6th Hands-on sheet for
Advanced Algorithmics, SS 15

Hand In: *in lecture, exercise sessions, hand-in box in stairwell 48-6 or via email.*

Step 4.5: Find better algorithms – approximation

Try to apply the new concepts from lecture to our scenarios.

- Research approximation algorithms for the problems we model our scenarios with that run polynomial time.
- Implement the most promising candidates and run them against your testbed. What do you observe in terms of performance?
- Run the algorithms on our real-world data. How do they perform? Can you explain differences in performance?

Step 5: Making a choice

We have tried several strategies. Now we have to choose: which algorithm is preferable in which scenario resp. under which assumptions?

Also try to answer the following questions.

- How good are the (best) solutions on the real-world data?
- Which algorithm promises the best solutions? Can you reason why?
- Which algorithm would you recommend to a practitioner? Why?

> Still stuck in step two due to time restrictions? No worries, you do not *have* to work on the real data. It is completely fine if you work only on synthetic data!
> Note also that you do not have to work on the steps in sequence; feel free to join in at any time!
> Our repository – `https://github.com/reitzig/advalg15` – awaits your contributions!