



Positions

Johannes Maly

2019—now **PostDoc in mathematics**, RWTH Aachen University, Aachen.

Education

2016–2019 **PhD in mathematics**, *Technical University of Munich*, Munich. under supervision of Prof. Massimo Fornasier

2013–2015 Master of Science, Technical University of Munich, Munich, 1.2 - passed with high distinction. Mathematics

2011–2013 Bachelor of Science, Technical University of Munich, Munich, 1.9 - passed with

Mathematics with minor in computer science

2011 **TwoInOne program**, *Technical University of Munich*, Munich. Special program to shorten Bachelor's degree

2003–2011 University-entrance diploma, Erasmus Grasser Gymnasium, Munich, 1.2 - passed with high distinction.

Theses

Ph.D. thesis Recovery Algorithms for Quantized Compressed Sensing;

Advisor Prof. Massimo Fornasier

M.Sc. thesis Weighted Energy-Dissipation Approximation for an Optimal Control Problem; Advisor Prof. Martin Brokate

Experience

Teaching

2020 **Teaching assistant for "Optimization"**, RWTH University Aachen, Aachen.

2019/2020 Teaching assistant for "Repetitorium - Höhere Mathematik II", RWTH University Aachen, Aachen.

2019 Teaching assistant for "Höhere Mathematik II", RWTH University Aachen, Aachen.

- 2018 **Teaching assistant for "Foundations of Data Analysis"**, *Technical University of Munich*, Munich.
- 2012/2014 **Teaching assistant for "Analysis für Informatiker"**, *Technical University of Munich*, Munich.

Thesis supervision

- 2020 Advisor for Bachelor's Thesis "..." of Havva Akcyna, RWTH, Aachen.
- 2019 Advisor for Master's Thesis "..." of Konstantin Riedl, Technical University of Munich, Munich.
- 2018 Advisor for Master's Thesis "Near-Optimal Data-Driven ℓ_1 -Regularization" of Judith Wewerka, *Technical University of Munich*, Munich.

International

2014–2015 **Semester abroad**, Nanyang Technological University, Singapore.

Vocational

2012-2015 **Work experience and working student**, *Siemens*, Munich.

Work on pedestrian flow simulation based on cellular automatons and enhancements of simulator.

List of Publications

Accepted and Published Articles

[1] **J. Maly and L. Palzer**, "Analysis of Hard-Thresholding for Distributed Compressed Sensing with One-Bit Measurements", 2018, to appear in Information and Inference: A Journal of the IMA, arXiv preprint: https://arxiv.org/abs/1805.03486.

Submitted Preprints to Refereed Journals

- [2] H. C. Jung, J. Maly, L. Palzer, and A. Stollenwerk, "Quantized Compressed Sensing by Rectified Linear Units", 2019, arXiv preprint: https://arxiv.org/abs/1911.07816.
- [3] **Z. Kereta, J. Maly, and V. Naumova**, "Linear convergence and support recovery for non-convex multi-penalty regularization", 2019, *arXiv* preprint: https://arxiv.org/abs/1908.02503.
- [4] M. Iwen, F. Krahmer, S. Krause-Solberg, and J. Maly, "On Recovery Guarantees for One-Bit Compressed Sensing on Manifolds", 2018, arXiv preprint: https://arxiv.org/abs/1807.06490.
- [5] **M. Fornasier, J. Maly and V. Naumova**, "Robust Recovery of Low-Rank Matrices with Non-Orthogonal Sparse Decomposition from Incomplete Measurements", 2018, arXiv preprint: https://arxiv.org/abs/1801.06240.

Conference Papers

[6] H. C. Jung, J. Maly, L. Palzer, and A. Stollenwerk, "Quantized Compressed Sensing by Rectified Linear Units", 2020, accepted to iTWIST'20 workshop.

- [7] S. Dirksen, M. Iwen, S. Krause-Solberg, and J. Maly, "Robust One-bit Compressed Sensing With Manifold Data", 2019, International Conference on Sampling Theory and Applications (SampTA), https://sampta2019.sciencesconf.org/267528/document.
- [8] H. C. Jung, J. Maly, L. Palzer, and A. Stollenwerk, "One-Bit Compressed Sensing by Convex Relaxation of the Hamming Distance", 2019, SPARS workshop.
- [9] **Z. Kereta, J. Maly, and V. Naumova**, "Linear convergence and support recovery for non-convex multi-penalty regularisation", 2019, *SPARS workshop*.
- [10] M. Fornasier, J. Maly and V. Naumova, "Robust Recovery of Low-Rank Matrices using Multi-Penalty Regularization", 2017, NIPS workshop Optimization for Machine Learning, Long Beach, http://opt-ml.org/papers.html.
- [11] **S. Krause-Solberg and J. Maly**, "A tractable approach for one-bit Compressed Sensing on manifolds", 2017, *International Conference on Sampling Theory and Applications (SampTA)*, https://ieeexplore.ieee.org/document/8024465.