

FINITE EXTINCTION AND CONTROL IN SOME DELAY MODELS

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Abstract. For a controllable linear time-invariant system $x' = Ax + bu(t)$ in \mathbb{R}^n a general delayed feedback action $u(t) = -k(t)u(t - \tau)$ is proposed so that the solutions of the closed-loop system $x' = Ax - bk(t)x(t - \tau)$ are driven to zero in finite time. Optimality with respect to some integral performance indices is also analyzed.

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