

# Curriculum Vitae — Tim Ophelders

last updated: October 14, 2024

## Personal Information

Name T. A. E. Ophelders  
Citizenship Dutch  
Address Department of Information and Computing Sciences  
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The Netherlands  
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## Education

2009 – 2012 Bachelor's degree in Computer Science and Engineering  
at TU Eindhoven  
2012 – 2014 Master's degree in Computer Science and Engineering  
at TU Eindhoven  
graduated cum laude  
Honors program (specializations Algorithms and Visualization)  
2014 – 2018 PhD student  
in the Applied Geometric Algorithms group  
of the Department of Mathematics and Computer Science  
of TU Eindhoven  
graduated cum laude (among top 5% at TU Eindhoven)

## Past Employments

2021 – current Assistant Professor, Utrecht University & TU Eindhoven  
Utrecht, The Netherlands  
Eindhoven, The Netherlands  
2020 – 2021 Postdoc, TU Eindhoven  
Eindhoven, The Netherlands  
2018 – 2020 Research Scholar, Michigan State University  
East Lansing, Michigan, USA  
2014 – 2018 PhD Student, TU Eindhoven  
Eindhoven, The Netherlands  
2012 Software Engineer, Adversitement  
Uden, The Netherlands

## Grants

2021 NWO Veni Grant (€280.000)

## Awards & Honors

- 2024 Best presentation award at the European Workshop on Computational Geometry (EuroCG) 2024
- 2020 Best poster award at the International Conference on Advances in Geographic Information Systems (SIGSPATIAL) 2020
- 2019 Best Institute for Programming research and Algorithmics (IPA) dissertation of 2018
- 2017 Winner of the international ECR competition for the Lorentz Center Workshop on Movement: New Sensors, New Data, New Challenges
- 2015 Master's Thesis nominated for the TU/e academic awards

## Teaching

2024 – 2025	Lecturer	Topological Data Analysis	TU/e
	Mentor	Projects in Topological Data Analysis	TU/e
2023 – 2024	Lecturer	Topological Data Analysis	TU/e
	Mentor	Projects in Topological Data Analysis	TU/e
2022 – 2023	Lecturer	Topological Data Analysis	TU/e
	Coordinator	GMT-Colloquium	UU
	Supervisor	Research Methods	UU
	Supervisor	Software Project	UU
2021 – 2022	Coordinator	GMT-Colloquium	UU
	Lecturer	Topological Data Analysis	TU/e
2020 – 2021	Lecturer	Topological Data Analysis	TU/e
	Teaching assistant	Discrete Structures	TU/e
2017 – 2018	Lecturer	Proving Mini-Course	TU/e
	Coach	Coaching Bachelor Students	TU/e
	Teaching assistant	Discrete Structures	TU/e
2016 – 2017	Coach	Coaching Bachelor Students	TU/e
	Teaching assistant	Data Structures	TU/e
2015 – 2016	Teaching assistant	Data Structures	TU/e
2014 – 2015	Teaching assistant	Data Structures	TU/e

## Supervision

### Postdocs

2023 – 2025	Anna Schenfisch	co-supervision	TU/e
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### PhD candidates

2023 – 2024	Tom Peters	co-supervision	TU/e
2022 –	Thijs Beurskens	daily supervision	TU/e
2021 –	Thijs van der Horst	daily supervision	UU & TU/e
2020 –	Yvette Oortwijn	co-supervision	TU/e & VU

### Master students

2025	Gijs de Man	TU/e
2025	Eva Kato	UU
2025	Thomas van Deukeren	UU
2024	Shashi Chotkan	TU/e
2024	Ralf Eemers	TU/e
2024	Niem Schneider	UU
2024	Morris van der Minnen	UU
2024	Liam Thomassen	UU

2023	Tim Roggen	co-supervision	UU
2023	Arjen Simons	co-supervision	UU
2023	Maas van Apeldoorn		TU/e
2023	Arne Gerits		TU/e
2022	Thijs Beurskens	co-supervision	TU/e
2022	Matthijs Kemp		UU
2022	Quintess Barnhoorn	co-supervision	UU

