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**Local and consistent centrality measures in parameterized networks.** (English) Zbl 1397.91526  
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**Summary:** We propose an axiomatic approach to characterize centrality measures for which the centrality of an agent is recursively related to the centralities of the agents she is connected to. This includes the Katz-Bonacich and the eigenvector centrality. The core of our argument hinges on the power of the consistency axiom, which relates the properties of the measure for a given network to its properties for a reduced problem. In our case, the reduced problem only keeps track of local and parsimonious information. Our axiomatic characterization highlights the conceptual similarities among those measures.

**MSC:**

**91D30** Social networks; opinion dynamics

**90B10** Deterministic network models in operations research

Cited in **3** Documents

**Keywords:**

parameterized networks; centrality measure; eigenvector centrality; Katz-Bonacich centrality

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