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## Combining Perception and Manipulation in ROS<sup>1</sup>

In this talk we will discuss some recent and future developments in adding mobile manipulation abilities to the Robot Operating System (ROS). One approach relies on object recognition and pose determination from 3D sensed data for performing manipulation tasks, based on a precomputed grasp and model database. An alternative approach uses point cloud perception algorithms such as segmentation, filtering, and 3D statistics to perform reactive grasps of novel objects.

This functionality is fully integrated into ROS and available for download under an open source license. We believe that these contributions can serve as a step towards more complex applications in human living environments.

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<sup>1</sup> Joint work with Sachin Chitta, Kaijen Hsiao and Gil Jones