

DANIELE BRUNO

Curriculum Vitae



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Personal Profile

Innovation Manager certified UNI11814:2021.

I am a naval architect and marine engineer working in R&D for the marine and yachting industry. I started my career as CAE Specialist working on the design of high-performance motorboats, carrying out fluid-dynamic and structural numerical analyses using design of experiment techniques (machine learning algorithms). I acquired a discrete ability to write code (Python) and to manage on demand computing (HPC). For some years now I have gained a good experience in project promoting and management (industrial and webapp), both in terms of economic resources and team, collaborating with stakeholders such as shipyards, universities and research centers.

Current Occupation

May 2024 - Today **INNOVATION MANAGER UNI11814:2021** *Premetis - Trieste (Italy)*

I help companies and institutions for the conception and writing of projects and research and development activities within the framework of corporate strategy. I work for seeking funding, whether from public tenders or through private venture channels.

I am responsible for the management system, quality/safety/environment, which will lead the companies towards integrated ISO certification.

Key issues: *R&D&I projects, TRL certification, design thinking, new business models, ISO9001, ISO56000.*

Dec 2022 - Today **BUSINESS DEVELOPER** *PLUS srl - Trieste (Italy)*

I am involved in strategic planning and technology scouting, within the industrial sector of virtual prototyping and AI applications development. Among the different tasks I have been charged with there are: - project management - accounting for the development of new solutions - identification of potential new customers with the aim of creating new business opportunities. I was involved in the conception and writing of applications for funding from public tenders. Below is the list of applications funded to date.

Key issues: *digital twin, virtual prototyping, numerical analysis, software development.*

Regional and PNRR co-financed Projects

(grant application design, writing and submission)

- POR-FESR FvG: C-Drone (1.4 mln€) Azione a.1.1.2 "negoziale"

- iNEST: ModeBoat (0.34 mln€)-Spoke 9 | Adr.IA (0.5 mln€)-Spoke 8 | AeroPathAI (0.2 mln€)-Spoke 2

Sept 2016 - Nov 2022 **CHIEF INNOVATION OFFICER** *MICAD srl, R&D Department - Trieste (Italy)*

I coordinate a multidisciplinary team of four people. I am responsible for the management of in-house or funded R&D projects, from conception and writing of the application (EU, National or Regional program) to scientific coordination and maintaining the project documentation. I'm also responsible for partnership research and definition.

Key issues: *innovative propulsion system, numerical analysis, hpc, web app, cloud services, additive manufacturing, industry 4.0.*

Patents - Inventor (2018)

- "Dispositivo propulsore ad elica" (IT201800010884A1) - Activity management and coordination of the consultant in charge of writing and drawings.

Cluster promotion activities - Founder and proposal coordinator (2022)

- DMH - Digital Marine Hub - *Seal of Excellence* by EU as EDIH program (European Digital Innovation Hub). Partner: CNR, CINECA, UNITS, POLIMI, SISSA, UCINA, CLM, NAVIGO, MARE-FvG, DLTM.

Self-financed Projects - Salone di Genova 2019

- MAMBO - World's first 3D printed continuous glass fiber boat (MICAD, AUTODESK, CATMARINE, CONFINDUSTRIA NAUTICA, MERCURY MARINE, OSCULATI, OWEN'S CONING, MOI COMPOSITE)

European SME-Instrument program - 2017

- INCAT / MODCAT - New business model for working catamaran production and supply chain *Seal of Excellence*, Phase 1.

Regional co-financed Projects - POR-FESR Friuli Venezia Giulia and Puglia

- VR Experience - Advanced studies on methods of engaging people within VR scenes (MICAD)
- NAVE+ - Virtual prototyping using virtual and augmented reality (MICAD)
- EASYPRO - Collaborative platform for project and production management: load case, performance prediction, documents approval - front and back end development (MICAD)
- ECO-CFRP - Utilization of RCF (Recycled Carbon Fibers), using non-woven fabrics, in the aeronautical sector (MICAD - KARBOREK - GIANNUZZI - SINAPSI - ENEA)
- UBE 2 - Vibroacoustic predictions for the comfort of pleasure boats by numerical analysis of fluid dynamics interactions between appendages and exhaust. (MICAD - MCY - UNITS - SISSA)
- ABE - Reduction of maritime related noise, vibration and chemical emissions: aeroacoustic analysis of exhaust gases (MICAD - AIRWORKS - UNITS - METECH - WARTSILA)
- C.A.L.C. - Computer aided load cases web app - front and back end development (MICAD)
- P.E.R.Na. - Shaftless rim-driven electric propeller for sailing boats (MICAD - UNITS - UNIUD - MwFEP)
- SOPHYA - Seakeeping performance comparison on Planing Boats (CFD, Towing tank and Sea trials) (MICAD - MCY - UNITS)
- CANTIERE 4.0 - Industry 4.0 applied to shipyards (MICAD - ESTECO - MCY - IKON - TEKNODATA)

May 2013 -
Dec 2022

CAE ENGINEER
MICAD srl, Lecce (Italy)

As a consultant to, among others, Beneteau Group, Monte Carlo Yachts, Azimut Yachts and Bavaria, I collaborate on the design of several boats, both in the preliminary and executive design phases. I also worked as a shipyard surveyor for carrying out instrumented sea trials.

