Electronic Journal of Linear Algebra ISSN 1081-3810
A publication of the International Linear Algebra Society
Volume 14, pp. 51-58, September 2005

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

MATRICES AND GRAPHS IN EUCLIDEAN GEOMETRY*

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Abstract. Some examples of the interplay between matrix theory, graph theory and n-dimensional Euclidean geometry are presented. In particular, qualitative properties of interior angles in simplices are completely characterized. For right simplices, a relationship between the tree of legs and the circumscribed Steiner ellipsoids is proved.

Key words. Euclidean space, Gram matrix, Biorthogonal bases, Simplex, Interior angle, Steiner circumscribed ellipsoid, Right simplex.

AMS subject classifications. 05C50, 52A40.

* Received by the editors 27 September 2004. Accepted for publication 11 September 2005. Handling Editor: Bryan L. Shader.

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