Propuesta 1 : Machine Learning on Artificial Perception for Autonomous Robotic Grasping.

Prof: Kensuke Harada

Robotic grasping in autonomous manipulation has bee widely studied in the las few years, however, artificial vision as the main sensor of these robots involve high complex algorithms which usually demand a fixed environment in order to complain about a desire performance. Besides, techniques for image processing design for a particular environment or figures and low tolerance for new pieces or materials for pick or groups. Because of that, adaptive techniques have been explored in order to include some machine learning elements in image processing algorithms as clusterings or reinforcement learning for robust and autonomous robot’s response.

Propuesta 2 : Multi-Agent Approach for Coordinate Autonomous Manipulation Robot .

Prof: Kensuke Harada

Planning for robotic arm manipulation involved a high nonlinear and high constrained problem. Some research in order to reach the easiest approach for less computing time and time and energy optimized path. However, such high dimensional problem can be approach as a multi-agent system coordinated in order to reach the desired performance under no linear constraint.Therefore, some researchers have proposed a framework in which each articulation is seem as a individual agent in a group which is the robotic arm itself.