

# Agostino De Marco

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## Personal data

**Born:** August 31, 1969 — Pozzuoli (Napoli), Italy  
**Nationality:** Italian  
**Address:** Bacoli (Napoli), Italy  
**Phones:**  
**Marital status:** Married (father of two sons)

## Office

**Address:** Università degli Studi di Napoli Federico II  
Dipartimento di Ingegneria Industriale (DII) – Sezione Aerospaziale  
*University of Naples Federico II*  
*Department of Industrial Engineering – Aerospace Division*  
Via Claudio, 21 — 80125 Napoli, Italy  
**Phone:** +39 081 7683323  
**Fax:** +39 081 7683622  
**email:** [agostino.demarco@unina.it](mailto:agostino.demarco@unina.it)

## Current position

2021–Present *Associate Professor of Flight Mechanics, University of Naples Federico II*

## Areas of specialization

Aerospace engineering • Aircraft flight mechanics • Flight dynamics and control • Flight simulation  
• Flight testing • Applied aerodynamics and hydrodynamics • Computational fluid dynamics (with applications to both aeronautical and naval engineering problems) • Scientific computing •  $\LaTeX$  and Digital typography

## Education and academic positions held

2017–Present Professor of Flight Mechanics, Italian Air Force Academy (Accademia Aeronautica, Pozzuoli, Italy)  
2002–2020 Assistant professor of Flight Mechanics, University of Naples Federico II  
2001–2002 Post-doc at University of Naples Federico II, Department of Naval Engineering  
2001 PhD in Naval Engineering, University of Naples Federico II, Department of Naval Engineering  
1996 Laurea *summa cum laude*, in Aeronautical Engineering, University of Naples Federico II

## Teaching experience

- 2017–Present Appointed as professor of *Flight Mechanics*, Italian Air Force Academy, Master Degree for military pilots in Management of Defense Aerospace Systems.
- 2012–Present Appointed as professor of *Flight Dynamics & Flight Simulation*, University of Naples Federico II, Master Degree in Aerospace Engineering.
- 2010–Present Appointed as professor of *Flight Mechanics (Aircraft Stability & Control)*, University of Naples Federico II, Bachelor Degree in Aerospace Engineering.
- 2008–2009 Appointed as aggregate professor of *Flight Dynamics and Control*, University of Salento, Lecce (Italy), Master Degree in Aerospace Engineering.
- 2004–2008 Appointed as aggregate professor of *Flight Simulation Techniques*, University of Naples Federico II, Bachelor Degree in Aerospace Engineering.

- Two decades of teaching experience at university level (as Lecturer, Assistant Professor, and Associate Professor) in the following topics (disseminated in various courses): Aircraft flight dynamics, Flight mechanics, Aerodynamics, Applied aerodynamics, Computational aerodynamics, Numerical methods in engineering.
- Supervisor of numerous graduate and post-graduate theses in Aerospace Engineering at the University of Naples Federico II.
- Appointed as lecturer in seminars and classes for professional audiences by several Italian institutions and aeronautical industries (e. g. Italian Air Force Academy, Alenia/Selex, Piaggio, OAN).
- Currently appointed for the courses of *Flight Mechanics* and *Flight Dynamics and Simulation* at the Polytechnic School of the University of Naples Federico II.

*Committed to support the teachings, both in oral lectures and written material, by providing the learners with realistic and up-to-date calculation examples and software tools.*

## Current research (see [List of Publications](#))

- Component of the Design of Aircraft and Flight technologies research group (DAF, [www.daf.unina.it](http://www.daf.unina.it)) at the Department of Industrial Engineering, University of Naples Federico II.
- Flight quality assessment of general aviation twin-propeller aircraft and regional transport twin-propeller aircraft. CFD analysis of twin-propeller airplane configurations. Vertical tail design methodologies based on CFD studies. Evaluation of aircraft unsteady aerodynamics using CFD. (see ref. [17, 23, 34]).
- Risk analysis for airplanes operating near wind farms, a joint research conducted by the University of Naples Federico II in collaboration with the Fraunhofer Institute for Wind Energy and Energy System Technology (IWES, Germany). The project addresses the evaluation of flight loads on representative airplanes flying in various conditions in proximity of wind farms. The analyses are conducted by coupling CFD simulations of flow around wind farms and 6-Degree-of-Freedom flight simulations through non-calm air. (see ref. [16, 28]).
- Involved in the Horizon 2020 project IRON, *Innovative turboprop configuration*. The research addresses the development of an innovative turboprop configuration with rear-mounted engines, with a clean and high-efficiency wing and extended laminar flow. The IRON project also focuses on modern high-lift

systems and optimization of ground performance, and on innovative aircraft configurations with rear propeller installations, mounted on tailplanes. (see ref. [27]).

