Robotics and Sensing Research Laboratory
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Lab Director: Prof. Billur Barshan

Research Interests: intelligent sensing, sensor-based robotics, sensor data fusion and integration, ultrasonic, optical, and inertial sensing, human motion analysis and differentiation

Ultrasonic Sensing
- target differentiation
- radius of curvature estimation
- surface profile determination
- range estimation

Infrared Sensing
- target differentiation and localization
- range estimation

Other Lab Capabilities

Research Grants
- Fusion of Odometry, Gyroscope, Laser and Sonar Data and its Application to Mobile Robotics (TÜBİTAK grant)
- Target Discrimination for Sonar Sensor Networks for Mobile Robot Applications (NATO-Collaborative Research Grant)
- Intelligent Sensor Systems for Mobile Robots (TÜBİTAK and British Council grants)
- IST-Turkey: New Information Society Technologies for Turkey, Intelligent Systems Group (TÜBİTAK grant, Principal Investigator: Prof. A. B. Özgüler)

Inertial Navigation Systems
- evaluation of INS
- sensor data fusion and integration
- Kalman filtering

Selected Publications