

The Institute for Robotics and Intelligent Machines (IRIM)

The Institute for Robotics and Intelligent Machines (IRIM) at the Georgia Institute of Technology is a university-wide research institute bringing together students and researchers across departmental boundaries, with a focus on the core areas of human-augmentation, autonomy, and collaborative robotics. By combining resources, a large robotics eco-system is available to IRIM's researchers and this document describes these facilities, organized by system class.

Facilities and Resources:

I. Autonomous Vehicles

- Porsche Cayenne retrofitted for autonomous driving
- AM General Hummer retrofitted for autonomous driving
- Scale vehicles (3 vehicles, 1/4 scale) for autonomy and navigation research

II. Mobile Robots

- Khepera mobile robots (12)
- Magellan Pro robots (2)
- Turtlebots (12)
- Gritsbots (125)
- Amigobot (1)
- BEAM Robot (1)
- i-Create (6)
- Pioneer 3AT robots (5)

III. Humanoid and Locomoting Robots

- NAO humanoids (5)
- Darwin humanoids (2)
- Cody, humanoid robot (1)
- SandBot Six-Legged robot (1)
- MuddyBot, a paddle-based locomotor system (1)
- Multi-servo sandfish robot platform (1)

IV. Aerial Drones

- Parrot quadrotors (8)
- Crazyflie quadrotors (7)
- X8-M quadrotor (1)
- DJI Spreading Wings S1000+ octocopter (1)
- Asctec Pelican quadrotor (1)
- Quarter Scale Piper Cub air vehicles, equipped with Piccolo autopilot system (5)
- Tiger Shark air vehicles, equipped with Piccolo autopilot system (2)
- Scion Weasel air vehicles, equipped with Georgia Tech GUST autopilot system (2)

V. Marine Robots

- Seaperch, educational underwater Remotely Operated Vehicle (1)
- GT-MUR, Miniature Autonomous Underwater Vehicle (1)
- Victoria, Autonomous Surface Vehicle (1)
- Eco mapper, Autonomous Underwater Vehicle (1)

VI. Manipulators

- Pioneer Robots with arms (1)
- PR2 (1)
- Dusty, teleoperated robot (1)
- Kinova JACO2 6-DOF arm (1)
- Kuka KR 500 heavy-duty industrial robot (1)
- Kuka KR 210 heavy-duty industrial robot (3)
- Universal Robots industrial robot UR-5 (1)
- ReThink Robotics Sawyer (1)
- Fanuc LRMate 200iD compact six-axis mini robot (1)

VII. Assistive Robots

- Autonomous Wheelchair (1)
- EL-E, assistive robot (1)
- Curi, the personal service robot & companion (1)
- Shimon robotic marimba player (1)
- Shimi smart-phone enabled robotic musical companion (3)
- Haile robotic percussionist (1)

VIII. Supporting Infrastructure

- Optitrack Motion Capture (2 systems with 10 cameras each)
- Vicon Motion Capture (2 systems with 8 cameras each)
- Instrumented treadmill
- Wireless EMG system for biomechanics research