- Involved in the Horizon 2020 project AGILE, *Aircraft 3rd Generation MDO for Innovative Collaboration of Heterogeneous Teams of Experts* (Founded by European Commission). AGILE overall project objective targets the significant reduction in aircraft development costs, by enabling a more competitive supply chain able to reduce the time to market of innovative aircraft products. Focus in AGILE is on integration of aerodynamic prediction tools in distributed analysis frameworks, aerodynamic design of reference and innovative aircraft configurations, and multi-domain optimization techniques (see ref. [4, 25, 27, 30, 33, 35]).
- Involved in a research in collaboration with Computer Research Institute of Montréal (CRIM) and Polytechnique of Montréal (Canada) on *automatic detection of behavioural deviations in flight simulators*. In particular, data mining techniques and time series models are being applied to flight simulator behaviour in order to flag behavioural deviations at the system level due to malfunctions or component changes.
- Investigating the way to estimate the collision risk of aircraft with on ground obstacles near aerodromes — due to deviations from normal flight operations — via 6-degree-of-freedom Montecarlo flight simulations (see ref. [39, 45]).
- Component of a team of investigators at the University of Naples Federico II working on applicability of Flettner rotors to green naval propulsion (see ref. [32, 40]).
- Component of a team of investigators at the University of Naples Federico II working on the characterization of stepped planing hulls. Stepped hulls are investigated with towing tank tests and Computational Fluid Dynamics simulations, with applications to both high-speed planing crafts and seaplanes (see ref. [21]).
- Performance assessment of a submerged tethered renewable energy conversion system named GEM (*Generatore Elettrico Marino*, Marine Electric Generator). CFD-based aerodynamic design of ducted turbines. Dynamic characterization of the tethered underwater system exposed to marine currents (see ref. [18, 60]).

## Research experience (see List of Publications)

- Research interests include the following subjects and activities:
  - Aircraft design, flight dynamics and aerodynamic design (see refs. [1–4, 6–8, 10–12, 14, 15, 17, 27, 30, 33–35, 41, 54, 56–58, 75, 76, 82, 85–89, 91])
  - Flight testing and certification (see refs. [9, 12, 36, 54, 56, 57, 63, 68, 69, 81, 85, 87, 88])
  - Airship design and flight dynamics modelling (see refs. [42, 47, 49–51])
  - Nonlinear dynamics of flight at high angles of attack (see refs. [70, 74]),
  - Flight simulation (see refs. [16, 28, 39, 45, 55, 59, 67, 69, 72, 73])
  - Aircraft system identification (see refs. [36, 48, 58, 69])
  - Reconstruction and analysis of flight accidents (see refs. [39, 45, 84])
  - Techniques of visualization of airplane flight trajectories and three-dimensional motion, for flight simulation and accident analysis (see refs. [16, 28, 45, 84])
  - Use of computational fluid dynamics (CFD) software to support wind-tunnel and towing-tank experimental investigations (see refs. [13, 20–22, 34, 38, 43, 74, 80, 82, 83, 92, 93])
  - Applications of Aerodynamics to Naval Architecture (see refs. [29, 32, 40])
  - Aerodynamic design and optimization (see refs. [2, 4, 6, 15, 23–27, 34, 64, 74, 76, 79, 80])

