On the Hausdorff Voronoi diagram of point clusters in the plane. In Proc. Workshop on Algorithms and Data Structures (WADS), number 2748 in Lecture Notes in Computer Science, pages 439–450, 2003.
- [54] E. Papadopoulou and D. T. Lee. The min-max Voronoi diagram of polygonal objects and applications in VLSI manufacturing. In Proc. 13th International Symposium on Algorithms and Computation, number 2518 in Lecture Notes in Computer Science, pages 511–522, 2002.
- [55] Z. Chen, E. Papadopoulou, and J.-H. Xu. Robustness of algorithm for k-gon metric Voronoi diagram construction. In Proc. 14th Canadian Conference on Computational Geometry, August 2002.
- [56] E. Papadopoulou. Critical area computation for missing material defects in VLSI circuits. In Proc. International Symposium on Physical Design, pages 140–146, April 2000.
- [57] E. Papadopoulou. l_{∞} Voronoi diagrams and applications to VLSI layout and manufacturing. In *Proc. 9th International Symposium on Algorithms and Computation*, number 1533 in Lecture Notes in Computer Science, pages 9–18, 1998.
- [58] E. Papadopoulou and D. T. Lee. Critical area computation A new approach. In Proc. International Symposium on Physical Design, pages 89–94, 1998.
- [59] O. Aichholzer, F. Aurenhammer, D. Chen, D. T. Lee, A. Mukhopadhya, and E. Papadopoulou. Voronoi diagrams for direction-sensitive distances. In Proc. 13th Annual ACM Symposium on Computational Geometry, pages 418–420, 1997.
- [60] E. Papadopoulou. k-pairs non-crossing shortest paths in a simple polygon. In Proc. 7th Annual International Symposium on Algorithms and Computation, number 1178 in Lecture Notes in Computer Science, pages 305–314, December 1996.
- [61] E. Papadopoulou and D. T. Lee. Efficient computation of the geodesic Voronoi diagram of points in a simple polygon. In *Proc. 3rd Annual European Symposium on Algorithms*, number 979 in Lecture Notes in Computer Science, pages 238–251, 1995.
- [62] E. Papadopoulou and D. T. Lee. Shortest paths in a simple polygon in the presence of forbidden vertices. In Proc. 6th Canadian Conference on Computational Geometry, pages 110–115, August 1994.

In Preparation

[63] K. Junginger and E. Papadopoulou. Abstract tree-like Voronoi diagrams in expected linear time, extended. Manuscript in preparation for journal submission, 2021.

Software – Peer Reviewed

- [64] P. Cheilaris, S. K. Dey, and E. Papadopoulou. L_{∞} segment Delaunay graph. Computational Geometry Algorithms Library (CGAL) https://www.cgal.org, in CGAL 4.7 and later, 2015.
- [65] Voronoi CAA: Voronoi Critical Area Analysis. IBM VLSI CAD Tool, Department of Electronic Design Automation, IBM Microelectronics Division, Burlington, VT. Distributed by Cadence, since 2007. Patents: US6178539, US6317859, US7240306, US7752589, US7752580, US7143371, US20090125852.

Meetings with Published Abstracts

- [66] K. Junginger and E. Papadopoulou. An example of a randomized order-dependent time analysis in incremental construction. In *Abstracts 37th European Workshop on Computational Geometry (EuroCG)*, 2021.
- [67] C. Alegria, I. Mantas, E. Papadopoulou, M. Savić, H. Schrezenmaier, C. Seara, and M. Suderland. The Voronoi diagram of rotating rays with applications to floodlight illumination. In *Abstracts 37th European Workshop on Computational Geometry (EuroCG)*, 2021.
- [68] K. Junginger, I. Mantas, E. Papadopoulou, M. Suderland, and C. Yap. Certified approximations of Fermat points. In Abstracts 36th European Workshop on Computational Geometry (EuroCG), 2020.
- [69] K. Junginger and E. Papadopoulou. On tree-like abstract Voronoi diagrams in expected linear time. In Abstracts of Computational Geometry: Young Researchers Forum (CG:YRF), 2019.
- [70] I. Mantas, E. Papadopoulou, V. Sacristán, and R. Silveira. Linear-size farthest color Voronoi diagrams: conditions and algorithms. In Abstracts 35th European Workshop on Computational Geometry (EuroCG), 2019.
- [71] G. Barequet, E. Papadopoulou, and M. Suderland. Unbounded regions of higher-order line and segment Voronoi diagrams in higher dimensions. In *Abstracts 35th European Workshop* on Computational Geometry (EuroCG), 2019.
- [72] K. Junginger and E. Papadopoulou. Deletion in abstract Voronoi diagrams in expected linear time. In Abstracts 34th European Workshop on Computational Geometry (EuroCG), 2018.
- [73] M. Claverol, E. Khramtcova, E. Papadopoulou, M. Saumell, and C. Seara. Stabbing circles for some sets of Delaunay segments in the plane. In Abstracts 32nd European Workshop on Computational Geometry (EuroCG), 2016.
- [74] E. Khramtcova and E. Papadopoulou. Randomized incremental construction for the Hausdorff Voronoi diagram. In Abstracts of Computational Geometry: Young Researchers Forum (CG:YRF), 2015.
- [75] M. Claverol, E. Khramtcova, E. Papadopoulou, M. Saumell, and C. Seara. Stabbing circles for sets of segments in the plane. In Abstracts XVI Spanish Meeting on Computational Geometry (XVI EGC), 2015.

