

Curriculum vitae of:

# Herman Johannes Haverkort,

Dutch citizen, born 1974, father of Emma.

## Contact information

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## Education & Professional Experience

### Education and employment history

**Aug 2005–present** Assistant professor in the algorithms group of prof. Mark de Berg in the computer science department of Eindhoven University. Doing research and teaching several algorithms courses. Didactic training programme completed and tenure granted in 2007.

**June 2005–July 2005** Making research visits and attending workshops with support from Aarhus University, Carleton University and Eindhoven University.

**Oct 2004–May 2005** Research assistant professor in the algorithms group of the computer science department of Aarhus University (professor: Lars Arge). Doing research and programming.

**June 2004–Sep 2004** Guest researcher in the algorithms group of prof. Dorothea Wagner in the computer science department of Karlsruhe University.

**Nov 1999–Apr 2004** PhD student in the department of information and computing sciences of Utrecht University, Centre for Geometry, Imaging and Virtual Environments, headed by prof. Mark Overmars; degree awarded 17 May 2004. Thesis adviser: Mark de Berg (Eindhoven University).

**1997–2004** Working as one of the partner-founders of Splotter Games, developing, manufacturing and selling novel board and card games (including *Roads & Boats* and *Bus*), primarily in/to Germany and the United States of America.

**2002** Completed first year of law studies in Utrecht University.

**1999** Master's degree in computer science at Utrecht University. Adviser: Marc van Kreveld.

**1992** Completed pre-university education in Dutch, Greek, French, German, English, Geography and Economics in Arnhem City Gymnasium.

## Grants

**2012–2016** From the Dutch organization for scientific research (NWO) for research into curves in automated map schematization (with Bettina Speckmann)

## Awards and honours

**2009** Best-paper award ACM SIGSPATIAL Int. Conf. on Advances in Geographic Information Systems (ACM SIGSPATIAL GIS) 2009, with Jeremy Fishman and Laura Toma

**1992** Honourable mention in the international mathematics olympiad in Moscow.

**1991** 2nd price in the Dutch mathematics olympiad.

## Language skills

Fluent in Dutch, English, and German, speaking and writing these languages regularly at work and in personal life.

Able to read Danish, French, Norwegian, and Spanish for most practical purposes.

## Publications

### Articles in refereed international journals

*Marks in brackets: [S] Special issue: paper invited by conference chair.*

1. Single-authored: Recursive tilings and space-filling curves with little fragmentation, *Journal of Computational Geometry (JoCG)*, 2(1), 2011, p92-127.
2. [S] With Freek van Walderveen: Four-dimensional Hilbert curves for R-trees, *Journal of Experimental Algorithmics (JEA)*, to appear.
3. With Laura Toma: I/O-efficient algorithms on near-planar graphs, *Journal on Graph Algorithms and Applications (JGAA)*, 15(4), 2011, p503-532.
4. With Mark de Berg and Constantinos Tsirogiannis: Visibility maps of realistic terrains have linear smoothed complexity, *Journal of Computational Geometry (JoCG)*, 1(1), 2010, p57-71.
5. With Freek van Walderveen: Locality and bounding-box quality of two-dimensional space-filling curves, *Computational Geometry (CGTA)*, 43(2), 2010, p131-147.
6. With Mark de Berg, Shripad Thite, and Laura Toma: Star-Quadrees and Guard-Quadrees: I/O-Efficient Indexes for Fat Triangulations and Low-Density Planar Subdivisions, *Computational Geometry (CGTA)*, 43(5), 2010, p493-513.
7. With Sergio Cabello, Marc van Kreveld, and Bettina Speckmann: Algorithmic aspects of proportional symbol maps, *Algorithmica*, 58(3), 2010, p543-565.
8. [S] With Marc Benkert, Moritz Kroll, and Martin Nöllenburg: Algorithms for multi-criteria one-sided boundary labeling, *Journal of Graph Algorithms and Applications (JGAA)*, 13(3), 2009, p289-317.
9. [S] With Mark de Berg, Otfried Cheong, Junggun Lim, and Laura Toma: The complexity of flow on fat terrains and its I/O-efficient computation, *Computational Geometry (CGTA)*, 43(4), 2010, p331-356.