- Automotive aerodynamics and development of drag reduction devices (see ref. [22, 43])
- Design of wind- and hydro-turbines (see refs. [18, 38, 61, 77–79, 83])
- Design of power plants for renewable energy (see refs. [18, 38, 60, 61, 77, 78, 83])
- Applications of scientific and high-performance computing (see refs. [20, 22, 43, 92, 93])
- Software engineering, Object-Oriented design of large software systems (see refs. [19, 31, 33, 35])
- Object-Oriented and Functional modelling of data structures in Java language for aircraft preliminary design (see ref. [19, 31, 33, 35])
- Implementation of a JavaFX-based interface to the Open CASCADE Technology library for 3D/CAD modelling (see refs. [19, 31, 33, 35])
- Official developer of JSBSim ([www.jsbsim.org](http://www.jsbsim.org) · [github.com/JSBSim-Team/jsbsim](https://github.com/JSBSim-Team/jsbsim)), an open source project providing the default Flight Dynamics Model (FDM) for the flight simulation software FlightGear ([www.flightgear.org](http://www.flightgear.org)).
- Expert user of some of the most popular Computer-aided engineering (CAE) software tools, including Siemens STAR-CCM+, ANSYS Workbench, ANSYS ICFM CFD, ANSYS Fluent, OpenFOAM. More than 15 years of experience in running complex CFD simulations both on personal computer workstations and on parallel supercomputing frameworks.
- Component of the design team of a STOL Ultralight Aircraft in composite material named “Easy-Fly” (2003-2005). Aerodynamic design, engine/airframe integration, performance and flight quality assessment, wind-tunnel testing.
- Coordinator of the design and development of an advanced research flight simulation laboratory at the University of Naples (2002-2005). Commissioner for the final acceptance procedure of this plant. Currently in charge of the lab operations and productivity.
- Developed interest and expertise in the following related fields:
  - Programming languages (C++, Java, Matlab, Python, C, Fortran),
  - Software engineering and functional/object-oriented design,
  - Machine learning, deep learning, data science,
  - CAD and solid modelling,
  - Grid generation,
  - Web development (HTML, CSS, Javascript, PHP, Drupal, Joomla),
  - Management of large open source projects  
(see [github.com/Aircraft-Design-UniNa/jpad](https://github.com/Aircraft-Design-UniNa/jpad) · [github.com/JSBSim-Team/jsbsim](https://github.com/JSBSim-Team/jsbsim)).
- President (2013–2016) of the Italian Group of  $\LaTeX$  Users ( $\G_{IT}$ , *Gruppo Italiano di utenti  $\TeX$  e  $\LaTeX$* ), a nonprofit organization that promotes the dissemination of the  $\TeX$  typesetting system and its markup language  $\LaTeX$  in Italy —  $\LaTeX$  is de-facto standard in computer science and mathematics. Author of several articles on the use at all levels of this advanced, freeware typesetting technology (see refs. [5, 37, 44, 46, 52, 53, 62, 65, 66, 71]).

Other related interests: engineering illustrations, digital typography (desktop publishing), scientific publishing, and automated publishing solutions for public administrations (see ref. [52]).

## Participations in research projects and research contracts

2019–2022

Horizon 2020 — Project: *AGILE 4.0: Towards cyber-physical collaborative aircraft development*. University of Naples Federico II in partnership with German Aerospace Center (DLR), Fokker Aerostructures,

Embraer, Leonardo, Stichting Nationaal Lucht-En Ruimtevaartlaboratorium (NLR), Noesis Solutions, Office National d'Etudes et de Recherches Aerospatiales (ONERA), Politecnico di Torino, Rheinisch-Westfaelische Technische Hochschule Aachen, Concordia University (Canada), Technische Universiteit Delft (TUD), Bombardier, Russian Federation Central Institute of Aviation Motors, Russian Federal State Zhukovsky Central Aerohydrodynamic Institute.

2018–2022 Horizon 2020, Research and Innovation Framework Programme — Project: *ADORNO: Aircraft Design and noise Rating for regional aircraft*. Topic H2020-CS2-CFP07-2017-02: Development of aircraft models for a regional aircraft engine platform to provide requirements and trade factors for specific fuel consumption, engine drag and engine weight on fuel burn for both a year 2000 reference aircraft and a CS2 target aircraft. University of Naples Federico II in partnership with MTU Aero Engines ([www.mtu.de](http://www.mtu.de)) and Leadtech ([www.leadtech.it/eng/](http://www.leadtech.it/eng/)).

2016–2019 Horizon 2020 / Clean Sky JU — Project: *IRON: Innovative turboprop configuration*. Topic JTI-CS2-2015-CPW02-REG-01-03: Green and cost efficient Conceptual Aircraft Design including Innovative Turbo-Propeller Power-plant. University of Naples Federico II in partnership with Centro Italiano ricerche Aerospaziali SCPA (CIRA), Office National d'Etudes et de Recherches Aerospatiales (ONERA), Politecnico di Torino, Stichting Nationaal Lucht-En Ruimtevaartlaboratorium (NLR), Technische Universiteit Delft (TUD), General Electric Deutschland Holding GmbH, GE Aviation System LTD.

