Address: Corso Campano, 7 – Giugliano in Campania (NA)
– 80014 – ITALY

Mobile: +39.333.5469769
E-mail: and.esposito@virgilio.it

Place and Date of birth: Naples, 18 March 1977
Nationality: Italian
Marital status: single
Driving license: B
LinkedIn: http://it.linkedin.com/pub/andrea-esposito/25/b84/538/en

Andrea Esposito

Work experiences	

➤ -----please see below (**Memberships, Awards and References**) for a full list of current Membership activities-----

➤ [From March 2012 – Current] **Managing Director, Technical & Programmes Director** at SMART Solutions Srl, a company working in the **Space, Defence, Aeronautics and High Tech sectors. SMART Solutions is a Member of ASASpazio (http://www.asaspazio.it/), the most important Space Industry Association in Italy**, **Member of SPIN-IT (http://www.spin-it.eu/), the most important Space Research Association in Italy and Member of SERIT (Security Research in ITaly) (http://www.piattaformaserit.it/), the most important Security Association in Italy**.
Consulting Services provided: Engineering Services (Analysis & Design, Systems Engineering, System Modelling & Simulation, Performance Analysis, Test, Verification & Validation, Configuration Management); Technology Consulting; Management Consulting: Technical Management, Engineering & Development Management, Project Management, Risk Management, Quality Management, Product & Quality Assurance, Programmes Management & Supply Chain Management, Continuous Improvement, Operations Management, General Management, Sales & Marketing Management, Bid & Proposal Management, Contract Management. Research, Innovation and Technology Transfer Projects/Programmes. Bid/Proposal and Project Management activities managing European Consortia (European Companies, Universities and Research Centres) working on European Collaborative Projects. Coordination and supervision of Programme Reviews and Technical Reviews. Key Interface to the external world (Customers and Stakeholders, Subcontractors), interfacing directly with Top Management. Job Meetings, Conferences, Workshops and Seminars with Customers, Stakeholders and Subcontractors. Interviews for recruitment of new employees and organisation of courses for their training.

➤ [September – October 2012 at the IAC (International Astronautical Congress) 2012] **1) National Delegate for AIDAA (Italian Association for Aeronautics and Astronautics); 2) Group Leader (selected by IAF) for the IPMC YP Workshop; 3) Chairing Technical Sessions for the Space Committees. AIDAA is a Member of IAF (International Astronautical Federation), ICAS (International Council of the Aeronautical Sciences) and CEAS (Council of European Aerospace Societies)**.

➤ [April 2011 – March 2012] **Consultant for various companies in the Space, Defence, Aeronautics and High Tech sectors**.
Consulting Services provided: Engineering Services (Analysis & Design, Systems Engineering, System Modelling & Simulation, Performance Analysis, Test, Verification & Validation, Configuration Management); Technology Consulting; Management Consulting: Technical Management, Engineering & Development Management, Project Management, Risk Management, Quality Management, Product & Quality Assurance, Programmes Management & Supply Chain Management, Continuous Improvement, Operations Management, General Management, Sales & Marketing Management, Bid & Proposal Management, Contract Management. Research, Innovation and Technology Transfer Projects/Programmes. Bid/Proposal and Project Management activities managing European Consortia (European Companies, Universities and Research Centres) working on European Collaborative Projects. Coordination and supervision of Programme Reviews and Technical Reviews. Key Interface to the external world (Customers and Stakeholders, Subcontractors), interfacing directly with Top Management. Job Meetings, Conferences, Workshops and Seminars with Customers, Stakeholders and Subcontractors. Interviews for recruitment of new employees and organisation of courses for their training.

➤ [March 2010 – April 2011] **General Manager** (reporting directly to the President and CEO) at ASTRO Industry, a company working in the **Space, Defence, Aeronautics and High Tech sectors**.
Duties and responsibilities: General Management coordinating and supervising all Company Functions and **acting also as Head of Sales & Programmes Management, Head of Technical Management (Engineering & Development, Research & Technology, Configuration Management), Head of Operations, Head of Procurement**

& Supply Chain Management. Coordination and supervision of Programme Reviews and Technical Reviews. Key Interface to the external world (Customers and Stakeholders, Subcontractors), interfacing directly with senior management. Job Meetings, Conferences, Workshops and Seminars with Customers, Stakeholders and Subcontractors. Interviews for recruitment of new employees and organisation of courses for their training.

