

Lucia Angelini

WORK EXPERIENCE

[15/05/2022 – Current] University Research Fellow

Sant'Anna School of Advanced Studies

City: Pisa Country: Italy I am enrolled in the APRIL2020 EUproject. In particular, I am dealing with:

- Development of the Grasp Dictionary, that allows the translation of the high-level information that describes a grasp into the low-level information for the motion planning purpose.

- Collaboration on the development of a high-level Grasp Library for the grasp choice of flexible and delicate objects in industrial contexts.

- Development of a dual-arm teleoperated platform, that includes a self-collision avoidance algorithm.

- Shared research activities with national and international partners, both in industry and in academia, that led me to work in other European countries (Spain). - Collaboration in writing deliverables and reporting period review.

I am enrolled in the Fit4MedRobproject. In particular, I am dealing with supporting the mechanical design of the Virtual Egg (VE) and instrument Virtual Egg (iVE), two novel devices for the evaluation of the human hand dexterity.

I had the opportunity to participate at the conference Humanoids 2022 (IEEE-RAS International Conference on Humanoid Robots, Okinawa, Nov 28-30, 2022) and presented the paper "Self-collisionavoidance in bimanual teleoperation using CollisionIK: algorithm revision and usability experiment".

[2018 - 2022] **Board Game Demonstrator**

Pendragon Game Studio srl

City: Lucca

Country: Italv

I worked as Board Game Demonstrator during Lucca Comics&Games, the biggest comics festival in Europe held in Luccaevery year at the end of October.

EDUCATION AND TRAINING

[01/10/2019 - 22/04/2022]

Master Graduate in Biomedical Engineering

University of Pisa

Final grade: 110/110 cum Laude Level in EQF:EQFlevel 7 Thesis: Development of a bimanual hand-arm robotic platform teleoperated using wearables with selfcollision avoidance control algorithm.

[01/10/2016 - 19/10/2019]

Bachelor Graduate in Biomedical Engineering

University of Pisa

Final grade: 110/110 cum Laude **Level in EQF:**EQFlevel 6 **Thesis:**Graphene as a material for biomedical applications. Characteristics and mechanisms related to toxicity.

[15/09/2011 - 30/06/2016] High School Diploma

Liceo Scientifico E. Maiorana

Final grade: 100/100 Level in EQF:EQFlevel 4

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING C1 READING C1 WRITING C1

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

DIGITAL SKILLS

Windows | Microsoft Office | C++ | Matlab | Linux | Python | ROS | Git | CREO parametric

RESEARCHOUTPUTS

Articles in Internetional Conferences

Angelini, L., Uliano, M., Mazzeo, A., Penzotti, M., & Controzzi, M. (2022, November). Selfcollision avoidance in bimanual teleoperation using CollisionIK: algorithm revision and usability experiment. In *2022 IEEE-RAS21stInternational Conference on Humanoid Robots (Humanoids)* (pp. 112-118). IEEE.

I presented in person the work during an interactive presentation.

Articles in Workshop of International Conferences

Penzotti, M., Mazzeo A., Uliano, M., Angelini, L., & Controzzi, M. Proprioceptive filtering in robotics: an application in object handover. Workshop on RObotic MAnipulation of Deformable Objects: challenges in perception, planning and control for Soft Interaction (ROMANDO-SI),2022 Kyoto. (6 pages)

Mazzeo, A., Uliano, M., Cini, F., Penzotti, M., Angelini, L., Craighero, L., & Controzzi, M. A protocol to study the role of deformability in human manipulation when changing task accuracy. Workshop on RObotic MAnipulation of Deformable Objects: challenges in perception, planning and control for Soft Interaction (ROMANDO-SI),2022 Kyoto. (8 pages)