

Massimiliano Corrado Mattone

Mobile: [REDACTED]

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BORN IN : Torino, Italy, 30/08/1973

NATIONALITY : Italian

CURRENT POSITION

Logistic Manager at "Department of Mechanical and Aerospace Engineer" of Politecnico di Torino.

Laboratory Manager at "LAQ AERMECH Aeromechanical and Structural Systems", "Aerospace Structures Laboratory" and "Aerospace System Laboratory" of the "Department of Mechanical and Aerospace Engineer", Politecnico di Torino.

Referent for the safety on the work site at the "Department of Mechanical and Aerospace Engineer" of Politecnico di Torino.

EDUCATION

1999:	Master Degree in Aerospace Engineering at Politecnico di Torino. Thesis: "Dynamic behaviour of rotating systems", in collaboration with: "Fiat Avio", Torino
2004:	PhD in Aerospace Engineering. Thesis: "Updating of Finite Element Models"

SPOKEN LANGUAGES

Mother tongue: Italian

Other languages: English : (PET Certificate - 2001)

TECHNICAL SKILLS

- Assessment of structural behaviour of components and systems with numerical simulations (especially Finite Elements)
- 3D CAD modelling.
- Multidisciplinary optimisation.
- Experimental mechanics: measure of deformations and strains in static and dynamic conditions.

- Software skills: MSC Patran, Nastran (good); Abaqus CAE, Abaqus (basic); Ansys (basic); Hypercrash-Radioss-Hipermesh (Basic); Matlab (good); Unigraphics (basic); Solidworks (basic); Isight (good); Femtools (basic); HBM Catman Professional (good); LMS Testlab (good); NI Labview (basic).
- Other IT skills: Microsoft Windows, Unix/Linux systems, Microsoft Office, Latex, Python

PROFESSIONAL ACTIVITIES

2003: Research Grant at the Department of Aerospace engineering of Politecnico di Torino concerning: "Advanced Methodologies for the development of aero-engine components".

2004-2006: Research Grant at the Department of Aerospace engineering of Politecnico di Torino concerning: "Design of aerospace structures: CAD-CAE integration" and "Laboratory tests of aerospace materials and components".

2006(September): Technician at "LAQ AERMECH Aeromechanical and structural systems"

2007 (July-August): Visiting Researcher at "National Institute of Aerospace", Langley VA USA

From 2000 until 2015 tutor for many university courses:

- "Computer Aided Design of Aerospace Structures"; Diploma Universitario in Ingegneria Aerospaziale of Politecnico di Torino.
- "Aircraft constructions" ; master Degree of Aerospace engineering of Politecnico di Torino.
- "Aerospace Structures" ; bachelor degree in Aerospace engineering at Politecnico di Torino.
- "Introduction to mechanical systems and computer aided engineering"; degree in "Industrial Production" of Politecnico di Torino.
- "Structural Dynamics of Aerospace Structures"; master degree in Aerospace Engineering of Politecnico di Torino.
- "Theoretical and experimental analysis of aerospace structures"; master degree in Aerospace Engineering of Politecnico di Torino.
- "Applied optics", PhD course in Physics at Politecnico di Torino.

Co-tutor of several BC, MSC and PHD Thesis

RESERCH ACTIVITIES

- Comparison of methodologies for finite elements models updating.
- Optical methods for experimental evaluation of displacements and strains.
- CAD-CAE integration
- Multidisciplinary optimisation
- Experimental mechanics.
- Numerical simulations of impacts phenomena.

- Numerical and experimental studies of real time shape sensing techniques (in collaboration with dr. A. Tessler, NASA Langley Research Centre).

PARTICIPATION TO NATIONAL AND INTERNATIONAL RESEARCH PROGRAMS

Programs funded by “Regione Piemonte”:

- “Bando regionale” E57 (2005-2007): “Multiobjective and multidisciplinary optimisation of aerospace systems”.
- “Corale” 2007-2010: “Development of an integrated simulation system for the collaborative design of a low environment impact aeroengine”;
- “Great 2020” (2009-2011): Green Engine for the Air Transport:

Programs funded by “Ministry of Education, Universities and Research” (Italy):

- Prin 2002: “ New Technologies for medium and big sized aircraft fuselage”.
- Prin 2004: “ Whole carbon fibre fuselage for medium and big sized aircrafts”.
- Prin 2007: “ Development and validation of a new methodology for structural health monitoring of multilayered panels”.

Programs funded by EU:

- Vivace (2004-2007): Value Improvement through a Virtual Aerospace Collaborative Enterprise
- Dream: Validation of Radical Engine Architecture Systems
- Crescendo (2009-2012): Collaborative and Robust Engineering using Simulation Capability Enabling Next Design Optimisation
- CLEAN SKY - GRA (Green Regional Aircraft)

Participation to research activities founded by private companies

- “Primary structure of a spacecraft: preliminary design”, (mechatronic systemtechnik gmbh; Austria)
 - “ Numerical and experimental methodologies for simulation of impact phenomena applied to turbine engine blade containment”. (Avio, Italy)
 - “Spall-test for composite tissues certification” (Università of Cassino and Aerosekur, Italy)
 - Experimental Characterisation of ceramic composites materials subjected to “fod” (foreign object damage), (Avio, Italy)
 - “Development of a procedure for the evaluation of the acoustic effect due to structural modification on diesel engine components”; (GM Europe , Torino plant)
 - “Stress intensity factors and omogeneisation thecniques for aerospace components”; (Avio, Italy)
 - “Structural Analysis of counter rotating turbine.”, (Avio, Italy)
 - “Spacecraft Landing Legs Stochastic Analysis” ; (Thales Alenia Space, Italy)
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Torino, 20 marzo 2019 ;