➢ [July 2009 – February 2010] **Consultant** for various companies in the Space, Defence, Aeronautics and High Tech sectors.
Consulting Services provided: Engineering Services (Analysis & Design, Systems Engineering, System Modelling & Simulation, Performance Analysis, Test, Verification & Validation, Configuration Management); Technology Consulting; Management Consulting: Technical Management, Engineering & Development Management, Project Management, Risk Management, Quality Management, Product & Quality Assurance, Programmes Management & Supply Chain Management, Continuous Improvement, Operations Management, General Management, Sales & Marketing Management, Bid & Proposal Management, Contract Management. Research, Innovation and Technology Transfer Projects/Programmes. Bid/Proposal and Project Management activities managing European Consortia (European Companies, Universities and Research Centres) working on European Collaborative Projects. Coordination and supervision of Programme Reviews and Technical Reviews. Key Interface to the external world (Customers and Stakeholders, Subcontractors), interfacing directly with Top Management. Job Meetings, Conferences, Workshops and Seminars with Customers, Stakeholders and Subcontractors. Interviews for recruitment of new employees and organisation of courses for their training.

➢ [03 November 2008 – 30 June 2009] **Operations Manager** (reporting directly to the President and the General Manager) at ABETE, a company working on many Programmes with the main customers in the **Aerospace and Defence sector**.
Duties and responsibilities: Operations Management (managing 75 internal resources plus Subcontractors worldwide) acting also as Head of Sales & Programmes Management, Head of Technical Management (Engineering & Development, Research & Technology, Configuration Management), Head of Procurement & Supply Chain Management. Coordination and supervision of Programme Reviews and Technical Reviews. Key Interface to the external world (Customers and Stakeholders, Subcontractors), interfacing directly with senior management. Job Meetings, Conferences, Workshops and Seminars with Customers, Stakeholders and Subcontractors. Business Plan and Purchasing of Equipment and Machines to setup a new plant. Interviews for recruitment of new employees and organisation of courses for their training.

➢ [16 July 2007 – 31 October 2008] **Programmes Manager** (reporting to the Engineering & Development Director) at ATR Aerospace (ATR Group) for many Programmes: *"B787 Dreamliner"* **(Boeing/Alenia)**, *"M346"* **(Aermacchi)**, *"Falcon 900 EX"* **(Dassault Aviation/Aermacchi)**, *"Falcon 7X"* **(Dassault Aviation/Aermacchi)**, *"MD11 Spares"* **(Boeing California)**, *"Skycar"* **(OMA Sud)**, *"Antenna Reflector for Ariane 5"* **(EADS Space Transportation/Indra Espacio)**, *"PIA"* **(FIREMA)**.
Duties and responsibilities: **Bid & Proposal Management, Risk Management, Programmes and Supply Chain Management, Technical and Quality Management, Systems Engineering Management, Configuration Management and Change Management, Human Resources coordination, supervision and management, Coordination and supervision of Programme Reviews and Technical Reviews. Key Interface to the external world (Customers and Stakeholders, Subcontractors), interfacing directly with senior management. Job Meetings, Conferences, Workshops and Seminars with Customers, Stakeholders and Subcontractors, Business Plan and Purchasing of Equipment and Machines to setup a new plant**.

➢ [02 October 2006 – 06 July 2007] **Programme Manager** for the **Boeing Programme** *"B787 Dreamliner"* **(B787 Horizontal Stabilizer and Fuselage section 44 and 46)** and also for other projects with an Engineering Consulting Company (Engitech, reporting directly to the Managing Director and General Manager) serving clients in the **Aerospace, Automotive and Industrial fields**.
Duties and responsibilities: Bid & Proposal Management, Risk Management, Programme and Supply Chain Management, Technical and Quality Management, Systems Engineering Management, Configuration Management and Change Management, Human Resources coordination, supervision and management (15 resources from my company working in different functions in Alenia plus Alenia's employees involved in the Projects), job meetings and teleconferences with Alenia and Boeing interfacing directly with Senior Management, support to the CEO, interviews for recruitment of new employees (when needed) and training courses to properly introduce them to the activities and projects.