10. With Laura Toma and Yi Zhuang: Computing visibility on terrains in external memory, *Journal of Experimental Algorithmics (JEA)*, 13:5, 2009.
11. With Mark de Berg and Micha Streppel: Efficient c-oriented range searching with DOP-trees, *Computational Geometry (CGTA)*, 42(3), 2009, p250-267.
12. With Lars Arge and Mark de Berg: Cache-oblivious R-trees, *Algorithmica*, 53(1), 2009, p50-68.
13. With Otfried Cheong and Mira Lee: Computing a minimum-dilation spanning tree is NP-hard, *Computational Geometry (CGTA)*, 41(3), 2008, p188-205.
14. With Lars Arge, Mark de Berg, and Ke Yi: The Priority R-Tree: a practically efficient and worst-case-optimal R-tree, *ACM Transactions on Algorithms*, 4(1):9, 2008.
15. With Boris Aronov, Mark de Berg, Otfried Cheong, Joachim Gudmundsson and Antoine Vigneron: Sparse geometric graphs with small dilation, *Computational Geometry (CGTA)*, 40(3), 2008, p207-219.
16. With Marc Benkert, Joachim Gudmundsson, and Alexander Wolff: Constructing minimum-interference networks, *Computational Geometry (CGTA)*, 40(3), 2008, p179-272.
17. [S] With Jaesook Cheong and Frank van der Stappen: Computing all immobilizing grasps of a simple polygon with few contacts, *Algorithmica*, 44(2), 2006, p117-136.
18. With Joachim Gudmundsson and Marc van Kreveld: Constrained higher-order Delaunay triangulations, *Computational Geometry (CGTA)*, 30(3), 2005, p271-277.
19. With Tetsuo Asano, Mark de Berg, Otfried Cheong, Hazel Everett, Naoki Katoh, and Alexander Wolff: Optimal spanners for axis-aligned rectangles, *Computational Geometry (CGTA)*, 30(1), 2005, p59-77.
20. [S] With Mark de Berg and Joachim Gudmundsson: Box-trees for collision checking in industrial installations, *Computational Geometry (CGTA)*, 28(2-3), 2004, p113-135.
21. [S] With Joachim Gudmundsson, Sangmin Park, Chansu Shin, and Alexander Wolff: Facility location and the geometric minimum-diameter spanning tree, *Computational Geometry (CGTA)*, 27(1), 2004, p87-106.
22. With Pankaj Agarwal, Mark de Berg, Joachim Gudmundsson, and Mikael Hammar: Box-trees and R-trees with near-optimal query time, *Discrete & Computational Geometry*, 28(3), 2002, p291-312.

## Extended abstracts in refereed international conferences

*Marks in brackets: [P] I presented the paper at the conference.*

23. With George Fletcher and Jelle Hellings: Efficient external-memory bisimulation on DAGs, *Proc. 31st conference of the ACM special interest group on management of data (SIGMOD)*, Scottsdale, 2012. *To appear.*
24. With Anne Driemel, Maarten Löffler, and Rodrigo Silveira: Flow computations on imprecise terrains, *Proc. 12th Algorithms and Data Structures Symposium (WADS)*, New York, 2011, LNCS 6844:350-361.
25. With Mark de Berg and Constantinos Tsirogiannis: Implicit flow routing on terrains with applications to surface networks and drainage structures, *Proc. 22nd ACM-SIAM Symposium on Discrete Algorithms (SODA)*, San Francisco, 2011, p285-296.

