

Propositions

accompanying the dissertation

Probabilistic Motion Planning for Multi-Robot Systems

by

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1. To solve chance-constrained motion planning problems, one does not necessarily need to compute the robot collision probability. (This thesis)
2. The commonly used metrics, *trajectory length and time to reach the goal*, are not suitable for evaluating the performance of a local motion planner. (This thesis)
3. Complex motion prediction models of pedestrians are not necessary for collision avoidance: the constant velocity model is mostly sufficient. (This thesis)
4. Predicting future trajectories of autonomous mobile robots is more difficult than that of humans. (This thesis)
5. To navigate among humans, drones need to be designed to make humans feel safe in their vicinity.
6. The number of new publications would be significantly reduced while their quality would improve if there were no paper submission deadlines.
7. Current paper review practices force researchers not to report the weaknesses and limitations of their work.
8. Doing research is like cooking: one should be satisfied with the food or paper before presenting it to others.
9. The internet and social media networks divide people more than they connect them.
10. 圣人之道，为而不争。 《道德经》
The Tao of the Sage is to act without competing. *Tao Te Ching*
Intrinsic interest, instead of competition with others, is the driver of our true motivation.

These propositions are regarded as opposable and defensible, and have been approved as such by the promoters prof. dr. R. Babuska, and dr. J. Alonso-Mora.