➢ [01 February 2006 – 30 September 2006] **R&D activity with the awarding of a Fellowship Grant following the winning of a National Competition** at the **National Research Council – Institute of Research on Intelligent Systems for Automation – Genoa Research Centre** on the subject "Development of Project Initiatives in the frame of Computational Dynamic Simulation to determine and activate new regional policy tools through which promote economical and competitive growth of enterprises, increasing their innovation ability intended as creation of economic value from knowledge". This activity was in the frame of the **Programme funded by the European Commission** *"PRAI-FESR Regione Liguria"* **for the development in Innovation for Enterprises through cooperation among Research Institutes, Universities and Enterprises**.
Duties and responsibilities: Project Management and Systems Engineering, System Modelling & Simulation, Performance Analysis, Research, Analysis, Mathematical Modelling, Algorithms Development, Computational Dynamic Simulation, Control (both Linear and Non Linear Control) and Optimization of dynamic processes which characterize Complex Systems operation for Industrial Automation, by the use of Matlab/Simulink, C

and **C++**. Furthermore coordination of the activities in collaboration between CNR (National Research Council), "Ansaldo Energia" and University of Genoa for an Applied Research of great interest to Ansaldo Energia.
Note: <u>assessments concerning the work performed and the results achieved are available on request</u>.

➤ [02 May 2005 – 30 October 2005] **<u>R&D activity with the awarding of a Grant</u>** performed in the frame of an internship at **Alenia Spazio (then Alcatel Alenia Space, now Thales Alenia Space) – Turin – Space Transportation Division**, concerning **Project Management and Systems Engineering, System Modelling & Simulation, Performance Analysis, Test, Verification & Validation, Mechanical Design and Structural Analysis (Finite Element Analysis) of new trans-atmospheric hypersonic vehicles by the use of Hybrid Hot Structures (heat-resistant materials, both metallic and ceramic materials), composite materials, nanostructures and nanotechnologies for space applications**. The activity was in the frame of the **ESA Programme** *"Reusable Metallic Structures" – FLPP (Future Launchers Preparatory Programme)*, whose prime contractor for Structures and Thermal Subsystems was Alenia Spazio in Turin.
Periodically **Progress Reports** of the work performed have been presented to ESA representatives in charge of the Programme during **various job meetings**. In the end, the Final Report has also been presented during the Degree dissertation of the Master of Specialisation (Post University Degree, level II) in "Satellites and Orbiting Platforms" (see below for further details).
Note: <u>assessments concerning the work performed and the results achieved are available on request</u>.

➤ [28 June 2004 – 27 April 2005] **Military service carried out with full honours at Air Chief's Office – Italian Air Force - Ministry of Defence – Rome**. Training course with final achievement of the **Specialisation in** *"Information Science for Government"* **with full honours**. Military service closed because of the winning of an International Competition with the awarding of a Grant for participation in the Master of Specialisation (Post University Degree, level II) in "Satellites and Orbiting Platforms" sponsored by ESA, the main Space Companies and Research Institutes, Italian Air Force.

➤ [March 2004 – September 2004] **Lectureship** as an **Expert Lecturer** on the subject *"Aerospace Manufacturing"* addressed to **Alenia Aeronautica**'s employees, carried out at Casoria Plant (NA) on the occasion of a contract with "SIMKI Servizi di Impresa".

➤ [July 2003 – February 2004] **Experimental thesis on a Guidance, Navigation and Control Subsystem (GNCS)**. I developed and tested an **Integrated Control System (Systems Engineering, System Modelling & Simulation, Performance Analysis, Test, Verification & Validation)** with a **simulator of Star Imagers (Star Trackers)**, modern star sensors used for Attitude Determination in the **Guidance, Navigation and Control Subsystem (GNCS)**.

Memberships, Awards and References	➤ From March 2013 – **Chairman of the "Development and Programmes Management Committee" at IAASS (International Association for the Advancement of Space Safety) http://iaass.space-safety.org/**

➤ From January 2013 – **Member of SERIT (Security Research in ITaly) (http://www.piattaformaserit.it/), the most important Security Association in Italy**.

➤ From November 2012 – **Member of the European Register of Euro-Projects Designers & Managers (http://members.euprojectforum.eu/view.asp?id=1102)**.

➤ From October 2012 – **Member of the National "Working Groups of the Research & Innovation Committee" at Confindustria, the Italian Industry Federation (http://www.confindustria.it/)**.

