

# Sebastian Wild

University of Liverpool  
School of Electrical Engineering, Electronics & Computer Science  
Department of Computer Science  
Ashton Building, Ashton Street  
Liverpool L69 3BX, United Kingdom  
wild@liverpool.ac.uk

June 7, 2024

## Employment

- since 2023 **Senior Lecturer** (Associate Professor)  
2019–2023 **Lecturer** (Assistant Professor)  
Department of Computer Science · University of Liverpool  
2017–2019 **Postdoctoral Fellow and Sessional Instructor**  
David R. Cheriton School of Computer Science · University of Waterloo  
2012–2017 **Wissenschaftlicher Mitarbeiter** (research assistant)  
Department of Computer Science · University of Kaiserslautern

## Education

- Dr. rer. nat.** Department of Computer Science · University of Kaiserslautern · 2016  
(equiv. to **Ph.D.**)  
Dissertation  
Title: *Dual-Pivot Quicksort and Beyond: Analysis of Multiway Partitioning and Its Practical Potential*  
Supervisor: Prof. Dr. Markus Nebel  
2nd Reviewer: Prof. Robert Sedgewick (Princeton University)  
3rd Reviewer: Univ.-Prof. Dr. Martin Dietzfelbinger (TU Ilmenau)
- M. Sc.** Department of Computer Science · University of Kaiserslautern · 2012
- B. Sc.** Department of Computer Science · University of Kaiserslautern · 2010
- Abitur** Kurfürst-Ruprecht-Gymnasium · Neustadt a. d. Weinstraße · 2006  
(equiv. to **A-levels**)

---

## Publications

---

NB: The convention in algorithms for author lists is in alphabetic order by last name.

Preprints and details at  
[www.wild-inter.net/publications](http://www.wild-inter.net/publications).  
(Titles are clickable links).

### Peer-Reviewed Conference Proceedings

- [c23] *Polyamorous Scheduling*  
Leszek Gąsieniec, Benjamin Smith, and Sebastian Wild  
***International Conference on Fun with Algorithms (FUN) 2024***  
A. Z. Broder and T. Tamir (eds.): FUN 2024, LIPIcs 291, pp 15:1–15:18
- [c22] *Deterministic Cache-Oblivious Funneselect*  
Gerth Stølting Brodal and Sebastian Wild  
***Scandinavian Symposium on Algorithm Theory (SWAT) 2024***  
H. L. Bodlaender (eds.): SWAT 2024, LIPIcs 294, pp 17:1–17:12
- [c21] *Towards Optimal Grammars for RNA Structures*  
Eva Onokpasa, Sebastian Wild, and Prudence Wong  
***Data Compression Conference (DCC) 2024***  
IEEE, DCC 2024, pp 332–341
- [c20] *Finding the saddlepoint faster than sorting*  
Justin Dallant, Frederik Haagenen, Riko Jacob, László Kozma, and Sebastian Wild  
***Symposium on Simplicity in Algorithms (SOSA) 2024***  
SIAM, SOSA 2024, pp 168–178
- [c19] *Funneselect: Cache-oblivious multiple selection*  
Gerth Stølting Brodal and Sebastian Wild  
***European Symposium on Algorithms (ESA) 2023***  
I. L. Gørtz, M. Farach-Colton, S. Puglisi, G. Herman (eds): ESA 2023, LIPIcs 274, pp 25:1–25:17
- [c18] *RNA secondary structures: from ab initio prediction to better compression, and back*  
Evarista Onokpasa, Sebastian Wild, and Prudence W. H. Wong  
***Data Compression Conference (DCC) 2023***  
DCC 2023, IEEE, pp 278–287
- [c17] *Multiway Powersort*  
William Cawley Gelling, Markus Nebel, Benjamin Smith, and Sebastian Wild  
***Symposium on Algorithm Engineering and Experiments (ALENEX) 2023***  
ALENEX 2023, ACM, pp 190–200
- [c16] *Randomized Communication and Implicit Graph Representations*  
Nathaniel Harms, Sebastian Wild, and Viktor Zamaraev  
***Symposium on Theory of Computing (STOC) 2022***  
STOC 2022, ACM, pp 1220–1233
- [c15] *Towards the 5/6-Density Conjecture of Pinwheel Scheduling*  
Leszek Gąsieniec, Benjamin Smith, and Sebastian Wild  
***Symposium on Algorithm Engineering and Experiments (ALENEX) 2022***  
C. A. Phillips and B. Speckmann (eds.): ALENEX 2022, pp 91–103

