



MOTION LEARNING BY IMITATION

OBJECTIVE

Our aim is to develop a natural and intuitive interface for teaching a robot how to perform coordinated gestures involving many degrees of freedom, wherein the robot directly mimics the actions of the human demonstrator.

FEATURES

- + Customized motion programming on robot without knowledge of robotics
- + Turn-based imitation for intuitive teaching
- + Human motion data transformed into a feasible desired motion for the robot satisfying kinematic and collision constraints
- + Compact representation of learnt motion as parameterized primitives.

POTENTIAL APPLICATIONS

- +Service: Interface for users to program service robot to perform custom tasks in custom environments
- +Healthcare: Interface for personalizing robotic physical therapy for stroke patients
- +Entertainment: Motion-authoring tool to create moves for robot dancers, robot actors, and animatronics