➤ From September 2012 – **Member of the IAF (International Astronautical Federation) Committees: Space Transportation Committee, International Programme/Project Management Committee, Space Societies Committee, Workforce Development/Young Professionals Programme Committee**.

➤ From June 2012 – **Member of the "Space Generation Advisory Council in support of the United Nations Programme on Space Applications" (http://spacegeneration.org/index.php). Member of the "Near Earth Objects (NEO) Project Group". Member of the "Space Safety and Sustainability Project Group"**

➤ From June 2012 – **Member of ASASpazio (http://www.asaspazio.it/), the most important Space Industry Association in Italy**.

➤ From June 2012 – **Member of SPIN-IT (http://www.spin-it.eu/), the most important Space Research Association in Italy**.

➤ From February 2011 – **<u>Elected "Member of the Governing Board" at AIDAA</u> (Italian Association for Aeronautics and Astronautics) – Naples Branch. AIDAA is a Member of IAF (International Astronautical Federation), ICAS (International Council of the Aeronautical Sciences) and CEAS (Council of European Aerospace Societies)**.

➤ From June 2010 – **<u>Nominated "Member of the Aerospace Committee"</u>** at the **Society of Professional Engineers – Naples Branch**.

➤ September 2006 – **<u>Winner of a National Competition</u>** for the awarding of a **Fellowship Grant** at the **National Institute for Nuclear Physics (INFN)** – "Roma – Tor Vergata" Research Centre. **"Mission Control, Tracking, Telemetry and Command (TT&C) and Data Handling for the Space Mission PAMELA (Payload for Antimatter-Matter Exploration and Light-nuclei Astrophysics)"**. http://pamela.roma2.infn.it/index.php

➤ September 2006 – **<u>Professional Reference</u>** released by the **National Research Council – Institute of Research on Intelligent Systems for Automation – Genoa Research Centre**.

➤ January 2006 – **<u>Winner of a National Competition</u>** for the awarding of a **Fellowship Grant** at the **National Research Council – Institute of Research on Intelligent Systems for Automation** – Genoa Research Centre (see above for

details).

	➢ October 2005 –**Professional References** released by **Alenia Spazio (then Alcatel Alenia Space, now Thales Alenia Space) – Turin**.

➢ October 2005 –**Professional References** released by **Alenia Spazio (then Alcatel Alenia Space, now Thales Alenia Space) – Turin**.

➢ October 2004 – **Certificate of Merit for the important contribution** given to the **Air Chief's Office – Italian Air Force - Ministry of Defence – Rome**.

➢ September 2004 – **Winner of an International Competition** with the awarding of a **Grant** for participation in the **Master of Specialisation (Post University Degree, level II) in "Satellites and Orbiting Platforms"**, organized by *University of Rome "La Sapienza" - School of Aerospace Engineering - Department of Aerospace Engineering and Astronautics* and sponsored by **ESA, the main Space Companies and Research Institutes, Italian Air Force**.

Education and skills

➢ **Master's Degree (5 years) in Aerospace Engineering**, got at the *University of Naples "Federico II" – Department of Space Engineering and Space Science* (http://www.disis.unina.it/NoteStoriche/NoteStoriche_ing.htm).
Degree dissertation on **24 February 2004** (final grade: **108/110**).
[July 2003 – February 2004] Experimental thesis on a Guidance, Navigation and Control Subsystem (GNCS). I developed and tested an **Integrated Control System (Systems Engineering, System Modelling & Simulation, Performance Analysis, Test, Verification & Validation)** with a **simulator of Star Imagers (Star Trackers)**, modern star sensors used for Attitude Determination in the **Guidance, Navigation and Control Subsystem (GNCS)**.

➢ [2004] **State exam to be in practice as a Professional Engineer (Registered Engineer with the National Society of Professional Engineers)**.

