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## On a Decentralized Active Sensing Strategy using Mobile Sensor Platforms in a Network

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In this paper, we consider the problem of active sensing using mobile nodes as a sensor network to estimate the state of a dynamic target. We propose a gradient-search-based decentralized algorithm that demonstrates the benefits of distributed sensing. We then examine the task of tracking multiple targets, and address it via a simple extension to our algorithm. Simulation results show that our simple decentralized approach performs quite well and leads to interesting cooperative behavior.

**Conference paper:** [pdf](#) (452 KB)

**Conference presentation:** [pdf](#) (6.83 MB)

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