

## **Complexity for affine control systems**

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We present some results regarding the complexity of the motion planning problem for control-affine systems. Such complexities are already defined and rather well-understood in the particular case of nonholonomic (or driftless) systems. Our aim is to generalize these notions and results to systems with a drift. Accordingly, we present various definitions of complexity, as functions of the curve that is approximated, and of the precision of the approximation. Due to the lack of time-rescaling invariance of these systems, we consider geometric and parametrized curves separately. Then, we give some estimates for these quantities, both in situations where the path is generic with respect to the drift and where it is completely non-generic.

This is a joint work with F. Jean.