

Personal Information

Date of birth: April 13th, 1990
Place of birth: 's-Hertogenbosch, Netherlands
Citizenship: Dutch

Work address

Department of Mathematics and Computer Science
TU Eindhoven, MF 4.104b
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5600 MB Eindhoven
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Education

- Since Sept. 2013 PhD-student at Eindhoven University of Technology
Advisor: prof.dr. Bettina Speckmann
- 2011 - 2013 Masters degree in Computer Science and Engineering
Thesis: *Edge Bundling and Routing via Well-separated
Pair Decomposition and Visibility Spanners*
Nominated for TUE academic awards
Eindhoven University of Technology
Honors program with the specialization “Algorithms and Visualization”
Graduated Cum Laude
- 2008 - 2011 Bachelor degree in Computer Science
Eindhoven University of Technology

Awards & Honors

- 2013 Best Paper award at the 21st European Symposium on Algorithms (ESA)
2014 Master’s Thesis nominated for the TUE academic awards
2014 Best Student Presentation at the 30th ACM Symposium of Computational Geometry (SoCG)

Teaching

- 2014 Tutorials for 2IL50 - Data Structures (Mandatory Bachelor)
2015 Tutorials for 2IL50 - Data Structures (Mandatory Bachelor)
2016 Tutorials for 2IL50 - Data Structures (Mandatory Bachelor)

Research Visits

Nov. 2013 - Dec. 2013 Monash University, Melbourne, Australia

Workshops (by invitation only, small number of participants)

- June 23rd - 27th 2014 Lorentz Center Workshop: Geometric Algorithms in the Field
Oct. 26th - 30th 2015 First workshop on Applied Geometric Algorithms
Eindhoven University of Technology
Jan. 30th - Feb. 3rd 2017 Second workshop on Applied Geometric Algorithms
Eindhoven University of Technology

Courses Attended

- Jan. 27th - 31st 2014 Algorithms and Complexity
Institute for Programming research and Algorithmics (IPA)
- Apr. 7th - 11th 2014 Spring Days on Cyber-Security
Institute for Programming research and Algorithmics (IPA)
- Aug. 11th - 14th 2014 Summer school on Learning at Scale
Center for Massive Data Algorithmics, Aarhus University, Denmark (MADALGO)
- Sep. 17th - 19th 2014 DFG priority program on algorithm engineering final meeting
Summer school on algorithm engineering
Karlsruhe Institute of Technology, Germany
- Nov. 5th - 7th 2014 Fall Days on software testing
Institute for Programming research and Algorithmics (IPA)
- Aug. 10th - 13th 2015 Summer school on Streaming Algorithms
Center for Massive Data Algorithmics, Aarhus University, Denmark (MADALGO)
- Sep. 28th - 30th 2015 2nd workshop on Algorithmic Challenges of Big Data (ACBD)
Technische Universität Dortmund, Germany
- Nov. 2nd - 6th 2015 Fall Days on Algorithms and Models for Real-life Systems
Institute for Programming research and Algorithmics (IPA)

Presentations

- Mar. 3rd 2014 *Distribution-Sensitive Construction of the Greedy Spanner*
European Workshop on Computational Geometry (EuroCG)
- Jun. 10th 2014 *A Framework for Computing the Greedy Spanner*
ACM Symposium on Computational Geometry (SoCG)
Best Student Presentation Award.
- Sep. 10th 2014 *Distribution-Sensitive Construction of the Greedy Spanner*
European Symposium on Algorithms (ESA)
- Mar. 17th 2015 *Clustered Edge Routing*
European Workshop on Computational Geometry (EuroCG)
- Apr. 15th 2015 *Clustered Edge Routing*
IEEE Pacific Visualization Symposium (PacificVis)
- Oct. 25th 2016 *Visual Encoding of Dissimilarity Data via Topology-Preserving Map Deformation*
IEEE Information Visualization Conference (InfoVis)
- Mar. 29th 2017 *Complexity Measures for Mosaic Drawings*
Int. Conference and Workshops on Algorithms and Computation (WALCOM)

(External) Referee

Journals. Journal of Computational Geometry (2014)

Conferences. 31th ACM Symposium on Computation Geometry (2014).