### Honors students

2023	Bart van der Steenhoven		TU/e
2022	Steven van den Broek		TU/e
2022	Peter Elmers		TU/e

### Bachelor students

2022	Matthijs Boers		UU
2022	Vincent Haverhoek		UU
2022	Xiao yi Hu		UU
2022	Jacky Kessels		UU
2022	Tim Kragten		UU
2022	Milo Ligter		UU
2022	Yfke Smit		UU
2022	Elio Verhoef		UU
2022	Koen Visser		UU

### Graduate students

2018 – 2020	Erik Amézquita	co-supervision	MSU
2018 – 2019	Mitchell Eithun	co-supervision	MSU

### Undergraduate students

2018 – 2020	Kayla Makela	co-supervision	MSU
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## Professional Service / Activities

Departmental	ICS Research Day 2025 (UU) Organization
	ICS Research Day 2024 (UU) Organization
	Informatics Research Advisory Committee (UU) IRAC member 2022 – 2025, chair 2024 – 2025
PC member	41st Symposium on Computational Geometry SoCG 2025
	40th European Workshop on Computational Geometry EuroCG 2024
	Computational Geometry: Young Researchers Forum 2023 CG:YRF 2023
	36th Symposium on Computational Geometry SoCG 2020
Editorial	Geometric and Graph-based Approaches to Collective Motion Dagstuhl Seminar 16022
Organization	6th Annual Conference and General Meeting of the Global Young Academy 2016 Local organisation
	CG Week 2015 Local organisation

## Reviewing and Refereeing

## Journals

CGTA	Computational Geometry: Theory and Applications	(2020, 2021, 2022, 2024)
CGT	Computing in Geometry and Topology	(2024)
JoCG	Journal of Computational Geometry	(2019, 2020, 2021, 2024)
Algorithmica	Algorithmica	(2019, 2023)
LNCS	Lecture Notes in Computer Science	(2023)
TALG	Transactions on Algorithms	(2017, 2020, 2022)
TVCG	Transactions on Visualization and Computer Graphics	(2021)
BSMM	Boletín de la Sociedad Matemática Mexicana	(2020)
IPL	Information Processing Letters	(2020)
TCS	Theoretical Computer Science	(2015, 2017)

## Conferences

STACS	International Symposium on Theoretical Aspects of Computer Science	(2025)
PacificVis	Pacific Visualization	(2025)
SODA	Symposium on Discrete Algorithms	(2023, 2025)
ESA	European Symposium on Algorithms	(2018, 2019, 2023, 2024)
ICALP	International Colloquium on Automata, Languages, and Programming	(2023, 2024)
SWAT	Scandinavian Symposium on Algorithm Theory	(2018, 2024)
SoCG	Symposium on Computational Geometry	(2016, 2017, 2018, 2020, 2022, 2023, 2024)
STOC	Symposium on Theory of Computing	(2021, 2024)
ITCS	Innovations in Theoretical Computer Science	(2023)
CCCG	Canadian Conference on Computational Geometry	(2016, 2018, 2022)
WG	International Workshop on Graph-Theoretic Concepts in Computer Science	(2021)
WADS	Algorithms and Data Structures Symposium	(2019, 2021)
MFCS	Mathematical Foundations of Computer Science	(2020)
InfoVis	Information Visualization	(2020)
EuroCG	European Workshop on Computational Geometry	(2020)
SoSA	Symposium on Simplicity in Algorithms	(2020)

## Workshops Attended (by invitation only, small number of participants)

- February 2024 Triangulations in Geometry and Topology  
Dagstuhl Seminar 24072
- November 2023 7th Workshop on Applied Geometric Algorithms  
Otterlo, The Netherlands
- April 2023 6th Workshop on Applied Geometric Algorithms  
Otterlo, The Netherlands
- August 2022 2nd Bertinoro Workshop on Distributed Geometric Algorithms  
University Residential Center, Bertinoro, Italy
- June 2022 Beyond Abstract Measures: geometry and computation  
Lorentz Center, Leiden, the Netherlands
- February 2022 Computation and Reconfiguration in Low-Dimensional Topological Spaces  
Dagstuhl Seminar 22062
- January 2020 5th Workshop on Applied Geometric Algorithms  
Langbroek, The Netherlands
- August 2019 Computation in Low-Dimensional Geometry and Topology  
Dagstuhl Seminar 19352
- October 2018 4th Workshop on Applied Geometric Algorithms  
Langbroek, The Netherlands
- September 2017 3rd Workshop on Applied Geometric Algorithms  
Vierhouten, The Netherlands
- August 2017 Movement: New Sensors, New Data, New Challenges  
Lorentz Center, Leiden, The Netherlands
- July 2017 Fields Workshop on Discrete and Computational Geometry  
Ottawa, Canada
- February 2017 Applications of Topology to the Analysis of 1-Dimensional Objects  
Dagstuhl Seminar 17072
- January 2017 2nd Workshop on Applied Geometric Algorithms  
Vierhouten, The Netherlands
- January 2016 Geometric and Graph-based Approaches to Collective Motion  
Dagstuhl Seminar 16022
- October 2015 1st Workshop on Applied Geometric Algorithms  
Langbroek, The Netherlands

