

Alberto Savino, Ph.D.





Wind Tunnel Test Engineer

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Employment History

- 2023 –  **Wind Tunnel Test Engineer** Department of Aerospace Science and Technology , Polytechnic University of Milan, Milano (Italia).
- 2019 – 2020  **Research Fellow** Department of Aerospace Science and Technology , Polytechnic University of Milan, Milano (Italia).
Research grant holder at Polytechnic University of Milan. Work based on the European project Smart Morphing & Sensing (Horizon 2020), <http://smartwing.org/SMS/EU/>.
- 2014 – 2015  **Curricular training** Analysis and optimization of a Formula Renault 2000, Tomcat Racing S.R.L., Lissone (Italia), Manufacturing - Automotive.




Education

- 2020 – 2023  **Ph.D. (cum laude) Aerospace Engineering, Polytechnic University of Milan**
Thesis title: *A Mid-Fidelity Aeroelastic Environment for Tiltrotor Analysis and Design*.
Related project: Development of innovative Functional aircraft Movable Surfaces, FORMOSA project (<https://cordis.europa.eu/project/id/885971/it>)
- 2015 – 2018  **M.Sc. Aeronautical Engineering, Polytechnic University of Milan**
Aerodynamics
Thesis title: *Design of a model with morphing flap for wind tunnel testing*.
- 2010 – 2014  **Degree Mechanical Engineering, Polytechnic University of Milan**
Vehicle
Thesis title: *Set up analysis of a Formula Renault 2000*.
- 2005 – 2010  **Scientific High school - PNI, Liceo Enrico Fermi, Cantù (Italy)**


Teaching Experience

- 2019 – 2020  course: **Aerodynamics**, Experimental Laboratories.
- 2020 – 2022  course: **Dinamica di Sistemi Aerospaziali**, Teaching Assistant.
- 2021 – 2023  course: **Istituzioni di Ingegneria Aerospaziale**, Experimental Laboratories.


Skills

- Languages  First language: Italian. Foreign language: strong reading, writing and speaking competencies for English.
- Coding  Matlab, Octave, Python, Fortran, \LaTeX , ...
- Software  CAD (Inventor, SolidEdge, Ansys, SolidWorks)
MESH (Pointwise, Hypermesh, Ansys)
FEM (Ansys, Inventor)
Multibody dynamics analysis software: MBDyn (<https://www.mbdyn.org/>)
Aerodynamics solver: DUST (<https://www.dust-project.org/>), Developer; SU2 (CFD)

Skills (continued)




Misc.  Academic research, teaching, training, Aerodynamics, Aerolasticity, Aerospace Structures.
Head Developer of DUST solver, <https://public.gitlab.polimi.it/DAER/dust>.

Certification


2015  TOEIC, Certified Level 1 in B

Research Publications




Journal Articles

- 1 Auteri, F., Savino, A., Zanolli, A., Gibertini, G., Zagaglia, D., Bmegaptche Tekap, Y., & Braza, M. (2022). Experimental evaluation of the aerodynamic performance of a large-scale high-lift morphing wing. *AEROSPACE SCIENCE AND TECHNOLOGY*, 124, 1–16.
 <https://doi.org/10.1016/j.ast.2022.107515>
- 2 Savino, A., Cocco, A., Zanolli, A., Tugnoli, M., Masarati, P., & Muscarello, V. (2021). Coupling mid-fidelity aerodynamics and multibody dynamics for the aeroelastic analysis of rotary-wing vehicles. *ENERGIES*, 14(21), 1–28.  <https://doi.org/10.3390/en14216979>
- 3 Zanolli, A., Savino, A., Palazzi, M., Tugnoli, M., & Muscarello, V. (2021a). Assessment of a mid-fidelity numerical approach for the investigation of tiltrotor aerodynamics. *APPLIED SCIENCES*, 11(8), 1–34.
 <https://doi.org/10.3390/app11083385>

Book Chapter

- 1 Auteri, F., Flaszynski, P., Savino, A., Zanolli, A., Gibertini, G., Zagaglia, D., Bmegaptche-Tekap, Y., Harribey, D., Rouchon, J. F., Kaczynski, P., Doerffer, P., Piotrowicz, M., Szwaba, R., Telega, J., Louge, T., Tò, J. B., Jimenez-Navarro, C., Marouf, A., & Braza, M. (2023). Aerodynamic evaluation. In *Smart morphing and sensing for aeronautical configurations prototypes, experimental and numerical : Findings from the h2020 n° 723402 sms eu project* (pp. 155–269). Springer.
 https://doi.org/10.1007/978-3-031-22580-2_5

