



Curriculum Vitae



Personal information

First name / Surname **Gianluca Pepe**
E-mail gianluca.pepe@uniroma1.it
Nationality Italian
Gender Male

Desired employment / Occupational field

Mechanical engineering research

Education and training

Dates	2014 - 2016
Principal subjects/occupational skills covered	Researcher of the Sapienza University of Rome. Winner of "Assegno di Ricerca" in "Study of innovative systems for sensorization and control of mechanical systems." (2014-16) Teaching position of Vehicle Systems Dynamics Management of the Sapienza laboratory of Vehicle Dynamic and Mechatronics of Cisterna di Latina. Responsible for project activities with private companies in the context of the automotive, in particular: <ul style="list-style-type: none">- Accident detection by suitable sensors (OCTO Telematics - Company)- Study of the drive style behaviour by accelerometer sensors (OCTO Telematics - Company)- New suspension design patented: developing innovative suspension installed on BMW Serie1- Grip tire detection and analysis patented: developing experimental setup on innovative technology platform
Dates	2010 – 2013
Title of qualification awarded	PhD student in Theoretical and Applied Mechanics in Mechanical Engineering at "La Sapienza" University of Rome.

Principal subjects/occupational skills covered	<p>Analysis and prototyping of innovative semi-active suspension for mechatronics systems and vehicles</p> <p>Analysis and development of new control logic via the calculus of variation approach and inequality energy rate control for semi-active systems.</p> <p>Programming and implementation of electronic hardware and sensors for monitoring and control dynamic systems.</p> <p>Analysis, design and prototyping of an innovative high-speed marine vehicle on the project "SeaLab" http://w3.uniroma1.it/sealab/</p> <p>SeaLab Research lines:</p> <ul style="list-style-type: none"> · Architectural design of the new vessel equipped with a smart suspension system · Semi active suspension system controlled · Innovative systems for vehicle control and stability · Anti-shock and vibration control systems · Propulsion systems (hydro jets & micro-turbines jets) · Smart suspension systems of boarded masses · FBG monitoring and self-diagnosis of structures · Composite materials based on natural fibres with the embedding of FBG sensors
Name and type of organisation providing education and training	Faculty of Engineering "La Sapienza" University of Rome, 18 via Eudossiana, 00184, Rome
Dates	2011
Title of qualification awarded	"Esame di Stato". Enabled to the profession of Engineer by passing the Italian State Exam for the industrial sector.
Principal subjects/occupational skills covered	Engineer Register "Ordine degli Ingegneri" of Rome, Section A Industrial
Name and type of organisation providing education and training	Faculty of Engineering "La Sapienza" University of Rome, 18 via Eudossiana, 00184, Rome
Dates	2006 – 2010
Title of qualification awarded	"Laurea Specialistica" in Mechanical Engineering with specialization in mechanical constructions: Italian degree similar to a master's degree
Name and type of organisation providing education and training	Faculty of Engineering "La Sapienza" University of Rome, 18 via Eudossiana, 00184, Rome
Dates	2001 – 2006
Title of qualification awarded	"Laurea" in Mechanical Engineering: Italian degree similar to a bachelor's degree
Name and type of organisation providing education and training	Faculty of Engineering "La Sapienza" University of Rome, 18 via Eudossiana, 00184, Rome
Dates	1995 – 2001
Title of qualification awarded	"Maturità Scientifica": similar to Leaving Certificate in Scientific Studies.
Name and type of organisation providing education and training	Liceo Scientifico <i>Istituto Montessori</i> of Rome
Advanced training courses	<p>Summer school course for doctoral candidates on: <i>"Applied Research: from university to industry"</i> Santander, Spain, 2013</p> <p>Course for doctoral candidates on: <i>"Vehicle Dynamics Control"</i>, SIDRA 2013, Bertinoro, Italy,</p>

Conferences organized

List of publications and patents

Master RED Research enhancement & development SSAS (School for Advanced Studies of Sapienza) on "Management, development and transfer of research results" 2013, Rome, Italy.

Course for doctoral candidates on: "Active and Passive Vibration Control of Structures", CISM 2013, Udine, Italy

SEALAB 2012, Rome, Italy "High-Tech and new strategies of cooperation between universities and business" – Coordinator and Author

G. Pepe and A. Carcaterra, "VFC – Variational Feedback Controller and its application to semi-active suspensions," *Mechanical Systems and Signal Processing*, 2016.