## Research Visits

- August 2023 Ivor van der Hoog, Technical University of Denmark
- February 2020 Erin Chambers, Saint Louis University
- January 2020 Bettina Speckmann, TU Eindhoven
- September 2019 Bettina Speckmann, TU Eindhoven
- October 2018 Bettina Speckmann, TU Eindhoven
- August 2016 Erin Chambers, Saint Louis University

## Courses and Schools Attended

- October 2016    **Fall School on Discrete Geometry and Topology**  
TU Graz, Graz, Austria
- July 2016        **Algorithms and Complexity**  
Institute for Programming research and Algorithmics (IPA)  
Eindhoven, The Netherlands
- November 2015    **Fall Days on Algorithms and Models for Real-Life Systems**  
Institute for Programming research and Algorithmics (IPA)  
Herten, The Netherlands
- August 2015     **Summer School on Streaming Algorithms**  
Center for Massive Data Algorithmics (MADALGO)  
Aarhus University, Aarhus, Denmark
- November 2014    **Fall Days on Software Testing**  
Institute for Programming research and Algorithmics (IPA)  
Oisterwijk, The Netherlands
- September 2014    **Summer School on Algorithm Engineering**  
Karlsruhe Institute of Technology (KIT)  
Karlsruhe, Germany

## Invited Talks

- 22 September 2023 Shortest Paths in General Polyhedral Surfaces  
Day of Applied Topology, VU Amsterdam
- 10 July 2023 Shortest Paths in General Polyhedral Surfaces  
Applied Algebraic Topology: Theory and Implementation, TU Eindhoven
- 15 August 2022 Topological Invariants  
2nd Bertinoro Workshop on Distributed Geometric Algorithms
- 13 June 2022 Beyond Abstract Measures for Plants  
Lorentz Center, Leiden, the Netherlands
- 24 June 2022 Minimum Height Drawings of Ordered Trees in Polynomial Time  
Curves and Surfaces, Arcachon, France
- 26 March 2021 Continuous Similarity Measures for Curves, Surfaces, and Beyond  
IPAndemic online event
- 17 February 2020 Continuous Hausdorff Distance and its Computation  
Saint Louis University
- 21 January 2020 Continuous Hausdorff Distance and its Computation  
TU Eindhoven
- 6 July 2017 Computing the Fréchet Distance between Real-Valued Surfaces  
6th Mini-Symposium on Computational Topology

## Talks

- 12 June 2024 Optimal In-Place Compaction of Sliding Cubes  
33rd International Computational Geometry Media Exposition, Athens
- 10 June 2022 Minimum Height Drawings of Ordered Trees in Polynomial Time  
38th Symposium on Computational Geometry (SoCG)
- 14 March 2022 A quality measure for Reeb graph drawings  
38th European Workshop on Computational Geometry (EuroCG)
- 11 November 2021 Polygon-Universal graphs  
Dutch Computational Geometry Day (DCGD)
- 8 June 2021 Polygon-Universal graphs  
37th Symposium on Computational Geometry (SoCG)
- 9 April 2021 Polygon-Universal graphs  
37th European Workshop on Computational Geometry (EuroCG)
- 20 September 2019 Homotopy Height, Grid-Major Height and Graph-Drawing Height  
27th Symposium on Graph Drawing and Network Visualization (GD)
- 21 June 2019 Convex Polygons in Cartesian Products  
35th Symposium on Computational Geometry (SoCG)
- 9 January 2019 SETH Says: Weak Fréchet Distance is Faster, but only if it is Continuous and in One Dimension  
30th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)
- 23 March 2018 On Convex Polygons in Cartesian Products  
34th European Workshop on Computational Geometry (EuroCG)
- 8 January 2018 On the Complexity of Optimal Homotopies  
29th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)
- 4 September 2017 Computing Optimal Homotopies over a Spiked Plane with Polygonal Boundary  
25th European Symposium on Algorithms (ESA)
- 28 July 2017 Data Structures for Fréchet Queries in Trajectory Data  
29th Canadian Conference on Computational Geometry (CCCG)

