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STABLE TRACKING UNDER INCOMPLETE AND CHANGING INFORMATION

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We consider the problem of tracking a trajectory of a dynamical system described by a system of ordinary differential equations. It is required to design a feedback control algorithm guaranteeing a prescribed quality of the controlled process; more exactly, the trajectory of the system must track a given trajectory of a certain reference system subject to an unknown disturbance. We propose two algorithms, which cover the cases of continuous and discrete measurement of phase states, respectively. The algorithms are stable with respect to information noises and computational errors.

Keywords: trajectory tracking, phase states, differential equations.

MSC: 49J35

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