Lars Rohwedder

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Research Interests

My research focuses mostly 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

Oct. 2019 - current. **Post-Doc** - EPFL.

Feb. 2016 - Sep. 2019. **Ph.D.** - University of Kiel.

Mar. 2013 - Feb. 2016. **Master of Science (Computer Science)** - University of Kiel.

Oct. 2010 - Feb. 2013. **Bachelor of Science (Computer Science)** - University of Kiel.

Training

Apr. 2015 - Jun. 2015. **Research Assistant** - VMWare (Palo Alto, USA).

Feb. 2014 - Apr. 2014. **Research Assistant** - Oracle Labs (Redwood Shores, USA).

Mar. 2013 - Sep. 2013. **Research Assistant** - 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. My Master's degree was among the three best (by grade) within the graduating class. My Bachelor's degree was the best.

Publications

Lars Rohwedder, Andreas Wiese. *A (2+eps)-approximation algorithm for preemptive weighted flow time on a single machine.* Manuscript.

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

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.

Moritz Buchem, Lars Rohwedder, Tjark Vredeveld, Andreas Wiese. *Additive Approximation Schemes for Load Balancing Problems.* manuscript.

Etienne Bamas, Paritosh Garg, Lars Rohwedder. *The Combinatorial Santa Claus Problem or: How to Find Good Matchings in Non-Uniform Hypergraphs.* manuscript.

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

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

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

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

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

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

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

Klaus Jansen, Lars Rohwedder. *A Note on the Integrality Gap of the Configuration LP for Restricted Santa Claus.* Information Processing Letters.

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

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

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

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