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## Characterization of graphs with exactly two non-negative eigenvalues\*

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**Abstract:** In this paper we characterize all graphs with exactly two non-negative eigenvalues. As a consequence we obtain all graphs  $G$  such that  $\lambda_3(G) < 0$ , where  $\lambda_3(G)$  is the third largest eigenvalue of  $G$ .

**Keywords:** Spectrum and eigenvalues of graphs, graphs with exactly two non-negative eigenvalues.

Math. Subj. Class.: 05C31, 05C50, 05C75, 05C76, 15A18

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## Karakterizacija grafov z natanko dvema nenegativnima lastnima vrednostima\*

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**Povzetek:** V tem članku karakteriziramo vse grafe z natanko dvema nenegativnima lastnima vrednostima. Od tod dobimo vse grafe  $G$ , za katere je  $\lambda_3(G) < 0$ , kjer je  $\lambda_3(G)$  tretja največja lastna vrednost grafa  $G$ .

**Ključne besede:** Spekter in lastne vrednosti grafov, grafi z natanko dvema nenegativnima lastnima vrednostima.

Math. Subj. Class.: 05C31, 05C50, 05C75, 05C76, 15A18

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