Assignments for September 13

- Read Chapter 5 in LaValle, S. M., *Planning Algorithms*, Cambridge University Press, Cambridge, UK, 2006. The chapter treats sampling-based motion planning.
- Extra reading:
  - LaValle, S. M., and Kuffner J. J.: *"Randomized kinodynamic planning"*, Int. J. Robotics Research 20:5 (2001), pp. 378–400.
  - Kuwata, Y., Fiore, G. A., Teo, J., Frazzoli, E., and How, J. P.: *"Motion planning for urban driving using RRT"*, IEEE/RSJ Int. Conf. Intelligent Robots and Systems (2008).
- Do Exercise 23 (a)-(b)[1] in Chapter 5 of the book by LaValle. In part (b), consider the effects of biased sampling in the RRT algorithm. If time permits, consider also Exercise 23 (c). Evaluate the implementation on an example of your choice (default: 2D space with obstacles).
- Lecture by Karl Berntorp.

[1] Line 14 in the algorithm in Figure 5.24 should be:
if $|T_b| < |T_a|$ **then** SWAP(T_a, T_b).