FRANCO FUSCO

Research & Development Engineer

Date of Birth 24 August 1993 Nationality Italian

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WORK EXPERIENCE

R&D Engineer (CDI)

Neurodec neurodec.ai

Mar 2022 – Present Valbonne (FR)

Development and maintenance of MDT*, a Python/C++ simulator for electrical activity during muscular contractions. Employed libraries: PyTorch, SQLAlchemy, Flask, CGAL.

*Maksymenko *et al.*, "A myoelectric digital twin for fast and realistic modelling in deep learning." Nature Communications 14.1 (2023): 1600. available online

ATER

I3S Sophia Antipolis & IUT Nice Côte d'Azur

Sep 2021 – Feb 2022 Sophia Antipolis (FR) & Nice (FR)

Research activities: investigation of novel control schemes based on a hybrid model-based and data-driven approach, using MPC techniques in conjunction with DNNs.

Teaching activities: 180+ hours between lectures and practical sessions (control theory, reinforcement learning, programming).

Post-doc: Advanced Robot Control

I3S Sophia Antipolis

Dec 2020 – Aug 2021 Sophia Antipolis (FR)

Study of parameterized MPC algorithms tailored for highly nonlinear systems with fast dynamics and limited computational power.

EDUCATION AND TRAINING

Ph.D. in Robotics

LS2N Centrale Nantes

Oct 2017 – Nov2020 Nantes (FR)

Thesis title: Dynamic Visual Servoing for Fast Robotic Arms

M.Sc. in Robotics

Università degli studi di Genova & Centrale Nantes

Sep2015 – Aug2017 Genoa (IT) & Nantes (FR)

Thesis title: Obstacle and Self-collision Avoidance with a Dual-arm Manipulator

B.Sc. in Mechatronics

Università degli studi di Padova

Sep2012 – Nov2015 Vicenza (IT)

Thesis title: Data Acquisition System for a Line-scan-camera of the Freescale-Cup Vehicle

STRENGTHS

Fast-learner | Hard-working | Enthusiastic

C++ | Python | LaTeX | ROS | ViSP | Nonlinear Control | Applied Linear Algebra

PUBLICATIONS

[1] Fusco *et al.* (2020), Integrating features acceleration in Visual Predictive Control.

[2] Fusco *et al.* (2022), Benchmarking nonlinear model predictive control with input parameterizations.

[3] Isralov *et al.* (2023), Reinforcement learning approach to control an inverted pendulum: A general framework for educational purposes.

LANGUAGES

French ●●●◐○

English ●●●●○

Italian (mother tongue) ●●●●●

Spanish ●○○○○

OTHER INTERESTS

Photography | Hiking | Scuba-diving | Skiing | 3D printing

MY LIFE PHILOSOPHY

"If life's a movie, be the actor – not a spectator"

REFEREES

Kostiantyn Maksymenko
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