

curriculum vitae



Personal information

Surname/ First name

Marco Tozzi

Address

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Nationality

Italy

Date of birth

11th December 1980

Work experience

Dates

February 2011 – Present

Occupation or position held

STRESS ENGINEER

Main activities and responsibilities

Finite Element Modeling of Aerospace structures, linear and non linear static analysis, linear and non linear buckling analysis, frequency response, random vibration, modal analysis, aeroelastic analysis and optimization.

External consultant at **BUCHER Gmbh** (Switzerland):

- Static structural test planning of AIRBUS and BOEING galleys following FAR/JAR regulations;
- test lead for static structural tests and cooling tests of AIRBUS and BOEING galleys following FAR/JAR regulations.
- fem modeling of AIRBUS and BOEING galleys; (HYPERMESH, PATRAN, CATIAv5)
- linear and non-linear static analysis for the interface load and stress recovery; (NASTRAN)
- linear and non-linear static analysis for the fittings; (NASTRAN)
- Post processing and final reporting. (PATRAN, HYPERVIEW, EXCEL)

Thales Alenia Space: COSMO 2nd Generation

- fem modelling, fem validity checks and detailed analysis (static, modal, random) for CSG antennas. (HYPERMESH, NASTRAN, PATRAN)

Mitsubishi Aircraft Corporation

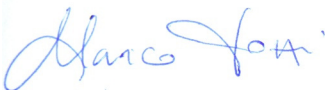
- Fem Modeling and Buckling analysis of the frames and beams sections for the cargo, passenger and service doors (HYPERMESH, NASTRAN)
- Postprocessing and reporting with massive use of VBA for EXCEL

<p>Name and address of employer Type of business or sector</p> <p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p>	<p>A2WIND</p> <ul style="list-style-type: none"> • Optimization of composite rotorblade. (ALTAIR PRODUCTS) <p>P3</p> <ul style="list-style-type: none"> • Airbus A330 – A340 fuselage stringers and crossbeams fatigue and crack propagation analysis and reporting. • Kt computation in Stabilized and Un-Stabilized cases (ISSY and SAFE output management, VBA Excel, hand calculation) <p>AIRWORKS S.R.L.</p> <p>Multidisciplinary consultancy for aerospace, mechanical and industrial engineering</p> <p>October 2009 – February 2011</p> <p>SYSTEM ANALYST AND SOFTWARE ENGINEER</p> <p>External consultant at THALES ALENIA SPACE</p> <ul style="list-style-type: none"> • Preliminary analysis for the development of communication satellite payload simulator within Matlab-Simulink environment. <p>External consultant at SELEX SISTEMI INTEGRATI</p> <ul style="list-style-type: none"> • Development, testing and documentation for Air Traffic Control System Software. <p>External consultant at SELEX GALILEO as algorithm analyst and software engineer for the development of software for the armament system control of Augusta A129 Mangusta attack helicopter.</p> <ul style="list-style-type: none"> • Development of the armament guidance and control system simulator within Simulink-Matlab environment • Analysis and development of algorithms and software for the missiles guidance by means the pilot's helmet position. (Matlab – C) • Analysis and development of algorithms and software for the targets tracking and engagement. (Matlab – C) • Analysis and development of algorithms and software for the filtering and management of GPS data. (Matlab – C - ADA)
<p>Name and address of employer Type of business or sector</p> <p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p>	<p>NEXT INGEGNERIA DEI SISTEMI S.P.A.</p> <p>IT systems and services</p> <p>March 2009 – October 2010</p> <p>VOLUNTARY RESEARCHER</p> <p>Voluntary research work at Sapienza University of Rome in the field of Multidisciplinary Design Optimization of Aerospace Structures. (See Referees and Publications)</p> <p>SAPIENZA UNIVERSITY OF ROME</p> <p>Scientific Research</p>
<p>Education and training</p> <p>Dates</p> <p>Title of qualification awarded</p> <p>Dates</p> <p>Title of qualification awarded</p> <p>Title of thesis</p>	<p>February 2010</p> <p>Success in the Italian exam of State for the practice of the profession of Engineer</p> <p>March 2006 – March 2009</p> <p>Master Degree in Aeronautical Engineering at SAPIENZA University of Rome.</p> <p>Title of thesis, "Multidisciplinary design optimization of wing structures"</p> <p>Final Grade, 108/110.</p> <p><i>"Multidisciplinary design optimization of wing structures"</i></p> <p>This work concern with the development of a software for the multidisciplinary optimization</p>

