


## PERSONAL INFORMATION

## Francesco Mastrandrea

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 Skype antares\_10 | [Google Hangouts](#) francesco.mastrandrea

Sex Male | Date of birth 05/07/1974 | Nationality Italian

## JOB APPLIED FOR

## Chief Engineer

## WORK EXPERIENCE

27/03/2018–Present

**Electrification Skill Team Leader**

AVL srl, Reggio Emilia (Italy)

[www.avl.com](http://www.avl.com)

Responsible for all the AVL electrification activities in Italy.

Business or sector Automotive

08/2015–12/2017

**Chief Engineer**

Thunder Power Italy srl

Via del Gregge, 100,, 21015 Lonate Pozzolo (Italy)

[www.tpev.com](http://www.tpev.com)

-Responsible for the all the powetrain development.

-In charge for the Integration of Electric Machine, Controller, DC/DC, Charger;

-Responsible for the battery development and supplier selection;

-Requirements release for the HV at System and Component level;

-Development & Testing planning;

-Budget management;

-Tier 1 interface for the HV component Development & Validation.

-Two vehicle running prototypes built.

Business or sector Automotive

02/02/2015–31/07/2015

**Chief Engineer**

Alfazero S.p.A, Colle di Val D'Elsa (Italy)

[www.alfazero.com](http://www.alfazero.com)

Technical chief for the Automotive Business Unit.

Development of a full electric heavy quadricycle (L7e - 80V 12kWh) for urban commuting (car-sharing oriented).

Built two running prototypes; the battery pack was internally designed and developed (LG cells 18650, air forced cooled).

Business or sector Automotive

23/02/2014–31/12/2014

**Consultant**

Ferrari S.p.A,

Via Abetone Inferiore 4, Maranello (Mo), 41053 Maranello (MO) (Italy)

**www.ferrari.com**

- Vehicle Engineer for the Hybrid Hypercar "LaFerrari".
- Durability and Reliability test on proving grounds (Nardò and Balocco) and legal roads (>200.000 km).
- General hardware and software debugging, in particular, focused on the Hybrid powertrain system and components.

Business or sector Automotive

12/2012–15/02/2014

**R&D manager**

Tazzari GL, Imola (Italy)

**www.tazzari-zero.com**

R&D Manager (CTO).

Powertrain system development: efficiency, compactness, thermal management, optimal range, charging, gear ratio, etc..

Battery Pack development 80V - 16 kWh - 35 kW (LiFePO4 cells).

Test and debug plan and monitoring.

Management of the mechanical, electrical and electronic staff (6 employees)

Technical supervisor for the suppliers (specs requirements).

During this period we built many prototypes and got the M1 vehicle homologation. The vehicle is currently on the market.

Business or sector Automotive

10/2010–05/2011

**Sport Director**

Liberty Effenbert Racing, Praha (Czechia)

**http://www.liberty-racing.com/**

- Technical development supervisor.
- Team and rider management (personnel, budget, logistic).

Business or sector Motorsport

01/2010–12/2017

**Research and development manager, Co-Founder**

Privé srl, Perugia (Italy)

**www.privesrl.com**

Co-founder of Privé srl involved in the Sustainable Mobility and Hybrid/Electric Agriculture and Earth-Moving Machinery. Privé helps manufacturers to reinvent their business directing to new more environmental friendly technologies like Lithium Hybrid Powertrain.

We developed many iron lithium phosphate batteries (plastic can) for excavator and mini dumpers. One of this project is still in production.

Track Dumper

**http://www.youtube.com/watch?v=nSLw4PjTYc**

**http://www.youtube.com/watch?v=XrdKW7dh7Ow**

Business or sector Machinery

10/2007–02/2009

**Director and chief executive**

PSG-1 (San Marino)

Bike: Kawasaki ZX10-R

Riders: Makoto Tamada e Regis Laconi

Team Manager of the Official Kawasaki Worldwide Superbike team.

Budget: over 4.000.000€. Staff Management: over 30 employers.

Activities:

- CTO role.
- Management of the technical development, budgeting and partnership with suppliers (Brembo, Marelli Motorsport, Ohlins).
- The team introduced the first 12V lithium battery in the World Superbike Championship (A123).

**Business or sector** Motorsport

2006–2009 **Engineer, Founder**

Studio ReNova, Perugia (Italy)

Design of PV plants, Solar heating and CO2 reduction related.

Problem solving and customer related technical support for Continua-Light. Elctroluminescent panel development.

Teacher at **Apiform Consortium** on energy efficiency subject to improve the Small Medium Enterprise competitiveness.

**Business or sector** Renewable energy

01/2005–09/2005 **Track engineer**

Scuderia Caracchi - SC, Bologna (Italy)

Bike: Ducati 749 e 999. Main

Riders: Gianluca Nannelli, Fonsi Nieto.