- [c14] *Succinct Euler-Tour Trees*  
Travis Gagie and Sebastian Wild  
***Canadian Conference on Computational Geometry (CCCG) 2021***  
M. He and D. Sheehy (eds.): CCCG 2021, pp 368–376
- [c13] *Hypersuccinct Trees – New universal tree source codes for optimal compressed tree data structures and range minima*  
J. Ian Munro, Patrick K. Nicholson, Louisa Seelbach Benkner, and Sebastian Wild  
***European Symposium on Algorithms (ESA) 2021***  
P. Mutzel, R. Pagh, G. Herman (eds.): ESA 2021, LIPIcs 204, pp 70:1–70:18
- [c12] *Lazy Search Trees*  
Bryce Sandlund and Sebastian Wild  
***Foundations of Computer Science (FOCS) 2020***  
S. Irani (ed.): FOCS 2020, IEEE, pp 704–715
- [c11] *Distance Oracles for Interval Graphs via Breadth-First Rank/Select in Succinct Trees*  
Meng He, J. Ian Munro, Yakov Nekrich, Sebastian Wild, and Kaiyu Wu  
***International Symposium on Algorithms and Computation (ISAAC) 2020***  
Y. Cao, SW. Cheng, M. Li (eds.): ISAAC 2020, LIPIcs 181, pp 25:1–25:18
- [c10] *Efficient Second-Order Shape-Constrained Function Fitting*  
David Durfee, Yu Gao, Anup B. Rao, and Sebastian Wild  
***Algorithms and Data Structures Symposium (WADS) 2019***  
Z. Friggstad, JR. Sack, M. Salavatipour (eds.): WADS 2019, LNCS 11646, Springer, pp 395–408
- [c9] *Sesquiselect: One and a half pivots for cache-efficient selection*  
Conrado Martínez, Markus E. Nebel, and Sebastian Wild  
***Meeting on Analytic Algorithmics and Combinatorics (ANALCO) 2019***  
M. Mishna and J.I. Munro (eds.): ANALCO 2019, SIAM, pp 54–66
- [c8] *Median-of-k Jumplists and Dangling-Min BSTs*  
Markus E. Nebel, Elisabeth Neumann, and Sebastian Wild  
***Meeting on Analytic Algorithmics and Combinatorics (ANALCO) 2019***  
M. Mishna and J.I. Munro (eds.): ANALCO 2019, SIAM, pp 74–86
- [c7] *Nearly-Optimal Mergesorts: Fast, Practical Sorting Methods That Optimally Adapt to Existing Runs*  
J. Ian Munro and Sebastian Wild  
***European Symposium on Algorithms (ESA) 2018***  
Y. Azar, H. Bast, G. Herman (eds.): ESA 2018, LIPIcs 112, pp 63:1–63:16
- [c6] *Average Cost of QuickXsort with Pivot Sampling*  
Sebastian Wild  
***International Conference on Probabilistic, Combinatorial and Asymptotic Methods for the Analysis of Algorithms (AofA) 2018***  
MD. Ward, JA. Fill (eds.): AofA 2018, LIPIcs 110, pp 36:1–36:19