➢ [September 2004 – September 2005] **Master of Specialisation (Post University Degree, level II) on Satellites, Space Systems, Space Applications and Services, Project Management** (http://www.mastersatelliti.it/eng/e_index.html), organized by the *University of Rome "La Sapienza" - School of Aerospace Engineering - Department of Aerospace Engineering and Astronautics*.
After six months of lectures, given by university professors, scientists, specialists from space companies and agencies, a **Team Work** activity was carried out which involved all the participants in the Master to phase A of a **Geostationary satellite Project for Telecommunications Services**. Team Work was carried out according to the logic of **Concurrent Engineering**, the most advanced and most efficient technique which optimize Team Work synchronizing the interactions among the various subsystems and so minimizing the downtime. Each participant was assigned a subsystem and I was **in charge of the Thermal Control Subsystem (TCS)**.
The **Final Report** concerning an **ESA Project on Space Transportation** performed during an internship at **Alcatel Alenia Space – Turin – Space Transportation Division** (see above for details) was presented at the Degree dissertation of the Master of Specialisation on **26 September 2005** at the *University of Rome "La Sapienza"*.

➢ [2006-2009] Many training courses organized by the companies (employers and customers) on **Project Management, Risk Management, Continuous Improvement, Lean Manufacturing, Six Sigma, JIT, MRP, MRP II, ERP**.

➢ [2008-2009] **Professional Development Programme** for **Executive Education**: **"Development of Managerial skills in the Aerospace Sector"** organized by CONSAER (http://www.consaer.it/) and funded by Fondirigenti (http://www.fondirigenti.it/default.do). Courses: **Supply Chain and Organization of Processes, Supply Chain Management, Logistics Management, Project Management, Risk Management, Contract Management for the Aerospace sector, Aeronomics, New Strategies in the Aerospace market, Innovative Technologies for the Aerospace Industry, Lean Manufacturing, Time and Resources Management, Leadership and Coaching, People Management**.

➢ [June 2010] **"International Marketing of New Technologies"** on **Technology Transfer**, held in Naples by **AUTM (Association of University Technology Managers)** (http://www.autm.net).

Knowledge and skills:

➢ *Space Missions*:
Space Missions and Systems (Remote Sensing & Earth Observation Satellites, Satellite Constellations for Navigation & Positioning, Telecommunications Satellites, Meteorological Satellites, Space Exploration and Human Space Flight, ISS, Space Science Missions, Experimentation in Space), Mission Analysis & Design, Orbital Mechanics, Flight Dynamics, Astrodynamics, Formation Flying, Orbital Manoeuvres, Space Environment, Radiation Effects, Magnetic Field, Gravitational Field, Van Allen Radiation Belt.

➢ *Space Vehicles and Systems*:
Satellites , Space Vehicles, Launchers, Space Systems and Technologies, Satellite System, Systems Engineering, Spacecraft Systems and Subsystems, "Guidance, Navigation and Control" Subsystem (GNCS), Space Propulsion Subsystem, "Structures, Mechanisms and Materials" Subsystem, Thermal Control Subsystem (TCS), Electrical Power Subsystem (EPS), Data Handling Subsystem, TT&C (Telemetry, Tracking and Command), AIT (Assembly Integration and Test), AIV (Assembly, Integration and Verification), Acceptance and Qualification, Ground Segment, EGSE (Electrical Ground Support Equipment), MGSE (Mechanical Ground Support Equipment), Mission Operations, Satellite Operations. Good knowledge of standards (including ECSS standards on "Space Project Management", "Space Engineering" and "Space Product Assurance").

> *Defence Systems, Space Applications and Services*:

Defence Systems & Electronics, Radar, SAR (Synthetic Aperture Radar), INS (Inertial Navigation Systems), "Guidance, Navigation and Control Systems and Services", Satellite Navigation and Positioning Systems and Services, Global Navigation Satellite Systems (GNSS) with Satellite Based Augmentation Systems (SBAS) or Ground Based Augmentation Systems (GBAS): GPS, GLONASS, EGNOS, GALILEO, etc.. . GNSS Compatibility, Interoperability and Standardisation issues, Satellite Communications Systems and Services, Earth Observation & Remote Sensing.

> *Electronics, Electromagnetism, Information and Telecommunication Engineering*:

Electrical Engineering, Electronics, Electronic Devices, Microelectronics, Electromagnetic Fields, Radiofrequencies, Electro-Magnetic Compatibility (EMC), Electromagnetic Radiation, Electromagnetic Spectrum, Spectrum Analysis, Radioactivity and Radiation Effects, "Knowledge Engineering and Expert Systems" (Artificial Intelligence and Neural Networks), Information Engineering, Programming, Computational Dynamic Simulation, "State Estimation, Control and Optimization", Signals Theory, Digital Signal Processing (DSP), Image Processing, Pattern Recognition, Noise Modeling, Telecommunication Networks, Parallel Computing, Cluster, Grid Computing, Communication Protocols, Communication Buses (also military standards, e.g.: MIL-STD-1553B), Telemetry and Commands for Remote Control, Air Traffic Management (ATM).