Championship: World Superbike

Data acquisition analysis and set up (Suspension, Tyres, Fuel Ratio)

**Business or sector** Motorsport

01/2005–10/2005 **Track Engineer**

WTR Team, San Marino (San Marino)

Bike: Aprilia 125 GP

Rider: Dario Giuseppetti

Championship: 125 MotoGP

Data acquisition analysis and Motorcycle set up (Suspension, Tyres, A/F Ratio).

**Business or sector** Motorsport

01/2004–10/2004 **Track Engineer**

Gold Racing Team, Rimini (Italy)

Bike: Aprilia 125 GP

Riders: Michele Conti, Marketa Janakova

Championship: Italian Championship, European Championship

Data acquisition analysis and Motorcycle set up (Suspension, Tyres, A/F Ratio)

**Business or sector** Motorsport

10/2001–08/2002 **Computer assistant**

Ausl, Perugia (Italy)

<http://www.ausl2.umbria.it/mediacenter/FE/home.aspx>

IT department for civil service.

**Business or sector** Human health and social work activities

2000–2005 **Technical inspector**  
 A.C.I., C.S.A.I., Perugia (Italy)  
<http://www.csai.aci.it/>

Technical verification of Motorsport vehicles during race events mainly focused on safety and the performance limitation rules.

**Business or sector** Motorsport

EDUCATION AND TRAINING

10/2007–01/2010 **PHD in Industrial Engineering (Biomechanics area)** EQF level 8  
 Industrial Engineering Department, Faculty of Engineer, Univerity of Perugia, Perugia (Italy)  
 Thesis on “Active Anti-Shear Device for Knee Rehabilitation after ACL (Anterior Cruciate Ligaments) Surgery”

10/2006–10/2008 **Postgraduate fellowship** EQF level 8  
 Department of Industrial Engineering, College of Engineering, University of Perugia, Perugia (Italy)  
 Development of semiactive suspension with MR fluids for motorcycles.

10/2003–10/2005 **Postgraduate fellowship** EQF level 8  
 Department of Mechanical Engineer, College of Engineer, University of Perugia, Perugia (Italy)  
 Motorcycle Aerodynamic improvement by boundary layer control. Intensive Experimental activities on wind tunnel. Technical partnership with Aprilia and Piaggio to develop new solutions to improve comfort and performance.

10/1993–10/2002 **MSC in Mechanical Engineering** EQF level 7  
 University of Perugia, College of Engineering, Perugia (Italy)  
 Ground vehicles

09/1989–07/1993 **High School Diploma** EQF level 4  
 Liceo Classico A. Mariotti, Perugia (Italy)  
 Humanistic culture

PERSONAL SKILLS

**Mother tongue(s)** Italian

**Foreign language(s)**

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	C1	C1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user  
 Common European Framework of Reference for Languages

**Communication skills** Excellent communication skills: team spirit in a multicultural environment gained through my experience as team manager, sport director, researcher at university (seminars and lessons), technical fairs, international project (ESA, SBK), technical director for new product development,

journalist for engineering magazine, technical advisor for EV associations and blogs.

**Organisational / managerial skills**

Excellent managerial skills as team leader, project and team manager:  
 -in WSBK responsible for more than 30 employees  
 -experience in logistic  
 -used to coordinate people in stressful working experience  
 -managing a part of an international cluster for European Project (budget around €2.000.000).  
 Able to afford and accomplish complex projects autonomously full firming preconceived budget.

**Job-related skills**

Able to have an overall overview of developing many sides of a new prototype or products, managing and motivating a working team to reach in a short time the best results. Used to work under stressing condition to answer with rationality to the harsh and unexpected scenario. Excellent at risk analyst, management and strategy.

**Digital skills**

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem-solving
Proficient user	Proficient user	Independent user	Independent user	Proficient user

Digital skills - Self-assessment grid

Excellent knowledge of Windows OS.Excellent knowledge of Web Hosted and Cloud Applications as Google Suite (Drive, Calendar) and EvernoteGood knowledge of Office and Openoffice suite. Basic knowledge of 3D CAD, FEM and PLM/PDM.

**Driving licence**

B

**ADDITIONAL INFORMATION**

**Publications**

Mastrandrea F. Thesis "Aspetti sulla Sicurezza dei Motoveicoli." Facoltà di Ingegneria, Università degli Studi di Perugia, Perugia, 2002.

Fabbri L., Franceschini G., Mastrandrea F. Numerical Simulation of Motorcycles Crash Test pubblicata in "Biomechanics and sports", Courses and Lectures no. 473 - International Centre For Mechanical Sciences. SpringerWienNewYork, Udine, 2004; Pag. 147-160.

