# A Note on the Trackability of Dynamic Sensor Networks

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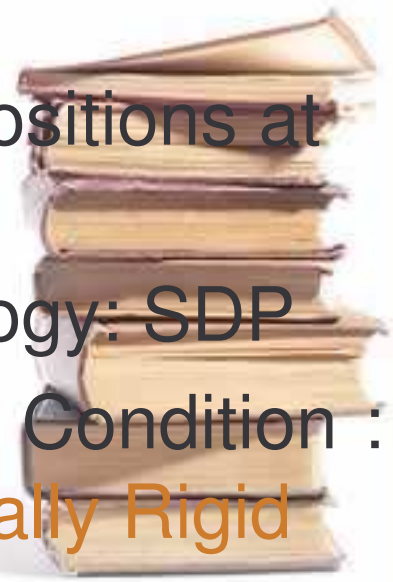
2008.9.19

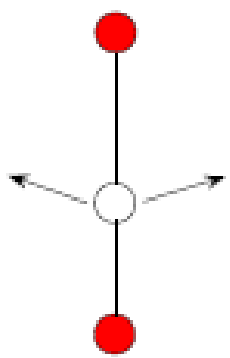
# *Locating V.S. Tracking*

- Known: pairwise distance information
- Look for positions of sensors
- Methodology: Semidefinite Programming (SDP)
- Localizable Condition: Uniquely Localizable Graph

- Known: pairwise distance information in a period [0,t], initial positions of sensors at time 0
- Look for positions at time t
- Methodology: SDP
- Trackable Condition : Infinitesimally Rigid



# Uniquely Localizable V.S. Infinitesimally Rigid



(a) Initial sensor Location at $t = 0$

(b) Two possible sensor locations at $t > 0$ that feedback the same distance data

An Example of Uniquely Realizable Graph Not Trackable (Red-Anchor, White-Sensor)