

PERSONAL INFORMATION Luca Cavanini

Nationality Italian

WORK EXPERIENCE

-
- Apr 2020 – Present **Freelance - Technical consultant**
Information engineering
- Apr 2018 - Mar 2020 **Technical consultant**
Industrial Systems and Control Ltd. - Glasgow, Scotland (UK)
Control system engineering
- Nov 2017 - Apr 2018 **Research fellow**
Università Politecnica delle Marche, Ancona
Wind turbine controls
- May 2014 - Oct 2014 **Research fellow**
Università Politecnica delle Marche, Ancona
Mobile robotics

EDUCATION AND TRAINING

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- Oct 2014 - Oct 2018 **PhD - Thesis Title: "Model Predictive Control for Electrical and Mechatronic Systems"**
Università Politecnica delle Marche, Ancona
- 2010-2014 **Master Degree in Automation Engineering**
Università Politecnica delle Marche, Ancona
- 2006-2009 **Bachelor Degree in Informatics and Automation Engineering**
Università Politecnica delle Marche, Ancona

PERSONAL SKILLS

- Mother tongue** Italian
- Computer skills** – competent with most Microsoft Office programmes
– experience with HTML/C/C++/MATLAB/Python
- Driving licence** B

ADDITIONAL INFORMATION

- Publications** Cavanini L., Ippoliti G., Camacho E.F. “Model Predictive Control of a Linear Parameter Varying Model of an UAV” *Journal of Intelligent & Robotic Systems* (2021)
- Cavanini L., Majecki P., Grimble M. J., Uchihori H., Tasaki M., Yamamoto I. “LPV-MPC Path Planner for Autonomous Underwater Vehicles” *IFAC Conference on Control Applications in Marine Systems, Robotics, and Vehicles 2021 (CAMS)*
- Cavanini L., Majecki P., Grimble M. J., Ivanovic V., Tseng H.E. “LPV-MPC Path Planning for Autonomous Vehicles in Road Junction Scenarios” *IEEE International Conference on Intelligent Transportation Systems 2021 (ITSC)*
- Cavanini L., Cimini G., Ferracuti F., Ippoliti G. “Reference governor for a boost converter with power factor correction” *IEEE European Control Conference 2021 (ECC)*
- Uchihori H., Cavanini L., Tasaki M., Majecki P., Yashiro Y., Grimble M. J., Yamamoto I., van der Molen G., Eguchi K. “Linear Parameter-Varying Model Predictive Control of AUV for Docking Scenarios” *Applied Sciences* (2021)
- Cavanini L., Ferracuti F., Longhi S., Marchegiani E., Monteriù A. “Sparse Approximation of LS-SVM for LPV-ARX Model Identification: Application to a Powertrain Subsystem” *IEEE AEIT International Conference of Electrical and Electronic Technologies for Automotive 2020 (AEIT AUTOMOTIVE)*
- Cavanini L., Ferracuti F., Longhi S., Monteriù A. “LS-SVM for LPV-ARX Identification: Efficient Online Update by Low-Rank Matrix Approximation” *IEEE International Conference on Unmanned Aircraft Systems 2020 (ICUAS)*
- Cavanini L., Cimini G., Ippoliti G. “Model predictive control for pre-compensated power converters: application to current mode control” *Journal of the Franklin Institute* (2019)
- Cavanini L. and Ippoliti G. “Fault Tolerant Model Predictive Control for an Over-actuated Vessel” *Ocean Engineering* (2018).
- Cavanini L., Cimini G., Ippoliti G. “Computationally efficient model predictive control for a class of linear parameter-varying systems” *IET Control Theory & Applications* (2018).

Autorizzazione per la pubblicazione sul web:

Il sottoscritto Luca Cavanini autorizza la pubblicazione del curriculum della sua attività scientifica, didattica e professionale sul web.

In fede, 21/02/2022