Malerba M, Mastrandrea F. Sistema di acquisizione dati della galleria del vento di Perugia, "Forum Tecnologico sulla Strumentazione Virtuale", NIDays2007, "Soluzioni e Applicazioni", VNU business publications, 2007, pag. 67-68. Disponibile in formato elettronico all'indirizzo <http://sine.ni.com/cs/app/doc/p/id/cs-10224>.

Mastrandrea F, Vinciotti W, Moraglia S. Confronto tecnico-economico tra soluzioni impiantistiche di tipo cogenerativo applicate ad un caso reale. In atti del 62° Congresso Nazionale ATI (Associazione Termotecnica Italiana), Salerno; 2007

Pandis C, Metastasio A, Mastrandrea F. Compound motor action potential (CMAP) of the ulnar nerve in altered gravity conditions, pubblicato su Erasmus Experiment Archive, archivio digitale ricerche dell'Agenzia Spaziale Europea (ESA), 2007. Disponibile in formato elettronico all'indirizzo: <http://eea.spaceflight.esa.int/?pg=exprec&id=9038&...>

Franceschini G, Mastrandrea F, Carnevali V. Fluidi magnetoreologici per lo sviluppo di una scarpa sportiva a smorzamento variabile. In corso di pubblicazione negli atti del 3° workshop: Problemi di vibrazioni nelle strutture civili e nelle costruzioni meccaniche, Perugia, 11-12/09/2008.

Franceschini G., Mastrandrea F., Carnevali V., Development of MR Fluid for Running Shoes with an Active Damping System, su International Journal of MEDICAL IMPLANTS and DEVICES, 4(1), 32, 2009.

Mastrandrea F., Franceschini G., Carnevali V., Kenny J.M., Iannoni A., Development of MR Fluid for Running Shoes with an Active Damping System. Atti del Congresso SBEC (the 25th Southern Biomedical Engineering Conference), Miami (USA), IFBM Proceedings (Vol.24), pag. 153-154,

Springer, 2009.

Mastrandrea F., Taticchi P., 2009, A Performance Measurement System for Racing Teams: an Exploratory Study in an Unresearched Context, in Business Performance Measurement and Management: New Contexts, Theme and Challenges; Springer, ISBN:978-3-642-04799-2

Mastrandrea F. Tesi di Dottorato su Active Anti-Shear Device for Knee Rehabilitation after ACL (Anterior Cruciate Ligaments) Surgery. Dipartimento di Ingegneria Industriale, Facoltà di Ingegneria, Università Degli Studi di Perugia, Perugia, 2010.

Franceschini G., Mastrandrea F., Camevali V., Benvenuti P., Biscarini A., A New Electromechanical Device for Minimization of the Knee Shear Joint Load in Leg Extension Equipment. Proceedings SBEC 2010 (the 26th Southern Biomedical Engineering Conference), Collage Park, Maryland (USA), 30/04-01/05/2010.

Vinciotti W., Mastrandrea F., Caponi M., Blois C., Blois L., Logozzo S., La Geotermia moderna: studio e brevetto di una nuova tecnologia di sfruttamento delle risorse a bassa entalpia. Atti del VIII Convegno Nazionale dei Giovani Ricercatori di Geologia Applicata , Perugia, 18-19 febbraio 2010.

Biscarini A., Benvenuti P., Botti F., Mastrandrea F., Zanuso S., Modelling the joint torques and loadings during squatting at the Smith machine. Journal of Sports Sciences, 1466-447X, Volume 29, Issue 5, First published 2011, Pages 457 – 469

Bolovinou, A.; Bakas, I.; Amditis, A.; Mastrandrea, F.; Vinciotti, W., "Online prediction of an electric vehicle remaining range based on regression analysis," Electric Vehicle Conference (IEVC), 2014 IEEE International, vol., no., pp.1,8, 17-19 Dec. 2014

#### Presentations

Speaker at ESARS 2012 Conference in Bologna 16-18 Ottobre, "Powertrain Technology for a New Generation of Earth Moving Equipment".

Speaker at SBEC Southern Biomedical Engineering Conference, Miami (USA), 15-17 Maggio 2009, "Development of MR Fluid for Running Shoes with an Active Damping System"

Speaker at SIB forum, Rimini, 11-12 Ottobre 2007, "L.E.C caratteristiche e potenzialità applicative".

#### Projects

Experiment participation in low gravity condition to detect nervous system adaptation [47th ESA Parabolic Flight Campaign](#).

Participation with Privé srl at "Mobility 2.0", 7FP European Project "ICT for Green Cars".

Prototype engineering of a full electric excavator 22q.

Production engineering of full electric lithium minidumper.

Prototype engineering of a full electric top performance spyder.

#### Memberships

CTO of EVnow! No-profit Foundation that promotes Sustainable Mobility and Electric Vehicles in every form.

Honorary Professor of the NRAcademy School that helps talented riders to increase their performance and to achieve superior results in their career.