> *Systems and Plants*:

Systems Theory, Control Theory (Linear and Non Linear Control), Automatic Controls, Computational Dynamic Simulation, "State Estimation, Control and Optimization", Signals Theory, Aerospace Systems, Aerospace Control Systems, Aerospace Servomechanisms, Remote Sensing Systems, Aerospace Plants, Aerospace Systems for Experimentation.

> *Fluid Dynamics, Aerodynamics and Propulsion*:

Fluid Mechanics, Hydraulics, Fluid Dynamics, Thermofluids, Gas Dynamics, Aerodynamics, Hypersonic Aerodynamics, Computational Fluid Dynamics (CFD), Finite Volume Models, Aeroacoustics, Jet Engines, Turbines, Compressors, Turbomachinery, Aircraft Engines, Aerospace Propulsion, Spacecraft Propulsion, Rockets.

> *Structures, Mechanics, Materials and Processes*:

Continuum Mechanics, Solid Mechanics, Construction Theory, Structural Acoustics and Vibration, Aerospace Vehicles Construction, Aerospace Vehicles Structures, Mechanics Applied to Machines, Machines Construction, Engines, Turbines, Compressors, Turbomachinery, Flight Mechanics, Orbital Mechanics, Astrodynamics, Industrial Design, Mechanical Design, F.E.M. Structural Models, Structural Analysis (F.E.A.), Science and Technology of Aeronautical and Aerospace Materials, Metallic Materials and Alloys, Ceramic Materials, Polymeric and Composite Materials (Carbon Fiber Reinforced Plastic, Fiberglass: Glass-Reinforced Plastic, Sandwich Structured Composites), Nanostructures and Nanotechnologies, Smart Materials, Mechanical Processes, Thermal Processes, NADCAP Special Processes: Heat Treating, Chemical Processes, Composites, Welding, Brazing, Bonding, Finishes, Coatings, Surface Enhancement, Sealants, Elastomer Seals, Fluid Distribution Systems, Non-Conventional Machining, Electronics, Non-Destructive Testing/Inspection (NDT/NDI)), Materials Testing.

> *Quality, Safety and Reliability*:

Quality Management System (ISO 9001:2000, AS/EN/JISQ 9100), Total Quality Management (TQM), Product Quality Assurance (PQA), Quality Control, Continuous Improvement, European Foundation for Quality Management (EFQM) Excellence Model, Six Sigma, DMAIC (Define, Measure, Analyze, Improve and Control), DMADV (Define, Measure, Analyze, Design and Verify), DFSS (Design for Six Sigma), Kaizen, Continuous Improvement, Theory of Constraints (TOC), Statistical Process Control (SPC), Design of Experiments (DOE), Shewhart cycle (PDCA: Plan-Do-Check-Act), Control Charts, Problem Solving, Brainstorming, Root Cause and Corrective Action (RCCA) Analysis, Preventive Action, Remedial Action, Failure Mode and Effects Analysis (FMEA), Fault Tree Analysis (FTA), Event Tree Analysis (ETA), Pareto Analysis, Probabilistic Risk Assessment (PRA), Risk Analysis, Safety and Reliability Analysis. Inspection and Test Quality System (AS9003), Aerospace First Article Inspection Requirement (AS9102), First Article Inspection (FAI) plans, Measurement Plans, Coordinate Measurement Systems (CMS) (Coordinate Measuring Machines (CMM), Laser Tracker, numerical controlled machinery with inspection probe capability), Metrology, Measurement Systems Analysis, Geometric Dimensioning and Tolerancing (GD&T) per ASME Y14.5M-1994, Guidelines for Quality and Environmental Systems Auditing (ISO 19011), Quality Audit Process, Non-Destructive Testing/Inspection (NDT/NDI) (Visual Inspection, Liquid or Dye Penetrant Inspection, Magnetic Particle Inspection, Radiographic Testing, Ultrasonic Testing, Electromagnetic Testing, Acoustic Emission Testing and Thermo-Graphic Inspection). Aerospace and Defence Regulations and Standards (AS/EN/JISQ 9100, ECSS, FAA, EASA and MIL standards).