- [c5] *Quicksort Is Optimal for Many Equal Keys*  
Sebastian Wild  
***Meeting on Analytic Algorithmics and Combinatorics (ANALCO) 2018***  
M. Nebel, S. Wagner (eds.): ANALCO 2018, SIAM, pp 8–22
- [c4] *Analysis of Branch Misses in Quicksort*  
Conrado Martínez, Markus E. Nebel, and Sebastian Wild  
***Meeting on Analytic Algorithmics and Combinatorics (ANALCO) 2015***  
R. Sedgewick, MD. Ward (eds.): ANALCO 2015, SIAM, pp 114–128
- [c3] *Pivot Sampling in Dual-Pivot Quicksort*  
Markus E. Nebel and Sebastian Wild  
***International Conference on Probabilistic, Combinatorial and Asymptotic Methods for the Analysis of Algorithms (AofA) 2014***  
M. Bousquet-Mélou, M. Soria (eds.): DMTCS-HAL Proceedings Series, vol. BA, pp 325–338
- [c2] *Engineering Java 7's Dual Pivot Quicksort Using MALIJAN*  
Sebastian Wild, Markus E. Nebel, Raphael Reitzig, and Ulrich Laube  
***Meeting on Algorithm Engineering and Experiments (ALENEX) 2013***  
P. Sanders, N. Zeh (eds.): ALENEX 2013, SIAM, pp 55–69
- [c1] *Average Case Analysis of Java 7's Dual Pivot Quicksort*  
Sebastian Wild and Markus E. Nebel  
***European Symposium on Algorithms (ESA) 2012***  
L. Epstein and P. Ferragina (eds.): ESA 2012, LNCS 7501, Springer, pp 825–836.

### Peer-Reviewed Journal Articles

- [j9] *A Simple and Fast Linear-Time Algorithm for Divisor Methods of Apportionment*  
Raphael Reitzig and Sebastian Wild  
***Mathematical Programming B*, 2023**
- [j8] *Succinct Permutation Graphs*  
Konstantinos Tsakalidis, Sebastian Wild, and Viktor Zamaraev  
***Algorithmica* 85, 2, pp 509–543, 2022**
- [j7] *QuickXsort – A Fast Sorting Scheme in Theory and Practice*  
Stefan Edelkamp, Armin Weiß, and Sebastian Wild  
***Algorithmica* 82, 3, pp 509–588, 2020**
- [j6] *Dual-pivot and beyond: The potential of multiway partitioning in quicksort*  
Sebastian Wild  
Distinguished Dissertations in ***it – Information Technology***, 60, 3, pp 173–177, 2018
- [j5] *Building Fences Straight and High: An Optimal Algorithm for Finding the Maximum Length You Can Cut  $k$  Times from Given Sticks*  
Raphael Reitzig and Sebastian Wild  
***Algorithmica* 80, 11, pp 3365–3396, 2018**

- [J4] *Analysis of Pivot Sampling in Dual-Pivot Quicksort*  
Markus E. Nebel, Sebastian Wild, and Conrado Martínez  
*Algorithmica* 75, 4, pp 632–683, 2016
- [J3] *Analysis of Quickselect under Yaroslavskiy’s Dual-Pivoting Algorithm*  
Sebastian Wild, Markus E. Nebel, and Hosam Mahmoud  
*Algorithmica* 74, 1, pp 485–506, 2016
- [J2] *Average Case and Distributional Analysis of Dual Pivot Quicksort*  
Sebastian Wild, Markus E. Nebel, and Ralph Neininger  
*ACM Transactions on Algorithms* 11, 3, article 22, 2015
- [J1] *JAGUC – A Software Package for Environmental Diversity Analyses*  
Markus E. Nebel, Sebastian Wild, Michael Holzhauser, Lars Hüttenberger,  
Raphael Reitzig, Matthias Sperber, and Thorsten Stoeck  
*Journal of Bioinformatics and Computational Biology* 9, 6, pp 749–773, 2011

### Textbooks

- [B1] *Entwurf und Analyse von Algorithmen*  
(*Design and Analysis of Algorithms*)  
Markus Nebel and Sebastian Wild · *Springer Vieweg* · 2018

### Theses

- [T3] *Dual-Pivot Quicksort and Beyond: Analysis of Multiway Partitioning and Its Practical Potential*  
*Dissertation* · University of Kaiserslautern · 2016
- [T2] *Java 7’s Dual Pivot Quicksort*  
*Master’s Thesis* · University of Kaiserslautern · 2012
- [T1] *An Earley-style Parser for Solving the RNA-RNA Interaction Problem*  
*Bachelor’s Thesis* · University of Kaiserslautern · 2010

