

# Ahmad Biniiaz

[ahmad.biniiaz@gmail.com](mailto:ahmad.biniiaz@gmail.com)  $\diamond$  <https://cglab.ca/~biniiaz/>

5101 Lambton Tower, School of Computer Science, University of Windsor  
401 Sunset Ave, Windsor, ON N9B 3P4, Canada

## Education

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### PhD in computer science

*Carleton University, Canada, 2017*

Thesis: *Matchings in geometric graphs*

Supervisors: Anil Maheshwari and Michiel Smid

### Masters degree in computer science

*Shiraz University, Iran*

### Bachelor degree in computer engineering

*Bu-Ali Sina University, Iran*

## Profession

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### Assistant Professor (tenure-track)

*School of Computer Science, University of Windsor, Canada*

2019-present

### Adjunct Professor

*School of Computer Science, Carleton University*

2020-present

### NSERC postdoctoral fellow

*University of Waterloo, Canada*

2017-2019

### Fields Institute postdoctoral fellow

*Carleton University, Canada*

2017

## Current Research Interests

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- Algorithm Design and Analysis
- Discrete and Computational Geometry
- Approximation Algorithms
- Combinatorial Optimization
- Simplicity in Algorithms
- Graph Drawing and Network Visualization
- Algorithmic Graph Theory
- Data Structures
- Discrete Structures

## Research Grants

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2020-25	NSERC Discovery Grant (early-career) for 5 years <i>Natural Sciences and Engineering Research Council of Canada</i>	\$182,500
2019	Startup Grant <i>University of Windsor</i>	\$55,000
2017-19	NSERC Postdoctoral Fellowship for 2 years <i>Natural Sciences and Engineering Research Council of Canada</i>	\$90,000
2017	Fields Institute Postdoctoral Award <i>Fields Institute and Carleton University</i>	\$35,000
2016-17	Ontario Graduate Scholarship (OGS) <i>Government of Ontario and Carleton University</i>	\$15,000
2015-16	Ontario Graduate Scholarship (OGS) <i>Government of Ontario and Carleton University</i>	\$15,000

## Competitive Academic Awards

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2016-17	Hamlin Graduate Fellowship <i>Dean of Graduate Studies, Carleton University</i>	\$3,000
2016-17	CUASA Scholarship <i>Carleton University Academic Staff</i>	\$2,000
2015-16	Hamlin Graduate Fellowship <i>Dean of Graduate Studies, Carleton University</i>	\$2,000
2015-16	CUASA Scholarship <i>Carleton University Academic Staff</i>	\$2,698
2015-16	David and Rachel Epstein Foundation Scholarships <i>Carleton University</i>	\$1,000
2015-16	GSA Student Parent Award <i>Graduate Students' Association, Carleton University</i>	\$500
2015	Best student presentation award in CALDAM 2015 <i>Springer</i>	€200
2014-15	Indira Gandhi Memorial Fellowship <i>Dean of Graduate and Postdoctoral Affairs, Carleton University</i>	\$10,000
2013-14	Indira Gandhi Memorial Fellowship <i>Dean of Graduate and Postdoctoral Affairs, Carleton University</i>	\$10,000

## Graduate Scholarships

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2013-16	Research Assistantship <i>Carleton University</i>	4×\$14,000
2013-16	Teaching Assistantship <i>Carleton University</i>	4×\$10,129

## Teaching

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### University of Windsor:

- Theoretical Foundations of Computer Science (COMP-2310) - **undergrad** Winter 2023
- Computational Geometry and Its App. (COMP-8570) - **grad course** Fall 2022
- Key Concepts in Computer Science (COMP-1000) - **undergrad** Fall 2022
- Theoretical Foundations of Computer Science (COMP-2310) - **undergrad** Winter 2022
- Literature Review and Survey (COMP-8100) - **grad course** Fall 2021
- Computational Geometry and Its App. (COMP-8570) - **grad course** Fall 2021
- Theoretical Foundations of Computer Science (COMP-2310) - **undergrad** Winter 2021
- Key Concepts in Computer Science (COMP-1000) - **undergrad** Winter 2021
- Computational Geometry and Its App. (COMP-8570) - **grad course** Fall 2020
- Computational Geometry and Its App. (COMP-8570) - **grad course** Winter 2020
- Key Concepts in Computer Science (COMP-1000) - **undergrad** Fall 2019

### University of Waterloo:

- Data Structures and Data Management (CS240)<sup>1</sup> - **undergrad** Spring 2019
- Data Structures and Data Management (CS240)<sup>2</sup> - **undergrad** Spring 2018

### Carleton University:

- Enrichment Mini Courses Program (EMCP)<sup>3</sup> - **high school level** May 2015

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<sup>1</sup> Evaluation score: 4.04 (out of 5).