Principal subjects/Occupational skills covered	<p>of wing structures. The code implement mathematic models for the non-linear constrained optimization problems, and find the optimum set of design variables which maximizes an objective function by satisfying several constraints on the structural response, on the mechanics of flight, stability and control and on the aeroelastic behaviour.</p>
Dates Title of qualification awarded	<p>March 2006 – March 2009 Bachelor Degree in Aerospace Engineering at SAPIENZA University of Rome.</p>
Title of Thesis	<p>Title of thesis, "Multidisciplinary design optimization of wing structures" Final Grade, 100/110. <i>"Theoretical study, numerical analysis and experimental observations on fatigue crack propagation in an aluminium beam."</i></p>
Dates	<p>2011 Altair Training Course March/2011: HyperMesh MOD1 training course This is a course for using HyperMesh to create and set up finite element models for analysis. Altair Training Course March /2011: HyperView training course This is an introductory course for using HyperView to post-process finite element solver results and to analyze test lab engineering data. Altair Training Course May/2011: Optistruct training course This is a course teaching the use of OptiStruct for optimization in the product design process, with focus on understanding how optimization can help on improve the product structural performance. Students will learn optimization concepts and do hands-on exercises for topology, topography, size, and shape optimizations. Altair Training Course November/2011: HyperMesh MOD2 training course This is a course for using the advanced features of HyperMesh to create and set up finite element models for analysis.</p>
Personal skills and competences	
Technical skills and competences	<p>The described curriculum of study provides me the requested competences for the practise of the profession of Engineer in the aeronautic and space field. Engineer specialist in the numeric-theoretic analysis of structure. I have also competences in the study of aeroelastic phenomenon, static and dynamic analysis.</p>
Computer skills and competences	<p>Operating systems: Windows 9x, NT, XP, Vista; Linux. Microsoft Office Applications: Power Point, Access, Excel, Word FEM Software: Adina, Nastran, Patran, Hypermesh, Radioss, Optistruct CAD Softwares: AutoCAD, Catia Scientific Softwares: Matlab, Simulink,</p>

<p>Artistic skills and competences</p> <p>Other skills and competences</p> <p>Additional information</p>	<p>Programming languages: Fortran, C, C++, ADA, VBA for Excel Other Software: Latex</p> <p>I cultivate my passion for music playing piano with great interest and passion.</p> <p>Very sociable, with strong capabilities for interaction and collaboration in a team, whose priority on the job is the sharing of resources and knowledge in order to achieve the highest standards of quality. Hard worker, open minded and great sense of responsibility, who does not suffer for stress or pressure and, on the contrary, finds in the difficulties a challenge.</p> <p>Publications: V. Capannolo, F. Mastroddi, and M. Tozzi, "On the Use of Geometry Design Variables in the MDO Analysis of Wing Structures with Aeroelastic Constraints on Stability and Response.", Aerospace Science and Technology 15 (2011) 196–206</p> <p>V. Capannolo, F. Mastroddi and M. Tozzi: "An MDO approach for the preliminary design of wing structures with aeroelastic constraints on worst-gust response", 8th World Congress on Structural and Multidisciplinary Optimization (WCSMO8), LNEC (National Laboratory for Civil Engineering), Lisboa, Portugal on June 1- 5, 2009</p> <p>Referee: Franco Mastroddi, Associate Professor in Aeroelasticity and Structural Dynamics at the University of Rome "La Sapienza". Dipartimento di Ingegneria Aerospaziale e Astronautica Page 2/2 – Curriculum vitae of Marco Tozzi Sapienza - UNIVERSITA' DI ROMA Via Eudossiana, 16 00184 - ROMA</p> <hr/> <p>tel. +39 - 06 - 44585945 fax. +39 - 06 – 44585670 e-mail franco.mastroddi@uniroma1.it http://www.diaa.uniroma1.it/docenti/f.mastroddi</p>
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Rome, 19th November 2011


(SIGNATURE – MARCO TOZZI)