Publications

Journals

1. **Distribution-Sensitive Construction of the Greedy Spanner**
S.P.A. Alewijnse, Q.W. Bouts, A.P. ten Brink and K. Buchin.
Algorithmica, vol. 78, issue 1, pp 209-231, 2017.
Open access digital version: DOI 10.1007/s00453-016-0160-9.
2. **Computing the Greedy Spanner in Linear Space**
S.P.A. Alewijnse, Q.W. Bouts, A.P. ten Brink and K. Buchin.
Algorithmica, vol 73, issue 3, pp 589-606, 2015.
Open access digital version: DOI 10.1007/s00453-015-0001-2.
(Special issue of invited papers from 21st European Symposium on Algorithms)
3. **Progressive Geometric Algorithms**
S.P.A. Alewijnse, T.M. Bagautdinov, M.T. de Berg, Q.W. Bouts, A.P. ten Brink, K. Buchin, M.A. Westenberg.
Journal of Computational Geometry (JoCG), vol 6(2), pp 72-92, 2015.
(Special issue of invited papers from 30th ACM Symposium on Computational Geometry)
4. **Visual Encoding of Dissimilarity Data via Topology-Preserving Map Deformation**
Q.W. Bouts, T. Dwyer, J. Dykes, B. Speckmann, N. Henry Riche, S. Carpendale, S. Goodwin, A. Liebman
IEEE Transactions on Visualization and Computer Graphics (TVCG), 2015.
DOI: 10.1109/TVCG.2015.2500225

Formally reviewed Conference Proceedings

1. **Complexity Measures for Mosaic Drawings**
Q.W. Bouts, B. Speckmann and K. Verbeek
Proc. *11th Int. Conference and Workshops on Algorithms and Computation (WALCOM)*, pp. 149 - 160, LNCS 10167, 2017.
2. **Mapping Polygons to the Grid with Small Hausdorff and Fréchet Distance**
Q.W. Bouts, I. Kostitsyna, M. van Kreveld, W. Meulemans, W. Sonke, K. Verbeek.
Proc. *24th European Symposium on Algorithms (ESA)*, pp. 1 - 16 22., LIPICS 57, 2016.
3. **Clustered Edge Routing**
Q.W. Bouts and B. Speckmann
8th IEEE Pacific Visualization Symposium (PacificVis), pp. 55 - 62, 2015.
4. **Distribution-Sensitive Construction of the Greedy Spanner**
S.P.A. Alewijnse, Q.W. Bouts, A.P. ten Brink.
22nd European Symposium on Algorithms (ESA), pp. 61 - 72, LNCS 8737, 2014.
5. **A Framework for Computing the Greedy Spanner**
Q.W. Bouts, A.P. ten Brink and K. Buchin.
30th ACM Symposium on Computational Geometry (SoCG), pp. 11 - 19, 2014.
6. **Progressive Geometric Algorithms**
S.P.A. Alewijnse, T.M. Bagautdinov, M.T. de Berg, Q.W. Bouts, A.P. ten Brink, K. Buchin, M.A. Westenberg.
30th ACM Symposium on Computational Geometry (SoCG), pp. 50 - 59, 2014.

7. Computing the Greedy Spanner in Linear Space

S.P.A. Alewijnse, Q.W. Bouts, A.P. ten Brink and K. Buchin.

Proc. *21st European Symposium on Algorithms (ESA)*, pp. 37 - 48, LNCS 8125, 2013.

Best paper award.

Weakly refereed Conference Proceedings and Workshop Abstracts

1. Mapping polygons to the grid with small Hausdorff and Fréchet distance

Q.W. Bouts, I. Kostitsyna, M. van Kreveld, W. Meulemans, W. Sonke, K. Verbeek.

Abstr. 32th European Workshop on Computational Geometry (EuroCG), 2016.

2. Clustered Edge Routing

Q.W. Bouts and B. Speckmann

Abstr. 31th European Workshop on Computational Geometry (EuroCG), 2015.

3. Distribution-Sensitive Construction of the Greedy Spanner

S.P.A. Alewijnse, Q.W. Bouts, A.P. ten Brink and K. Buchin.

Abstr. 30th European Workshop on Computational Geometry (EuroCG), 2014.