2015–2018 Horizon 2020 — Project: *AGILE: Aircraft 3rd Generation MDO for Innovative Collaboration of Heterogeneous Teams of Experts*. University of Naples Federico II in partnership with German Aerospace Center (DLR), Alenia Aermacchi, EADS Deutschland, Fokker Aerostructures, Stichting Nationaal Lucht-En Ruimtevaartlaboratorium (NLR), Noesis Solutions, Office National d'Etudes et de Recherches Aerospatiales (ONERA), Politecnico di Torino, Rheinisch-Westfaelische Technische Hochschule Aachen, Technische Universiteit Delft (TUD), Bombardier, Russian Federation Central Institute of Aviation Motors, Russian Federal State Zhukovsky Central Aerohydrodynamic Institute.

2014–2016 Campania Technological Aerospace District (DAC S.c.a r.l.), PON-REC — Project *CERVIA: Virtual Certification Methods applied to Innovative Solutions*. University of Naples Federico II in partnership with Alenia Aermacchi, Magnaghi Aeronautica, Atitech, MBDA, DEMA, Telspazio.

2010–2013 National Operative Research Programme PON01-1750 in partnership with Centro Ricerche FIAT (FIAT Research Center): *Componenti avanzati per la riduzione della resistenza all'avanzamento di autoveicoli* (Advanced solutions for the reduction of automotive drag). Design of boundary-layer control devices based on unsteady blowing and synthetic jets for the reduction of car drag. Numerical simulations on three-dimensional reference bodies. Wind tunnel tests.

2008–2012 European Project Clean Sky, Green Regional Aircraft. Wind tunnel investigations on airfoils equipped with synthetic jet actuators. Evaluation of performance improvements for high altitude, long endurance UAVs.

2011 Contract with ATR Toulouse: *Analysis of performance, stability and control of re-engineered versions of ATR42 and ATR72*.

2011 Contract with Kelyon Srl: *Development of a web application for the Administration of the City of Naples. An automated L<sup>A</sup>T<sub>E</sub>X-based toolchain for the composition of institutional communications*.

2009–2010 Contract with ATR Toulouse: *Aerodynamic analysis and design of a new generation turbo-prop (NGTP) for regional transport*.

2007–2010 Contract 442 with Direzione Armamenti Aeronautici (ARMAEREO, Italian Air Force): *Soffiamento instazionario e getti sintetici. Studio e sperimentazione per l'applicazione su un velivolo militare* (Unsteady blowing and synthetic jets. Analysis and wind tunnel tests for the application on a military UAV).



- 2009 Project FARO 2009/II. Polo delle Scienze e Tecnologie, Università degli studi di Napoli Federico II: *Sviluppo di dispositivi a getto sintetico per diverse applicazioni tecnologiche* (Development of synthetic jet devices for various technological applications). Use of piezoelectric actuators in flight mechanics.
- 2006–2007 Contract with SICTA Consortium (Innovative Systems for Air Traffic Control, ENAV/Techno Sky): *Enhanced Collision Risk Model (E-CRM)*. Deterministic support for aerodrome obstacle collision risk assessment via engineering flight simulations.
- 2004–2006 Contract with CIRA (Italian Aerospace Research Centre): *HALE-WING. Improvement of aerodynamic performance of airplanes and UAVs with boundary-layer control via unsteady blowing*.
- 2003–2005 Contract with Aerosoft: *EasyFly. Design of a STOL ultra-light aircraft in composite material*.
- 2002 Project Young Researchers, University of Naples Federico II: *Development of a basic flight simulator for light aircraft*.

