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**V. Nikiforov\*** (vnikifrv@memphis.edu). *The spectral radius of monotone graph properties.* Preliminary report.

A graph property is a class of graphs closed under isomorphisms. A property  $P$  is said to be monotone if  $G \in \mathcal{P}$  and  $H \subset G$  imply that  $H \in \mathcal{P}$ .

Write  $|G|$  for the order of a graph  $G$  and  $\mu(G)$  for the spectral radius of its adjacency matrix. Given a property  $\mathcal{P}$ , define the function

$$f_{\mathcal{P}}(n) = \max \{ \mu(G) : G \in \mathcal{P}, |G| = n \}.$$

In the recent years  $f_{\mathcal{P}}(n)$  has been determined or approximated for a vast number of graph properties. This talk will present some general new results related to  $f_{\mathcal{P}}(n)$  for a monotone graph property  $\mathcal{P}$ . (Received March 01, 2009)