ALL. B

Decreto Rettrice Università di Roma “La Sapienza” n. 2073/2024 del 23/08/2024

GIULIO AVANZINI
Curriculum Vitae

Lecce, 9 ottobre 2024

Part I – General Information

Full Name	Giulio Avanzini
Date of Birth	
Place of Birth	
Citizenship	Italian
Permanent Address	
Mobile Phone Number	
E-mail	
Spoken Languages	Italian, English

Part II – Education

Type	Year	Institution	Notes (Degree, Experience,…)
University graduation	1993	Sapienza Università di Roma	Ingegneria Aeronautica
PhD	1997	Sapienza Università di Roma	Meccanica Teorica e Applicata

Part III – Appointments

III.A – Academic Appointments

Start	End	Institution	Position
2011	present	Università del Salento	Professore ordinario (full professor)
1998	2011	Politecnico di Torino	Ricercatore (assistant professor)

III.B – Other roles in Academic Institutions

Start	End	Institution	Position
2014	2023	Università del Salento	Coordinatore del Dottorato in Inge-gneria dei Sistemi Complessi
2018	present	Università del Salento	Component of the Department executive committee (giunta)
2019	present	Università del Salento	Component of the university work-group for gender policies

2023	present	Università del Salento	Component of the Board of the Ph.D. program in Engineering of Complex Systems
2023	present	Università del Salento	Scuola Superiore ISUFI: Component of the Teaching Committee
2011	2013	Università del Salento	Component of the Board of the Ph.D. program in Mechanical Engineering
2006	2011	Politecnico di Torino	Component of the Board of the Ph.D. program in Aerospace Engineering

III.C – Other Appointments

Start	End	Institution	Position
1997	1998	CNR – INSEAN	Research staff
1993	1994	Marina Militare Italiana	Guardiamarina (1st grade officer)

Part IV – Teaching experience

IV.A – Courses for 5 year Engineering Degrees (vecchio ordinamento)

Year	Institution	Lecture/Course
1999-2004	Politecnico di Torino	Tutorials for the Course of "Flight Mechanics", IV year, 5 year degree in Aerospace Engineering (20 hours per year), ITA
1999-2005	Politecnico di Torino	Tutorials for the Course of "Helicopter Flight Mechanics", V year, 5 year degree in Aerospace Engineering (20 hours per year), ITA
2000-2005	Politecnico di Torino	Course "Flight Testing", V year, 5 year degree in Aerospace Engineering, equivalent of 10 CFU, ITA

IV.B – Courses for 3 year Engineering Degrees (Laurea)

Year	Institution	Lecture/Course
2002-2011	Politecnico di Torino	Tutorials for the Course of "Flight Mechanics", II year, Laurea in Aerospace Engineering (16 hours per year), ITA
2003-2006	Politecnico di Torino	Course "Elements of Flight Testing", III year, Laurea in Aerospace Engineering, 6 CFU, ITA
2012-2014	Università del Salento	Course "Analytical Mechanics" (Meccanica Razionale), II year, Laurea in Industrial Engineering, 6 CFU, ITA
2013-2018	Università del Salento	Course "Fundamentals of Aerospace Engineering", III year, Laurea in Industrial Engineering, 6 CFU, ITA
2017-today	Politecnico di Bari	Course "Flight Mechanics", III year, Laurea in Aerospace System Engineering, 6 CFU, ITA
2019-today	Università del Salento	Course "Flight Simulation Lab", III year, Laurea in Industrial Engineering, 6 CFU, ITA

IV.C – Courses for 2 year Master Degrees in Engineering (Laurea Magistrale)

Year	Institution	Lecture/Course
2004-2006	Politecnico di Torino	Course "Space Flight Dynamics", II year, Laurea Magistrale in Aerospace Engineering, 6 CFU, ITA
2004-2010	Politecnico di Torino	Course "Flight Dynamics of Flexible Aircraft", II year, Laurea Magistrale in Aerospace Engineering, 6 CFU, ITA