- 27 June 2017 **Sweeping Surfaces using Short Curves**  
Computational & Algorithmic Topology (CATS)
- 5 April 2017 **Fréchet Isotopies to Monotone Curves**  
33rd European Workshop on Computational Geometry (EuroCG)
- 19 January 2017 **Computing the Fréchet Distance between Real-Valued Surfaces**  
28th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)
- 9 June 2016 **The Complexity of Snake**  
8th International Conference on Fun with Algorithms (FUN)
- 1 April 2016 **Computing the Fréchet Distance between Real-Valued Surfaces**  
32nd European Workshop on Computational Geometry (EuroCG)
- 14 September 2015 **Computing the Similarity Between Moving Curves**  
23rd European Symposium on Algorithms (ESA)
- 18 March 2015 **Computing the Similarity Between Moving Curves**  
31st European Workshop on Computational Geometry (EuroCG)



# Publications

## Journals

- **Computing the Fréchet Distance Between Uncertain Curves in One Dimension**  
K. Buchin, M. Löffler, T. Ophelders, A. Popov, J. Urhausen, and K. Verbeek  
*Computational Geometry - Theory and Applications (CGTA)*, 109, 2023.  
(Special issue of TCS devoted to WADS 2021)
- **Between shapes, using the Hausdorff distance**  
M. van Kreveld, T. Miltzow, T. Ophelders, W. Sonke, and J. Vermeulen  
*Computational Geometry - Theory and Applications (CGTA)*, 100, 2022.
- **Measuring hidden phenotype: quantifying the shape of barley seeds using the Euler characteristic transform**  
E. Amézquita, M. Quigley, T. Ophelders, J. Landis, D. Koenig, E. Munch, and D. Chitwood  
*in silico Plants*, 4(1), 2022.
- **The Shape of Aroma: Measuring and Modeling Citrus Oil Gland Distribution**  
E. Amézquita, M. Quigley, T. Ophelders, D. Seymour, E. Munch, and D. Chitwood  
*Plants, People, Planet (PPP)*, 2022.
- **Constructing Monotone Homotopies and Sweepouts**  
E. Chambers, G. R. Chambers, A. de Mesmay, T. Ophelders, and R. Rotman  
*Journal of Differential Geometry (JDG)*, 119(3), pp. 383–401, 2021.
- **A Note on Equitable Hamiltonian Cycles**  
T. Ophelders, R. Lambers, F. Spijksma, and T. Vredeveld  
*Discrete Applied Mathematics (DAM)*, 303, pp. 127–136, 2021.
- **The Shape of Things to Come: Topological Data Analysis and Biology, from Molecules to Organisms**  
E. Amézquita, M. Quigley, T. Ophelders, L. Munch, and D. Chitwood  
*Journal Developmental Dynamics (Dev Dyn)*, 248(7), pp. 816–833, 2020.
- **Geometry and Topology of Estuary and Braided River Channel Networks Automatically Extracted from Topographic Data**  
M. Hiatt, W. Sonke, E. Addink, W. van Dijk, M. van Kreveld, T. Ophelders, K. Verbeek, J. Vlaming, B. Speckmann, and M. Kleinhans  
*Journal of Geophysical Research: Earth Surface (JGRES)*, 125(1):e2019JF005206, 2020.
- **Computing Representative Networks for Braided Rivers**  
M. Kleinhans, M. van Kreveld, T. Ophelders, W. Sonke, B. Speckmann, and K. Verbeek  
*Journal of Computational Geometry (JoCG)*, pp. 423–443, 2019.
- **The Complexity of Snake and Undirected NCL Variants**  
M. De Biasi and T. Ophelders  
*Theoretical Computer Science (TCS)*, 748, pp. 55–65, 2018.  
(Special issue of TCS devoted to FUN 2016)
- **Computing the Similarity Between Moving Curves**  
K. Buchin, T. Ophelders, and B. Speckmann  
*Computational Geometry - Theory and Applications (CGTA)*, 73, pp. 2–14, 2018.  
(Special issue of CGTA devoted to EuroCG 2015)
- **Visual Analytics of Delays and Interaction in Movement Data**  
M. Konzack, T. J. McKetterick, T. Ophelders, M. Buchin, L. Giuggioli, J. Long, T. Nelson, M. A. Westenberg, and K. Buchin  
*International Journal of Geographical Information Science (IJGIS)*, 31(2), pp. 320–345, 2017.

