# Lars Rohwedder

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## Curriculum Vitae

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| Nationality | German |
| Date of birth | July 1, 1991 |
| Research Interests | My research focuses on algorithms in theoretical computer science. I am interested in combinatorial optimization, approximative and parameterized algorithms. Most of my work is connected to scheduling and (integer) linear programming. |
| Academia | **Post-Doc** 10/2019 - ongoing<br>EPFL (Lausanne, Switzerland)<br>**Ph.D.** 02/2016 - 09/2019<br>University of Kiel (Kiel, Germany)<br>**M.Sc. (Computer Science)** 03/2013 - 02/2016<br>University of Kiel (Kiel, Germany)<br>**B.Sc (Computer Science)** 10/2010 - 02/2013<br>University of Kiel (Kiel, Germany) |
| Industry | **Research Assistant** 04/2015 - 06/2015<br>VMWare (Palo Alto, USA)<br>**Research Assistant** 02/2014 - 04/2014<br>Oracle Labs (Redwood Shores, USA)<br>**Research Assistant** 03/2013 - 09/2013<br>Oracle Labs (Redwood Shores, USA) |
| Awards and Honors | ▶ I was admitted a scholarship by the Studienstiftung (German Academic Scholarship Foundation), a prestigious German organization that supports exceptionally talented students.<br>▶ I won the award for the best Ph.D. in the year 2019 by the "Förderverein der TF" of the University of Kiel.<br>▶ My Master's degree was among the three best (by grade) within the graduating class.<br>▶ My Bachelor's degree was the best (by grade). |
| Other Activities | I have been in the program committee of WAOA'20 and I am regularly peer-reviewing for various conferences and journals. I contributed a significant part to the successful DFG (German research foundation) project proposal "Entwicklung von Approximationsalgorithmen für Scheduling auf heterogenen Maschinen" by my Ph.D. advisor Klaus Jansen. |

Publications

[1] Lars Rohwedder, Andreas Wiese. *A (2+eps)-approximation algorithm for preemptive weighted flow time on a single machine.* STOC'21.

[2] Jana Cslovjecsek, Friedrich Eisenbrand, Christoph Hunkenschröder, Lars Rohwedder, Robert Weismantel. *Block-Structured Integer and Linear Programming in Strongly Polynomial and Near Linear Time.* SODA'21.

[3] Etienne Bamas, Paritosh Garg, Lars Rohwedder. *The Submodular Santa Claus Problem in the Restricted Assignment Case.* preprint.

[4] Etienne Bamas, Andreas Maggiori, Lars Rohwedder, Ola Svensson. *Learning Augmented Energy Minimization via Speed Scaling.* NeurIPS'20.

[5] Moritz Buchem, Lars Rohwedder, Tjark Vredeveld, Andreas Wiese. *Additive Approximation Schemes for Load Balancing Problems.* preprint.

[6] Paritosh Garg, Sagar Kale, Lars Rohwedder, Ola Svensson. *Robust Algorithms under Adversarial Injections.* ICALP'20.

[7] Lars Rohwedder. *Algorithms for Integer Programming and Allocation.* Ph.D. thesis.

[8] Klaus Jansen, Alexandra Lassota, Lars Rohwedder. *Near-Linear Time Algorithm for n-fold ILPs via Color Coding.* ICALP'19 / SIAM J. Discrete Math'20.

[9] Klaus Jansen, Lars Rohwedder. *Local Search Breaks 1.75 for Graph Balancing.* ICALP'19.

[10] Marin Bougeret, Klaus Jansen, Michael Poss, Lars Rohwedder. *Approximation Results for Makespan Minimization with Budgeted Uncertainty.* WAOA'19.

[11] Sebastian Berndt, Leah Epstein, Klaus Jansen, Asaf Levin, Marten Maack, Lars Rohwedder. *Online Bin Covering with Limited Migration.* ESA'19.

[12] Klaus Jansen, Lars Rohwedder. *On Integer Programming, Discrepancy, and Convolution.* ITCS'18.

[13] Klaus Jansen, Lars Rohwedder. *A Note on the Integrality Gap of the Configuration LP for Restricted Santa Claus.* Inf. Process. Lett.'20.

[14] Klaus Jansen, Lars Rohwedder. *Compact LP Relaxations for Allocation Problems.* SOSA'18.

[15] Klaus Jansen, Lars Rohwedder. *A Quasi-Polynomial Approximation for the Restricted Assignment Problem.* IPCO'17 / SIAM J. Comput.'20.

[16] Klaus Jansen, Lars Rohwedder. *Structured Instances of Restricted Assignment with Two Processing Times.* CALDAM'17.

[17] Klaus Jansen, Lars Rohwedder. *On the Configuration-LP of the Restricted Assignment Problem.* SODA'17.

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| Teaching Activities | **Approximation Algorithms** | Teaching Assistant | Summer'19 |
| | **Bachelor's thesis** | Co-Advisor | Winter'18/19 |
| | *Fast Approximation Algorithms for Scheduling via Discrepancy and FFT* | | |
| | **Introduction to Operations Research** | Teaching Assistant | Winter'18/19 |
| | **Efficient Algorithms** | Teaching Assistant | Summer'18 |
| | **Introduction to Operations Research** | Teaching Assistant | Winter'17/18 |
| | **Master's thesis** | Co-Advisor | Summer'17 |
| | *Experimental Comparison of Theoretical Algorithms for FVS* | | |
| | **Efficient Algorithms** | Teaching Assistant | Summer'17 |
| | **Bachelor's thesis** | Co-Advisor | Winter'16/17 |
| | *Local Search for the Restricted Assignment Problem* | | |
| | **Introduction to Operations Research** | Teaching Assistant | Winter'16/17 |
| | **Efficient Algorithms** | Teaching Assistant | Summer'16 |
| | **Theoretical Computer Science** | Teaching Assistant | Winter'13/14 |
| | **Software Engineering** | Teaching Assistant | Winter'12/13 |
| | **Algorithms and Data Structures** | Teaching Assistant | Summer'12 |

References Available upon request