

# CMPE 259\_ Sensor Networks

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Localization: *GPS*

# Announcements

- ❑ Homework due on 02.14.
  - Submission: e-mail to katia, cintia, [kumarv@soe](mailto:kumarv@soe).
  - Plain text or pdf.
- ❑ Final project presentations.
- ❑ Updated reading list for next class.

# Today

- Gabriel Elkaim's talk on GPS.

# Node Localization

# Node Localization

- ❑ For some sensor network applications, exact location is critical.
  - Tracking.
  - Monitoring.
- ❑ For most applications, having location information enhance value of information.
- ❑ Also needed in geographic routing.

# How to determine node location?

- ❑ May be trivially available if:
  - Satellite based GPS is feasible and available on all nodes.
  - All nodes are hand-placed and pre-configured with location coordinates.
- ❑ Otherwise it is quite challenging (even with a fraction of known reference/beacon nodes).
- ❑ Typically, one assumes some nodes have position information (e.g., through GPS), but not all.