PERSONAL INFORMATION

Andrea Giancarlo Airale

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State personal website(s)

Replace with type of IM service Replace with messaging account(s)

Sex Male | Date of birth 25/12/1984 | Nationality Italian

JOB APPLIED FOR
POSITION
PREFERRED JOB
STUDIES APPLIED FOR

Automotive Engineer

WORK EXPERIENCE

2013-Today

Co-founder - Spin Off - BEOND Ltd @I3P (Innovative Enterprise Incubator of Politecnico di Torino)

The Beond Business was to design, develop and create the whole package "Project, Product and Process" and then sell it to a Contractor or a International Company that could bring it to market, ensuring vehicle assistance. Our ULEV solution will be a heavy quadricycle (L7e) and not a vehicle (M1) this solutions will permit us to have a simplified and light vehicle structure, overcoming the problem of batteries (high weight, high costs and high volumes). Even if the vehicle will be small it will be designed for 2 people. This kind of vehicle will weight about 460 kilograms, it twill be 2.9 meters long, 1.5 meters wide and 1.4 meters high.

This fully EV (electric vehicle) will reach the maximum speed of 80 km/h and accelerate from 0-50 km/h in 7 seconds. Lithium polymer batteries will weight just 60 kilograms, providing a range of 70 km. The vehicle will be also equipped with a small engine capable to recharge batteries whenever it's necessary allowing the vehicle to run up to 400 km with only 8 liter of gasoline. Internet connection and social media application will be natively installed onboard thanks to an innovative interface connected to customer phone or tablet. This solution, has ben already implemented and allows to manage fleets and provide infos for car sharing.

- Automotive Project Management
- Start Up Finance and Investment
- Automotive Design and Engineering

Business or sector START-UP, SPIN OFF, AUTOMOTIVE, COMPOSITE MATERIAL, ELECTRIC and HYBRID VEHICLE

2012-2015

Research Fellow (3 year) – Work as Researcher in IEHV Resarch Group (Innovative Electric and Hybrid Vehicle) under the guide of prof. Massimiliana Carello.

Results achieved :
R&D Program and Project

- (2011-2013) GM Powertrain Europe "Advanced Urban Hybrid-Electric Concept "
- (2012) Magneti Marelli Sospensioni "Benchmarking sui materiali compositi per applicazioni autoveicolistiche"
- (2013) Magneti Marelli Sospensioni – "Caratterizzazione meccanica di materiali compositi a matrice Termoindurente e Termoplastica"
- (2014) Magneti Marelli Sospensioni – "Caratterizzazione meccanica di materiali compositi a matrice Termoplastica"
- (2013-2015) Piattaforma Regionale Automotive "Progetto CARVOUR – Sviluppo di un City Vehicle Elettrico con Sospensioni in Materiale Composito"

Skills acquired:

- Pubblic Financing
- Regional Financing
- R&D Project definition and construction
- Project Partner Management.

Business or sector R&D, TESTING, AUTOMOTIVE, COMPOSITE MATERIAL, ELECTRIC and HYBRID VEHICLE

2012-2013 **Creator and Business Analyst - Spin Off pre-incubated project “BEOND” @I3P (Innovative Enterprise Incubator of Politecnico di Torino)**

The Beond aim is to develop a product of "ultra light urban electric vehicle " (ULEV) that is completely innovative and will be not on the market in the next years.
Results achieved :
_Official permission to be Politecnico di Torino Spin Off
_5th place at START-CUP Piemonte
_18.000€ Piemonte Regione Prize
_20.000€ Private Investment
_Unique Spin Off on “Electric and Hybrid Vehicle Prototype Design, Engineering and Construction”
_40 automotive companies network in Piemonte ready to invest on innovative urban vehicle prototype
_Large automotive network to manage automotive projects and jobs
Skills acquired:

- Business Plan & Business Model Definition
- Benchmarking Research & Analysis
- Market Research & Analysis
- Fund raising and Investment research activity
- Partnership definition & agreement

Business or sector START-UP, SPIN OFF, BUSINESS PLAN, INVESTMENT

2012 (5 months) **Team Leader of XAM 2.0 project – Team for Brighton-London Future Car Challenge (FCC) UK**

_Coordinated and organized a team of 20 senior students (with at least 2 years experience in student teams)
_Collect more than 50 financial sponsors and technical and industrial partners
_Taking into account the aspects of manufacturability , recyclability and economic sustainability
_ Designed and built to be a prototype of a heavy quadricycle abled to run on the road
_ Built sponsorship and fund-raising strategy that has collected 500,000 €
_Built marketing plan to give maximum visibility and prominence to the project.
Results achieved : first prize at the Future Car Challenge as Best E -REV Prototype, the first vehicle built by students at the FCC, XAM 2.0 is compared with the vehicle of Mercedes, Renault, Opel , Jaguar and Nissan. XAM 2.0 was presented at the Museum of Turin December 12, 2012 and the Industrial Union of Turin on June 11, 2012.
Skills acquired:

