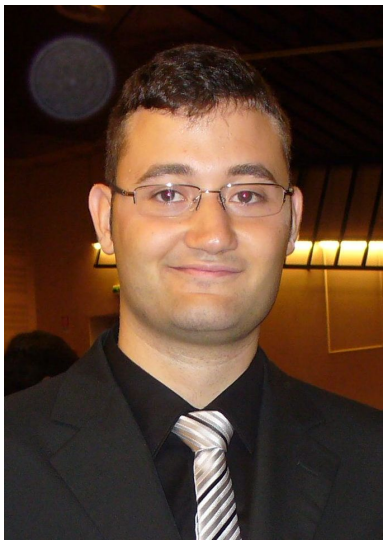
Europass Curriculum Vitae



Personal information

Surname(s) / First name(s)	**Fornari, Francesco**
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Email(s)	francesco.fornari@gmail.com
Nationality(-ies)	Italian
Date of birth	05/02/1987 (Taranto, Italy)
Gender	Male

Work experience

Dates	**November 2017** - **...**
Occupation or position held	**PT HIL Acting Manager**
Name and address of employer	Jaguar Land Rover (Coventry, United Kingdom)
Main activities and responsibilities	In the last months, apart from the PT HIL Technical Lead role, it was necessary to fill in the management gap due to our line manager leaving. Identified as suitable and reliable candidate to cover the position, additional tasks have been carried out in order to allow the team to suffer as less as possible that situation. Main tasks have been related to the interactions with the rest of the management about directions to give to the company, approvals of software installations, timesheets and paid hours, purchasing from suppliers (RFQ, Technical Specifications, Commercial Agreements). On top of this it was necessary to manage people (eighteen engineers) supervising their jobs and assigning priorities for the tasks, based on the interactions with the rest of the management. Direct report to the Senior Managers.
Type of business or sector	Automotive field
Dates	**May 2016** - **...**
Occupation or position held	**PT HIL Technical Lead - Powertrain/Hybrids**
Name and address of employer	Jaguar Land Rover (Coventry, United Kingdom)

Main activities and responsibilities	The activity is related to the management of the **technical activities** related to the **PHEV** (Plug-In Full Hybrid Vehicle) and **BEV** (Electrical Vehicle) projects, leading a group of around eight HIL Delevepment Engineers. It is necessary to **plan**, **coordinate** and **support** the activities of the **team** and interaction with **customers/suppliers** are fundamental in order to collect requirements and in order to plan the deliveries of HIL RIGs as better as possible. Apart from connection inside and outside the team, it is also necessary to escalate problems to the management, whenever needed. Interaction with other teams and managers are fundamental in order to establish or improve supplier-customer relationships (CAE, Verification & Validation, Test Facilities..). Involvement in purchasing activities can be also required when needed. Involvement in recruitment and new starters inductions usually required. The role requires both **technical skills** (related to **Powertrain** components/systems, **dSPACE** hardware and software, Vehicle networks - **CAN**, **FlexRay**, **LIN**) and **communication/management skills**, since it is necessary to **coordinate** a group of people and to **assign tasks** in order to achieve results as a team, but also because it's usually necessary to be able to clarify/understand roles and responsibilities during collaborations with other teams. With respect to the V-cycle, the activities supervised are both related to "component level testing" and "system level testing", that allows to have a complete picture of the system.
Type of business or sector	Automotive field
Dates	**July 2015** - **May 2016**
Occupation or position held	**PT HIL Development Engineer - Powertrain/Hybrids**
Name and address of employer	Jaguar Land Rover (Coventry, United Kingdom)
Main activities and responsibilities	The activity is related to the **design/development/maintenance of HIL RIGs** for Powertrain testing. Tests are essentially functional ones that deals with Hybrid functionalities (Energy management/Torque Management/Electric Machine and Batteries Management) for Hybrid vehicles: Mild Hybrids (MHEV), Full Hybrids (HEV), Plug-In Hybrids (PHEV) and Electrical(BEV). HIL RIGs are developed for different targets: **components tests** (Level 3) and **system tests** (Level 4). Level 3 HIL RIGs have as System Under Test just one ECU (usually the Powertrain Control Module), Level 4 HIL RIGs have as SUT more than one ECU connected to the RIG (Powertrain, Transmission, ABS..). The activity foreseen also development of HIL RIGs for **Test Cells**, in which real components such as real engine, real transmission, real battery, dynos, are connected to the RIG for performance / system level testing purposes. **dSPACE** and **Mathworks** products (hardware and software) are heavily used for these activities for modelling (Simulink) network interactions (CAN/LIN/FlexRay) and electrical interations (Digital/Analog I/O). dSPACE HIL RIGs experience with both **PHS** and **SCALEXIO** systems.
Type of business or sector	Automotive field
Dates	**January 2015** - **July 2015**
Occupation or position held	**Diagnosis Manager - Powertrain Control Module**
Name and address of employer	**Mediamotive** @ Fiat Chrysler Automobiles (Torino, Italy)
Main activities and responsibilities	Main task of this activity is to discuss with the Powertrain Control Module (PCM) Software supplier (Bosch) and with customers (System Engineers) in order to collect **requirements** about **electrical/functional diagnosis**, being involved in their **design**, **enable** the diagnosis in the PCM software and **check** the final result against requirements. These tasks are performed in collaboration with the Validation group, that refers about the issues found during the software tests and asks support in order to discuss with the **software supplier** (Bosch) and fix the issues against diagnosis requirements. These activities have been performed for B-Line and D-Line projects: FIAT Ducato SCR , Alfa Romeo Giulietta, FIAT Doblò, FIAT Ducato SCR (NAFTA).
Type of business or sector	Automotive field
Dates	**September 2013** - **January 2015**