<sup>2</sup> Evaluation score: 4.23 (out of 5). Ranked among “**top instructors**” of the department.

<sup>3</sup> An annual program designed for high school students of Eastern Ontario and Western Quebec.

## Student Supervision (co-supervisions are marked with \*)

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• Jilsa Chandarana	Masters	University of Windsor	Winter 2023-present
• Shayan Taheri Jam	Undergrad intern	Sharif Uni. of Tech.	Fall 2022-present
• <a href="#">Mohammad Hashemi</a>	Masters	University of Windsor	Fall 2022-present
• <a href="#">Parham Khamsepour</a>	Masters	University of Windsor	Fall 2021-present
• <a href="#">Patrick Devaney*</a>	Masters	University of Windsor	Fall 2021-present
• <a href="#">Saman Bazargani*</a>	PhD	University of Ottawa	Winter 2020-present
• <a href="#">Ian Kennedy</a>	BSc honors	University of Windsor	Fall 2021-Winter 2022
• <a href="#">Zhikai Lin</a>	Masters	University of Windsor	Fall 2020-present
• <a href="#">Yunkai Wang*</a>	Masters	Carleton University	Summer 2020-Winter 2021
• <a href="#">Rishav Chatterjee</a>	Masters	University of Windsor	Fall 2019-Spring 2021
• Majid Daliri	Undergrad intern	University of Tehran	Winter 2021-Winter 2022
• Amir H. Moradpour	Undergrad intern	University of Tehran	Winter 2021-Winter 2022
• <a href="#">Patrick Devaney</a>	BSc honors	University of Windsor	Fall 2020-Winter 2021
• <a href="#">Zhikai Lin</a>	BSc honors	University of Windsor	Fall 2019-Winter 2020
• <a href="#">Kimberly Crosbie*</a>	Masters	Carleton University	Fall 2014-Winter 2017
• Chris Saxton*	BSc honors	Carleton University	Winter 2017
• <a href="#">Lei Chen*</a>	BSs honors	Carleton University	Winter 2016
• Evren Kaya*	DSRI intern	Carleton University	Summer 2015

## Contributions to the Scientific Community

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### Program Committees:

- 35th Canadian Conference on Computational Geometry (CCCG 2023)
- 5th Iranian Conference on Computational Geometry (ICCG 2022)
- 17th Algorithms and Data Structures Symposium (WADS 2021)
- 4th Iranian Conference on Computational Geometry (ICCG 2021) (**co-chair**)
- 32nd Canadian Conference on Computational Geometry (CCCG 2020)
- 36th European Workshop on Computational Geometry (EuroCG 2020)
- 31st Canadian Conference on Computational Geometry (CCCG 2019)
- 2nd Iranian Conference on Computational Geometry (ICCG 2019)
- 29th Canadian Conference on Computational Geometry (CCCG 2017)

### Organizing Committees:

- 17th Regional Secondary School Programming Competition (SSPC), Windsor, Dec. 2022
- ACM ICPC Programming Contest, Windsor, Oct. 2019  
East Central North America Regional (ACM ICPC ECNA RPC)

- 16th Regional Secondary School Programming Competition (SSPC), Windsor, Dec. 2019
- Fields Workshop on Discrete and Computational Geometry, Ottawa, 2017.
- 29th Canadian Conference on Computational Geometry (CCCG), Ottawa, 2017.