## Work experience

- Founder in 2019 of *SmartUp Engineering* [www.smartup-engineering.com](http://www.smartup-engineering.com), an academic spin-off company of the University of Naples Federico II. An innovative startup born to meet the specific needs of companies and research institutions in various industrial fields, focusing on: Software development for industrial and scientific applications related to aerospace; support to the design, development and testing of innovative aerial platforms; application of innovative technologies in the aerospace, mechanical and energy sectors.
- Consultant in 2014 for the relatives of the victims in the “Ustica Accident” — an air crash occurred in 1980 in the middle of Tyrrhenian Sea (Italy) that killed 81 civilians travelling on a Douglas DC-9 airliner, and whose responsibilities have never been ascertained. Modelling of the accident scenario and reconstruction of the final airplane trajectory with a 6-degree-of-freedom flight simulation software.
- Consultant in 2012 for a wind farm construction company. Aeronautical study required by ENAV (Italian Air Traffic Control authority). Assessment of safety issues related to the construction of a wind farm in proximity of Lamezia Terme Aerodrome (Italy), in compliance to international regulations.
- Expert witness in 2008 in a case for the determination of responsibilities in a flight accident occurred near Ravenna (Italy) to a Grob G103 Twin Astir aerobatic sport sailplane. Analysis and reconstruction of the accident scenario. Evaluation of maximum loads on horizontal and vertical tailplanes according to specific regulations. Simulation of the fatal manoeuvre known as “super-slow tonneau” by means of advanced 6-degree-of-freedom flight simulation software. Reconstruction of tail load time histories.
- Design and construction in 2006 of a wind micro-turbine of 5 kW optimized for low wind speed, as an associate of EOLPOWER Srl academic spin-off company.
- Expert witness in 2003 in a case for the determination of responsibilities in a flight accident occurred near Genova (Italy) to a LearJet 45. Analysis and reconstruction of the accident scenario. Determination of aircraft path and attitude angles time histories from ATC data. Virtual flight animation and synchronization with original audio of recorded pilot/ATC.

## Memberships

- AIAA (American Institute of Aeronautics and Astronautics) senior member.
- International member of AIAA Modelling & Simulation Technical Committee (2008-2014).

## Honors and awards

- *TechnologyBiz Prize 2011 for Applied Innovation in ITC* (Campania Region, Italy, Confederation of Industries of Naples Area) for developing the L<sup>A</sup>T<sub>E</sub>X-based web application FACILE, in co-operation with Kelyon Srl and Engineering Spa.
- *CIBA-PARK Technological Incubator Prize 2006* (Italian Aerospace Research Centre, Ministry of Instruction University and Research) as an associate of EOLPOWER Srl academic spin-off company.
- *Start-Cup Campania Award 2006* (Campania Region, Italy, University of Naples Federico II) as an associate of EOLPOWER Srl for the best academic spin-off company in Campania.

## Languages

Italian, native speaker.

English, highly proficient in both spoken and written forms.

French, working knowledge.

Naples, June 2021.