2007-2011	Politecnico di Torino	Course "Spacecraft Attitude Dynamics and Control", II year, Laurea Magistrale in Aerospace Engineering, 6 CFU, ENG
2011-2016	Università del Salento	Course "Flight Mechanics", I year, Laurea Magistrale in Aerospace Engineering, 9 CFU, ITA
2014-2017	Università del Salento	Course "Aircraft Design", II year, Laurea Magistrale in Aerospace Engineering, 9 CFU, ENG
2016	Università La Sapienza	Course in "Space Flight Dynamics", I year, Laura Magistrale in Aerospace Engineering, 6 CFU in "Orbital Dynamics", ENG
2017-present	Università del Salento	Course "Flight Mechanics", I year, Laurea Magistrale in Aerospace Engineering, 6 CFU, ENG
2017- present	Università del Salento	Course "Atmospheric and Space Flight Dynamics", I year, Laurea Magistrale in Aerospace Engineering, 6 CFU, ENG
2018-2020	Università del Salento	Course "Aircraft Design", II year, Laurea Magistrale in Aerospace Engineering, 6 CFU, ENG
2021- present	Università del Salento	Course "Aircraft Design", II year, Laurea Magistrale in Aerospace Engineering, 9 CFU, ENG

IV.D – Courses for Ph.D. prgrams

Year	Institution	Lecture/Course
2021- present	Università del Salento	Technical and scientific communication (10 hours)

IV.E – Teaching experiences abroad

Year	Institution	Lecture/Course
2012	University of Illinois at Urbana-Champaign	Course "Flight Dynamics of Flexible Aircraft", M.Sc. in Control System Engineering, 54 hour, ENG
2004-2011	University of Glasgow	Course "Space Flight Dynamics 4", M.Eng. in Aerospace Engineering, 6 CFU, ENG
2004-2011	University of Glasgow	Course "Space Flight Dynamics 2", M.Sc. in Aerospace Engineering, 6 CFU, ENG
2006	Université Bordeaux 1	Short Course "Space Flight Dynamics" for the Ecole d'Ingénieurs en Modélisation Mathématique et Mécanique (20 hours), ENG

IV.F – Other teaching experiences

Year	Institution	Lecture/Course
2023	Università di Pisa	Short Course on "Fundamentals of Helicopter Flight Dynamics", in the framework of the Course on "Aerospace applications of Robotics", Laurea Magistrale in Automatic Controls (8 hours)
2021-today	Università del Salento	Short course "Orbital Mechanics" for the Scuola Superiore ISUFI
2004-today	Foreign Institutions	Seminars on various topics at NASA Langley Research Center (2012), Universitat Politecnica de Catalunya, Barcelona, Spain (2008, 2012), Imperial College, London, UK (2004, 2005), University of Glasgow, UK (2004-2011), Strathclyde University, Glasgow, UK (2012, 2016), European Union Aviation Safety Agency, Köln, Germany (2018), Supaero, Toulouse, France (2023)
2004-today	Italian Institutions	Seminars on various topics at Università di Bologna (campus di Forlì), Politecnico di Torino, Politecnico di Milano, Università di Napoli Federico II, Università di Pisa

IV.G – Ph.D thesis supervision (tutor)

Year	Institution	Ph.D. Program	Canidate	Thesis title
2009 2011	Politecnico di Torino	Aerospace Engineering	Alberto Torasso	Low order models and numerical techniques for the analysis of rotorcraft flight mechanics
2011 2013	Politecnico di Torino	Aerospace Engineering	Elena Vellutini	Low–Thrust Trajectory Design
2011 2013	Politecnico di Torino	Aerospace Engineering	Irene A. Piacenza	Simplified dynamic models for modern flying vehicles
2015 2017	Università del Salento	Mechanical Engineering	Francesco Nicassio	Analysis methods and innovative materials for flexible aerospace vehicles
2022 2024	Università del Salento	Engineering of Complex Systems	Danilo Zona	Analytical and Numerical Methods for Efficient Preliminary Space Mission Design (to be defended in 2025)

Part V - Society memberberships, Awards and Honors

V.A – Society memberships

Year	Title
2012-	American Institute of Aeronautics and Astronautics, Senior Member
2018-	Accademia Pugliese delle Scienze, Socio Ordinario (since 2020), Consigliere della Classe di Scienze Fisiche Mediche e Naturali (since 2023, for the 2023-2025 mandate)
2019-	Interuniversity Center of Integrated Systems for the Marine Environment, Scientific Representative for Università del Salento, Member of the Board of Directors
2020-	Associazione Italiana di Aeronautica e Astronautica, President of the "Apulia Section"

V.B – Awards and Honors

Year	Title
2017	Derek George Astridge Memorial Prize 2017 – Aerospace Division

Part VI - Funding Information [grants as PI-principal investigator or I-investigator]

Note: When data for grant value are available, the first number indicates the total program budget, the second one, in brackets, is the budget for the Institution of the candidate. When only one number is provided, the total budget was assigned to the Institution of the candidate.