> *Production and Manufacturing*:

Product Lifecycle Management (PLM), Process Management, Configuration Management, Change Management, Revision Control, Product Data Management (PDM) (e.g.: ENOVIA), Engineering Bill Of Materials (EBOM), Manufacturing Bill Of Materials (MBOM), Manufacturing Process Management (MPM), Lean Manufacturing, Material Requirements Planning (MRP), Manufacturing Resource Planning (MRP II), Enterprise Resource Planning (ERP), JIT (Just In Time) Inventory Systems, Manufacturing Plan, Manufacturing Processes, Tooling and Machining Tools, Precision Machining, Moulding, Composite Manufacturing Processes, Filament Winding, Computer Numerical Control (CNC), Cutting Machines, Automated Tape Laying Machines, Hot Forming Machines, Autoclaves.

> *Management*:

Team Leadership, Project Leadership, Technical Management, Configuration Management, Change Management, Quality Management, Project Management (deep knowledge of PMI's PMBoK, PRINCE2 and ECSS methodologies

and standards for Project Management), Risk Management, Programmes Management and Supply Chain Management, Procurement Management, Operations Management, General Management, Finance Management, Strategy Management, Sales & Marketing Management, Bid & Proposal Management, Contract Management, Human Resources Management, Communication Management.

Languages	➢ **Fluent in English**, deepened both for personal knowledge and during studies, but especially through **several travels abroad in different countries** and through **job meetings and teleconferences working in an international and multicultural job environment**.
	➢ **Basic knowledge of French** thanks to a course at **Alliance Française Galliera de Gênes – French Embassy in Italy** (mother tongue teachers), with the final achievement of the **DELF A Certificate**.
	➢ **Basic knowledge of Spanish** thanks to a course at the **Cultural Foundation FEEM (Foundation ENI Enrico Mattei)** (mother tongue teacher).
Computer skills	➢ Good knowledge of the relevant **Operating Systems**: WINDOWS, UNIX, LINUX, DOS.
	➢ Good knowledge of **software for managerial and industrial applications**: Microsoft Office, MS Project, MS Visio, Matlab, Simulink, Modelica, AMESim, Dymola, UML, SysML, DOORS, LabView, Nastran, Patran, Femap, HyperMesh, Cosmos Works, Solid Works, Catia, Fibersim, UniGraphics, AutoCAD, MathCAD, Fluent, STK.
	➢ **ECDL**: European Computer Driving License.
	➢ Good knowledge of **Programming Languages**: C, C++, Fortran, Pascal, Matlab, Simulink, LabView, Visual Basic, HTML, Prolog.
	➢ Experiences in the development of algorithms in the field of **Artificial Intelligence** (**Neural Networks**: Prolog).
Software experiencies	➢ **Software development** by the use of **MATLAB, SIMULINK, C e C++** for the **development of algorithms for computational dynamic simulation, control (Linear and Non Linear Control) and optimization of dynamic processes which characterize Complex Systems operation for Industrial Automation**. This activity was in the frame of the **Programme funded by the European Commission *"PRAI-FESR Regione Liguria"* for the development in Innovation for Enterprises** and was **carried out at the National Research Council with the coordination of the activities in collaboration among CNR (National Research Council), "Ansaldo Energia" and University of Genoa**.
	➢ **Mechanical Design and Structural Analysis with F.E.M. models** by the use of **NASTRAN, PATRAN, HYPERMESH, CATIA, COSMOSWORKS, SOLIDWORKS** for the development of **new trans-atmospheric hypersonic vehicles by the use of Hybrid Hot Structures (heat-resistant materials, both metallic and ceramic materials), composite materials, nanostructures and nanotechnologies for space applications**. This activity was in the frame of the **ESA Programme "*Reusable Metallic Structure*"**, and was performed at **Alcatel Alenia Space in Turin – Space Transportation Division**.
	➢ **Software development** by the use of **MATLAB, SIMULINK and C** for the accomplishment of an **Integrated Control System (Systems Engineering, System Modelling & Simulation, Performance Analysis, Test, Verification & Validation)** with the **development of a Star Imager simulator**, modern star sensors used for attitude determination in the **Guidance, Navigation and Control Subsystem (GNCS)** of satellites and spacecrafts. **Kalman filtering** was used for **State Estimation**. **Validation tests** were carried out for the simulator by the use of the **star catalogue SKYMAP2000, developed at the NASA Goddard Space Flight Center**. Such catalogue contains astrophysical data of 299485 stars and it was used in order to **simulate the stars in the vault of heaven**. Some sub-catalogues were extracted by this catalogue, each one used as **on board catalogue** in order to **carry out the tests in the actual satellite operating conditions**. In addition, the **operating conditions of a Star Imager properly oriented on board a satellite** in Earth Orbit were simulated too, accurately taking into account Reference Frames and the relations between them by a proper use of **Euler's Matrices** and **Quaternions**.
	➢ **Software development** by the use of **LABVIEW** in collaboration with **μARS (Microgravity Advanced Research and Support center)** for the accomplishment of a **Remote Control and Telemetry System** for a **Scientific Mission on the ISS** (International Space Station).
	➢ **Software development** by the use of **MATLAB** and **SIMULINK** for the accomplishment of an **AOCS (Attitude and Orbit Control System)** for a satellite in Earth Orbit.
	➢ **Software development** for the accomplishment of a system for **Pattern Recognition of Remote Sensing Images** by the **LANDSAT7** satellite, by the use of **LABVIEW** for the extraction of features, and a **LVQ (Learning Vector Quantization) Neural Network** for Pattern Recognition of images.
	➢ **Software development** by the use of **FORTRAN** and **MATLAB** for solving several **Hypersonic Aerodynamics** problems.
	➢ **Software development** by the use of **FORTRAN** and **MATLAB** for solving several **Computational Fluid Dynamics (CFD)** problems.
Personal interests	**Deep interest in everything is innovative and technologically advanced, especially for Technology, Science and Research.** I like reading Science and Technology, News, Economy and Finance magazines, journals and papers. I like travelling. I like to practice several sports, in particular swimming. I like music very much and I like to play various musical instruments. I like to go to the cinema.
Personal skills	**Special creative and innovative aptitude, talent, enthusiasm, passion and attraction for challenge. Excellent flair for problem solving and development of innovative ideas in every field of application. Excellent learning ability**