## List of publications – Agostino De Marco

- [1] Nicolosi, F., Corcione, S., Trifari, V., and **De Marco, A.** “Design and Optimization of a Large Turboprop Aircraft”. In: *Aerospace* 8 (May 2021). doi: [10.3390/aerospace8050132](https://doi.org/10.3390/aerospace8050132).
- [2] **De Marco, A.**, Di Stasio, M., Della Vecchia, P., Trifari, V., and Nicolosi, F. “Automatic Modeling of Aircraft External Geometries for Preliminary Design Workflows”. In: *Aerospace Science and Technology* 98.105667 (Mar. 2020). doi: [10.1016/j.ast.2019.105667](https://doi.org/10.1016/j.ast.2019.105667).
- [3] **De Marco, A.**, Trifari, V., Nicolosi, F., and Ruocco, M. “A Simulation-Based Performance Analysis Tool for Aircraft Design Workflows”. In: *Aerospace* 7 (Nov. 2020). doi: [10.3390/aerospace7110155](https://doi.org/10.3390/aerospace7110155).
- [4] Lefebvre, T., Bartoli, N., Dubreuil, S., Panzeri, M., Lombardi, R., Della Vecchia, P., Stingo, L., Nicolosi, F., **De Marco, A.**, Ciampa, P., Anisimov, K., Savelyev, A., Mirzoyan, A., and Isyanov, A. “Enhancing optimization capabilities using the AGILE collaborative MDO framework with application to wing and nacelle design”. In: *Progress in Aerospace Sciences* 119 (Nov. 2020). doi: [10.1016/j.paerosci.2020.100649](https://doi.org/10.1016/j.paerosci.2020.100649).
- [5] **De Marco, A.** “Graphics for L<sup>A</sup>T<sub>E</sub>X users”. In: *ArsT<sub>E</sub>Xnica* 28 (2019), pp. 64–100.
- [6] Della Vecchia, P., Stingo, L., Nicolosi, F., **De Marco, A.**, Daniele, E., and D’Amato, E. “Application of Game Theory and Evolutionary Algorithm to the Regional Turboprop Aircraft Wing Optimization”. In: *Evolutionary and Deterministic Methods for Design Optimization and Control With Applications to Industrial and Societal Problems*. Ed. by Andrés-Pérez, E., González, L. M., Periaux, J., Gauger, N., Quagliarella, D., and Giannakoglou, K. Cham: Springer International Publishing, 2019, pp. 403–418. doi: [10.1007/978-3-319-89890-2\\_26](https://doi.org/10.1007/978-3-319-89890-2_26).
- [7] Nicolosi, F., Corcione, S., Trifari, V., Della Vecchia, P., and **De Marco, A.** “Design Guidelines for High Capacity Innovative Regional Turboprop Aircraft”. In: *Proceedings of 2019 AIAA Aerospace Sciences Meeting, AIAA SciTech Forum*. AIAA 2019-0256. San Diego, California, USA: AIAA, American Institute of Aeronautics and Astronautics, Jan. 2019, pp. 1–16. doi: [10.2514/6.2019-0256](https://doi.org/10.2514/6.2019-0256).
- [8] Della Vecchia, P., Malgieri, D., Nicolosi, F., and **De Marco, A.** “Numerical analysis of propeller effects on wing aerodynamic: Tip mounted and distributed propulsion”. In: *Transportation Research Procedia* 29 (Feb. 2018), pp. 106–115. doi: [10.1016/j.trpro.2018.02.010](https://doi.org/10.1016/j.trpro.2018.02.010).
- [9] Della Vecchia, P., Stingo, L., Nicolosi, F., **De Marco, A.**, Cerino, G., Ciampa, P. D., Prakasha, P. S., Fioriti, M., Zhang, M., Mirzoyan, A., Aigner, B., and Charbonnier, D. “Advanced turboprop multidisciplinary design and optimization within AGILE project”. In: *Proceedings of 2018 Aviation Technology, Integration, and Operations Conference, AIAA Aviation Forum*. AIAA 2018-3205. Atlanta, Georgia, USA: AIAA, American Institute of Aeronautics and Astronautics, June 2018, pp. 1–17. doi: [10.2514/6.2018-3205](https://doi.org/10.2514/6.2018-3205).
- [10] Della Vecchia, P., Nicolosi, F., Ruocco, M., Stingo, L., and **De Marco, A.** “An Improved High-Lift Aerodynamic Prediction Method for Transport Aircraft”. In: *CEAS Aeronautical Journal* (2018), pp. 1–10. doi: [10.1007/s13272-018-0349-5](https://doi.org/10.1007/s13272-018-0349-5).
- [11] Nicolosi, F., Corcione, S., Della Vecchia, P., **De Marco, A.**, Ruocco, M., and Trifari, V. “Aerodynamic Design and analysis of an innovative regional turboprop configuration”. In: *Proceedings of 31st Congress of the International Council of Aeronautical Sciences (ICAS)*. Belo Horizonte, Brasil: International Council of Aeronautical Sciences, ICAS, Sept. 2018.