26. With Jeremy Fishman and Laura Toma: Improved visibility computation on massive grid terrains, *Proc. 17th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM GIS)*, Seattle, 2009, p121-130. *Best-paper award*.
27. With Mark de Berg and Constantinos Tsirigiannis: Visibility maps of realistic terrains have linear smoothed complexity, *Proc. 25th ACM Symposium on Computational Geometry (SoCG)*, Aarhus, 2009, p163-168.
28. [P] With Freek van Walderveen: Four-dimensional Hilbert curves for R-trees, *Proc. 11th Workshop on Algorithm Engineering and Experiments (ALENEX)*, New York, 2009, p63-73.
29. With Freek van Walderveen: Locality and bounding-box quality of two-dimensional space-filling curves, *Proc. 16th European Symposium on Algorithms (ESA)*, Karlsruhe, 2008, LNCS 5193:515-527.
30. [P] With Mark de Berg, Shripad Thite, and Laura Toma: I/O-efficient map overlay and point location in low-density subdivisions, *Proc. 18th International Symposium on Algorithms and Computation (ISAAC)*, Sendai, 2007, LNCS 4835:500-511.
31. With Marc Benkert, Moritz Kroll, and Martin Nöllenburg: Algorithms for multi-criteria one-sided boundary labeling, *Proc. 15th International Symposium on Graph Drawing (GD)*, Sydney, 2007, LNCS 4875:243-254.
32. [P] With Mark de Berg, Otfried Cheong, Junggun Lim, and Laura Toma: I/O-efficient flow modeling on fat terrains, *Proc. 10th Int. Workshop on Algorithms and Data Structures (WADS)*, Halifax, 2007, LNCS 4619:239-250.
33. With Otfried Cheong and Mira Lee: Computing a minimum-dilation spanning tree is NP-hard, *Proc. Computing: the Australasian Theory Symposium (CATS)*, Ballarat, 2007, CRPIT Vol. 65, p15-24.
34. With Laura Toma and Yi Zhuang: Computing visibility on terrains in external memory, *Proc. Workshop on Algorithm Engineering and Experiments / Workshop on Analytic Algorithms and Combinatorics (ALENEX/ANALCO)*, New Orleans, 2007, p13-22.
35. With Sergio Cabello, Marc van Kreveld, and Bettina Speckmann: Algorithmic aspects of proportional symbol maps, *Proc. 14th European Symposium on Algorithms (ESA)*, Zürich, 2006, LNCS 4168:720-731.
36. With Lars Arge, Andrew Danner and Norbert Zeh: I/O-efficient hierarchical watershed decomposition of grid terrain models, *Proc. 12th International Symposium on Spatial Data Handling (SDH)*, Vienna, 2006, p825-844.
37. With Laura Toma: I/O-efficient algorithms on near-planar graphs, *Proc. 7th Latin American Theoretical Informatics conference (LATIN)*, Valdivia, 2006, LNCS 3887:580-591.
38. With Marc Benkert, Joachim Gudmundsson, and Alexander Wolff: Constructing interference-minimal networks, *Proc. 32th SOFSEM*, Merin, 2006, LNCS 3831:166-176.
39. [P] With Boris Aronov, Mark de Berg, Otfried Cheong, Joachim Gudmundsson and Antoine Vigneron: Sparse geometric graphs with small dilation, *Proc. 16th International Symposium on Algorithms and Computation (ISAAC)*, Sanya, 2005, LNCS 3827:50-59.
40. [P] With Mirela Tanase and Remco Velthkamp: Multiple polyline to polygon matching, *Proc. 16th International Symposium on Algorithms and Computation (ISAAC)*, Sanya, 2005, LNCS 3827:60-70.
41. With Mark de Berg and Micha Streppel: Efficient c-oriented range searching with DOP-trees, *Proc. 13th European Symposium on Algorithms (ESA)*, Mallorca, 2005, LNCS 3669:508-519.