Research programs at Università del Salento				
Year	**I/PI**	**Title**	**Program**	**Grant value**
2024-	PI	advanCed seRvices And netWorks FOr aiR Drone transport (CRAWFORD)	Bando MISE 2022	€ 3.850.062 (€ 498.420)
2024-	PI	Integrated Adaptive Marine Monitoring (IAMM)	Bando a cascata ecosistema PNRR RAISE	€ 699.000 (€ 362.000)
2023-	I	integrated Conceptual Design tools for Suborbital vehicles (iConDes)	PRIN PNRR 2022	€ 239.855 (€ 126.400)
2020-24	I	Addestramento immersivo e manutenzione a distanza 4.0 per Aeronautica Militare (Air4MAM)	Piano Nazionale della Ricerca Militare, bando 2019	€ 3.111.542 (€ 225.870)

2020-23	I	E-crops – tecnologie per l'agricoltura digitale sostenibile	PON Ricerca e Innovazione 2014-2020	€ 9.265.230 (€ 745.816)
2018-21	I	Tecnologie dei sensori e microsistemi per applicazioni nel settore aeronautico e spaziale (SMEA)	PON 03	€ 3.586.953 (€ 879.960)
2018-21	PI	Ambiente per Operazioni Sicure di Sistemi aeromobili a pilotaggio remote (AcrOSS)	PON Ricerca e Innovazione 2014-2020	€ 3.850.062 (€ 879.960)
2018-21	PI	Sistema Avanzato di MonitoraGgio AmbiEntale (SAGAcE)	INNONETWORK-Sostegno ad attività di R&S per sviluppo di tecnologie sostenibili, nuovi prodotti e servizi	€ 2.230.000 (€ 190.000)
2015-20	I	Robotic subsea exploration technologies	EU H2020	€ 5.987.722 (€ 224.590)
2015-18	I	Effective dexterous ROV operations in presence of communication latencies (DExROV)	EU H2020	€ 4.600.000 (€ 184.375)
2015-17	I	Test and Knowledge-based Environment for Operations, Flight and Facility	Sostegno Cluster Tecnologici Regionali (Bando Regione Puglia n.399 del 28/07/2014, n. 458 del 29/09/2014)	€ 3.144.100 (€ 304.400)
2013	I	Development and realization of a nano-satellite for electromagnetic remote sensing	Research contract by PSI S.p.A., in cooperation with DMA Univ. di Roma "La Sapienza"	€ 200.000 (€ 15.000)

Research programs at Politecnico di Torino				
Year	**I/PI**	**Title**	**Program**	**Grant value**
2011	PI	Multibody analysis of a parachute-entry vehicle system	Research contract by Thales-Alenia Space - Torino	€ 33.500
2010	PI	Flying qualities of an entry vehicle	Research contract by Thales-Alenia Space - Torino	€ 13.000
2007-09	I	Development and application of methods for the aeromechanic analysis in support of the design of a light helicopter	Research contract by K4A s.r.l., in cooperation with DMA Univ. di Roma "La Sapienza"	€ 63.440 (€ 10.000)
2002-06	I	Development of the flight control system for a general aviation aircraft	PON GAFACS	unknown
2003-04	I	Building and ground testing a twin-rotor UAV	COFIN 2002	unknown
2000-02	I	Design and rapid prototyping of the control system for a remotely piloted vehicle	COFIN 2000	unknown
2000	PI	Systems for Automatic Guidance of Unmanned Vehicles	Programma Giovani Ricercatori, Politecnico di Torino	3500 €
1998-99	I	A remotely piloted flying platform for environmental monitoring	Piano Nazionale per le Ricerche in Antartide	unknown
1997-98	I	International Collaboration on Benchmark CFD Validation Data for Surface Combatant	Office of Naval Research, USA, Contract N00014-00-1-0344	unknown

Part VII – Research Activities

Keywords	Brief Description
Nonlinear dynamics of high-performance aircraft and rotorcraft	Application of dynamic system theory and bifurcation analysis for the determination of aircraft behavior and critical flight regimes in conditions where aerodynamic and inertial nonlinear phenomena are dominant (instabilities, transition to chaotic motion, loss of control, etc.). Use of continuation methods for the determination of maps of equilibria for the evaluation of aircraft performance in steady flight, closed-loop behavior of highly- and super-augmented aircraft. Continuation of periodic solution of rotor flap-lag dynamics for investigating rotor instabilities (e.g. ground resonance), including non-conventional rotor configurations.