### Working Papers & Technical Reports

- [M5] *An Optimal Randomized Algorithm for Finding the Saddlepoint*  
Justin Dallant, Frederik Haagenen, Riko Jacob, László Kozma, and Sebastian Wild
- [M4] *A House Divided: Cooperation, Polarization, and the Power of Reputation*  
Sebastian Wild, Phillip Keldenich, Jann Spiess, Maximilian Schlund, Jano Costard,  
Jonas Radbruch, Paul Stursberg, and Sándor Fekete · Research Square, *In Review*
- [M3] *Dynamic Optimality Refuted – For Tournament Heaps*  
J. Ian Munro, Richard Peng, Sebastian Wild, and Lingyi Zhang
- [M2] *Entropy Trees and Range-Minimum Queries In Optimal Average-Case Space*  
J. Ian Munro, and Sebastian Wild
- [M1] *A Practical and Worst-Case Efficient Algorithm for Divisor Methods of Apportionment*  
Raphael Reitzig and Sebastian Wild

### Other Publications

- [O2] *Quicksort mit zwei Pivots und mehr* · Sebastian Wild  
GI LNI Dissertations Band 17 – Ausgezeichnete Informatikdissertationen 2016
- [O1] *Why is Dual-Pivot Quicksort Fast?* · Sebastian Wild  
extended abstract for *Theoretage 2015* (GI Workshop on Algorithms)

## Awards and Honors

- 2023 ***Guild Awards 2023 – Teacher of the Year (Science & Engineering)***  
Prize awarded by the *Guild of Students* of *University of Liverpool* by nomination awarded to one academic in each of the three Faculties
- 2017 ***GI Dissertationspreis 2016*** · [T3]  
Prize for **best dissertation** in computer science 2016 in Germany, Austria, and Switzerland, jointly awarded by *GI*, *SI*, and *OCG*
- 2017 Nominated for ***Distinguished Teaching Award 2017*** of *University of Kaiserslautern* for the design of the interactive course *Training für Programmierwettbewerbe*
- 2013 *Preis des Freundeskreises der TU Kaiserslautern* · [T2]  
**Best Master's Thesis** in the Department of Computer Science 2012
- 2012 **Best Paper Award** at the *European Symposium on Algorithms 2012* · [C1]
- 2009–2012 **Scholarship** of the German National Academic Foundation

## Grants and Funding

### Principal Investigator

- 2023–2026 **New Investigator Award** · Engineering and Physical Sciences Research Council (EPSRC)  
*Computing over Compressed Graph-Structured Data*  
volume £ 519 180 (full economic cost)
- 2022–2023 **Impact Accelerator Fund** for developing impact case  
*Improved Sorting Algorithms for programming libraries*  
funded by School of Electrical Engineering, Electronics, and Computer Science, University of Liverpool · volume £ 16 000
- 2022 **Visiting Fellowship** for hosting Gerth Stølting Brodal  
funded by Department of Computer Science, University of Liverpool  
1 of 4 funded Visiting Fellows · volume £ 700
- 2021–2022 **International Exchanges Program** · The Royal Society  
*Lazy Finger Search Trees*  
travel grant for research visit to Kostas Tsichlas (Patras, Greece) · volume £ 2 900
- 2020–2023 **PhD studentship** for Benjamin Smith  
funded by School of Electrical Engineering, Electronics, and Computer Science, University of Liverpool · 1 of 2 studentships in the department · volume £ 59 076

- 2021** **Workshop** *Algorithmic and probabilistic aspects of space efficiency*  
funded by London Mathematical Society, Department of Computer Science, and the  
EECS School NeST Initiative of University of Liverpool · volume £ 940
- 2020** **Travel Grant** for research visit to Markus Lohrey  
EECS School NeST Initiative of University of Liverpool · volume £ 940

### Co-Investigator

- 2021–2022** **International Exchanges Program** · The Royal Society  
*Decomposition techniques for graphs classes of bounded width parameters and their applications*  
PI Viktor Zamaraev; part of project team · volume £ 12 000

