Electronic Journal of Linear Algebra ISSN 1081-3810
A publication of the International Linear Algebra Society
Volume 20, pp. 730-738, November 2010

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

# A NEW UPPER BOUND FOR THE LAPLACIAN SPECTRAL RADIUS OF A GRAPH*

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**Abstract.** Let $G$ be a simple connected graph with $m$ edges, and the line graph of $G$ with degree sequence $t_1 \geq t_2 \geq \cdots \geq t_n$. This paper presents a new upper bound for the Laplacian spectral radius of $G$ as follows:

$$\mu_1(G) \leq \min_{1\leq i\leq m} \left\{ \frac{t_i + 3 + \sqrt{(t_i+1)^2 + 4(i-1)(t_1 - t_i)}}{2} \right\}.$$

**Key words.** Laplacian spectral radius, Line graph, Degree sequence.

**AMS subject classifications.** 05C50, 15A18.

*Received by the editors on April 25, 2010. Accepted for publication on November 15, 2010. Handling Editor: Bryan Shader.

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