Dynamics of flexible aircraft and spacecraft	Analysis of the dynamics of flexible aircraft and spacecraft, where deformation degrees of freedom play a role in the response to disturbances and control inputs. Development of a novel hybrid Newtonian-Lagrangian approach for deriving low-order models of flexible aircraft and spacecraft, with deformation degrees-of-freedom; critical analysis of the relevance of deformation for the derivation of minimum-complexity models suitable for real-time simulations and control law synthesis. Application of the approach to modern large jet transport aircraft (in collaboration with University of Illinois at Urbana-Champaign) and large space structures.
Flying qualities of entry and transatmospheric vehicles	Analysis of flying qualities of entry vehicles in hypersonic, supersonic and subsonic flight regimes. Modelling and simulation of coupled vehicle and parachute system during parachute opening and deceleration phases. Conceptual design of suborbital vehicles (trajectory and mission optimization, preliminary sizing, performance analysis).
Unmanned aerial systems (UAS's)	Design and development of a Vertical TakeOff and Landing UAS with counter-rotating rotors enveloped in a doughnut shaped fuselage; modelling, simulation and control of the UAS for this unconventional configuration. Use of UAS in the civil airspace (risk analysis, mission planning, augmented reality tools for enhanced remote pilot awareness). Dynamics of UAS's with suspended payloads. Performance analysis and optimal sizing of electrically driven aerial vehicles, with a focus on small unmanned platforms.
Autonomous underwater vehicles	Modelling, simulation and control of multi-hull autonomous underwater vehicles (AUV's). Mission planning, guidance, navigation and control of underwater vehicles, with a focus on the configuration of thrusters for minimum controllability. Use of AUV's in marine environmental monitoring.
Direct and inverse simulation of aircraft and rotorcraft motion	The description of aircraft trajectory in terms of intrinsic coordinates allowed for the derivation of two original direct and inverse integration schemes based on the time-scale separation principle. The inverse simulation scheme was used for feedforward command generation in real-time for fixed- and rotary-wing aircraft. An innovative aircraft position prediction algorithm was also derived as a means for providing visual aid to a pilot in the framework of studies focused on advanced Head-Up Displays for remotely piloted vehicles. A novel solution algorithm for inverse simulation problems for rotorcraft dynamics was also proposed. The latter is based on a Model Predictive Control architecture that allows to implement the solution of the inverse problem derived for a simplified low-order helicopter model on a more complex individual blade simulator. The inverse simulation algorithm was used also in the framework of a study aimed at the determination of the helicopter noise footprint during a landing maneuver.
Robust control of fixed and rotary-wing aircraft	Application of structured singular value technique to the synthesis of robust control laws of a doughnut-shaped UAV in the presence of model and parametric uncertainties. Robustification of existing controllers in the presence of saturation, with the derivation of an L2 anti-windup compensator for unstable uncertain systems, with application to modern highly maneuverable aircraft (in collaboration with the Second University od Rome "Tor Vergata"). Synthesis of robust control laws by means of multi-objective evolutionary optimization algorithms.
Hybrid-electric powertrains for aircraft and rotorcraft	Optimization of hybrid-electric powertrains for fixed-wing aircraft and rotorcraft, with determination of technological bottlenecks and expected requirements. Use of hybrid-electric powertrains for emergency landing after engine failure for helicopter and tilt-rotor aircraft.
Spacecraft attitude dynamics and control in a fully actuated configuration	Analysis of dynamic behaviour of gyrostats and spacecraft with switching control logics by means of dynamic system theory tools. Derivation of spacecraft attitude control laws by means of (i) an inverse simulation method based on a local optimization algorithm and (ii) a Ljapunov approach (in collaboration with Glasgow University) and a focus on satellite configurations controlled by means of a cluster or control moment gyroscopes or a combination of magnetic actuators and a momentum/reaction wheel(s).
Spacecraft attitude dynamics and control in underactuated configuration	Motion planning and control of underactuated spacecraft, when three rotational degrees of freedom are controlled by means of two torque components only, as a consequence of failure in non-redunant systems (e.g. with a cluster of only two reaction wheels) or as a consequence of control system hardware characteristics (e.g. use of magnetic actuators only). Derivation of nonlinear control laws for purely magnetic detumbling, spin-axis pointing, boresight pointing (including the case in the presence of a residual angular momentum), minimum-error attitude acquisition.

