

# List of topics for the master seminar (Combinatorics and Optimization) MAT.606, SS 2019

Eranda Dragoti-Çela and Bettina Klinz

The topics 1-6 are supervised by Eranda Dragoti-Çela, the topics 7-19 by Bettina Klinz.

## References

- [1] C. Büsing, Recoverable Robust Shortest Path Problems, *Networks* **59(1)**, 2012, 181–189.  
<https://onlinelibrary.wiley.com/doi/full/10.1002/net.20487>.
- [2] C. Dürr, T. Erlebach, N. Megow and J. Meißner, Scheduling with Explorable Uncertainty, Preprint, September 2017.  
<https://arxiv.org/abs/1709.02592>.
- [3] D. Freund and D.P. Williamson, Rank aggregation: New bounds for MCx, *Discrete Applied Mathematics* **252**, 2019, 28–36.  
<https://www.sciencedirect.com/science/article/pii/S0166218X17303426>.
- [4] P. Halffmann, S. O. Krumke, A. Quilliot, A.K. Wagler and J-T. Wegener, On the Online Min-Wait Relocation Problem, *Electronic Notes in Discrete Mathematics* **50**, 2015, 281–286.  
<https://www.sciencedirect.com/science/article/pii/S1571065315002024>.
- [5] N. Pinson and F.C.R. Spieksma, Online interval scheduling on two related machines: the power of lookahead, *Journal of Combinatorial Optimization*, published online on 09 January 2019.  
<https://doi.org/10.1007/s10878-019-00381-6>.
- [6] T.A.M. Toffolo, J. Christiaens, F.C.R. Spieksma and G. Vanden Berghe, The sport teams grouping problem, *Annals of Operations Research* **275**, 2019, 223–243.  
<https://link.springer.com/content/pdf/10.1007/s10479-017-2595-z.pdf>.
- [7] H-C. An, M. Singh and O. Svensson, LP-based algorithms for capacitated facility location, *SIAM Journal on Computing* **46**, 2017, 272–306.  
<https://epubs.siam.org/doi/10.1137/151002320>.
- [8] U. Bhaskar, L. Fleischer and E. Anshelevich, A Stackelberg strategy for routing flow over time, *Games and Economic Behaviour* **92**, 2015, 232–247.  
<http://www.sciencedirect.com/science/article/pii/S0899825613001334>.
- [9] Y. Disser and J. Matuschke, Degree-constrained orientations of embedded graphs, *Journal of Combinatorial Optimization* **31**, 758–773, 2016.  
<http://link.springer.com/article/10.1007/s10878-014-9786-1>.
- [10] A. Frieze, W. Pegden and T. Tkocz, On random multi-dimensional assignment problems, Preprint, January 2019.  
<https://arxiv.org/abs/1901.07167>.
- [11] M.X. Goemans, S. Gupta and P. Jaillet, Discrete Newtons algorithm for parametric submodular function minimization, in: *Springer Lecture Notes in Computer Science* **10328**, Proceedings of IPCO 2017: Integer Programming and Combinatorial Optimization, pp 212–227, 2017.  
[https://link.springer.com/chapter/10.1007/978-3-319-59250-3\\_18](https://link.springer.com/chapter/10.1007/978-3-319-59250-3_18).

- [12] M.X. Goemans and F. Unda, Approximating incremental combinatorial optimization problems, in: *Proceedings of Approximation, Randomization, and Combinatorial Optimization. Algorithms and Techniques (APPROX/RANDOM 2017)*, 2017.  
<http://drops.dagstuhl.de/opus/volltexte/2017/7555/pdf/LIPIcs-APPROX-RANDOM-2017-6.pdf>.
- [13] C. Gottschalk, A.M.C.A. Koster, F. Liers, B. Peis, D. Schmand and A. Wierz, Robust flows over time: models and complexity results, *Mathematical programming*, 2018, **171**, 55–85.  
<https://link.springer.com/article/10.1007/s10107-017-1170-3>.
- [14] L. Graf and T. Harks, Dynamic flows with adaptive route choice, to appear in Proceedings of IPCO 2019.  
<https://arxiv.org/abs/1811.07381>
- [15] M. Labbé, F. Plein and M. Schmidt: Bookings in the European gas market: Characterisation of feasibility and computational complexity results, Preprint, December 2018.  
[http://www.optimization-online.org/DB\\_HTML/2018/12/6977.html](http://www.optimization-online.org/DB_HTML/2018/12/6977.html).
- [16] J. Matuschke, M. Skutella and J.A. Soto, Robust randomized matchings, in *Proceedings of the Twenty-Sixth Annual ACM-SIAM Symposium on Discrete Algorithms*, pp. 1904-1915, SIAM, Philadelphia, PA, 2015.  
<http://dx.doi.org/10.1137/1.9781611973730.127>.
- [17] M. Mucha and M. Sviridenko, No-wait flowshop scheduling is as hard as asymmetric traveling salesman problem, *Mathematics of Operations Research* **41**, 247–254, 2016.  
Permalink:<http://dx.doi.org/10.1287/moor.2015.0725>.
- [18] S. Singla, The price of information in combinatorial optimization, *Proceedings of the Twenty-Ninth Annual ACM-SIAM Symposium on Discrete Algorithms*, 2018, 2523–2532.  
<https://epubs.siam.org/doi/10.1137/1.9781611975031.161>, preprint version with more details <https://arxiv.org/abs/1711.00405>.
- [19] M. Skutella, M. Sviridenko and M. Uetz, Unrelated machine scheduling with stochastic processing times, *Mathematics of Operations Research* **41**, 851–864, 2016.  
<http://pubsonline.informs.org/doi/10.1287/moor.2015.0757>.