RUIZHONG WEI, Lakehead University, Department of Computer Science, Thunder Bay, ON P7B 5E1
Some Combinatorial Methods for Wireless Sensor Network Scheduling

We consider the node scheduling problem for t-covered and connected sensor networks. Some combinatorial methods are proposed to allocate all nodes in the sensor network into $k(k \geq t)$ different groups $\{0, 1, \ldots, k-1\}$ without requiring location information such that each group will be connected and maintaining the coverage ratio as high as possible. Theoretical analysis and simulation results show that the new scheduling method has better performance than previous randomized scheduling scheme. It can be used to prolong the lifetime of sensor networks effectively.