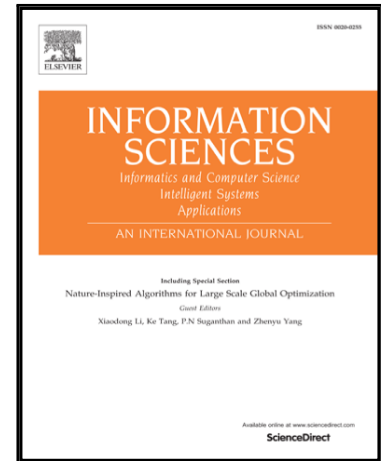


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Distributed Compressed Sensing Based Joint Detection and Tracking
for Multistatic Radar System

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Highlights

- This paper presents a novel distributed compressed sensing based joint detection and tracking approach for multi-static radar system, which reduces the computational load largely, in a centralized fusion framework.
- In this paper, we consider reconstructing the sparse vector representing the target state space directly.
- A novel DGSSMP algorithm is proposed to reconstruct the sparse grid reflection vector in distributed compressed sensing, under a general condition when each individual sensing matrix is different and with high coherence.
- The outputs of the DGSSMP algorithm (the states of all potential targets), are directly fed as instantaneous measurements to the TBD tracker, which avoids the use of a nonlinear measurement model in classical TBD algorithm.

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