




Enrico Regolin

Automation Engineer

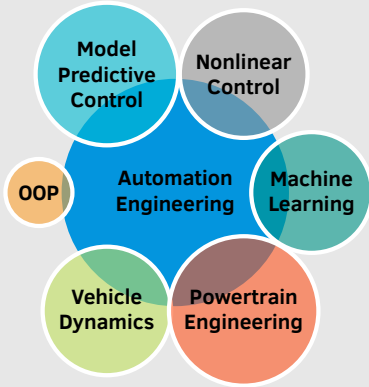
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 Enrico_Regolin

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Skills

Overview



Programming

Matlab • Simulink • \LaTeX

C • C++ • Java • IPG CarMaker

Languages

Italian (Native language)

English (C2)

German (B2)

Projects

AVL - Customer Projects - Full-Hybrid vehicles ECU SW development for series production

AVL - Future Hybrid - Hybrid transmission prototype: functionalities development and on-field testing

ITEAM - Forces Estimation - model based virtual sensor development with experimental validation

ITEAM - Autonomous Racing Driving - concept development and simulations

Education

2016- **PhD. Candidate, Automation Engineering** University of Pavia, Italy

2010-2013 **MSc., Automation Engineering** (110/110) University of Padova, Italy

2005 - 2009 **BEng., Electronic Engineering** (100/110) University of Trieste, Italy

Current Occupation

2016 - **Phd. Candidate** ICDS Lab, University of Pavia

Marie Skłodowska-Curie Fellow, project: ITEAM.

Grant agreement number: 675999

Thesis: Robust Vehicle Dynamics Control in Multi Actuated Ground Vehicles via Sliding Modes Generation. Supervisor: A.Ferrara

Research Topics:

- Higher Order Sliding Mode / EKF method for wheel forces estimation: active collaborations with Heudiasyc (France) and KU Leuven (Belgium)
- Model based path tracking for autonomous racing based on MPC/A* framework, in development with Virtual Vehicle (Austria)

Main Publications

A. Ferrara, G.P. Incremona and E. Regolin, "Optimization Based Adaptive Sliding Mode Control with application to Vehicle Dynamics Control", Special Issue for International Journal of Robust and Nonlinear Control "Sliding Mode Control, Estimation and Optimization", April 2018.

E. Regolin, M. Zambelli, A. Ferrara, "A multi-rate ISM approach for robust vehicle stability control during cornering", Proceedings of the 15th IFAC Symposium on Control in Transportation Systems, 6-8 June 2018, Savona, Italy.

E. Regolin, D. Savitzky, V. Ivanov, K. Augsburg and A. Ferrara, "Lateral Vehicle Dynamics Control via Sliding Modes Generation". In A. Ferrara, ed., "Sliding Mode Control of Vehicle Dynamics", 2017, IET.

E. Regolin and A. Ferrara, "SVM Classification and Kalman Filter Based Estimation of the Tire-Road Friction Curve", Proceedings of The 20th World Congress of the International Federation of Automatic Control, 9-14 July 2017, Toulouse, France.

Experience

Apr 2013- **Powertrain Engineer** AVL Gmbh

May 2016 Functions development and testing for ECU software in the following fields:

- Automatic transmissions
- Full-Hybrid vehicles (prototype and series production vehicle commissioning)

Aug 2012- **Student Trainee** AVL Gmbh

Mar 2013 Worked as a student on Master Thesis "Modelling of a Torque Converter and Control of the Torque Converter Lockup Clutch". Supervisor: L.Schenato

Aug 2008- **Student Trainee** Danieli Automation Spa

Jan 2009 Worked as a student on Bachelor Thesis "Characterization of an Electromagnetic Width Sensor: Thermal Sensitivity Analysis and Error Compensation". Supervisor: T.Parisini

Jun 2007- **Technical Employee (Part-time)** Laguna Snc

Jul 2012 Responsible for logistics and trucks movement in a fish trading company