- Found rasing
- Economic, legal and legal -related insurance of a vehicle
- The road and put his obtaining a test plate

Business or sector R&D, TESTING, AUTOMOTIVE, PROTOTYPE CONSTRUCTION, MOTORSPORT

2011 (4 months) **Marketing consultant and assistance** – working for INSIDE srl about educational marketing program for Autodesk strategy educational program.
Skills acquired:

- Web Marketing
- Selling Skills

Business or sector UNIVERSITY, SOFTWARE TRAINING

2010-2011 **Team Leader of H2politO – Team for Shell Ecomarathon competition (SEM) Germany, XAM urban concept**

_ Coordinated and organized 45 Team student
_Created a culture of “innovative technologies”
_Always taked in account industriability, reyiclability and sostenibility aspects
_ Designed and built not a race car, but an urban car with industrial content.
_ Create a sponsorship and found raising strategy to collect more than half million of euros of sponsorizations.
_Create a marketing strategy to make grow the visibility of the project
Goal achieved: medal from Italian Republic President, first hybrid urban concept at SEM 2011, first urban concept built by student in Torino, design award at SEM 2011, many presences on national papers and national tv broadcast.
Skill gained:

- Found rasing skills, economics and legal know how
- High level problem-solving, innovation planning skills
- System engineering skills,
- Sensibility and capability to select people

Business or sector STUDENT TEAM, LOW CONSUMPTION COMPETITION

2010 **Advisor and coordinator** – group of student in the course “Entrepreneurship and Business Plan” of Management Engineering by prof. Paolucci.
Skill gained:

- Business Plan Checking
- Project Management

Business or sector UNIVERSITY, SOFTWARE TRAINING

2007-2009 **Team Leader of H2politO – Team for Shell Ecomarathon competition (SEM) Germany, IDRA prototype**

_ Lead the Team from the creation to the success
_ Coordinated and organized 28 Team student
_Organized the conservation of the Team “knowhow” with an efficient method.
_ Improved the technical innovations on the prototype and made a right long term strategy.
_ Timely performed financial and operational analyses for upper management.
_Create a marketing strategy to make grow the visibility of the project
Goal achieved: best debutant team in SEM 2008, 3rd place at the Formula EHI, marketing award in SEM 2009, compotec award 2009, presence on “Ambiente Italia” RAI3 national tv broadcast.
Skill gained:

- Leadership skills, operating with discipline, building collaborative and diverse relationships
- Problem-solving, analytical thinking, goal-orientation, attention to details
- Flexibility, operating with rigour
- Costconsciousness.

Business or sector STUDENT TEAM, LOW CONSUMPTION COMPETITION

EDUCATION AND TRAINING

2012 – 2014

Politecnico di Torino. Torino
Phd Student in Mechanical Engineering
[Mark: Graduated]

PhD at the Department of Mechanical and Aerospace Engineering at Politecnico di Torino under the guide of prof. Massimiliana Carello.
_ Study of continuous fiber composite materials (glass, carbon, basalt, flax) in thermoplastic and thermosetting matrix for automotive applications.
_ Study of theory and computational models for the FEM simulation of composite materials.

Skills acquired :

- _Experimental Testing: Tension, Compression, Bending, Fatigue and Impact on composite materials.
- _Experimental Testing: aging UV cell, Climate and Corrosive on composite materials with DMTA analysis, ATR, light and electron microscopy.
- _Realizzation of Card material model with experimental data for FEM
- _FEM model validation of the specimen and component
- _Analysis and study the phenomena of delamination of the composite
- _Management and coordination of Research Team (phd student, master student)
- _Management and coordination of Research Contract for Companies
- _Management and coordination of European and Regional Research Program

Results achieved : Phd on Composite Material with the Thesis “Study and analysis of advanced composite materials for suspension automotive applications”.

2014

State Examination
Mechanical Engineer
[Mark: 80/100]

2008 – 2011

Politecnico di Torino. Torino
Master Degree in Automotive Engineering
[Mark: 103/110].

2003 – 2008

Politecnico di Torino. Torino
Bachelor Degree in Automotive Engineering
[Mark: 86/110].

1998 – 2003

High School “C. Cattaneo” Scientific Diploma
[Mark: 100/100]. Turin

Replace with EQF (or other) level if relevant

PERSONAL SKILLS

Mother tongue(s): Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	Intermediate	Upper-Intermediate	Upper-Intermediate	Upper-Intermediate	Intermediate
	Replace with name of language certificate. Enter level if known.				
French	Starter	Elementary	Elementary	Elementary	Starter
	Replace with name of language certificate. Enter level if known.				