## Formally Reviewed Conference Proceedings

- **The Complexity of Geodesic Spanners using Steiner Points.**  
S. de Berg, T. Ophelders, I. Parada, F. Staals, and J. Wulms  
*Abstr. 35th International Symposium on Algorithms and Computation (ISAAC)*, to appear, 2024.
- **Optimal In-Place Compaction of Sliding Cubes**  
I. Kostitsyna, T. Ophelders, I. Parada, T. Peters, W. Sonke, B. Speckmann  
*Proc. 19th Scandinavian Symposium on Algorithm Theory (SWAT)*, pp. 31:1–31:14, 2024.
- **Optimal In-Place Compaction of Sliding Cubes (Media Exposition)**  
I. Kostitsyna, T. Ophelders, I. Parada, T. Peters, W. Sonke, B. Speckmann  
*Proc. 40th International Symposium on Computational Geometry (SoCG)*, pp. 89:1–89:4, 2024.
- **Faster Fréchet Distance Approximation through Truncated Smoothing**  
T. van der Horst, T. Ophelders  
*Proc. 40th International Symposium on Computational Geometry (SoCG)*, pp. 63:1–63:15, 2024.
- **Shortest Paths in Portalgons**  
M. Löffler, T. Ophelders, R. Silveira, and F. Staals  
*Proc. 39th International Symposium on Computational Geometry (SoCG)*, 48:1–48:16, 2023.
- **A Subquadratic  $n^\epsilon$ -approximation for the Continuous Fréchet Distance**  
T. van der Horst, M. van Kreveld, T. Ophelders, B. Speckmann  
*Proc. 34th Annual Symposium on Discrete Algorithms (SODA)*, pp. 1759–1776, 2023.
- **Morphing Planar Graph Drawings through 3D**  
K. Buchin, W. Evans, F. Frati, I. Kostitsyna, M. Löffler, T. Ophelders, and A. Wolff  
*Proc. 48th International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM)*, pp. 80–95, 2023.
- **Minimum Height Drawings of Ordered Trees in Polynomial Time: Homotopy Height of Tree Duals**  
T. Ophelders and S. Parsa  
*Proc. 38th Annual Symposium on Computational Geometry (SoCG)*, 55:1–55:16, 2022.
- **Computing the Fréchet Distance Between Uncertain Curves in One Dimension**  
K. Buchin, M. Löffler, T. Ophelders, A. Popov, J. Urhausen, and K. Verbeek  
*Proc. 17th Algorithms and Data Structures Symposium (WADS)*, pp. 243–257, 2021.
- **A Family of Metrics from the Truncated Smoothing of Reeb Graphs**  
E. Chambers, E. Munch, T. Ophelders  
*Proc. 37th Annual Symposium on Computational Geometry (SoCG)*, 22:1–22:17, 2021.
- **Polygon-Universal Graphs**  
T. Ophelders, I. Rutter, B. Speckmann, K. Verbeek  
*Proc. 37th Annual Symposium on Computational Geometry (SoCG)*, 55:1–55:15, 2021.
- **Volume from Outlines on Terrains**  
M. van Kreveld, T. Ophelders, W. Sonke, B. Speckmann, and K. Verbeek  
*Proc. 11th International Conference on Geographic Information Science (GIScience)*, 16:1–16:15, 2021.
- **Between Shapes, Using the Hausdorff Distance**  
M. van Kreveld, T. Miltzow, T. Ophelders, W. Sonke, and J. L. Vermeulen  
*Proc. 31st International Symposium on Algorithms and Computation (ISAAC)*, 13:1–13:16, 2020.
- **Route-preserving Road Network Generalization**  
M. van de Kerkhof, I. Kostitsyna, M. van Kreveld, M. Löffler, and T. Ophelders  
*Proc. 28th International Conference on Advances in Geographic Information Systems, (SIGSPATIAL)*, pp. 381–384, 2020.  
(Winner of the Best Poster Award)
- **Planar Emulators for Monge Matrices**  
H.-C. Chang and T. Ophelders  
*Proc. 32nd Canadian Conference on Computational Geometry (CCCG)*, pp. 141–147, 2020.

