

Assignments for Meeting on Feb. 2, 2021 (1/2)

- ▶ Read Chapters 5.4–5.5 in LaValle, S. M., *Planning Algorithms*, Cambridge University Press, Cambridge, UK, 2006. Depending on interest, you can also scan Chapters 5.1–5.3.
- ▶ Read Chapters 14.1, 14.3.4, and 14.4.3 in LaValle, S. M., *Planning Algorithms*, Cambridge University Press, Cambridge, UK, 2006.
- ▶ Read Sections 3.3.3 and 5 in Karaman, S., & E. Frazzoli, "Sampling-based algorithms for optimal motion planning", *The International Journal of Robotics Research*, 30(7), 846–894, 2011.
DOI: <https://doi.org/10.1177/0278364911406761>
- ▶ Scan the paper S. Karaman, & E. Frazzoli, "Optimal kinodynamic motion planning using incremental sampling-based methods", 49th IEEE Conference on Decision and Control (CDC), Atlanta, GA, 7681–7687, 2010.
DOI: <https://doi.org/10.1109/CDC.2010.5717430>
- ▶ Scan the paper Kuwata, Y., Teo, J., Fiore, G., Karaman, S., Frazzoli, E., & How, J. P., "Real-Time Motion Planning With Applications to Autonomous Urban Driving", *IEEE Transactions on Control Systems Technology*, 17(5), 1105–1118, 2009. DOI: <https://doi.org/10.1109/TCST.2008.2012116>

Assignments for Meeting on Feb. 2, 2021 (2/2)

- ▶ Do the parts of Hand-in Exercise 2 from TSFS12 that concern RRT (Sections 4.1–4.2) and RRT* (Section A). Those that have taken TSFS12 should implement and evaluate an RRT* for the Dubins' vehicle that is optimal with respect to path length, and then compare it with the results from the TSFS12 implementations.
- ▶ **Next meeting: Tuesday February 2, 2021, at 15:15 in Zoom.**
- ▶ Lecture responsibility: Anja Hellander.