Conference Proceedings

- 1 Caccia, F., Abergo, L., Savino, A., Morelli, M., Zhou, B. Y., Gori, G., Zanolli, A., Gibertini, G., Vigeveno, L., & Guardone, A. (2023). Multi-fidelity numerical approach to aeroacoustics of tandem propellers in evtol airplane mode, In *Aiaa aviation 2023 forum*.
 <https://doi.org/10.2514/6.2023-3221>
- 2 Savino, A., Cardoso, J., Pecoraro, M., & Muscarello, V. (2023). Development of innovative movable surfaces for the next-generation civil tiltrotor aircraft, In *20th australian international aerospace congress*.  <https://arinex.com.au/AIAC20/content.html>
- 3 Cocco, A., Colli, A., Savino, A., Masarati, P., & Zanolli, A. (2022). A non-linear unsteady vortex lattice method for aeroelastic rotor loads evaluation, In *48th european rotorcraft forum (erf 2022)*, Curran.
- 4 Cocco, A., Savino, A., & Masarati, P. (2022). Flexible multibody model of a complete tiltrotor for aeroservoelastic analysis, In *Asme 2022 international design engineering technical conferences and computers and information in engineering conference (idetc/cie 2022)*, ASME.
 <https://doi.org/10.1115/DETC2022-89734>
- 5 Cocco, A., Savino, A., Zanolli, A., & Masarati, P. (2022). Comprehensive simulation of a complete tiltrotor with pilot-in-the-loop for whirl-flutter stability analysis, In *48th european rotorcraft forum (erf 2022)*, Curran.

- 6 Savino, A., Cocco, A., Zanolini, A., De Gaspari, A., Zanolini, A., Cardoso, J., Carvalhais, D., & Muscarello, V. (2022). Design and optimization of innovative tiltrotor wing control surfaces through coupled multibody - mid-fidelity aerodynamics simulations, In *78th international annual forum vertical flight society*, Curran.
 - 7 Savino, A., Cocco, A., Zanolini, A., & Muscarello, V. (2022). Numerical investigation of wing-propeller aerodynamic interaction through a vortex particle-based aerodynamic solver, In *48th european rotorcraft forum (erf 2022)*, Curran.
 - 8 Cocco, A., Savino, A., Zanolini, A., Zanolini, A., Masarati, P., & Muscarello, V. (2021). Coupled multibody-mid fidelity aerodynamic solver for tiltrotor aeroelastic simulation, In *9th international conference on computational methods for coupled problems in science and engineering, coupled problems 2021*, CIMNE. <https://doi.org/10.23967/coupled.2021.013>
 - 9 Savino, A., Cocco, A., Zanolini, A., Zanolini, A., & Muscarello, V. (2021). A coupled multibody - mid fidelity aerodynamic tool for the simulation of tiltrotor manoeuvres, In *47th european rotorcraft forum (erf 2021)*.
 - 10 Zanolini, A., Savino, A., Palazzi, M., Tugnoli, M., & Muscarello, V. (2021b). Mid-fidelity numerical approach to tiltrotor aerodynamics, In *47th european rotorcraft forum (erf 2021)*.
 - 11 Cocco, A., Savino, A., Montagnani, D., Tugnoli, M., Guerroni, F., Palazzi, M., Zanolini, A., Zanolini, A., & Muscarello, V. (2020). Simulation of tiltrotor maneuvers by a coupled multibody-mid fidelity aerodynamic solver, In *46th european rotorcraft forum (erf 2020)*, Russian Helicopters.
- Autorizzo al trattamento dati ai sensi del GDPR 2016/679 del 27 aprile 2016 (Regolamento Europeo relativo alla protezione delle persone fisiche per quanto riguarda il trattamento dei dati personali).
 - Autorizzo la pubblicazione del Curriculum Vitae sul sito istituzionale del Politecnico di Milano (sez. Amministrazione Trasparente) in ottemperanza al D. Lgs n. 33 del 14 marzo 2013 (e s.m.i.).