Fundamental problems in Astrodynamics	(a) Non-singular solution of the orbital two-point boundary value problem (Lambert problem) by means of a method based on classical orbital elements; (b) analytical propagation of low-thrust trajectories by means of perturbative expansions and multiple timescale approach; (c) approximate solution of Lambert problem for low-thrust trajectories.
Spacecraft formation flying	(a) Optimization of the formation acquisition maneuver through a novel evolutionary optimization algorithm; (b) formation control in orbit via the virtual structure approach for centralized and decentralized architectures; (c) dynamics of multi-tethered formations (in collaboration with Universitat Politecnica de Catalunya).
Space mission analysis and design	Use of evolutionary optimization algorithms in the framework of space mission analysis and design, with a focus on fast and efficient trajectory approximation methods for preliminary mission optimization (with applications to low-thrust trajectories in the framework of the restricted circular three body problem and multi-rendezvous trajectories for active debris removal missions), in collaboration with "La Sapienza" Università di Roma and Supaero (Toulouse, France).

Part VIII – Summary of Scientific Achievements

VIII.A – Total

Product type	Number	Data Base	Start	End
Papers [international]	121	Scopus	1995	2024
Papers [national]	0			
Books [scientific]	0			
Books [teaching]	0			

Total Impact factor **	89,674
Total Citations	1283
Average Citations per Product	10,603
Hirsch (H) index	20
Normalized H index*	0,741

*H index divided by the academic seniority, evaluated as the time-span from the end of the Ph.D. program.

** Data for journal impact factors at time of publication (JIF) were taken from the Web of Science (WoS) database (www.webofscience.com). When JIF was not available for the publication year, the value for the closest available year was adopted. Total impact factor was evaluated summing up all JIF's at the year of the corresponding publication, based on data retrieved from WoS database on October 8th, 2024.

Data on citations and H-index were retrieved from the Scopus database (www.scopus.com) on October 8th, 2024.

VIII.B – Last 10 years (counted from January 1st of the tenth year before the call)

Product type	Number	Data Base	Start	End
Papers [international]	45	Scopus	2014	2024
Papers [national]	0			
Books [scientific]	0			
Books [teaching]	0			

Total Impact factor ***	69,241
Total Citations (including conference papers)	459
Average Citations per Product	10,200
Total Citations (journal papers only)	423
Average Citations per journal paper	15,107
Hirsch (H) index	14
Normalized H index over 10 years	1,4