in every field and special ability in technology transfer of the previously acquired skills to new fields of applications. Self-taught and self-starter.

Team Leadership (Technical and Project Leadership). Experience in coordination and supervision of Programmes/Projects at System level (Product and Project Lifecycle Management) and at Corporate/Portfolio level. Experience in managing cross-functional and remote teams, coordinating and supervising Project Managers, Project Engineers, Project Control staff, Functional Managers, Technicians and Subcontractors as an Integrated Project Team (IPT). Experience in acting as the Key Interface to the external world (Customers and Stakeholders, Subcontractors), interfacing directly with senior management. Experience in setting up Job Meetings, Conferences, Workshops and Seminars with Customers, Stakeholders and Subcontractors.

Experience of working in a challenging and demanding international, multicultural, multi-project and multi-subject environment. Ability to establish and maintain effective working relationship with internal and external interfaces. Excellent organizational skills. Ability to manage multi-tasks situations and to manage multiple projects simultaneously. Ability to prioritize activities and to adjust priorities to multiple demands and unanticipated events as well as adjust decisions and actions to new information. Ability to be flexible in response to changing circumstances or conditions. Hard worker, flexible on work time, deep sense of duty, adaptability, flexibility. Ability to work calmly and correctly in high stress situation with tight deadlines. Interdisciplinary and boundary-less approach.

Ability in managing, coordinating and supervising human resources. Ability to use time and resources effectively avoiding unnecessary work and activities that do not add value, to produce value-added contributions. Passion for the work "well done first time". Ability to accomplish more efficient work processes. Natural aptitude to team work, team spirit, spirit of initiative. Excellent communication and interpersonal skills, ability to interact with people, strong ability to communicate with different functions. Strong team builder, motivator and team player, able to create group cohesion. Strong leadership. Decision-making and managerial independence and skills, highly self-motivated and result oriented with a high level of autonomy and responsibility. Aptitude to accomplish solutions in line with mission and team objectives. Customer focused and result oriented.

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