

# UNIVERSITY OF GENOA DEPARTMENT OF INFORMATICS, BIOENGINEERING, ROBOTICS AND SYSTEMS ENGINEERING MASTER'S PROGRAM IN BIOENGINEERING

# Thesis Project Form

Title (tentative): Validation of innovative methods for assessment of spatial skills in visually impaired children

Thesis advisor(s): Sabatini Silvio P., Monica Gori (IIT), Giulia Cappagli (IIT)

E-mail: silvio.sabatini@unige.it

Address: Via All'Opera Pia, 13 - 16145 Genova (III piano)

**Phone:** (+39) 010 33 52092

## **Description**

#### Motivation and application domain

Scientific validation of a technological device aimed at assessing the spatial and/or motor skills of children with visual impairment

### General objectives and main activities

Vision has a fundamental role in the neuropsychomotor development of the child. It has been shown that children with visual disabilities have greater difficulty reaching certain stages of perceptive, neuromotor, and cognitive development than their peers, reducing the ability to adopt a solid system of spatial references. In this context, developing new tests to assess perceptual-motor skills early is crucial.

This thesis aims to develop and apply procedures for evaluating motor skills in children as part of a project born from the collaboration between the research laboratory UVIP (Unit for Visually Impaired People) of Istituto Italiano di Tecnologia and IRCSS Fondazione Mondino.

#### Training Objectives (technical/analytical tools, experimental methodologies)

Assessment of spatial and/or motor skills during development via motion recording system (Vicon). Scientific validation of a technological device aimed at assessing the child's spatial and/or motor skills.

Place(s) where the thesis work will be carried out: IIT and DIBRIS (via Opera Pia 13)

#### Additional information

Maximum number of students: 1