

Numerically Generated Path Stabilizing Controllers: use of Preliminary Feedback

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Abstract: A hybrid open-loop closed-loop control strategy for path following control problems is introduced. It is based on a strategy due to Jankowski et al., but modified by a preliminary feedback. An analysis is done in the linear case showing when the preliminary feedback is needed and how to compute it. The extension to nonlinear systems is discussed. A nonlinear example is presented showing the necessity of preliminary feedback. The approach is especially useful for complex nonlinear systems with high relative degrees.

Keywords:

AMS Subject Classification: