Location problems in graphs with connectivity and rigidity requirements

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We consider 'source location problems' in undirected graphs motivated by localization problems in sensor networks. In such a network the fundamental problem is to determine the locations of the sensors from a subset of pairwise distances. To achieve unique localizability it is necessary to know the exact location of some sensors. We investigate the algorithmic questions arising in this setting and give efficient (near) optimal algorithms for such location problems with connectivity and rigidity requirements.