Restricted-Model Control : Application to the Nonholonomic car

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Résumé

This works investigate the use of restricted-model control (RMC) to the nonholonomic car system for trajectory tracking. Classical RMC architecture present a singularity when the reference orientation pass through +- pi/2. To solve this problem, two contro architecture are presented, the use of an auxiliary input and the use of an invariant error. Robustness to noise and initial condition are tested for thoses architectures.

Mots-Clés: Restricted, Model Control, Flatness, Invariant, Mobile Robotic

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