Numerical Analysis:

- Prediction of planing hull tow performances, by CFD simulations.
- Prediction of planing hull seakeeping and maneuvering aptitude, by CFD simulations.
- Simulations on fast, ventilated stepped hulls or foiled.
- Self-Propulsion simulation.
- Open water propeller simulations.
- Structural design of composite materials, by FEM analysis.

Naval Engineering:

- 3D Modelling of naval surfaces and composite structures.
- Hydrostatic and Stability calculations.
- Lamination Schedules and work instructions for structures and hull components.
- Structures scantling for the compliance with the ISO rules.
- Measure on board during sea trial (Ship Motions, vibrations, acoustic)

Education and Training

2024

DIGITAL TWIN PER L'ECONOMIA SOSTENIBILE
SISSA - Scuola Superiore di Studi Avanzati

The course teaches real-time physical simulation and Digital Twin fundamentals, focusing on AI-driven predictive monitoring and control, especially for North Adriatic marine environments. It also covers broader industrial and environmental Digital Twin applications.

- 2024** **INNOVATION MANAGER CERTIFICATION COURSE**
LEF Lean Experience Factory scarl
The training programme is based on the UNI 11814:2021 standard, dedicated to professionals working in the field of innovation management, called Innovation Management Professionals.
At the end of the course it will be possible to take the qualification examination for the profession.
- 2019 -** **MASTERING DESIGN THINKING**
2020 **MIT Sloan School of Management**
Executive Program (EN): *Master of in-depth study of the "design thinking" approach applied to process and product innovation.*
The program, based on working groups of different nationalities, led to the creation of a product development project starting from the analysis of customer needs to the realization of the product idea.
- Jul 2012 -** **UNIVERSITY INTERNSHIP**
Dec 2012 **Università degli Studi di Napoli "Federico II", Towing Tank, Naples (Italy)**
As internship member of Towing Tank of the Department of Naval Engineering I had the opportunity to follow experimental trials collaborating in definition and execution of the trials.
Main activities:
- Resistance trials in calm water.
 - Self-propulsion trials.
 - Propeller tests in open water.
 - Seakeeping trials on motor yacht.
- 2005 -** **BACHELOR'S DEGREE IN NAVAL ENGINEERING**
2012 **Università degli Studi di Napoli "Federico II", Naples (Italy)**
Thesis (EN): *Hydrodynamic hull shape optimization: New approach to geometric modeling, Design-Space investigation, C.F.D. Analysis by Potential Panel and RANSE Methods.*
Developing of an automatic procedure to optimize naval surfaces using design of experiments techniques. Software used: CAESES, ShipFlow, STAR-CCM+.

Other experiences

- Apr 2024** **Innovation Manager certified UNI11814:2021.**
Intertek Italia SpA
- Feb 2024** **The Foiling Organization**
Blue District - Porto Antico - Genova
Board member - R&D program manager
- 2019 -** Participation as an exhibitor at the international fairs
2020 **METS Trade** (Amsterdam), **FLIBS** (Fort Lauderdale), **Salon Nautic** (Paris), **Seaworks** (Southampton), **Seatec** (Carrara)
Main activities: Strategic marketing, relations with the organization, commercial and B2B contacts, post-event followup.
- Nov 2018** **ESTECO User Meeting**
Stazione Marittima di Trieste
Speaker at UM2018, for the project P.E.R.Na.
"Fluid dynamics optimization of a shaft-less rim-driven propeller using ModeFrontier"
- Jun 2018** **NAV 2018**
Stazione Marittima di Trieste
Speaker at NAV 2018, for the project P.E.R.Na.
"Fluid dynamics optimization of a shaft-less rim-driven propeller"
- Nov 2016** **EnginSoft CAE Conference**
Vicenza
Speaker at the conference with the article titled: Hull - Support tool interaction for a large yacht made of composite materials.
- 2013 -** **Nautech**
2017 **Magazine on nautical technologies**
Writer for a series of articles on hydrodynamic topics

Personal Skills

Languages

English: Professional (PET 84/100);

German: basic knowledge

Technical Skills

Project Management

ISO 9001: very good command
MS Project: very good command
YouTrack: very good command

Digital Mockup & VR

Figma (UI): good command
Draw.IO (Process): good command
Unity framework: good command

HPC

AWS EC2: very good command
ParallelCluster: good command
AWS S3-FSX: good command
AWS CLI: good command

Coding

PYTHON: advance knowledge
MongoDB: basic knowledge
MySQL: basic knowledge
LaTeX: good command

CAE Software

STAR-CCM+: very good command
ANSYS Mechanical: good command
Mode Frontier: good command

CAD Software

Rhinoceros: very good command
Grasshopper: very good command
Solid Works: good command
Siemens NX: good command

General Knowledge:

Project and Risk Management; ISO 9001 - ISO 27001, Strategic Marketing (Buyer-Persona definition, Customer journey exploration); Business model definition by canvas support; Contracts Formulation, Privacy Policy and GDPR.

Trieste, li 24/03/2025

Firma:
