

# Motion Control

Mobile Robotics

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# Today

- Motion control without obstacles and without noise
- Reminder of robot motion and kinematics
- Control to a goal pose overview
  - Orientation control
  - Position control (forward-motion control)
- Control to goal pose
  - Using inverse kinematics
  - Without any curvature
  - Using an intermediate point
  - Using lines and arcs
  - Using a sequence of points
- Simulation
- Trajectory tracking control

# Motion Control Without Obstacles or Noise

# Kinematic Model

# Forward Kinematics

# Control to a Goal Pose

# Orientation Control

# Position Control



# Control to a Goal Position

# Inverse Kinematics

# Control to a Goal Pose Without Curvature

# Control to a Goal Pose Using an Intermediate Point

# Further Study

# Simulation