

5_3 _ROS_DATA_INFORMATION – Mostly ROS1 FALL 2022

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Welcome to the ROS Community

<https://www.ros.org/blog/community/>

The core ROS source code is built and maintained by Open Robotics and the members of the ROS 2 [Technical Steering Committee \(TSC\)](#); but much of what makes ROS so special is built by other groups within the ROS community.



Open Robotics

[Open Robotics](#) works with the global ROS community to create open software and hardware platforms for robotics including ROS 1, ROS 2, the Gazebo simulator, and the Ignition simulator. Open Robotics uses these platforms to solve important problems and help others to do the same by offering software and hardware development services for a variety of client organizations.

OTHER MEMBERS OF THE COMMUNITY

- **The Autoware Foundation – Self Driving**
- **F1 Tenth Race Cars, etc**
- **MoveIt**
[MoveIt](#) is a set of ROS packages for forward and inverse kinematics and planning using ROS. <https://moveit.ros.org/>
- **OpenCV**
[OpenCV](#) (Open Source Computer Vision Library) is an open source computer vision and machine learning software library.

- microROS
micro-ROS is bridging the gap between resource-constrained microcontrollers and larger processors in robotic applications that are based on ROS. micro-ROS runs on a wide variety of embedded hardware and brings ROS closer to robot hardware.
- ROS-Industrial
ROS-Industrial is an open-source project that extends the advanced capabilities of ROS software to industrial relevant hardware and applications. <https://www.swri.org/ros-industrial>

ROS PACKAGES MANY Many PAGES! Select ROS1 or ROS2 Distribution

<https://index.ros.org/packages/>

DOCUMENTATION

<http://wiki.ros.org/>

EXAMPLES

ROS Courses

<http://wiki.ros.org/Courses>

ROS Books

BOOKS 13/37 – just by Date not Quality

<http://wiki.ros.org/Books>

ROS2 books – Not yet – A moving Target

[ROS Robotics By Example - Second Edition](#) (2017-12, K, Python)

Robots and Sensors – A Sampling- Search by Tag or Category – See 10 Year Montag of Robots.

<https://robots.ros.org/>

All types of Sensors:

<http://wiki.ros.org/Sensors>

1. [Sensors supported by ROS](#)
1. [Portals](#)
2. [Complete Listing](#)
1. [1D range finders](#)
2. [2D range finders](#)
3. [3D Sensors \(range finders & RGB-D cameras\)](#)
4. [Audio / Speech Recognition](#)
5. [Cameras](#)
6. [Enviromental](#)
7. [Force/Torque/Touch Sensors](#)
8. [Motion Capture](#)
9. [Pose Estimation \(GPS/IMU\)](#)
10. [Power Supply](#)
11. [RFID](#)
12. [Sensor Interfaces](#)
13. [Speed](#)

TOOLS - RVIZ

<http://wiki.ros.org/Tools>

1. [Tools](#)
1. [3D Visualization: RVIZ](#)
2. [Webviz](#)
3. [Logging and Visualization Sensor Data: rosbag and rqt_bag](#)
4. [Live plotting: rqt_plot](#)
5. [System visualization: rqt_graph](#)
6. [Control & Visualization with Mobile Devices: ROS-Mobile](#)
7. [Command Line Tools](#)
1. [Running ROS Systems](#)
2. [Interacting with and debugging running system](#)
3. [Install, build and filesystem tools](#)

LIBRARIES

libraries and simulators for Robot Operating System

Open-CV, PLC (PointCloud 3D), Open-NI (Cameras, Microsoft Kinect),

Open-Rave (Trajectory planning for manipulators)

Simulators: Gazebo, V-Ref

CORE ELEMENTS- APIs: ROS1 roscpp, rospy

<http://wiki.ros.org/APIs>

DISCUSSIONS-NEWS Blog Retired to ROS discourse

<https://www.ros.org/news/> <https://discourse.ros.org/>

DON'T BE AFRAID TO ASK QUESTIONS – MOST OF THE TIMES

THE PROBLEMS ARE NOT PERSONAL!

<https://answers.ros.org/questions/> 66069 questions

A GOOD HISTORY – Worth a Read

https://en.wikipedia.org/wiki/Robot_Operating_System

This page was last edited on 5 April 2022, at 00:47 (UTC).

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