*** Evaluated as described above, based on data retrieved from WoS database on October 8th, 2024

Part IX – Selected Publications

	Authors, Title, Year, Journal, Vol.(issue), d.o.i.	**Cit.**	**JIF**
1)	Serafini J., Moretti S., Bernardini G., Pasquali C., **Avanzini G.**, Emergency Landing of a Hybrid Electric Tiltrotor After Engine Failure, **2024**, *IEEE Transactions on Transportation Electrification*, 10(2), 10.1109/TTE.2023.3306456	0	7,2
2)	Zona D., Zavoli A., Federici L., **Avanzini G.**, Evolutionary Optimization for Active Debris Removal Mission Planning, **2023**, IEEE Access, 11, 10.1109/ACCESS.2023.3269305	1	3,4
3)	Nicassio F., Fattizzo D., Giannuzzi M., Scarselli G., **Avanzini G.**, Attitude dynamics and control of a large flexible space structure by means of a minimum complexity model, **2022**, Acta Astronautica, 198, 10.1016/j.actaastro.2022.05.047	9	3,5
4)	**Avanzini G.**, Zavoli A., De Matteis G., Giulietti F., Single axis pointing for underactuated spacecraft with a residual angular momentum, **2022**, Aerospace Science and Technology, 124(paper no. 107512), 10.1016/j.ast.2022.107512	2	5,6
5)	**Avanzini G.**, de Angelis E.L., Giulietti F., Two-timescale magnetic attitude control of Low-Earth-Orbit spacecraft, **2021**, Aerospace Science and Technology, 116(paper no. 106884), 10.1016/j.ast.2021.106884	5	5,457
6)	**Avanzini G.**, Martínez D.S., Risk assessment in mission planning of uninhabited aerial vehicles, **2019**, Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 233(10), 10.1177/0954410018811196	9	1,244
7)	**Avanzini G.**, de Angelis E.L., Giulietti F., Serrano N., Attitude control of Low Earth Orbit satellites by reaction wheels and magnetic torquers, **2019**, Acta Astronautica, 160, 10.1016/j.actaastro.2019.03.013	19	2,833
8)	Donateo T., Carlà A., **Avanzini G.**, Fuel consumption of rotorcrafts and potentiality for hybrid electric power systems, **2018**, Energy Conversion and Management, 164, 10.1016/j.enconman.2018.03.016	31	7,181
9)	**Avanzini G.**, Nicassio F., Scarselli G., Reduced-order short-period model of flexible aircraft, **2017**, Journal of Guidance, Control, and Dynamics, 40(8), 10.2514/1.G002387	19	2,024
10)	**Avanzini G.**, de Angelis E.L., Giulietti F., Optimal performance and sizing of a battery-powered aircraft, **2016**, Aerospace Science and Technology, 59, 10.1016/j.ast.2016.10.015	71	2,057
11)	Gennaretti M., Serafini J., Bernardini G., Castorrini A., De Matteis G., **Avanzini G.**, Numerical characterization of helicopter noise hemispheres, **2016**, Aerospace Science and Technology, 52, 10.1016/j.ast.2016.02.013	27	2,057
12)	De Angelis E.L., Giulietti F., De Ruiter A.H.J., **Avanzini G.**, Spacecraft attitude control using magnetic and mechanical actuation, **2016**, Journal of Guidance, Control, and Dynamics, 39(3), 10.2514/1.G000957	31	1,856
13)	**Avanzini G.**, Palmas A., Vellutini E., Solution of low-thrust Lambert problem with perturbative expansions of equinoctial elements, **2015**, Journal of Guidance, Control, and Dynamics, 38(9), 10.2514/1.G001018	22	1,651
14)	De Angelis E.L., Giulietti F., **Avanzini G.**, Single-Axis pointing of underactuated spacecraft in the presence of path constraints, **2015**, Journal of Guidance, Control, and Dynamics, 38(1), 10.2514/1.G000121	27	1,651
15)	Vellutini E., **Avanzini G.**, Shape-based design of low-thrust trajectories to cislunar Lagrangian point, **2014**, Journal of Guidance, Control, and Dynamics, 37(4), 10.2514/1.G000165	14	1,291
16)	**Avanzini G.**, De Angelis E.L., Giulietti F., Spin-axis pointing of a magnetically actuated spacecraft, **2014**, Acta Astronautica, 94(1), 10.1016/j.actaastro.2012.10.035	24	1,122

Part X – Editorial collaborations

Period	Role	Journal
2018 to present	Academic Editor	International Journal of Aerospace Engineering (Wiley)
2010-2020	International Advisor	Journal of Guidance, Control and Dynamics (AIAA)

Reviewer for:
- Journal of Guidance, Control, and Dynamics, AIAA
- Journal of Aircraft, AIAA
- Journal of Aerospace Engineering, Proc. of the Institution of Mechanical Engineers, Part G
- International Journal of Aerospace Engineering, Wiley
- Simulation Modelling Practice and Theory, Elsevier
- Aerospace Science and Technology, Elsevier
- Advances in Engineering Software, Elsevier
- Nonlinear Dynamics, Springer
- Transactions on Aerospace and Electronic Systems, IEEE

Part XI – Complete List of Publications

XI.A – Publications on indexed journals (Scopus database for list and citations, Web of Science for journal Impact Factor). Data retrieved on 8 October 2024.