- [12] Nicolosi, F., **De Marco, A.**, Sabetta, V., and Della Vecchia, P. “Roll performance assessment of a light aircraft: Flight simulations and flight tests”. In: *Aerospace Science and Technology* 76 (May 2018), pp. 471–483. DOI: [10.1016/j.ast.2018.01.041](https://doi.org/10.1016/j.ast.2018.01.041).
- [13] Petrosino, F., de Rosa, D., Mingione, G., Sgueglia, A., and **De Marco, A.** “MDO Applications to Conventional and Novel Turboprop Aircraft within AGILE European Project”. In: *Proceedings of 2018 AIAA Aerospace Sciences Meeting, AIAA SciTech Forum*. AIAA 2018-0785. Kissimmee, Florida, USA: AIAA, American Institute of Aeronautics and Astronautics, Jan. 2018, pp. 1–7. DOI: [10.2514/6.2018-0785](https://doi.org/10.2514/6.2018-0785).
- [14] Stingo, L., Della Vecchia, P., Cerino, G., Nicolosi, F., and **De Marco, A.** “MDO Applications to Conventional and Novel Turboprop Aircraft within AGILE European Project”. In: *Proceedings of 31st Congress of the International Council of Aeronautical Sciences (ICAS)*. Belo Horizonte, Brasil: International Council of Aeronautical Sciences, ICAS, Sept. 2018.
- [15] Trifari, V., Ruocco, M., Cusati, V., Nicolosi, F., and **De Marco, A.** “Multi-Disciplinary Analysis and Optimization Java Tool for Aircraft Design”. In: *Proceedings of 31st Congress of the International Council of Aeronautical Sciences (ICAS)*. Belo Horizonte, Brasil: International Council of Aeronautical Sciences, ICAS, Sept. 2018.
- [16] Varriale, C., **De Marco, A.**, Daniele, E., Schmidt, J., and Stoevesandt, B. “Flight Load Assessment for Light Aircraft Landing Trajectories in Windy Atmosphere and Near Wind Farms”. In: *Aerospace* 5.42 (2018). DOI: [10.3390/aerospace5020042](https://doi.org/10.3390/aerospace5020042).
- [17] Ciliberti, D., Della Vecchia, P., Nicolosi, F., and **De Marco, A.** “Aircraft directional stability and vertical tail design: A review of semi-empirical methods”. In: *Progress in Aerospace Sciences* 95 (Nov. 2017), pp. 140–172. DOI: [10.1016/j.paerosci.2017.11.001](https://doi.org/10.1016/j.paerosci.2017.11.001).
- [18] Coiro, D. P., Troise, G., Scherillo, F., **De Marco, A.**, Calise, G., and Bizzarrini, N. “Development, deployment and experimental test on the novel tethered system GEM for tidal current energy exploitation”. In: *Renewable Energy* (Jan. 2017). DOI: [10.1016/j.renene.2017.01.040](https://doi.org/10.1016/j.renene.2017.01.040).
- [19] **De Marco, A.**, Cusati, V., Trifari, V., Ruocco, M., Nicolosi, F., and Della Vecchia, P. “A Java Toolchain of Programs for Aircraft Design”. In: *Proceedings of 6th CEAS Air and Space Conference, Aerospace Europe 2017*. Bucharest, Romania: Council of European Aerospace Societies, CEAS, Oct. 2017.
- [20] **De Marco, A.**, De Luca, F., Mancini, S., Miranda, S., Pensa, C., Scognamiglio, R., and Staiano, G. “Contribution of the High Performance Computing (HPC) in Naval Architecture Researches”. In: *Results and Scientific Applications Derived from the Italian PON ReCaS Project*. Ed. by Laccetti, G., Merola, L., Bellotti, R., Andronico, G., de Nardo, G., Maggi, G., Russo, G., Silvestris, L., Tassi, E., and Tangaro, S. World Scientific Publishing Company, 2017. Chap. 27, pp. 319–328. DOI: [10.1142/9789814759717\\_0026](https://doi.org/10.1142/9789814759717_0026).
- [21] **De Marco, A.**, Mancini, S., Miranda, S., Scognamiglio, R., and Vitiello, L. “Experimental and Numerical Hydrodynamic Analysis of a Stepped Planing Hull”. In: *Applied Ocean Research* 64 (Mar. 2017), pp. 135–154. DOI: [10.1016/j.apor.2017.02.004](https://doi.org/10.1016/j.apor.2017.02.004).
- [22] **De Marco, A.**, Nicolosi, F., Coiro, D. P., Tognaccini, R., Calise, G., Della Vecchia, P., Corcione, S., Ciliberti, D., and Mele, B. “High Performance Computing (HPC) and Aerospace Research Activities at the University of Naples Federico II”. In: *Results and Scientific Applications Derived from the Italian PON ReCaS Project*. Ed. by Laccetti, G., Merola, L., Bellotti, R., Andronico, G.,

- de Nardo, G., Maggi, G., Russo, G., Silvestris, L., Tassi, E., and Tangaro, S. World Scientific Publishing Company, 2017. Chap. 26, pp. 307–318. DOI: [10.1142/9789814759717\\_0026](https://doi.org/10.1142/9789814759717_0026).
- [23] Della Vecchia, P., Nicolosi, F., Malgieri, D., and **De Marco, A.** “Numerical Analysis of Propeller Effects on Wing Aerodynamic: Tip mounted and Distributed Propulsion”. In: *Proceedings of 6th CEAS Air and Space Conference, Aerospace Europe 2017*. Bucharest, Romania: Council of European Aerospace Societies, CEAS, Oct. 2017.
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