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills
- good communication skills gained through my experience as Team Leader in H2politO and Project Leader in POLITO

Organisational / managerial skills
- leadership (currently responsible for a team of 30 people)
- decision maker
- analytical
- efficient
- adaptable
- goal-oriented
- fast
- learner
- accurate
- team player

Job-related skills
- good command of Innovative Vehicle and its Subsystems

Computer skills
- MS Excel, MS PowerPoint, MS Word and MS Project [Advanced]
- Adobe Premiere (video editing) [Advanced]
- Adobe Photoshop, Lightroom (photo editing) [Intermediate]
- Autodesk products (Inventor, 3D Studio max, Showcase..) [Intermediate]
- Hypermesh, Altair (FEM analysis) [Intermediate]
- Solidworks, Simulia (CAD design) [Basic]
- Star CCM++, CD-Adapco (Fluidodynamic and aerodynamic simulation) [Basic]
- Matlab Simulink, Mathworks (Mathematic modeling) [Basic]
- Amesim, LMS (Mathematic modeling) [Basic]

Other skills
- Carpentry
- Mechanical Assembling

Driving licence
- B

ADDITIONAL INFORMATION

PUBBLICSTIONS

M. CARELLO, A. AIRALE, A. FERRARIS, "City Vehicle XAM 2.0: design and optimization of its plug-in E-REV powertrain " SAE World Congress, Advanced Hybrid and Electric Vehicle Powertrains, Detroit 01 April, 2014 DOI: 2014-01-1822, ISNN: 0148-7191

M. CARELLO, A. AIRALE, A. FERRARIS, "City Vehicle XAM 2.0: design and optimization of the composite suspension system" SAE World Congress, Automotive Composites, Detroit 01 April, 2014 DOI: 2014-01-1050, ISNN: 0148-7191

M. CARELLO, A. AIRALE, A. MESSANA, – "IDRApegasus: a carbon fiber monocoque vehicle prototype" Mat.-wiss. u. Werkstofftech. 2014, 45, No. 5, DOI 10.1002/mawe.201400238

M. CARELLO, A. AIRALE, – "Composite suspension arm optimization for the city vehicle XAM 2.0" Design and Computation of Modern Engineering Materials, Advanced Structured Materials 54, DOI: 10.1007/978-3-319-07383-5_18, Springer International Publishing Switzerland 2014

M. CARELLO, A. AIRALE, A. FERRARIS, A. MESSANA, – " XAM 2.0: from student competition to professional challenge" Computer-Aided Design and Applications, 11:sup1, S61-S67, DOI: 10.1080/16864360.2014.914412

M. CARELLO, A. AIRALE, A. MESSANA, – "IDRApegasus: a carbon fiber monocoque vehicle prototype" 7thInternational Conference on Advanced Computational Engineering and Experimenting ACE-X 2013, Madrid (Spain), 1-4 Luglio, 2013 (Abstract su supporto magnetico)

M. CARELLO, A. AIRALE, – "Composite suspension arm optimization for the city vehicle XAM 2.0" " 7thInternational Conference on Advanced Computational Engineering and Experimenting ACE-X 2013, Madrid (Spain), 1-4 Luglio, 2013 (Abstratc su supporto magnetico)

M. CARELLO, A. AIRALE, – "Le sospensioni della XAM 2.0" Composite Magazine, Marzo 2013, pag. 36-41

M.CARELLO, A.AIRALE, A.FERRARIS – "XAM: una promessa che profuma di vittoria" Autotecnica, n. 364, Novembre 2011, pp. 100-106.

M.CARELLO, A.AIRALE, A.FERRARIS – "XAM: dal foglio bianco alla city car in soli sei mesi" Il Progettista Industriale, Ottobre 2011, Pag.70-75, Quaderni di progettazione.

M.CARELLO, A. AIRALE, A. SCATTINA, "Carbon fiber monocoque for a hydrogen prototype for low consumption challenge", Materials Science and Engineering Technology -Special ACE-X Issue, Wiley-VCH Verlag GmbH & Co., vol. 42, No.5, 2011 , pp. 386-392. (DOI 10.1002/mawe.201100793)

M.CARELLO, A.AIRALE, A.SCATTINA, "Carbon fiber monocoque for a hydrogen prototype for low consumption challenge", 4thInternational Conference on Advanced Computational Engineering and Experimenting ACE-X2010, Paris (France), 8-9 July 2010, pp. 23 (Abstract on magnetic support).
M.CARELLO, A.AIRALE, "Analisi aerodinamica del prototipo IDRA08", Analisi & Calcolo, Anno XI, n. 39, Giugno 2010, pp. 48-50, ISSN 1128-3874.