---

## Talks

*Slides available at [www.wild-inter.net/publications](http://www.wild-inter.net/publications).*

### Invited Talks

- 2023** “Quicksort, Timsort, Powersort” · [c7], [c17]  
**Warwick CS Colloquium** · University of Warwick · 15 Nov. 2023
- 2023** “Quicksort, Timsort, Powersort”  
**CS Lectures** · IT University of Copenhagen · 9 Nov. 2023
- 2023** “Quicksort, Timsort, Powersort: Algorithmic ideas, engineering tricks, and trivia behind  
CPython’s new sorting algorithm” · [c7], [c17]  
**PyCon US 2023** · 22 Apr. 2023
- 2021** “Hypersuccinct Trees”  
**International Conference on Probabilistic, Combinatorial and Asymptotic Methods  
for the Analysis of Algorithms (AofA) 2021** · 14 Jun. 2021
- 2021** “Quicksorts of the 21st Century”  
**Workshop Verified software: tools and experiments** · Special event celebrating  
quicksort’s 60th birthday · Isaac Newton Institute · 7 Jun. 2021
- 2019** “Dual-Pivot Quicksort and Beyond: An Analysis-of-Algorithms Perspective on Multiway Quicksort”  
**Computability in Europe 2019** · Special Session *Smoothed and Probabilistic Analysis of Algorithms*  
Durham University · 17 Jul. 2019
- 2018** “Succinct Data Structures For Range Minimum Problems”  
**NSF Center for Science of Information** · Purdue University · 24 Oct. 2018
- 2017** “Dual-Pivot Quicksort and Beyond”  
**Annual SPP Meeting** of the DFG Schwerpunktprogramm *Algorithms for Big Data*  
19 Oct. 2017
- 2016** “Dual-Pivot Quicksort and Beyond”  
Research Seminar · **Hasso-Plattner-Institut Potsdam** · 6 Sep. 2016

## Conference & Workshop Presentations

- 2023 “Funneselect: Cache-Oblivious Multiple Selection” · [c19]  
*ESA 2023* · 6 Sept. 2023
- 2023 “Quicksort, Timsort, Powersort”  
*Dagstuhl Seminar 23 211* (Scalable Data Structures) · 22 May 2023
- 2022 “On the combinatorics of space-efficient data structures”  
*Banff International Research Station Workshop 22w5004*  
(Analytic and Probabilistic Combinatorics) · 15 Nov. 2022
- 2022 “Demystifying Neural Networks (and outreach during lockdown)” · *tiny.cc/ai-course*  
*Creative Mathematical Science Communication 2022* · 20 Apr. 2022
- 2021 “Lazy Search Trees” · [c12]  
*Dagstuhl Seminar 21 071* (Scalable Data Structures) · 16 Feb. 2021
- 2019 “Second-Order Shape-Constrained Function Fitting” · [c10]  
*WADS 2019* · 6 Aug. 2019
- 2019 “Compressed Range-Minimum Queries: Average-Case Analysis of Search Trees Meets Space-Efficient Data Structures” · [M2]  
*AofA Meeting* · 24 Jun. 2019
- 2019 “Entropy Trees & Range-Minimum Queries In Optimal Average-Case Space” · [M2]  
*Dagstuhl Seminar 19 051* (Data Structures for the Cloud and External Memory Data)  
28 Jan. 2019
- 2019 “Sesquiselect: One and a half pivots for cache-efficient selection” · [c9]  
*ANALCO Conference* · 06 Jan. 2019
- 2018 “Nearly-optimal Mergesorts” · [c7]  
*ESA Conference* · 20 Aug. 2018
- 2018 “Average Cost of QuickXsort with Pivot Sampling” · [c6]  
*AofA Conference* · 28 June 2018
- 2018 “Quicksort Is Optimal for Many Equal Keys” · [c5]  
*ANALCO Conference* · 8 Jan. 2018
- 2017 “Median-of-k Quicksort is optimal for many equal keys”  
*AofA Meeting* · 19 June 2017
- 2016 “Quicksort with Equal Keys”  
*Dagstuhl Seminar 16 101* (Data Structures and Advanced Models of Computation on Big Data)  
7 March 2016
- 2015 “Why is Dual-Pivot Quicksort Fast?” · [O1]  
*GI Theorietage* (Workshop) · 29 Sept. 2015
- 2015 “Analysis of Branch Misses in Quicksort” · [c4]  
*ANALCO Conference* · 4 Jan. 2015
- 2014 “Pivot Sampling in Dual-Pivot Quicksort” · [c3]  
*AofA Conference* · 16 June 2014



