Electronic Journal of Linear Algebra ISSN 1081-3810
A publication of the International Linear Algebra Society
Volume 12, pp. 64-72, May 2005

ELA
www.math.technion.ac.il/iic/ela

MULTI-AGENT AVOIDANCE CONTROL USING AN M-MATRIX PROPERTY*

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Abstract. In this paper a generalization of avoidance control for multi-agent dynamic systems is presented. Strategies for avoidance control for multiple agents are obtained using individual Liapunov-type functions. The overall system avoidance conditions are guaranteed using a vector Liapunov-type function via an M-matrix property.

Key words. Avoidance control, M-matrices, Multi-agent systems.

AMS subject classifications. 15A99, 93C41, 93B52, 34H05, 49N30, 49N90.

*Received by the editors 3 December 2004. Accepted for publication 5 May 2005. Handling Editor: Abraham Berman.

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