1. BACKGROUND

“Socially Assistive Robotics provide assistance through social interaction and without physical contact”

- The social robot is able to:
  - Carry out sessions autonomously
  - Coach and encourage to do activities
  - Remind to use the affected limb
- Non-contact interaction → less risk to patients
- Easily tested and deployed

2. TARGET PATIENTS

- Children from 4 to 14 years old:
  - Obstetric Brachial Plexus Palsy (OBPP)
  - Infantile Cerebral Palsy (ICP)
- Causing upper limb disorders
- Patients are unmotivated with the treatment

3. OBJECTIVES

- Design of therapies based on social robotics
- Provide tools for physician-robot interaction
- Develop systems for user-activity adaptation

4. TOWARDS NOVEL THERAPIES

5. ARCHITECTURE OVERVIEW

6. USE CASE AND CORRECTION MECHANISMS

- The patient imitates the poses of the robot
- The poses are prescribed and adapted to each patient
- The level of difficulty is adjusted online while training
- Each pose is verified
- The system provides feedback to correct the poses