- 42. [P] With Lars Arge and Mark de Berg: Cache-oblivious R-trees, *Proc. 21st ACM Symposium on Computational Geometry (SoCG)*, Pisa, 2005, p170-179.
- 43. With Lars Arge, Mark de Berg, and Ke Yi: The Priority R-Tree: a practically efficient and worst-case-optimal R-tree, *Proc. 23rd Symp. of the ACM Special Interest Group on Management of Data (SIGMOD)*, Paris, 2004, p347-358.
- 44. [P] With Jaesook Cheong and Frank van der Stappen: On computing all immobilizing grasps of a simple polygon with few contacts, *Proc. 14th Int. Symp. on Algorithms and Computation (ISAAC)*, Kyoto, 2003, LNCS 2906:260-269.
- 45. [P] With Mark de Berg: Significant-presence range queries in categorical data, *Proc. 8th Int. Workshop on Algorithms and Data Structures (WADS)*, Ottawa, 2003, LNCS 2748:462-473.
- 46. With Joachim Gudmundsson, Sangmin Park, Chansu Shin, and Alexander Wolff: Facility location and the geometric minimum-diameter spanning tree, *Proc. 5th Int. Workshop on Approximation Algorithms for Combinatorial Optimization (APPROX)*, Rome, 2002, p146-160.
- 47. [P] With Mark de Berg and Joachim Gudmundsson: Box-trees for collision checking in industrial installations, *Proc. 18th Symposium on Computational Geometry (SoCG)*, Barcelona, 2002, p53-62.
- 48. [P] With Pankaj Agarwal, Mark de Berg, Joachim Gudmundsson, and Mikael Hammar: Box-trees and R-trees with near-optimal query time, *Proc. 17th Symposium on Computational Geometry (SoCG)*, Medford, 2001, p124-133.

## Abstracts in informal or unrefereed international conferences and posters

Marks in brackets: [P] I presented the paper at the conference; [T] I wore a poster T-shirt at the conference.

- 49. With Kevin Buchin, Tal Milea, and Okke Schrijvers: Shortest-Paths Preserving Metro Maps, poster with abstract in *Proc. 19th International Symposium on Graph Drawing (GD)*, Eindhoven, 2011. *To appear.*
- 50. [T] With Anne Driemel, Maarten Löffler, and Rodrigo Silveira: Flow computations on imprecise terrains, *Abstracts 27th European Workshop on Computational Geometry (EuroCG)*, Morschach, 2011, p119-122.
- 51. With Mark de Berg and Constantinos Tsirigiannis: Implicit flow routing on triangulated terrains, *Abstracts 27th European Workshop on Computational Geometry (EuroCG)*, Morschach, 2011, p151-154.
- 52. With Mark de Berg and Constantinos Tsirigiannis: Flow on noisy terrains: an experimental evaluation, *Abstracts 27th European Workshop on Computational Geometry (EuroCG)*, Morschach, 2011, p111-114.
- 53. [PT] Single-authored: Recursive tilings and space-filling curves with little fragmentation, *Abstracts 26th European Workshop on Computational Geometry (EuroCG)*, Dortmund, 2010, p185-188.
- 54. [P] With Jeffrey Janssen: Simple I/O-efficient flow accumulation on grid terrains, *Abstract collection Workshop on Massive Data Algorithms*, Aarhus, 2009.
- 55. With Mark de Berg and Constantinos Tsirigiannis: Visibility maps of realistic terrains have linear smoothed complexity, *Abstracts 25th European Workshop on Computational Geometry (EuroCG)*, Brussel, 2009, p199-202.

56. [P] With Maarten Löffler, Elena Mumford, Matthew O’Meara, Jack Snoeyink, and Bettina Speckmann: Colour patterns for polychromatic four-colourings of rectangular subdivisions, *Abstracts 24th European Workshop on Computational Geometry (EuroCG)*, Nancy, 2008, p75-78.
57. With Freek van Walderveen: Space-filling curve properties for efficient spatial index structures, *Abstracts 24th European Workshop on Computational Geometry (EuroCG)*, Nancy, 2008, p51-54.
58. [P] With Mark de Berg, Shripad Thite, and Laura Toma: I/O-efficient map overlay and point location in low-density subdivisions, *Abstracts 23rd European Workshop on Computational Geometry (EuroCG)*, Graz, 2007, p73-76.
59. [P] With Heekap Ahn, Mark de Berg, Otfried Cheong, Frank van der Stappen, and Laura Toma: River networks and watershed maps of triangulated terrains revisited, *Abstracts 22nd European Workshop on Computational Geometry (EuroCG)*, Delphi, 2006, p173-176.
60. [P] With Lars Arge, Andrew Danner and Norbert Zeh: Computing Pfafstetter labellings I/O-efficiently, *Proc. 1st Workshop on Massive Geometric Data Sets*, Pisa, 2005, Münster University, Dept. of Computer Science, technical report 02/05-I, p37-41.
61. With Marc Benkert, Joachim Gudmundsson, and Alexander Wolff: Constructing interference-minimal networks, *Abstracts 21st European Workshop on Computational Geometry (EuroCG)*, Eindhoven, 2005, p203-206.
62. [P] With Tetsuo Asano, Mark de Berg, Otfried Cheong, Hazel Everett, Naoki Katoh, and Alexander Wolff: Optimal spanners for axis-aligned rectangles, *Abstracts 20th European Workshop on Computational Geometry (EuroCG)*, Sevilla, 2004, p97-100.
63. [P] With Mark de Berg: Significant-presence range queries in categorical data, *Abstracts 19th European Workshop on Computational Geometry (EuroCG)*, Bonn, 2003, p169-172.
64. [P] With Joachim Gudmundsson and Marc van Kreveld: Constrained higher-order Delaunay triangulations, *Abstracts 19th European Workshop on Computational Geometry (EuroCG)*, Bonn, 2003, p105-108.
65. With Joachim Gudmundsson, Sang-Min Park, Chansu Shin, and Alexander Wolff: Approximating the geometric minimum-diameter spanning tree, *Abstracts 18th European Workshop on Computational Geometry (EuroCG)*, Warszawa, 2002, p41-45.
66. With Hans Bodlaender: Finding a minimal tree in a polygon with its medial axis, *Proc. 11th Canadian Conference on Computational Geometry (CCCG)*, Vancouver, 1999.