- 2014 “Dual-Pivot Quicksort – Asymmetries in Sorting”  
**Dagstuhl Seminar 14 091** (Data Structures and Advanced Models of Computation on Big Data)  
25 March 2014
- 2013 “Engineering Java 7’s Dual Pivot Quicksort Using MALIJAN” · [c2]  
**ALENEX Conference** · 7 Jan. 2013
- 2013 “Quickselect Under Yaroslavskiy’s Dual-Pivoting Algorithm”  
**AofA Meeting** · 28 May 2013
- 2013 “Java 7’s Dual Pivot Quicksort”  
**FORMAT Workshop** · 9 April 2013
- 2012 “Average Case Analysis of Java 7’s Dual Pivot Quicksort” · [c1]  
**ESA Conference** · 11 Sept. 2012

### Departmental & Seminar Talks

- 2023 “Quicksort, Timsort, Powersort”  
SSLC Distinguished Lecture Series · University of Liverpool · 17 Apr. 2023
- 2022 “Putting your graphs on a diet”  
Durham-Liverpool Synergy Networks Seminar · 27 Oct. 2022
- 2019 “Dual-Pivot Quicksort and Beyond” · University of Liverpool · 10 Dec. 2019
- 2017 “Dual-Pivot Quicksort and Beyond” · University of Waterloo · 1 Nov. 2017
- 2015 “Dual-Pivot Quicksort” · University of Kaiserslautern · 24 Mar. 2015

## Teaching Experience

*Details on courses and teaching evaluations at [www.wild-inter.net/teaching](http://www.wild-inter.net/teaching).  
(Titles are clickable links).*

### Instructor of Record

Sole responsibility for module (give lectures, design assignments, take/design exams).

- 2024 *Advances in Theoretical Computer Science (COMP 555)* · postgraduate level
- 2023 *Efficient Algorithmics (COMP 526)* · postgraduate level
- 2023 *Advances in Theoretical Computer Science (COMP 555)* · postgraduate level
- 2022 *Efficient Algorithmics (COMP 526)* · postgraduate level
- 2022/23 *Communicating Computer Science (COMP 335)* · third-year undergraduate
- 2022 *Applied Algorithmics (COMP 526)* · postgraduate level
- 2021/22 *Communicating Computer Science (COMP 335)* · third-year undergraduate
- 2021 *Applied Algorithmics (COMP 526)* · postgraduate level
- 2020 *Applied Algorithmics (COMP 526)* · postgraduate level
- 2018 *Data Structures and Data Management (CS 240)* · undergraduate level

- 2017 *Advanced Algorithmics: Strategies for Hard Problems* · advanced postgraduate level
- 2017 *Competitive Programming* · undergraduate level
- 2016/17 *Algorithms and Data Structures* · undergraduate level, non-CS majors

### Teaching Assistance

Responsible for tutorials (recruit student tutors, design assignments and exams, give exercise classes).

- 2015/16 *Introduction to the Mathematical Analysis of Algorithms*  
2014 (original title: *Algorithm Engineering*) · advanced postgraduate level
- 2013/14 *Computational Biology I: Alignments and Sequencing*  
advanced undergraduate level
- 2015/16 *Computational Biology II: Signals, Phylogenetics and Structure Prediction*  
2014 postgraduate level  
2012/13
- 2014/15 *Design and Analysis of Algorithms* · intermediate undergraduate level
- 2013 *Combinatorial Algorithms: String Search, Compression, Networks,  
and Random Generation* · advanced undergraduate level
- 2013/14 *Proof Techniques* · tutorial at introductory undergraduate level  
2012/13

### Student Tutor

(grade assignments, give exercise class).

