

Luca Maurelli

(+39) 340 8192088 • luca.maurelli@unibg.it
Via Giovanni da Verrazzano, 68, Treviglio (BG), 24047, Italy

CURRENT POSITION

Research Assistant (Assegnista di ricerca) at the Department of Management, Production and Information Sciences, University of Bergamo Jun 2018 – Current

- Project SMART4CPPS, funded by Regione Lombardia, led by 4 OdR and 10 local companies.
 - Management activity of Pilot 1 and Pilot 4
 - Pilot 1: Design of a health monitoring system for electromechanical actuators (University of Bergamo, Camozzi)
 - Pilot 4: Machine learning algorithms for the zero-defect end-of-line tuning of medium-voltage switches (University of Bergamo, Cosberg, ABB, CNR)
- Project CRYOABLATION:
 - Model identification of the temperature dynamics in *cryoblation* for atrial fibrillation therapy (in cooperation with Dipartimento di Cardiologia, Ospedale di Seriate)
- Project SP@RK-4.0-I.E.S.:
 - Data analysis and development of a health monitoring and predictive maintenance system in high performance workcenters (in cooperation with Mandelli spa)
- Project SMI-PREDICTIVE MAINTENANCE:
 - Design of a predictive maintenance system for beverage packaging machines using accelerometers (in cooperation with SMI Group)

PREVIOUS POSITION

Software Engineer at Consortium Intellimech in Kilometro Rosso, Bergamo Oct 2017 – Apr 2018

- Project KNOWLEDGIZE, funded by Regione Lombardia, led by Consortium Intellimech, with 2 OdR and 3 local companies.
 - Development of a Knowledge Management Web Platform with an Innovative ML Algorithm based on Tag Searching using Django and Google Services (University of Bergamo, University of Brescia, Cosberg, Elettrocablaggi, Vin Service)
- Development of software applications:
 - Push-bottom panel for testing procedures connected to a PLC and a DB in C#
 - Monitoring system communicating with most industrial protocols such as MQTT, MTCONNECT, UPC-UA and MODbus in Python

EDUCATION

Master's degree cum laude (110 e lode) in Computer Science

University of Bergamo, Italy

Mar 2018

Development of a Knowledge Management Web Platform with an Innovative ML Algorithm based on Tag Searching

Bachelor's degree in Computer Science

University of Bergamo, Italy

Sep 2015

Development of a library for Mobile Robot Trajectory Control

POST-GRADUATE EDUCATION

Ph.D. Course: Nonlinear System Identification

Politecnico of Milan, Italy

48h course, Jan 2019

Identification approaches explored: NARMAX, Set Membership, Wiener and Hammerstein, Neural Networks, Sequential Monte Carlo

Ph.D. Course: Model based Fault Diagnosis using a MATLAB Linear Framework

University of Padova, Italy

48h course, Mar 2019

Synthesis procedures of fault detection and isolation filters relying on computational approaches in the most general setting

TEACHING EXPERIENCE

Lecture Assistant of the following courses at the University of Bergamo:

1. *Controlli Automatici* (Advanced Control Systems) 20h course, Sep 2018 – Dec 2018

Co-advisor of the following **MSc theses** at the University of Bergamo:

1. Thesis: *Sviluppo preliminare di un sistema di health monitoring per un attuatore elettromeccanico*
Advisor: prof. Fabio Previdi Students: Davide Palazzini, Alen Preda