	Authors, Title, Year, Journal, Vol.(issue), d.o.i.	**Cit.**	**JIF**
1)	Serafini J., Moretti S., Bernardini G., Pasquali C., Avanzini G., Emergency Landing of a Hybrid Electric Tiltrotor After Engine Failure, 2024, *IEEE Transactions on Transportation Electrification*, 10(2), 10.1109/TTE.2023.3306456	0	7,2
2)	Di Nisio A., Avanzini G., Lotano D., Stigliano D., Lanzolla A.M.L., Battery Testing and Discharge Model Validation for Electric Unmanned Aerial Vehicles (UAV), 2023, Sensors, 23(15), 10.3390/s23156937	6	3,4
3)	Zona D., Zavoli A., Federici L., Avanzini G., Evolutionary Optimization for Active Debris Removal Mission Planning, 2023, IEEE Access, 11, 10.1109/ACCESS.2023.3269305	1	3,4
4)	Nicassio F., Fattizzo D., Giannuzzi M., Scarselli G., Avanzini G., Attitude dynamics and control of a large flexible space structure by means of a minimum complexity model, 2022, Acta Astronautica, 198, 10.1016/j.actaastro.2022.05.047	9	3,5
5)	Avanzini G., Zavoli A., De Matteis G., Giulietti F., Single axis pointing for underactuated spacecraft with a residual angular momentum, 2022, Aerospace Science and Technology, 124(paper no. 107512), 10.1016/j.ast.2022.107512	2	5,6
6)	Avanzini G., Luigi de Angelis E., Giulietti F., Optimal cruise performance of a conventional helicopter, 2022 Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 236(5), 10.1177/09544100211024091	5	1,1
7)	Avanzini G., de Angelis E.L., Giulietti F., Two-timescale magnetic attitude control of Low-Earth-Orbit spacecraft, 2021, Aerospace Science and Technology, 116(paper no. 106884), 10.1016/j.ast.2021.106884	5	5,457
8)	Avanzini G., de Angelis E.L., Giulietti F., Performance analysis and sizing guidelines of electrically-powered extraterrestrial rovers, 2021, Acta Astronautica, 178,, 10.1016/j.actaastro.2020.09.035	1	2,954
9)	Ingrosso R., De Palma D., Avanzini G., Indiveri G., Dynamic modeling of underwater multi-hull vehicles, 2020, Robotica, 38(9), 10.1017/S0263574719001693	8	2,088
10)	Avanzini G., Martínez D.S., Risk assessment in mission planning of uninhabited aerial vehicles, 2019, Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 233(10), 10.1177/0954410018811196	9	1,244
11)	Avanzini G., de Angelis E.L., Giulietti F., Serrano N., Attitude control of Low Earth Orbit satellites by reaction wheels and magnetic torquers, 2019, Acta Astronautica, 160, 10.1016/j.actaastro.2019.03.013	19	2,833

