

# ME5524 Bayesian Robotics

## Project 1: Target Estimation

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# Challenge

- The mission of the robot is to
  - Identify and locate the static and dynamic objects of interest (OOIs) in RBE framework.
- The robot may be static at this stage.

# Objectives

- Identify the best detection and recognition technique.
- Identify the best RBE technique.
- Demonstrate the validity of the implemented techniques through the Challenge.

# Grouping

- Each group may consist of 1-3 members;
- Tasks include
  - Formulation
  - Programming
  - Simulation/experiment
  - Presentation
  - Report writing

# Presentation and Demonstration

## - Organization -

- Date: 3/29 (Wed)
- Time: 4pm-6:45pm
- Place: #3 Randolph Hall
- Time for each group:
  - 10 min for presentation
  - 5 min for demonstration

# Presentation

## - Contents -

Your presentation should include

1. Background (1 slide)
2. Objective (1 slide)
3. Developed/implemented detection technique (2 slides)
4. Developed/implemented RBE technique (1 slides)
5. Developed/implemented system (1 slides)
6. Experimental results (3 slides)
7. Conclusions and future work (1 slide)

# Presentation

- 1<sup>st</sup> notice: 7 min
- 2<sup>nd</sup> notice: 9 min
- 3<sup>rd</sup> notice: 10 min

# Report

## - Organization -

- Due date and time: 2pm, 4/5 (Wed)
- Submission procedure: online
  - Web submission (Assignment)
  - No e-mail unless any difficulty rises



# Report

## - Contents -

Your report must follow the following structure:

1. Background (including past related work)
2. Objective(s)
3. Motion and sensor models
4. Approach
5. Experimental results
6. Conclusions and future work

Describe the amount of contribution of each member by %.

# Presentation and Report

## - Grading -

- Total: 50
  - Presentation (10);
  - Report (40)
    - Original contribution (9);
    - Appearance and format (5);
    - Description (9);
    - Experimental results (11);
    - Conclusions and future work (6).
- Instructor will grade all.