Electronic Journal of Linear Algebra ISSN 1081-3810
A publication of the International Linear Algebra Society
Volume 11, pp. 88-102, April 2004

ELA
http://math.technion.ac.il/iic/ela

REACHABILITY INDICES OF POSITIVE LINEAR SYSTEMS*

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Abstract. It is well known that positive linear systems have differences in the concepts and characterizations of the structural properties of reachability and controllability. In this paper, the reachability indices of a positive system are defined and consequently they are studied. For that, a canonical form of the reachability indices is given by positive similarity. From that canonical form, it is established that the reachability indices are invariant by positive similarity. At the end, a complete sequence of invariants of a canonical reachability system is given.

Key words. Positive systems, Reachability indices, Canonical form, Sequence of invariants.

AMS subject classifications. 15A21, 93B10.

*Received by the editors 16 Dec 2003. Accepted for publication 21 March 2004. Handling Editor: Daniel B. Szyld.

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