

Seminar on
“Graph, Algorithms &
Robust Optimization”

TU Berlin

May 8, 2017

Selected Papers

1. C. A. Holzmam and F. Harary, **On the tree graph of a matroid**
2. V. L. Kompel'makher and V. Liskovets, **Sequential generation of arrangements by means of a basis of transpositions**
3. F. Chung, P. Diaconis and R. Graham, **Universal cycles for combinatorial structures**
4. J. R. Johnson, **Universal cycles for permutations**
5. F. Hurtado and M. Noy, **Graph of triangulations of a convex polygon and tree of triangulations**
6. O. Aichholzer, F. Aurenhammer, C. Huemer and B. Vogtenhuber, **Gray code enumeration of plane straight-line graphs**
7. G. Bhat and C. Savage, **Balanced Gray Codes**
8. F. Ruskey, J. Sawada and A. Williams, **Binary bubble languages and cool-lex order**
9. B. Stevens and A. Williams, **The Coolest Way to Generate Binary Strings**
10. R. Wua, J. Chang, H. Chan and K. Pai, **A loopless algorithm for generating multiple binary tree sequences simultaneously**
11. H. Hu and R. Sotirov, **Special cases of the quadratic shortest path problem**
12. A. Pessoa, L. Di Puglia Pugliese, F. Guerriero and M. Poss, **Robust constrained shortest path problems under budgeted uncertainty**
13. M. Bougeret, A. Pessoa and M. Poss, **Robust scheduling with budgeted uncertainty**
14. A. Agra, M. Santos, D. Nace and M. Poss, **A dynamic programming approach for a class of robust optimization problems**
15. A. Ardestani-Jaafari and E. Delage, **Linearized Robust Counterparts of Two-stage Robust Optimization Problems with Applications in Operations Management**
16. I. Ashlagi, P. Jaillet, V. Manshadi and M. Rees, **Kidney Exchange in Dynamic Sparse Heterogenous Pools**
17. C. Buchheim and J. Kurtz, **Min-max-min robust combinatorial optimization subject to discrete uncertainty**
18. L. Castelli, M. Labbé and A. Violin, **Network Pricing Problem with Unit Toll**
19. D. Bertsimas and A. Thiele, **A Robust Optimization Approach to Inventory Theory**
20. S. Agrawal, Y. Ding, A. Saberi and Y. Ye, **Price of Correlations in Stochastic Optimization**

Important dates

- ▶ 24.4.2017: first meeting
 - ▶ Presentation of topics
- ▶ **8.5.2017: second meeting**
 - ▶ **Guidelines for presentations**
 - ▶ **Assignment of topics**
- ▶ 15.5.2017: Example presentations of Torsten and Guillaume
- ▶ 21.5.2016: 5-minute presentations
 - ▶ Short introduction into topic and main results
- ▶ 22.6.2017: Final slides due
- ▶ 29-30.6.2017: Seminar TU Berlin

Your Talk

- ▶ Time: exactly 45 min
 - ▶ no outline on separate slide necessary
 - ▶ about 15 min introduction
 - ▶ Do not forget to situate the paper within literature
 - ▶ about 25 min results and proof ideas
 - ▶ Focus / Amount of details may depend on paper length !
 - ▶ about 5 min conclusion
- ▶ Media:
 - ▶ LaTeX-beamer, Keynote, Prezi, Powerpoint, etc.
- ▶ Goal:
 - ▶ Understandability (everyone should be able to understand everything)

Layout

- ▶ per slide: small pieces of information that are easy to digest
 - ▶ ≤ 30 words! (better ≤ 20)
 - ▶ ≤ 10 words at once! (better ≤ 5)
- ▶ “perfect” layout
 - ▶ no distractions (transitions only where helpful)
 - ▶ no typos
 - ▶ consistency, e.g., in use of upper/lowercase symbols
- ▶ avoid massive use of math symbols (if necessary use blackboard)

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- ▶ (... unless you really have a good reason to do so)

Layout (continued)

- ▶ use figures wherever possible
 - ▶ rule of thumb: (almost) no slide without a figure!
- ▶ definitions / algorithms / examples by picture
- ▶ saturated colours (**no yellow**)
- ▶ highlight **important stuff**
- ▶ we do not require a handout
 - ▶ we expect flawless slides
- ▶ your explanation must be represented by the slides

Storyline

- ▶ at every stage of the talk it should be clear
 - ▶ what is our aim?
 - ▶ what do we know already?
 - ▶ what do we still have to show?
- ▶ try to reflect these questions in
 - ▶ layout of slides
 - ▶ language
 - ▶ repetition
 - ▶ running examples
- ▶ rule of thumb: first intuition, then formalisation
- ▶ examples, examples, examples, and counterexamples

Language

- ▶ use language to structure your talk
 - ▶ breaks
 - ▶ emphasis
 - ▶ repetition
 - ▶ make clear, precise and concise statements
- ▶ language should not distract
 - ▶ be calm (use language and gestures instead of a laser pointer)
 - ▶ variety is good (use intonation breaks)
 - ▶ address the audience (not the wall)
- ▶ you are the main attraction, not your slides

Practice

- ▶ you need to practice a lot
- ▶ practice loud with your slides (best: with projector)
- ▶ do not learn by heart (except the first three statements)
- ▶ rule of thumb: practice the full talk at least 3 times
 - ▶ until you feel safe
- ▶ excitement is good
- ▶ we will ask questions, when sth. is not clear
 - ▶ be prepared!

Evaluation

- ▶ your grade reflects you own work
 - ▶ story
 - ▶ storyline
 - ▶ selection of presented material
 - ▶ knowledge of the paper
 - ▶ layout
 - ▶ structure
 - ▶ figures
 - ▶ clarity
 - ▶ presentation
 - ▶ eye contact and language