- [76] E. Khramtcova and E. Papadopoulou. Linear-time algorithms for the farthest segment Voronoi diagram and related tree-structures. In Abstracts 31st European Workshop on Computational Geometry (EuroCG), 2015.
- [77] H. Bennett, E. Papadopoulou, and C. Yap. A subdivision approach to weighted Voronoi diagrams. In *Abstracts 24th Annual Fall Workshop on Computational Geometry*, 2014.
- [78] G. Barequet and E. Papadopoulou. On farthest-site Voronoi diagrams of line segments and lines in three and higher dimensions. In Abstracts 30th European Workshop on Computational Geometry (EuroCG), 2014.
- [79] E. Khramtcova and E. Papadopoulou. A simple RIC for the Hausdorff Voronoi diagram of non-crossing clusters. In *Abstracts 30th European Workshop on Computational Geometry* (EuroCG), 2014.
- [80] P. Cheilaris, E. Khramtcova, and E. Papadopoulou. Randomized incremental construction of the Hausdorff Voronoi diagram of non-crossing clusters. In *Abstracts 29th European Workshop* on Computational Geometry (EuroCG), pages 159–163, 2013.
- [81] E. Papadopoulou and M. Zavershynskyi. A sweepline algorithm for higher-order Voronoi diagrams. In Abstracts 29th European Workshop on Computational Geometry (EuroCG), pages 233–216, 2013.
- [82] E. Papadopoulou and M. Zavershynskyi. On higher-order Voronoi diagrams of line segments. In Abstracts 28th European Workshop on Computational Geometry (EuroCG), pages 233–236, 2012.
- [83] E. Papadopoulou and S. K. Dey. On the farthest line segment Voronoi diagram. In Abstracts 28th European Workshop on Computational Geometry (EuroCG), pages 237–240, 2012.
- [84] E. Papadopoulou and J. Xu. The L_{∞} Hausdorff Voronoi diagram revisited. In Abstracts 27th European Workshop in Computational Geometry (EuroCG), pages 67–70, 2011.
- [85] E. Papadopoulou. Geometric min-cuts, higher order Voronoi diagrams, and net-aware VLSI critical area extraction. In *Seventh Joint Operations Research Days*, Lugano, TI, Switzerland, September 2009.
- [86] E. Papadopoulou. Higher order Voronoi diagrams of segments for VLSI critical area extraction. In 17th Fall Workshop on Computational and Combinatorial Geometry, IBM T.J. Watson Research Center, Hawthorn, NY, U.S.A., 2007.
- [87] E. Papadopoulou. Net-aware critical area extraction for VLSI opens via Voronoi diagrams. In 23rd European Workshop on Computational Geometry, Graz University of Technology, Graz, Austria, March 2007.
- [88] E. Papadopoulou. Voronoi diagrams for VLSI manufacturing: robustness and implementation. In *DIMACS Workshop on Implementations of Geometric Algorithms*, DIMACS Center, Rutgers University, Piscataway, NJ, U.S.A., December 2002.
- [89] E. Papadopoulou and D. T. Lee. The L_{∞} Voronoi diagram of segments and VLSI applications. In *Proc. of the 6th SIAM Conference on Geometric Design*, Albuquerque, NM, U.S.A., November 1999.

- [90] E. Papadopoulou. VLSI critical area computation for missing material defects via L_{∞} Voronoi diagrams. In *Proc. of the 8th Fall Workshop on Computational Geometry (FWCG)*, Johns Hopkins University, Baltimore, MD, U.S.A., October 1999.
- [91] E. Papadopoulou and D. T. Lee. L_{∞} Voronoi diagrams and applications in VLSI layout and manufacturing. In *Proc. of the 8th Fall Workshop on Computational Geometry (FWCG)*, Brown University, Providence, RI, U.S.A., October 1998.

Patents

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