## Some manuscripts

67. Single-authored: An inventory of three-dimensional Hilbert space-filling curves, arXiv:1109.2323.
68. Single-authored: I/O-optimal algorithms on grid graphs, 2011. *Extended abstract and appendices submitted to conference.*

## Theses

**PhD** *Results on geometric networks and data structures*, PhD thesis, Utrecht University, 2004. *The thesis consists of the following articles:*

- *An introduction, especially into bounding-volume hierarchies;*
- *Significant-presence range queries in categorical data;*

- *Box-trees and R-trees with near-optimal query time;*
- *Box-trees for collision checking in industrial installations;*
- *The Priority R-Tree: a practically efficient and worst-case-optimal R-tree;*
- *Facility location and the geometric minimum-diameter spanning tree;*
- *Optimal spanners for axis-aligned rectangles.*

**MSc** *Eliminatie van details in een topografische kaart (Elimination of details in a topographic map)*, MSc thesis INF/SCR-99-11, Utrecht University, 1999. *The thesis consists of two parts: “Modelling van een cartografisch probleem” (“Modelling a cartographic problem”, in Dutch, and specific to Dutch cartography), and “Detecting and solving narrowness in polygons” (in English).*

## Artefacts

**2005** While working as a post-doc at Aarhus University, I programmed an application to compute hierarchical decompositions into watersheds of terrains whose models do not fit in main memory, based on the terrains’ river networks. The application was programmed in C++ and compiled on a UNIX system, using the TPIE library for I/O-efficient algorithms. More information can be found on the website of the STREAM project at Duke University (<http://terrain.cs.duke.edu/>).

## Lectures

For presentations given at conferences, see above under publications. Some other lectures/presentations (since 2006):

- 2011** Universität Würzburg: Algorithms for graphs that do not fit in memory
- 2009** Technische Universität Braunschweig: “Algorithms and data structures for data that does not fit in memory”
- 2008** Technische Universität München: “Measuring the qualities of space-filling curves for spatial index structures”
- 2008** Universiteit Utrecht: “Designing algorithms for data that does not fit in memory”
- 2008** Aarhus University / Center for Massive Data Algorithmics: “I/O-efficient flow modeling on fat terrains”
- 2007** Seoul National University: “I/O-efficient algorithms for GIS”
- 2006** Gwangju Institute of Science and Technology: “I/O-efficient algorithms for near-planar graphs”

## Teaching

- 2010–2011** Undergraduate algorithm design and implementation project
- 2011** Graduate seminar on parallel algorithms on GPUs
- 2006–2008, 2010–2011** Graduate course on I/O-efficient algorithms (recognised by the departmental evaluation committee as one of the best courses of the autumn semester of 2008)
- 2010** Graduate seminar on visibility computations for geographic information systems