### Departmental Committees: (at School of Computer Science, University of Windsor)

- Colloquium Coordinator (May 2022-April 2023)
- Graduate Executive Committee (May 2022-April 2023)
- Appointments Committee (May 2021-April 2022)
- Colloquium Coordinator (May 2021-April 2022)
- Graduate Executive Committee (May 2021-April 2022)
- PhD Admissions and Progress Committee (October 2020-April 2022)
- Appointments Committee (Sep. 2019-April 2020)
- ACM ICPC Programming team (September 2019-present) (**coach**)

### Referee for:

- **Journals:** SIAM Journal on Discrete Mathematics, Algorithmica, Discrete and Computational Geometry, Journal of Discrete Algorithms, Journal of Computational Geometry, Journal of Graph Algorithms and Applications, International Journal of Computational Geometry & Applications, Information Processing Letters, International Journal of Geographical Information Science, Computational Geometry: Theory and Applications
- **Conferences:** WALCOM'23, SoCG'22, GD'22, EuroCG'22, SODA'21, ISAAC'21, ESA'21, SWAT'21, WADS'21, SoCG'21, STACS'21, ICCG'21, WG'21, FCT'21, FSTTCS'20, LATIN'20, SoCG'20, SWAT'20, CiE'20, GD'19, ICALP'18, SoCG'18, GD'18, WG'18, COCOON'18, ESA'16, SoCG'17, STACS'17, IWOC'17, CALDAM'16, CCCG'15

### Participation in Invitational Research Workshops:

- 10<sup>th</sup> Workshop on Geometry and Graphs, McGill Research Institute, Barbados, 2023.
- 8<sup>th</sup> Workshop on Geometry and Graphs, McGill Research Institute, Barbados, 2020.
- 7<sup>th</sup> Workshop on Geometry and Graphs, McGill Research Institute, Barbados, 2019.
- 6<sup>th</sup> Workshop on Geometry and Graphs, McGill Research Institute, Barbados, 2018.
- NII Shonan Meeting on Geometric Graphs: Theory and Applications, Japan, 2017.
- 5<sup>th</sup> Workshop on Geometry and Graphs, McGill Research Institute, Barbados, 2017.
- 4<sup>th</sup> Workshop on Geometry and Graphs, McGill Research Institute, Barbados, 2016.

### Invited Talks:

- *Some problems in discrete and computational geometry*  
Department of Computer Science and Software Engineering, Concordia University, July 2020.
- *Some problems in discrete and computational geometry*  
Department of Computer Science, University of Bristol, February 2019.
- *Packing plane spanning trees into point sets*  
Graphs@Ryerson research group seminar, Ryerson University, October 2018.

## Presentations at Conferences:

- SoCG 2022, STACS 2022, ISAAC 2021, GD 2021, WADS 2021 (2 talks), WALCOM 2021, ICCG 2021 (2 talks), SODA 2020, SOSA 2020, CCCG 2019, WADS 2019 (2 talks), CCCG 2018, SWAT 2018 (2 talks), CCCG 2016, SWAT 2016, TTCS 2015, CALDAM 2015, CCCG 2014 (2 talks)

## Publications

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### Currently Under Review

2. *The minimum consistent spanning subset problem on trees*  
A. Biniáz, P. Khamsepour
1. *Linear time algorithms for stabbing pairwise intersecting disks*  
A. Biniáz, P. Bose, and Y. Wang  
Submitted to Computational Geometry: Theory and Applications  
Special issue of CCCG 2021.

### Journal Papers

40. *Acute tours in the plane*  
A. Biniáz.  
Discrete & Computational Geometry (special issue dedicated to Eli Goodman), 2023.  
<https://doi.org/10.1007/s00454-023-00486-0>
39. *Approximating longest spanning tree with neighborhoods*  
A. Biniáz.  
Journal of Computational Geometry, to appear, 2023.
38. *The minimum moving spanning tree problem.*  
H. Akitaya, A. Biniáz, P. Bose, J.-L. De Carufel, A. Maheshwari, L. F. Schultz Xavier da Silveira and M. Smid.  
Journal of Graph Algorithms and Applications, 27(1): 1–18, 2023.
37. *Token swapping on trees*  
A. Biniáz, K. Jain, A. Lubiw, Z. Masárová, T. Miltzow, D. Mondal, A. Murty Naredla, J. Tkadlec, and A. Turcotte.  
Discrete Mathematics & Theoretical Computer Science, 24(2), 2022.
36. *Approximating bottleneck spanning trees on partitioned tuples of points*  
A. Biniáz, A. Maheshwari, M. Smid  
Computing in Geometry and Topology, 1(1), 3:1–3:18, 2022.
35. *On the spanning and routing ratio of the directed Theta-six graph*  
H. Akitaya, A. Biniáz and P. Bose.  
Computational Geometry: Theory and Applications, 105-106: 101881, 2022.  
Special issue of WADS 2021.
34. *Euclidean bottleneck bounded-degree spanning tree ratios*  
A. Biniáz.  
Discrete & Computational Geometry, 67(1): 311–327, 2022.

