



# SPEECH PROCESSING

## INTRODUCTION

Speech processing technologies provide a natural communication medium to human to interact with robots. ASoRo's robot is mounted with far-talk microphones in order to achieve robust and intuitive human-robot interaction.

## RESEARCH AREA

- + Speaker independent large vocabulary speech recognition system to recognize speech commands
- + Generate semantic representation of spoken speech for dialog management system to plan and perform appropriate actions
- + Speech enhancement technology that enables ASoRo's robot to hear speech even in noisy environment
- + Detecting the origin of sound in 3D spatial space

## POTENTIAL APPLICATIONS

- + Wide range of robotic platform
- + Healthcare for medical documentation and to assist people with disabilities
- + Video games, home automation, interactive voice response system and mobile telephony applications