Occupation or position held	**Validation & Software Engineer - HIL**
Name and address of employer	**Mediamotive** @ Fiat Chrysler Automobiles (Torino, Italy)
Main activities and responsibilities	Responsible for the validation of the Powertrain Control Module software for different FCA projects, such as Jeep Renegade, 500X and Giulietta. Management of **HIL model setup**, test report, checklist and **open point list** of the Powertrain Control Module Software Supplier (in particular Bosch). The main goal of the activity is to check that the requirements of the software implementation are met, beside this it was necessary to find all the errors and provide a possible solution in order to solve the problems highlighted, at least as a workaround.
Type of business or sector	Automotive field
Dates	**January 2012** - **September 2014**
Occupation or position held	**PhD student**
Name and address of employer	Politecnico di Torino - Corso Duca degli Abruzzi, 24 (Torino, Italy)
Main activities and responsibilities	Researching and development in Mechatronics field in order to improve my knowledge regarding engineering in general, but in particular in model based activity, in new control techniques, in robotics, in electric/hybrid traction and electro-hydrostatic field
Type of business or sector	Mechatronics field

Dates	**November 2011** - **September 2013**
Occupation or position held	**Control System Engineer**
Name and address of employer	AMET s.r.l. - Via Livorno, 60 (Torino, Italy)
Main activities and responsibilities	After graduation **AMET** offered me to continue our collaboration as **Control System Engineer**. During those months I had acquired a lot of experience and competences. – I completed the project that I followed as main subject for my master degree thesis : the STEPS project. I have completed both the setting of the control unit to allow the Rover control and the HIL bench to simulate its behaviour. During this project I have used the same tools that I have used during my stage, so **MATLAB**, **Simulink**, **RT-LAB**, **TruckSim**, **CoDeSys**, **CANalyzer**. – I concluded a project in office automation that allows to control comfort parameters (such as internal temp., air quality, light) using a web interface according to user needs and according to external weather conditions, to guarantee energy conservation. Thanks to this activity I improved my skills in **MATLAB**/**Simulink** but also **Linux**, because The MathWorks models/files have been converted using RTW and loaded on a controller that uses as O.S. **Ubuntu**. – I managed also an european research project regarding **Model Based Analysis and Testing** that allowed me to become familiar with SysML, DOORS (for requirements management) and Rhapsody. This experience was interesting from both a technical and a linguistic point of view, because it allowed me to interact with foreigner people and to travel in Europe for meetings. I developed also other small projects in control system development using National Instruments hardware and software. I worked also in testing I/O cards on RT-LAB target.
Type of business or sector	Engineering Consultant / Control System Engineer

Dates	**April 2011** - **November 2011**
Occupation or position held	**Senior year student**
Name and address of employer	AMET s.r.l. - Via Livorno, 60 (Torino, Italy)
Main activities and responsibilities	During my stage in **AMET srl** I became familiar with a lot of software: – **MATLAB** and **Simulink**: to modelling steering and powertrain systems of a Rover for space exploration (STEPS project). I created also a model of PMSM motors; – **CoDeSys**: by 3S, to build software for electronic control unit such as STW ESX-3XL; – **CANalyzer**: to manage CAN network; – **TruckSim**: by Mechanical Simulation, to simulate vehicle dynamics. – **RT-Lab**: by Opal-RT to allow real-time simulation of the whole HIL bench; – **LaTeX**: to produce master degree thesis.
Type of business or sector	Automotive/Simulation