- 2010** Graduate course on geometric algorithms (with Kevin Buchin; recognised by the departmental evaluation committee as one of the best courses of the spring semester of 2010)
- 2008–2010** Undergraduate course on optimisation algorithms and an introduction to advanced topics in algorithms (with Elena Mumford in 2009 and 2010)
- 2006, 2008** Graduate seminar on graph drawing algorithms (with Bettina Speckmann in 2006, with Elena Mumford in 2008)
- 2006, 2007** Undergraduate course on graph algorithms and optimisation algorithms
- 2005** Graduate seminar on I/O-efficient algorithms
- 2000–2003, 2005–2008** Instructor in various courses on imperative programming, data structures, algorithms, logic, automata, and history of computer science
- 1993–1998** Mentor of the board and, in particular, the treasurers, of the Arnhem Interscholar Orchestra (a youth orchestra with board members aged 15 to 17 years).
- 1988–1991, 1998** Coaching gymnasium students in mathematics, physics and chemistry

## Collaborations

### Students and assistants

**Christian Volk:** Eindhoven University of Technology, PhD expected 2016

**Nicky Gerritsen:** Eindhoven University of Technology, MSc expected 2012

**Marvin Raaijmakers:** Eindhoven University of Technology, MSc expected 2012

**Ed Schouten:** Eindhoven University of Technology, MSc expected 2012

### Former students and assistants

*(All at Eindhoven University of Technology)*

Constantinos Tsirogiannis (PhD, 2011), Simon Sasburg (MSc, 2011), Robert Leeuwestein (MSc, 2010), Joery Mens (MSc, 2009), Marco Verstege (MSc, 2009), Freek van Walderveen (MSc, 2009), Peter Kooijmans (MSc, 2008), Jeffrey Janssen (MSc, 2008), Micha Streppel (PhD, 2007), Ummar Abbas (MSc, 2006)

### Co-authors

*Names, current country of residence, and years in which joint publications were first submitted:*

Pankaj Agarwal, USA (2000), Heekap Ahn, Korea (2006), Lars Arge, Denmark (2003, '04, '05), Boris Aronov, USA (2005), Tetsuo Asano, Japan (2003), Marc Benkert, Australia (2005, '07), Mark de Berg, Netherlands (2000, '01, '03, '04, '05, '06, '07, '08, '09, '11), Hans Bodlaender, Netherlands (1999), Kevin Buchin, Netherlands (2011), Sergio Cabello, Slovenia (2006), Jaesook Cheong, Korea (2003), Otfried Cheong, Korea (2003, '05, '06, '07), Andrew Danner, USA (2005), Anne Driemel, Netherlands (2011), Hazel Everett (2003), Jeremy Fishman, USA (2009), George Fletcher, Netherlands (2011), Joachim Gudmundsson, Australia (2000, '01, '02, '03, '05), Mikael Hammar, Sweden (2000), Jelle Hellings, Belgium (2011), Jeffrey Janssen, Netherlands (2009), Naoki Katoh, Japan (2003), Marc van Kreveld, Netherlands (2003, '06), Moritz Kroll, Germany (2007), Mira Lee, Korea (2006), Junggun Lim, Korea (2007), Maarten Löffler, USA (2008, '11), Tal Milea, Netherlands (2011), Elena Mumford, Netherlands (2008), Martin Nöllenburg, Germany (2007), Matthew

O'Meara, USA (2008), Sangmin Park, USA (2002), Okke Schrijvers, Netherlands (2011), Chansu Shin, Korea (2002), Rodrigo Silveria, Spain (2011), Michiel Smid, Canada (2005), Jack Snoeyink, USA (2008), Bettina Speckmann, Netherlands (2006, '08), Frank van der Stappen, Netherlands (2003, '06), Micha Streppel, Netherlands (2005), Mirela Tanase, Netherlands (2004), Shripad Thite, USA (2006), Laura Toma, USA (2005, '06, '07, '09), Constantinos Tsirogiannis, Netherlands (2008, '09, '11) Remco Veltkamp, Netherlands (2004), Antoine Vigneron, France (2005), Freek van Walderveen, Denmark (2007, '08), Alexander Wolff, Germany (2002, '03, '05), Ke Yi, China (2003), Norbert Zeh, Canada (2005), Yi Zhuang, USA (2006)

