Human Robot Collaboration

The ability to physically interact with people a fundamental requirement for the next generation of robots. Many potential applications depend on developing safe robots that can provide autonomous, intuitive, physical interaction. To achieve this, human collaboration and safety criteria need to be placed at the centre of the design process. Intuitive physical interaction between humans and robot systems need to be addressed in an interconnected manner. The goal of this technology is to enable the close, safe and dependable physical interaction between people and robots in a shared workspace.

State of the Art

Simple interactions are commonly used, collaboration has been the subject of extensive research. Compliant systems are well understood and commercial products are starting to emerge. Safety standards are starting to emerge.

2020 Target

To develop low cost safe dependable systems able to react and interact with people. To understand the bio-mechanics of human injury and motion. To track, understand and predict human motion, in real-time, in specific environments. To integrate cognition technologies into human robot collaboration. To develop tools for safety validation. To develop safety standards. To develop multi-modal collaboration.