33. *A short proof of the non-biplanarity of  $K_9$ .*  
A. Biniáz.  
Journal of Graph Algorithms and Applications, 26(1): 75–80, 2022.
32. *Bounded-angle minimum spanning trees*  
A. Biniáz, P. Bose, A. Lubiw, and A. Maheshwari.  
Algorithmica, 84(1): 150-175, 2022.
31. *Better approximation algorithms for the maximum weight internal spanning tree problem in cubic graphs and claw-free graphs*  
A. Biniáz.  
Journal of Graph Algorithms and Applications, 26(2): 209–224, 2022.  
Special issue of WALCOM 2021.
30. *A short proof of the toughness of Delaunahy triangulations*  
A. Biniáz.  
Journal of Computational Geometry, 12(1): 35–39, 2021.
29. *On the minimum consistent subset problem*  
A. Biniáz, S. Cabello, A. Maheshwari, P. Carmi, S. Mehrabi, J.-L. De Carufel, and M. Smid.  
Algorithmica, 83(7): 2273-2302, 2021.
28. *Minimum ply covering of points with discs and squares*  
T. Biedl, A. Biniáz, and A. Lubiw.  
Computational Geometry: Theory and Applications, 94: 101712, 2021.  
Special issue of CCCG 2019.
27. *Faster algorithms for some optimization problems on collinear points*  
A. Biniáz, P. Bose, P. Carmi, A. Maheshwari, I. Munro, and M. Smid.  
Journal of Computational Geometry, 11(1): 418–432, 2020.
26. *Plane hop spanners for unit disk graphs: Simpler and better*  
A. Biniáz.  
Computational Geometry: Theory and Applications, 89, 2020.  
Special issue of WADS 2019.
25. *Plane and planarity thresholds for random geometric graphs*  
A. Biniáz, E. Kranakis, A. Maheshwari, M. Smid.  
Discrete Mathematics, Algorithms and Applications, 12(1): 2050005:1-2050005:21, 2020.
24. *Packing plane spanning trees into a point set*  
A. Biniáz and A. García.  
Computational Geometry: Theory and Applications, 90, 2020.  
Special issue of CCCG'18.
23. *Packing boundary-anchored rectangles and squares*  
T. Biedl, A. Biniáz, A. Maheshwari, S. Mehrabi.  
Computational Geometry: Theory and Applications, 88, 2020.  
Special issue of CCCG'17.
22. *Bottleneck matchings and Hamiltonian cycles in higher-order Gabriel graphs*  
A. Biniáz, A. Maheshwari, and M. Smid.

Information Processing Letters, 153, 2020.