## **Participation in international workshops (since 2006)**

- 2012** Dagstuhl Seminar on Putting Data on the Map, Germany (scheduled).
- 2010** Dagstuhl Seminar on Schematization in Cartography, Visualization, and Computational Geometry, Germany.
- 2006, 2008, 2010** Dagstuhl Seminar on Data Structures, Germany.
- 2006, 2009** Dagstuhl Seminar on Geometric Networks, Germany.
- 2009** Workshop on computational geometry and geographic information systems, the Netherlands, including researchers from the Netherlands, the USA, Australia, and other countries.
- 2009** Bertinoro Workshop on Graph Drawing, Italy.
- 2008** Eindhoven Workshop on Graph Drawing, the Netherlands (organising).
- 2006, 2007, 2008** “Korean” Workshop on Computational Geometry and Geometric Networks, Korea, including researchers from Korea, Germany, the Netherlands, and several other countries.

## **Service to the profession**

### **Within the university**

- since 2011** Member of the computer science exam committee
- since 2011** Member of the computer science education quality assurance committee
- 2008-2009** Member of the faculty council of the department of mathematics and computer science

### **Internationally**

- 2012** Member of the programme committee of the 20th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems
- 2012** Member of the programme committee of the 20th European Symposium on Algorithms
- 2012** Member of the programme committee of the 4th International Conference on Advanced Geographic Information Systems GEOProcessing 2012
- 2011** Member of the jury of the BAPC. The jury creates the programming challenges for the contest and verifies the solutions.
- 2011** Member of the programme committee of the 19th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems

- 2010** Member of the programme committee of the 18th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems
- 2010** Member of the programme committee of the 3rd International Conference on Contemporary Computing.
- 2010** Member of the programme committee of the 26th European Workshop on Computational Geometry
- 2009** Member of the programme committee of the 17th International Symposium on Graph Drawing
- 2008** Organising, with Bettina Speckmann and Alexander Wolff, the first Eindhoven Workshop on Graph Drawing, including 15 researchers from several universities in Europe.
- 2008** Organising the Dutch Computational Geometry Day, including researchers from several universities in and around the Netherlands.
- 2007** Organising, with Christian Knauer, the “Korean” Workshop on Computational Geometry and Geometric Networks, Germany, including researchers from Korea, Germany, the Netherlands, and several other countries.

## Refereeing

**For journals:** SIAM Journal on Computing, Computational Geometry, Journal of the ACM, Algorithmica, IEEE Transactions on Dependable and Secure Computing, Journal of Graph Algorithms and Applications, Journal of Experimental Algorithmics, International Journal of Computational Geometry and Applications, Information Processing Letters, Journal of Discrete Algorithms, Discrete and Computational Geometry

**For conferences:** Graph Drawing (GD) (2006, '09, '11), European Symposium on Algorithms (ESA) (2005, '08, '10, '11), Workshop on Algorithms and Data Structures (WADS) (2003, '05, '07, '09, '11), PARA: State of the Art in Scientific and Parallel Computing (2010), Symposium on Computational Geometry (SoCG) (2005, '06, '08, '09, '10), SOFSEM (2006, '10), Symposium on Spatial and Temporal Databases (SSTD) (2009), Workshop on Algorithms and Computation (WALCOM) (2009), Symposium on Discrete Algorithms (SODA) (2007, '09), AGILE International Conference on Geographic Information Science (2008), GIScience (2008), Scandinavian Workshop on Algorithm Theory (SWAT) (2004, '08), International Colloquium on Automata, Languages and Programming (ICALP) (2005, '07), Algorithmic Aspects in Information and Management (AAIM) (2007), Symposium on Theoretical Aspects of Computer Science (STACS) (2003, '06, '07), International Symposium on Algorithms and Computation (ISAAC) (2004, '06), Canadian Conference on Computational Geometry (CCCG) (2006), Mathematical Foundations of Computer Science (MFCS) (2006), Symposium on Theory of Computing (STOC) (2005)

*This curriculum vitae was last updated on 7 March 2012.  
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