- **Homotopy Height, Grid-Major Height and Graph-Drawing Height**  
T. Biedl, E. Chambers, D. Eppstein, A. de Mesmay, T. Ophelders  
*Proc. 27th Symposium on Graph Drawing and Network Visualization (GD)*, pp. 468–481, 2019.
- **Convex Polygons in Cartesian Products**  
J. L. De Carufel, A. Dumitrescu, W. Meulemans, T. Ophelders, C. Pennarun, C. D. Tóth, S. Verdonschot  
*Proc. 35th Annual Symposium on Computational Geometry (SoCG)*, 22:1–22:17, 2019.
- **Topological Mapper for 3D Volumetric Images**  
D. H. Chitwood, M. Eithun, E. Munch, and T. Ophelders  
*Proc. 14th International Symposium on Mathematical Morphology (ISMM)*, pp. 84–95, 2019.
- **SETH Says: Weak Fréchet Distance is Faster, but only if it is Continuous and in One Dimension**  
K. Buchin, T. Ophelders, and B. Speckmann  
*Proc. 30th Annual Symposium on Discrete Algorithms (SODA)*, pp. 2887–2901, 2019.
- **Volume-based Similarity of Linear Features on Terrains**  
W. Sonke, M. van Kreveld, T. Ophelders, B. Speckmann, K. Verbeek  
*Proc. 26th International Conference on Advances in Geographic Information Systems (SIGSPATIAL)*, pp. 444–447, 2018.
- **On the Complexity of Optimal Homotopies**  
E. Chambers, A. de Mesmay, and T. Ophelders  
*Proc. 29th Annual Symposium on Discrete Algorithms (SODA)*, pp. 1121–1134, 2018.
- **Computing Optimal Homotopies over a Spiked Plane with Polygonal Boundary**  
B. A. Burton, E. Chambers, M. van Kreveld, W. Meulemans, T. Ophelders, and B. Speckmann  
*Proc. 25th Annual European Symposium on Algorithms (ESA)*, 23:1–23:14, 2017.
- **Data Structures for Fréchet Queries in Trajectory Data**  
M. de Berg, A. D. Mehrabi, and T. Ophelders  
*Proc. 29th Canadian Conference on Computational Geometry (CCCG)*, pp. 214–219, 2017.
- **Computing Representative Networks for Braided Rivers**  
M. Kleinhan, M. van Kreveld, T. Ophelders, W. Sonke, B. Speckmann, and K. Verbeek  
*Proc. 33rd International Symposium on Computational Geometry (SoCG)*, 48:1–48:16, 2017.
- **Computing the Fréchet Distance between Real-Valued Surfaces**  
K. Buchin, T. Ophelders, and B. Speckmann  
*Proc. 28th Annual Symposium on Discrete Algorithms (SODA)*, pp. 2443–2455, 2017.
- **The Complexity of Snake**  
M. De Biasi and T. Ophelders  
*Proc. 8th International Conference on Fun with Algorithms (FUN)*, 11:1–11:13, 2016.
- **Computing the Similarity Between Moving Curves**  
K. Buchin, T. Ophelders, and B. Speckmann  
*Proc. 23rd Annual European Symposium on Algorithms (ESA)*, pp. 928–940, 2015.

