

## Title

Radial Radio Sequence of a Graph.

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## Abstract

Let  $G(V(G), E(G))$  be a graph. A radial radio labeling,  $f$ , of a connected graph  $G$  is an assignment of positive integers to the vertices satisfying the following condition:  $d(u, v) + |f(u) - f(v)| \geq 1 + r(G)$ , for any two distinct vertices  $u, v \in V(G)$ , where  $d(u, v)$  and  $r(G)$  denote the distance between the vertices  $u$  and  $v$  and the radius of the graph  $G$ , respectively. The span of a radial radio labeling  $f$  is the largest integer in the range of  $f$  and is denoted by  $\text{span}(f)$ . The radial radio number of  $G$ ,  $rr(G)$ , is the minimum span taken over all radial radio labelings of  $G$ . The sequence  $(\mu_1(v))_{v \in V(G)}$  arranged in decreasing order is called the  $(\mu_1(v))$ - $rr$  sequence of  $G$ , where  $(\mu_1(v))$  is the radial radio number of the induced subgraph induced by the closed neighborhood of  $v$  in  $V(G)$ . In this paper, we present some results on the  $(\mu_1(v))$ - $rr$  sequence of a graph.

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