

ROSCon FR&DE 2025

WORKSHOPS

Workshop Title	Focus on new features within the Nav2 Stack
Name of principal instructor	Philipp Schnattinger (Node Robotics - T&S)
Number of supplementary instructors	1
Maximum of participants	10
Language	English
Workshop duration	4h
Required material	Laptop/PCs with Ubuntu and VS Code with Dev Containers
Skills required for participants	Advanced

Brief description

This navigation workshop will focus on some of the new features within the Nav2 Stack.

Learn to bring ROS 2 Nav2 onto real TurtleBots. We begin by using AMCL/EKF localisation with wheel-odometry to localize the robot. Next, integrate Nav2' s new Docking Server so the robot can autonomously locate, align and latch onto a charging station with minimal extra code.

Finally, configure the Model Predictive Path Integral (MPPI) controller, tune rollout counts and critic weights, and compare trajectory smoothness live in RViz.