*Formal Foundations of Programming* · *Software Development I: Introduction to Programming* ·  
*Software Development III: Concurrency and Parallel Programming*

---

## Supervised Students

---

### PhD Students

- 2020–2024 Benjamin Smith
- 2021–2025 Eva Onokpasa

### Selected Master's Theses

- 2021 William Cawley Gelling · Title: *4-way Peeksrt & 4-way Powersort* · [c17]
- 2020 Benjamin Smith · Title: *Exact Solutions for the Bamboo Garden Trimming Problem* · [c15]

### Selected Bachelor's Theses

- 2016 Marvin Peterson · Title: *Experimental View on Cache Behavior of Search Trees*
- 2015 Elisabeth Neumann · Title: *Randomized Jumplists With Several Jump Pointers* · [c8]

## Service

---

### To Profession

- Program committees** ESA 2025 (Chair Track S)  
AofA 2024 (Co-Chair)  
ESA 2024 · SOFSEM 2023 · LATIN 2022 · AofA 2022 · ESA 2019 · ANALCO 2019 · ANALCO 2018
- Reviews (journals)** *ACM Journal of Experimental Algorithmics* · *ACM Transactions on Algorithms* · *Algorithmica* · *Bulletin of Mathematical Biology* · *Combinatorics, Probability & Computing* · *Discrete Applied Mathematics* · *IEEE Transactions on Computers* · *Information Processing Letters* · *International Journal of Computer Mathematics* · *Journal of Experimental Algorithmics* · *Mathematical Programming* · *Mathematics in Computer Science* · *Software: Practice and Experience* · *The Computer Journal* · *Theoretical Computer Science* · *Stochastics (Intern. J. of Probability and Stochastic Processes)*
- Reviews (conferences)** SWAT 2024 · SoCG 2024 · STOC 2024 · ESA 2023 · FSTTCS 2023 · MFCS 2023 · IWOCA 2023 · WABI 2022 · ICALP 2022 · SODA 2022 · SODA 2022 · ISAAC 2021 · STACS 2021 · ESA 2021 · SoCG 2020 · SODA 2020 · SOFSEM 2020 · SPAA 2019 · SEA 2018 · WADS 2017 · SEA 2017 · ANALCO 2017 · AofA 2016 · SWAT 2014 · ANALCO 2014 · ESA 2013

### To Department

- since 2023** **REF Impact Lead** of the Department of Computer Science  
University of Liverpool
- since 2022** **Lead** of the **Recruitment, Outreach, and Public Relations** group  
of the School of Electrical Engineering, Electronics, and Computer Science  
University of Liverpool
- since 2020** **Coordinator** of **Outreach Activities** of the Department of Computer Science  
University of Liverpool
- 2012 – 2017** Representative of Scientific Employees in **Board of Examiners**  
(*Prüfungsausschuss*) · TU Kaiserslautern

---

## Additional Training

---

- 2023** *Knowledge Transfer Training Programme*  
Skillfluence & The Academy, University of Liverpool
- 2020** *Fellow of the Higher Education Academy*  
Recognition of teaching experience through the ULTRA program  
Advance HE & The Academy, University of Liverpool
- 2017** *Teaching Development Seminar Series for Postdocs*  
Centre for Teaching Excellence, University of Waterloo · 6–10 Nov. 2017
- 2016** *Lehre 2.0 – Lehren mit dem Internet*  
Workshop on including social media in teaching · 13 June 2016
- 2015** *Meetings und Projektbesprechungen effizient und zielgerichtet leiten*  
Workshop on how to effectively chair a group meeting · 9–10 April 2015

---

## Nonacademic Work Experience

---

**Java Developer** *marketmaker Software AG* (since 2012 part of *vwd Vereinigte Wirtschaftsdienste GmbH*)  
Jul 2010 – Apr 2012 in term breaks  
Developed server components for a web-based financial market-data solution.

---

## Languages

---

**German** native  
**English** fluent  
**French** elementary  
**Spanish** elementary