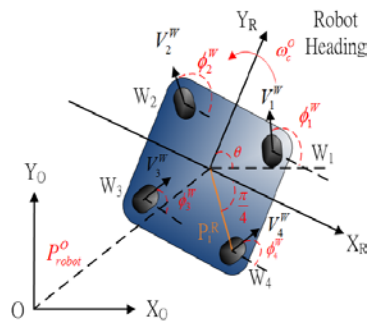


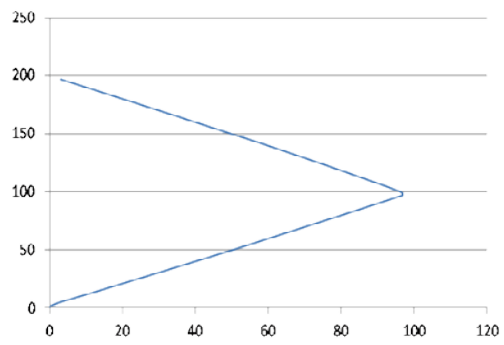
Tacking Control of a Four-Wheel Drive and Steer Mobile Robot

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The aim of this project is to proposed a kinematic model and tracking control algorithm that can fully exploit the features by our designed four-wheel drive and steer omni-directional mobile platform. The platform kinematics constitutes a extension the instantaneous center of rotation (ICR), and it novel analysis a forward and inverse kinematic model for the system. In addition, we are also considering a controller able to track an arbitrary linear/ angular velocity without mobility restrictions. In fact, our approach of this design represents a necessary step for addressing all the tasks for a mobile arm service robot, such as, for instance, manipulation with high dynamics, or fetch and delivery tasks in crowded places.



Arrangement of wheels of the steer-and-drive platform.



A trajectories result in the pose tracking experiment.