Education and training

Dates	**September 2009** - **November 2011**
Title of qualification awarded	**Master degree in Mechatronics Engineering**
Name and type of organization providing education and training	Politecnico di Torino - Corso Duca degli Abruzzi, 24 (Torino, Italy)
Principal subjects/Occupational skills covered	Studies about mechanical, electronic and electrical issues. – Applied Mechanics, Vibration Control; – System analysis using Newton or Lagrange's methods or Bond Graph; – Robotics: direct and reverse kinematics, Eulero and RPY angles, Denavit-Hartenberg conventions; – Electric Machine (both in static and in dynamic field); – Electric Safety (direct/indirect contacts etc..); – Power Electronics: converters; – CAN networks and similar ones; – Transducers; – Real-time systems.
Master degree thesis	*"Design of control system software and real-time simulations of a rover for spacial exploration"* - Supervisors: *Prof. Marcello Chiaberge*, *Prof. Andrea Festini*, *Prof. Nicola Amati*
Level in national or international classification	**110** / **110 cum laude**
Dates	**September 2006** - **July 2009**
Title of qualification awarded	**Bachelors degree in Computer Science Engineering**
Name and type of organization providing education and training	Politecnico di Torino - Corso Duca degli Abruzzi, 24 (Torino, Italy)
Principal subjects/Occupational skills covered	– Improvement of mathematics, physics and logical skills; – General Electronics; – Studies about Operative Systems; – Languages C, Java e HTML, Assembler; – Studies about networks; – Knowledge about database management; – Automatic Control.
Bachelors degree thesis	*"Standard DDR and further development"* - Supervisor: *Prof. Maurizio Zamboni*
Level in national or international classification	**110** / **110**

Dates	**September 2001** - **July 2006**
Title of qualification awarded	**Scientific high school degree**
Name and type of organization providing education and training	ITAS Maria Pia - Via Galileo Galilei, 27 (Taranto, Italy)
Principal subjects/Occupational skills covered	Mathematics, physics, chemistry, computer science, but also biology and earth science. Moreover, huge knowledge of humanistic field, studying literature and philosophy. Regarding a linguistic point of view, good preparation in English language.
Level in national or international classification	**100** / **100**

Personal skills and competences

Mother tongue(s) **Italian**

Other language(s)

Self-assessment *European level*(*)	Understanding		Speaking		Writing
	Listening	Reading	Spoken interaction	Spoken production	
[1] **English**	C1 Proficient user	C1 Proficient user	C1 Proficient user	C1 Proficient user	C1 Proficient user
French	A2 Basic user	A1 Basic user	A1 Basic user	A1 Basic user	A1 Basic user
German	A1 Basic user	A1 Basic user	A1 Basic user	A1 Basic user	A1 Basic user

(*) *Common European Framework of Reference (CEF) level*

Social skills and competences

During my experience in Turin I lived into a college, so I lived in a **multicultural melting-pot** and I think that a multicultural environment could be an important source of personal and social growth. Speaking about **team-work**, I think that it is important and that allows anyone to improve his technical knowledge. I used to work as a team since high school period until now. I moved in the United Kingdom in order to expand my cognitive, cultural and personal horizons and because I like new challenges, as well.

Organisational skills and competences

I am a quite **organised** and **punctual** man that likes also to manage and coordinate **team-work** activities. Obviously, I think that one needs **good sense** in managing and coordinating activities, because one have to be always ready to listen to other people points of view, without **preconceptions**.

[1] IELTS with marks 6.5 (31 May 2008)

Technical skills and competences

Skills about **Windows**, **Linux**, **Microsoft Office**, **OpenOffice**, and just a little bit of Autocad.

- **MATLAB**, **Simulink**, **Stateflow**,
- **dSPACE Libraries (RTI MultiMessage - CAN / LIN ...)**;
- **dSPACE FlexRay Configuration Tool**;
- **ETAS INCA**;
- **Vector CANalyzer/CANoe**;
- **DIAnalyzer**;
- **dSPACE ControlDesk**;
- **Rational DOORS**;
- **Rational RTC**;
- **ASANA**;
- **Smartsheet**;
- **SAP**;
- **RADs**;
- **TortoiseSVN**;
- **Microsoft Project**;
- Languages **C**, **Java**, **HTML**: for general settings;
- **CoDeSys**: by 3S, to develop software for ECU;
- **TruckSim**: by Mechanical Simulation, to vehicle dynamics simulation.
- **RT-Lab**: Opal-RT, to allow real-time simulation of the HIL bench;
- **LabVIEW**, by NI: just a general knowledge.

Moreover I can use email, internet, LaTeX.