21. *Rollercoasters: long sequences without short runs*  
T. Biedl, A. Biniáz, R. Cummings, A. Lubiw, F. Manea, D. Nowotka, J. Shallit.  
SIAM Journal on Discrete Mathematics, 33(2): 845–861, 2019.
20. *Maximum plane trees in multipartite geometric graphs*  
A. Biniáz, P. Bose, K. Crosbie, J.-L. De Carufel, D. Eppstein, A. Maheshwari, M. Smid.  
Algorithmica 81(4): 1512-1534, 2019.
19. *Flip distance to some plane configurations*  
A. Biniáz, A. Maheshwari, M. Smid.  
Computational Geometry: Theory and Applications, 81: 12-21, 2019.
18. *Improved bounds for guarding plane graphs with edges*  
A. Biniáz, P. Bose, A. Ooms, S. Verdonshot.  
Graphs and Combinatorics, 35(2): 437–450, 2019.
17. *Spanning trees in multipartite geometric graphs*  
A. Biniáz, P. Bose, D. Eppstein, A. Maheshwari, P. Morin, M. Smid.  
Algorithmica, 80(11): 3177-3191, 2018.
16. *Plane bichromatic trees of low degree*  
A. Biniáz, P. Bose, A. Maheshwari, M. Smid.  
Discrete & Computational Geometry, 59(4): 864–885, 2018.
15. *Strong matching of points with geometric shapes*  
A. Biniáz, A. Maheshwari, M. Smid.  
Computational Geometry: Theory and Applications, 68: 186–205, 2018.  
Special issue in memory of Dr. Ferran Hurtado.
14. *Faster algorithms for the minimum red-blue-purple spanning graph problem*  
A. Biniáz, P. Bose, I. van Duijn, A. Maheshwari, M. Smid.  
Journal of Graph Algorithms and Applications, 21(4): 527–546, 2017.
13. *Towards plane spanners of degree 3*  
A. Biniáz, P. Bose, J.-L. De Carufel, C. Gavoille, A. Maheshwari, M. Smid.  
Journal of Computational Geometry, 8(1): 11–31, 2017.
12. *An optimal algorithm for plane matchings in multipartite geometric graphs*  
A. Biniáz, A. Maheshwari, S. Nandy, M. Smid.  
Computational Geometry: Theory and Applications, 63: 1–9, 2017.
11. *Approximation algorithms for the unit disk cover problem in 2D and 3D*  
A. Biniáz, P. Liu, A. Maheshwari, M. Smid.  
Computational Geometry: Theory and Applications, 60: 8–18, 2017.  
Special issue of CCCG'15
10. *A plane 1.88-spanner for points in convex position*  
M. Amani, A. Biniáz, P. Bose, J.-L. De Carufel, A. Maheshwari, M. Smid.  
Journal of Computational Geometry, 7(1): 520–539, 2016.
9. *Plane geodesic spanning trees, Hamiltonian cycles, and perfect matchings in a simple polygon*



- A. Biniáz, P. Bose, A. Maheshwari, M. Smid.  
 Computational Geometry: Theory and Applications, 57: 27–39, 2016.
8. *Packing plane perfect matchings into a point set*  
 A. Biniáz, P. Bose, A. Maheshwari, M. Smid.  
 Discrete Mathematics and Theoretical Computer Science, 17(2): 119–142, 2015.
  7. *Higher-order triangular-distance Delaunay graphs: graph-theoretical properties*  
 A. Biniáz, A. Maheshwari, M. Smid.  
 Computational Geometry: Theory and Applications, 48(9): 646–660, 2015.
  6. *Matchings in higher-order Gabriel graphs*  
 A. Biniáz, A. Maheshwari, M. Smid.  
 Theoretical Computer Science, 596: 67–78, 2015.
  5. *On the hardness of the full Steiner tree problems*  
 A. Biniáz, A. Maheshwari, M. Smid.  
 Journal of Discrete Algorithms, 34: 118–127, 2015.
  4. *Approximating the bottleneck plane perfect matching of a point set*  
 K. Abu-Affash, A. Biniáz, P. Carmi, A. Maheshwari, M. Smid.  
 Computational Geometry: Theory and Applications, 48(9): 718–731, 2015.
  3. *On full Steiner trees in unit disk graphs*  
 A. Biniáz, A. Maheshwari, M. Smid.  
 Computational Geometry: Theory and Applications, 48(6): 453–458, 2015.
  2. *Fixed-orientation equilateral triangle matching of point sets*  
 J. Babu, A. Biniáz, A. Maheshwari, M. Smid.  
 Theoretical Computer Science, 555: 55–70, 2014.  
 Special issue of WALCOM’13.
  1. *An optimal algorithm for the Euclidean bottleneck full Steiner tree problem*  
 A. Biniáz, A. Maheshwari, M. Smid.  
 Computational Geometry: Theory and Applications, 47(3), 377–380, 2014.

### Conference papers

45. *Improved bounds for covering paths and trees in the plane*  
 A. Biniáz  
 Accepted to the 39th International Symposium on Computational Geometry (SoCG), 2023.
44. *A  $\frac{13}{9}$ -approximation of the average  $\frac{2\pi}{3}$ -MST*  
 A. Biniáz, P. Bose, P. Devaney  
 In proceedings of the 34th Canadian Conference on Computational Geometry (CCCG), 55–59, 2022.
43. *Piercing pairwise intersecting convex shapes in the plane*  
 S. Bazargani, A. Biniáz and P. Bose  
 In proceedings of the 15th Latin American Theoretical Informatics Symposium (LATIN), pages: 679–695, 2022.