## Weakly Refereed Conference Proceedings and Workshop Abstracts

- **An Interleaving Distance for Ordered Merge Trees.**  
T. Beurskens, T. Ophelders, B. Speckmann, and K. Verbeek  
*Abstr. 40th European Workshop on Computational Geometry (EuroCG)*, 2:1–2:8, 2024.
- **Hausdorff Morphs with Fewer Components.**  
A. Simons, M. van Kreveld, W. Meulemans, and T. Ophelders  
*Abstr. 40th European Workshop on Computational Geometry (EuroCG)*, 4:1–4:8, 2024.  
(Winner of the Best Presentation Award)
- **The Complexity of Geodesic Spanners using Steiner Points.**  
S. de Berg, T. Ophelders, I. Parada, F. Staals, and J. Wulms  
*Abstr. 40th European Workshop on Computational Geometry (EuroCG)*, 12:1–12:7, 2024.

- **Optimal In-Place Compaction of Sliding Cubes.**  
I. Kostitsyna, T. Ophelders, I. Parada, T. Peters, W. Sonke, and B. Speckmann  
*Abstr. 40th European Workshop on Computational Geometry (EuroCG), 20:1–20:7, 2024.*
- **Faster and Deterministic Subtrajectory Clustering.**  
I. van der Hoog, T. van der Horst, and T. Ophelders  
*Abstr. 40th European Workshop on Computational Geometry (EuroCG), 41:1–41:7, 2024.*
- **Simply Realising an Imprecise Polyline is NP-hard**  
T. van der Horst, T. Ophelders, and B. van der Steenhoven  
*Abstr. 39th European Workshop on Computational Geometry (EuroCG), 45:1–45:7, 2023.*
- **Computing Minimum Complexity 1D Curve Simplifications under the Fréchet Distance**  
T. van der Horst and T. Ophelders  
*Abstr. 39th European Workshop on Computational Geometry (EuroCG), 62:1–62:6, 2023.*
- **A Quality Measure for Reeb Graph Drawings**  
E. Chambers, E. Munch, and T. Ophelders  
*Abstr. 38th European Workshop on Computational Geometry (EuroCG), 61:1–61:7, 2022.*
- **Reconfiguring Popular Faces**  
F. Brunck, H.-C. Chang, M. Löffler, T. Ophelders, and L. Schlipf  
*Report from Dagstuhl Seminar 22062, pp. 24–34, 2022.*
- **Morphing Planar Graph Drawings through 3D**  
K. Buchin, W. Evans, F. Frati, I. Kostitsyna, M. Löffler, T. Ophelders, C. Wenk, and A. Wolff  
*Report from Dagstuhl Seminar 22062, pp. 40–42, 2022.*
- **Pattern-Matching on Braids**  
T. Ophelders  
*Report from Dagstuhl Seminar 22062, p. 64, 2022.*
- **Measuring hidden phenotype: Quantifying the shape of barley seeds using the Euler Characteristic Transform**  
E. Amezcuita, M. Quigley, T. Ophelders, J. Landis, D. Koenig, D. Chitwood, and L. Munch  
*Poster at the 14th Machine Learning in Computational and Systems Biology (MLCSB), 2021.*
- **Quantifying barley morphology using the Euler Characteristic Transform**  
E. Amezcuita, D. Chitwood, L. Munch, T. Ophelders, and M. Quigley  
*Abstr. 29th Fall Workshop on Computational Geometry (FWCG), pp. 10–13, 2021.*
- **Describing ‘demeter’: using the Euler Characteristic to Quantify the Shape and Biology**  
E. Amezcuita, M. Quigley, T. Ophelders, J. Landis, D. Koenig, L. Munch, D. Chitwood  
*Presentation at the 14th Great Lakes Bioinformatics Conference (GLBIO), 2021.*
- **Polygon-Universal Graphs**  
T. Ophelders, I. Rutter, B. Speckmann, and K. Verbeek  
*Abstr. 37th European Workshop on Computational Geometry (EuroCG), 21:1–21:6, 2021.*
- **Route-preserving Road Network Generalization**  
M. van de Kerkhof, M. van Kreveld, I. Kostitsyna, M. Löffler, and T. Ophelders  
*Abstr. 37th European Workshop on Computational Geometry (EuroCG), 5:1–5:8, 2021.*
- **The Continuous Hausdorff Distance and its Computation**  
T. Ophelders  
*Poster at Algebraic Topology: Methods, Computation, and Science (ATMCS), 2020.*
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