A. Carcaterra and G. Pepe, "Variational Control Approach to Energy Extraction from a Fluid Flow " presented at the Offshore Wind and other marine renewable Energies in Mediterranean and European Seas- OWEMES 8th Ed, 2015.

N. Roveri, G. Pepe, and A. Carcaterra, "OPTYRE – A new technology for tire monitoring: Evidence of contact patch phenomena," *Mechanical Systems and Signal Processing*, 2015.

G. Pepe, I. Giorgio, A. Carcaterra, D. Del Vescovo, and A. Sestieri, " Semiactive vibration control via VFC-Variational Feedback by piezoelectric actuation," in *NOVEM2015*, 2015.

G. Pepe and A. Carcaterra, "VFC - Variational Feedback Control applied to semi-active car suspensions," in *NOVEM2015*, 2015.

G. Pepe and A. Carcaterra, "A new semi-active variational based damping control," in *MESA 2014 - 10th IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications, Conference Proceedings*, 2014.

G. Pepe, A. Carcaterra, I. Giorgio, and D. Del Vescovo, "Variational Feedback Control for a nonlinear beam under an earthquake excitation," *Mathematics and Mechanics of Solids*, 2014.

A. Carcaterra, N. Roveri, G. Pepe, "Fractional dissipation generated by hidden wave-fields" *Mathematics and Mechanics of Solids*, 2014

G. Pepe, R. Rojas, A. Carcaterra, "Semi-active damping by variational control algorithms and energy rate inequalities" *Eurodyn*, Porto, Portugal 2014

N. Roveri, G. Pepe, A. Carcaterra, "Hilbert-Huang analysis of semi-active controllers" *Eurodyn*, Porto, Portugal 2014

G. Pepe, A. Carcaterra "Experimental results of real car suspensions using new damper controllers" *Eurodyn*, Porto, Portugal 2014

A. Carcaterra, G. Pepe, "Architecture of a new semi-active suspension system and associated control logic" Patent number: RM2014A000040, 2014

A. Calabria, R. Capata, M. Di Veroli, G. Pepe, "Testing of the ultra-micro gas turbine devices (1 – 10 kw) for portable power generation at UDR1: the test bench facility and first tests results", *Scientific Research, Engineering*, 2013

G. Pepe, A. Carcaterra, "High speed fluttering skids with elastic suspensions", *NAV2012*, Napoli, Italy, 2012

G. Pepe, A. Carcaterra, "Fluttering skid phenomena in high speed marine vehicles", *ISMA2012*,

Leuven, Belgium, 2012

A. Carcaterra, A. Scorrano, G. Pepe, A. Sestieri, "SEALAB: Aero-hydro mechanics of an extreme-speed marine vehicle", AIMETA, Bologna, Italy, 2011

G. Pepe, A. Carcaterra, A. Scorrano, A. Sestieri, "Stability analysis of a three-wings high-speed craft", AIMETA, Bologna, Italy, 2011

A. Carcaterra, A. Scorrano, G. Pepe, "SEALAB: Aero-hydro mechanics of a three-wings jumping vehicle", International Symposium on High Speed Marine Vehicles, Napoli, Italy, 2011

Personal skills and competence

Self-assessment

European level (*)

Language

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
B2	English	B2	English	B2	English	B2	English	B2	English

(*) [Common European Framework of Reference for Languages](#)

Social skills and competences

Good teamwork and good communication skills.

Participation to the course RYLA, "The leadership of the newcomer", Project Manager Dott.sa E. Vernoni - Rotary Club of West Rome

Organisational skills and competences

Good attitude to the management of projects and groups.

- Management of the project SEALAB <http://w3.uniroma1.it/sealab/>
- Seminars incurred during the course of vehicle dynamics and laboratory vehicle dynamics.
- Correlator some graduate thesis
- Sailing instructor

Computer skills and competences

Good knowledge of programming languages: Matlab™, Arduino™, Mathematica™, Fortran™, Pascal™, Visual Basic™

Good knowledge of the following programs of design: Rhinoceros™, Vray™, AutoCAD™, SolidWorks™,

Good knowledge of FEM analysis: ANSYS™

Excellent knowledge of Office™ tools (Word™, Excel™ and PowerPoint™)

Good knowledge of graphic design applications PhotoShop™

Artistic skills and competences

Photography, Classical guitar

Other skills and competences

Model aircraft and drones; Electronic prototyping with Arduino™; Sports: sailing and free climbing

Driving licence

Driving license A and B; Boat license without limits

Date 26/02/2016