M.CARELLO, A.AIRALE, "The hydrogen-fuelled prototype designed at the University- Il prototipo a idrogeno progettato al Politecnico" Tube Today, n. 25, June 2009.pp. 6-9 (versione italiana/inglese).

M. CARELLO, A. AIRALE, "Il Team H2politO e la sua sfida: IDRA08 veicolo a basso consumo", Autotecnica, n. 11, Novembre 2008, pp. 112-118.Replace with relevant publications, presentations, projects, conferences, seminars, honours and awards, memberships, references.

PRESENTATION, CONFERENCE and EVENTS

Intesa San Paolo - STARTUP INITIATIVE "Automotive & Smart Transportation Solutions 2014" July 03rd, 2014 Milan (Italy), “BEOND: Spin Off of Politecnico di Torino about Sustainable Mobility, born and now growing in I3P, the Politecnico di Torino Incubator for Innovative Start-Up companies” **#**

ACE-X - International Conference On Advanced Computational Engineering And Experiment, July 01-04, 2013 Madrid (Spain), “IDRApegasus: a carbon fiber monocoque vehicle prototype” M.CARELLO, A.AIRALE, A.MESSANA; and “Composite suspension arm optimization for the city vehicle XAM 2.0” M.CARELLO, A.AIRALE, **#**

Centro Estero per Internazionalizzazione Piemonte - BOSCH VENTURE CAPITAL March 27th 2013, Torino (Italy) “BEOND: Spin Off of Politecnico di Torino about Sustainable Mobility, born and now growing in I3P, the Politecnico di Torino Incubator for Innovative Start-Up companies” **#**

Presentation at Dr. Altavilla (FGA Chief Operating Officer EMEA) Dr. Di Giusto (FGA Head R. & D. - Architectures & Standardization), Dr. Chiari (FGA Head Product Planning) “BEOND: Spin Off of Politecnico di Torino about Sustainable Mobility, born and now growing in I3P, the Politecnico di Torino Incubator for Innovative Start-Up companies” **#**

XAM 2.0 OFFICIAL PRESENTATION December 12th 2012 Museo Nazionale dell’Automobile di Torino, M.CARELLO, A. FERRARIS, A.AIRALE; #

Presentation at Dr. Omar Hadded (Vice President - TATA Motors) November 9th 2012, Torino (Italy) “BEOND: Spin Off of Politecnico di Torino about Sustainable Mobility, born and now growing in I3P, the Politecnico di Torino Incubator for Innovative Start-Up companies” **#**

INNOVADAY MAGNETTO “Turin Start-up Day” October 12th 2012, Torino (Italy) “BEOND: Spin Off of Politecnico di Torino about Sustainable Mobility, born and now growing in I3P, the Politecnico di Torino Incubator for Innovative Start-Up companies” **#**

XAM OFFICIAL PRESENTATION June 13, 2011 Aula Magna Politecnico di Torino, M.CARELLO, A.AIRALE; #

ETF (European Training Foundation) ROUND TABLE, Bruxelles, February 3, 2011

DELIVERING TRANSFORMATIVE SOLUTIONS TO THE GLOBAL AUTOMOTIVE INDUSTRY, Auditorium CEA - Centro Ricerche Fiat, Orbassano (TO) October 28, 2010

MODENA MOTOR SPORT EXPOTECH - COMPOSITI EXPO-CONGRESS, Modena, October 13, 2010 “IDRA10: una monoposto in fibra di carbonio per competizioni di basso consumo” A.AIRALE, A.FERRARIS; #

AUTODESK UNIVERSITY: Las Vegas, December 1-4, 2009;

COMPOTEC: Carrara October 22-23, 2009 “IDRA09: Ready to be different? A composite monocoque for a low consumption racing prototype” M.CARELLO, A.AIRALE; **#**
JEC COMPOSITE EUROPE: Paris, March 24-26, 2009;

IDRA09 OFFICIAL PRESENTATION April 29, 2009 Aula Magna Politecnico di Torino, M.CARELLO, A.AIRALE, C.GIANUZZI, F. BRERA MOLINARO; #

I3P – IN CORSA VERSO IL FUTURO October 13, 2008 “IDRA08 il prototipo a idrogeno a basso consumo” M.CARELLO, A.AIRALE, G.CASO; **#**

CALVACANDO IL FUTURO (ATA Conference) November 22, 2007

TRANSALPINE WORKSHOP - Hybrid, electric and fuel cell propulsion system (ATA Conference), Pollein (Valle d’Aosta) October 4-5, 2007

Note: # in these events the candidate took part presenting his personal research work, the team, the project and future goals.

ANNEXES

- Enclosure Team H2politO, POLITO and BEOND experience