# Sebastian Wild

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September 1, 2024

# Employment \_\_\_

since 2024	<b>Professor</b> of Theoretical Computer Science · Head of Algorithms Group Department of Mathematics and Computer Science · University of Marburg
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

Department of Computer Science  $\cdot$  University of Kaiserslautern  $\cdot$  2016 Dr. rer. nat. (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.
(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 Funnelselect
  - 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 Haagensen, Riko Jacob, László Kozma, and Sebastian Wild
  - Symposium on Simplicity in Algorithms (SOSA) 2024
  - SIAM, SOSA 2024, pp 168–178
- [C19] Funnelselect: 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
[ C + 4 ]	Cuccinci	LIVICI IOVI	11000

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 Sym]posium 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] Sesquickselect: 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 Haagensen, 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
- [м3] 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 Theorietage 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
- **GI** Dissertationspreis 2016 · [T3]
  Prize for best dissertation in computer science 2016 in Germany, Austria, and Switzerland, jointly awarded by GI, SI, and OCG
- 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
- **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

- **New Investigator Award** · Engineering and Physical Sciences Research Council (EPSRC) Computing over Compressed Graph-Structured Data volume £ 519 180 (full economic cost)
- 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 £16000
  - 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
- **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

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

### **Invited Talks**

 $Slides\ available\ at\ www.wild\mbox{-}inter.net/publications.$ 

- 2023 "Quicksort, Timsort, Powersort" · [c7], [c17]

  Warwick CS Colloquium · University of Warwick · 15 Nov. 2023
- "Quicksort, Timsort, Powersort"CS Lectures · IT University of Copenhagen · 9 Nov. 2023
- "Quicksort, Timsort, Powersort: Algorithmic ideas, engineering tricks, and trivia behind CPython's new sorting algorithm" · [c7], [c17]

  PyCon US 2023 · 22 Apr. 2023
- \*\*Hypersuccinct Trees"

  International Conference on Probabilistic, Combinatorial and Asymptotic Methods for the Analysis of Algorithms (AofA) 2021 · 14 Jun. 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
- "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
- "Succinct Data Structures For Range Minimum Problems"NSF Center for Science of Information · Purdue University · 24 Oct. 2018
- "Dual-Pivot Quicksort and Beyond"

  Annual SPP Meeting of the DFG Schwerpunktprogramm Algorithms for Big Data
  19 Oct. 2017
- \*\*Dual-Pivot Quicksort and Beyond"

  Research Seminar · Hasso-Plattner-Institut Potsdam · 6 Sep. 2016

### Conference & Workshop Presentations

- "Funnelselect: 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
- "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**
- "Compressed Range-Minimum Queries: Average-Case Analysis of Search Trees Meets Space-Efficient Data Structures" · [M2] AofA Meeting · 24 Jun. 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
- *"Sesquickselect: 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
- "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
- *Pivot Sampling in Dual-Pivot Quicksort"* · [c3] *AofA Conference* · 16 June 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

- "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.

(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

<b>2017</b> Ad	vanced Algorithmics:	Strategies for Hard Problems	. 8	advanced postgraduate level
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**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 2014	Introduction to the Mathematical Analysis of Algorithms (original title: Algorithm Engineering) · advanced postgraduate level
2013/14	Computational Biology I: Alignments and Sequencing advanced undergraduate level
2015/16 2014 2012/13	Computational Biology II: Signals, Phylogenetics and Structure Prediction postgraduate level
2014/15	Design and Analysis of Algorithms · intermediate undergraduate level
2013	Combinatorial Algorithms: String Search, Compression, Networks, and Random Generation · advanced undergraduate level

### Student Tutor

2013/14

2012/13

(grade assignments, give exercise class).

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

*Proof Techniques* · tutorial at introductory undergraduate level

# Supervised Students

### PhD Students

2024 – 2028 Ziad Imaili Alaoui

**2020 – 2024** Benjamin Smith

**2021 – 2025** Eva Onokpasa

### Selected Master's Theses

**2021** William Cawley Gelling · Title: 4-way Peeksort & 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

### **Event Organization**

2024 Co-Organizer of the 35th International Conference on Probabilistic, Combinatorial and Asymptotic Methods for the Analysis of Algorithms (AofA 2024)

University of Bath, UK Proceedings LIPIcs Vol 302

### To Profession

Program ESA 2025 (Chair Track S) committees AofA 2024 (Co-Chair)

ESA 2024 · SOFSEM 2023 · LATIN 2022 · AofA 2022 · ESA 2019 ·

ANALCO 2019 · ANALCO 2018

**Reviews** ACM Journal of Experimental Algorithmics · ACM Transactions on Algorithms ·

(journals) 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 SODA 2025 · SOSA 2025 · SWAT 2024 · SoCG 2024 · STOC 2024 · ESA 2023 ·

(conferences) **FSTTCS** 

> 2023 · MFCS 2023 · IWOCA 2023 · WABI 2022 · ICALP 2022 · SODA 2022 · SOSA 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

**REF Impact Lead** of the Department of Computer Science 2023 - 2024

University of Liverpool

Lead of the Recruitment, Outreach, and Public Relations group 2022 - 2024

of the School of Electrical Engineering, Electronics, and Computer Science

University of Liverpool

**Coordinator** of **Outreach Activities** of the Department of Computer Science 2020 - 2024

University of Liverpool

Representative of Scientific Employees in **Board of Examiners** 2012 - 2017

(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
- *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