42. *Acute tours in the plane*  
A. Biniáz.  
In proceedings of the 38th International Symposium on Computational Geometry (SoCG), pages 16:1-16:8, 2022.
41. *A 10-approximation of the  $\frac{\pi}{2}$ -MST*  
A. Biniáz, M. Daliri, A. H. Moradpour.  
In proceedings of the 39th International Symposium on Theoretical Aspects of Computer Science (STACS), pages 13:1-13:15, 2022.
40. *Approximating longest spanning tree with neighborhoods*  
A. Biniáz.  
In Proceedings of the 32nd International Symposium on Algorithms and Computation (ISAAC), 2021.
39. *A short proof of the non-biplanarity of  $K_9$*   
A. Biniáz.  
In Proceedings of the 29th International Symposium on Graph Drawing and Network Visualization (GD), pages 101-106, 2021.
38. *Euclidean maximum matchings in the plane—local to global*  
A. Biniáz, A. Maheshwari, and M. Smid.  
In Proceedings of the 17th International Symposium on Algorithms and Data Structures (WADS), pages 186–199, 2021.
37. *On the spanning and routing ratio of the directed Theta-six graph*  
H. Akitaya, A. Biniáz and P. Bose.  
In Proceedings of 17th International Symposium on Algorithms and Data Structures (WADS), pages 1–14, 2021.
36. *The minimum moving spanning tree problem*  
H. Akitaya, A. Biniáz, P. Bose, J.-L. De Carufel, A. Maheshwari, L. F. Schultz Xavier da Silveira and M. Smid.  
In Proceedings of 17th International Symposium on Algorithms and Data Structures (WADS), pages 15–28, 2021.
35. *Better approximation algorithms for the maximum weight internal spanning tree problem in cubic graphs and claw-free graphs*  
A. Biniáz.  
In Proceedings of the 15th International Conference and Workshops on Algorithms and Computation (WALCOM), pages 260–271, 2021.
34. *Simple linear time algorithms for piercing pairwise intersecting disks*  
A. Biniáz, P. Bose, and Y. Wang.  
In Proceedings of the 33rd Canadian Conference on Computational Geometry (CCCG), pages 228–236, 2021.
33. *Euclidean bottleneck bounded-degree spanning tree ratios*  
A. Biniáz.  
In Proceedings of the 30th ACM-SIAM Symposium on Discrete Algorithms (SODA), pages 826–836, 2020.
32. *A short proof of the toughness of Delaunay triangulations.*  
A. Biniáz.

- In Proceedings of the 3rd SIAM Symposium on Simplicity in Algorithms (SOSA), pages 43–46, 2020.
31. *Bounded-angle minimum spanning trees*  
A. Biniáz, P. Bose, A. Lubiw, and A. Maheshwari.  
In Proceedings of the 17th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT), 14:1–14:22, 2020.
  30. *Minimum ply covering of points with convex shapes*  
A. Biniáz and Z. Lin.  
In Proceedings of the 32nd Canadian Conference on Computational Geometry (CCCG), pages 2–5, 2020.
  29. *Plane hop spanners for unit disk graphs*  
A. Biniáz.  
In Proceedings of the 16th International Symposium on Algorithms and Data Structures (WADS), pages 140–151, 2019.
  28. *On the minimum consistent subset problem*  
A. Biniáz, S. Cabello, A. Maheshwari, P. Carmi, S. Mehrabi, J.-L. De Carufel, and M. Smid.  
In Proceedings of the 16th International Symposium on Algorithms and Data Structures (WADS), pages 155–167, 2019.
  27. *Maximum matchings and minimum blocking sets in Theta-6 graphs*  
T. Biedl, A. Biniáz, V. Irvine, K. Jain, P. Kindermann, and A. Lubiw  
In Proceedings of the the 45th International Workshop on Graph-Theoretic Concepts in Computer Science (WG), pages 258–270, 2019.  
Also appeared in EuroCG’19.
  26. *Minimum ply covering of points with discs and squares*  
T. Biedl, A. Biniáz, and A. Lubiw.  
In Proceedings of the 31st Canadian Conference in Computational Geometry (CCCG), pages 226–235, 2019.
  25. *Three-coloring three-dimensional uniform hypergraphs*  
A. Biniáz, P. Bose, J. Cardinal, and M. Payne.  
In Proceedings of the 31st Canadian Conference in Computational Geometry (CCCG), pages 23–28, 2019.
  24. *Rollercoasters and caterpillars*  
T. Biedl, A. Biniáz, R. Cummings, A. Lubiw, F. Manea, D. Nowotka, and J. Shallit.  
In Proceedings of the 45th International Colloquium on Automata, Languages, and Programming (ICALP), pages 18:1–18:15, 2018.  
Also appeared in EuroCG’18.
  23. *Improved bounds for guarding plane graphs with edges*  
A. Biniáz, P. Bose, A. Ooms, and S. Verdonschot.  
In Proceedings of the 16th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT), pages 14:1–14:12, 2018.
  22. *Flip distance to some plane configurations*  
A. Biniáz, A. Maheshwari, M. Smid.

- In Proceedings of the 16th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT), pages 11:1–11:14, 2018.
21. *On the size of outer-string representations*  
T. Biedl, A. Biniáz, and M. Derka  
In Proceedings of the 16th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT), pages 10:1–10:14, 2018.
  20. *Faster algorithms for some optimization problems on collinear points*  
A. Biniáz, P. Bose, P. Carmi, A. Maheshwari, I. Munro, and M. Smid.  
In Proceedings of the 34th International Symposium on Computational Geometry (SoCG), pages 8:1–8:14, 2018.
  19. *Packing plane spanning trees into a point set*  
A. Biniáz and A. García.  
In Proceedings of the 30th Canadian Conference in Computational Geometry (CCCG), pages 49–53, 2018.
  18. *Compatible 4-holes in point sets*  
A. Biniáz, A. Maheshwari, M. Smid.  
In Proceedings of the 30th Canadian Conference in Computational Geometry (CCCG), pages 346–352, 2018.
  17. *Integral unit bar-visibility graphs*  
T. Biedl, A. Biniáz, V. Irvine, P. Kindermann, A. M. Naredla, A. Turcotte.  
In Proceedings of the 30th Canadian Conference in Computational Geometry (CCCG), pages 230–246, 2018.
  16. *Compatible paths on labelled point sets*  
Y. Bahoo, A. Biniáz, P. Cano, F. Chanchary, J. Iacono, K. Jain, E. Khramtcova, A. Lubiw, D. Mondal, K. Sheikhan, C. D. Tóth.  
In Proceedings of the 30th Canadian Conference in Computational Geometry (CCCG), pages 54–60, 2018.
  15. *Maximum plane trees in multipartite geometric graphs*  
A. Biniáz, P. Bose, K. Crosbie, J.-L. De Carufel, D. Eppstein, A. Maheshwari, and M. Smid.  
In Proceedings of the 15th International Symposium on Algorithms and Data Structures (WADS), pages 193–204, 2017.
  14. *Packing boundary-anchored rectangles*  
T. Biedl, A. Biniáz, A. Maheshwari, and S. Mehrabi.  
In Proceedings of the 29th Canadian Conference on Computational Geometry (CCCG), pages 138–143, 2017.
  13. *Towards plane spanners of degree 3*  
A. Biniáz, P. Bose, A. Maheshwari, J.-L. De Carufel, C. Gavoille, and M. Smid.  
In Proceedings of the 27th International Symposium on Algorithms and Computation (ISAAC), pages 19:1–19:14, 2016.
  12. *A faster algorithm for the minimum red-blue-purple spanning graph problem for points on a circle*  
A. Biniáz, P. Bose, I. van Duijn, A. Maheshwari, and M. Smid.

- In Proceedings of the 28th Canadian Conference on Computational Geometry (CCCG), pages 140-146, 2016.
11. *Plane bichromatic trees of low degree*  
A. Biniāz, P. Bose, A. Maheshwari, and M. Smid.  
In Proceedings of the 27th International Workshop on Combinatorial Algorithms (IWOCA), pages 68-80, 2016.
  10. *A plane 1.88-spanner for points in convex position*  
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