12)	Pascarelli C., Marra M., Avanzini G., Corallo A., Environment for planning unmanned aerial vehicles operations, 2019, Aerospace, 6(5), 10.3390/AEROSPACE6050051	1	1,659
13)	Donateo T., Carlà A., Avanzini G., Fuel consumption of rotorcrafts and potentiality for hybrid electric power systems, 2018, Energy Conversion and Management, 164, 10.1016/j.enconman.2018.03.016	31	7,181
14)	Avanzini G., Carlà A., Donateo T., Parametric analysis of a hybrid power system for rotorcraft emergency landing sequence, 2017, Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 231(12), 10.1177/0954410017726810	14	1,038
15)	Avanzini G., Nicassio F., Scarselli G., Reduced-order short-period model of flexible aircraft, 2017, Journal of Guidance, Control, and Dynamics, 40(8), 10.2514/1.G002387	19	2,024
16)	Zavoli A., De Matteis G., Giulietti F., Avanzini G., Single-Axis pointing of an underactuated spacecraft equipped with two reaction wheels, 2017, Journal of Guidance, Control, and Dynamics, 40(6), 10.2514/1.G002182	17	2,024
17)	Avanzini G., De Matteis G., Torasso A., Assessment of helicopter model accuracy through inverse simulation, 2017, Journal of Aircraft, 54(2), 10.2514/1.C033847	4	0,831
18)	Avanzini G., de Angelis E.L., Giulietti F., Optimal performance and sizing of a battery-powered aircraft, 2016, Aerospace Science and Technology, 59, 10.1016/j.ast.2016.10.015	71	2,057
19)	Giulietti F., Pollini L., Avanzini G., Visual AIDS for safe operation of remotely piloted vehicles in the controlled air space, 2016, Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 230(9), 10.1177/0954410016632014	5	0,809
20)	Gennaretti M., Serafini J., Bernardini G., Castorrini A., De Matteis G., Avanzini G., Numerical characterization of helicopter noise hemispheres, 2016, Aerospace Science and Technology, 52, 10.1016/j.ast.2016.02.013	27	2,057
21)	Zavoli A., Giulietti F., Avanzini G., De Matteis G., Spacecraft dynamics under the action of Y-dot magnetic control law, 2016, Acta Astronautica, 122, 10.1016/j.actaastro.2016.01.024	19	1,536
22)	De Angelis E.L., Giulietti F., De Ruiter A.H.J., Avanzini G., Spacecraft attitude control using magnetic and mechanical actuation, 2016, Journal of Guidance, Control, and Dynamics, 39(3), 10.2514/1.G000957	31	1,856
23)	Avanzini G., Palmas A., Vellutini E., Solution of low-thrust Lambert problem with perturbative expansions of equinoctial elements, 2015, Journal of Guidance, Control, and Dynamics, 38(9), 10.2514/1.G001018	22	1,651
24)	De Angelis E.L., Giulietti F., Avanzini G., Single-Axis pointing of underactuated spacecraft in the presence of path constraints, 2015, Journal of Guidance, Control, and Dynamics, 38(1), 10.2514/1.G000121	27	1,651
25)	Vellutini E., Avanzini G., Shape-based design of low-thrust trajectories to cislunar Lagrangian point, 2014, Journal of Guidance, Control, and Dynamics, 37(4), 10.2514/1.G000165	14	1,291
26)	Avanzini G., De Angelis E.L., Giulietti F., Spin-axis pointing of a magnetically actuated spacecraft, 2014, Acta Astronautica, 94(1), 10.1016/j.actaastro.2012.10.035	24	1,122
27)	Avanzini G., Capello E., Piacenza I.A., Mixed Newtonian-Lagrangian approach for the analysis of flexible aircraft dynamics, 2014, Journal of Aircraft, 51(5), 10.2514/1.C032235	12	0,556
28)	Avanzini G., Fedi M., Effects of eccentricity of the reference orbit on multi-tethered satellite formations, 2014, Acta Astronautica, 94(1), 10.1016/j.actaastro.2013.03.019	20	1,122
29)	Avanzini G., De Angelis E.L., Giulietti F., Acquisition of a desired pure-spin condition for a magnetically actuated spacecraft, 2013, Journal of Guidance, Control, and Dynamics, 36(6), 10.2514/1.59364	19	1,151
30)	Avanzini G., Giulietti F., Maximum range for battery-powered aircraft, 2013, Journal of Aircraft, 50(1), 10.2514/1.C031748	45	0,488
31)	Avanzini G., Thomson D., Torasso A., Model predictive control architecture for rotorcraft inverse simulation, 2013, Journal of Guidance, Control, and Dynamics, 36(1), 10.2514/1.56563	26	1,151
32)	Avanzini G., Fedi M., Refined dynamical analysis of multi-tethered satellite formations, 2013, Acta Astronautica, 84, 10.1016/j.actaastro.2012.10.031	33	0,816
33)	Zuiani F., Vasile M., Palmas A., Avanzini G., Direct transcription of low-thrust trajectories with finite trajectory elements, 2012, Acta Astronautica, 72, 10.1016/j.actaastro.2011.09.011	52	0,701
34)	Avanzini G., Guglieri G., Torasso A., Multibody analysis of terminal phase for a reentry vehicle: A comparative study, 2012, Journal of Aircraft, 49(6), 10.2514/1.C031788	5	0,632
35)	Avanzini G., Giulietti F., Magnetic detumbling of a rigid spacecraft, 2012, Journal of Guidance, Control, and Dynamics, 35(4), 10.2514/1.53074	90	1,27
36)	Avanzini G., Minisci E.A., Evolutionary design of a full-envelope full-authority flight control system for an unstable high-performance aircraft, 2011, Proceedings of the Institution of	4	0,488

	Mechanical Engineers, Part G: Journal of Aerospace Engineering, 225(10), 10.1177/0954410011414469		
37)	Avanzini G., Berardo L., Giulietti F., Minisci E.A., Optimal rotation sequences in presence of constraints on admissible rotation axes, 2011, Journal of Guidance, Control, and Dynamics, 34(2), 10.2514/1.49805	11	0,941
38)	Avanzini G., Giulietti F., Kinematic planning of slew manoeuvres after actuator failure for low-cost satellites, 2009, Journal of Loss Prevention in the Process Industries, 22(5). 10.1016/j.jlp.2009.04.008	3	0,81
39)	Avanzini G., Radice G., Ali I., Potential approach for constrained autonomous manoeuvres of a spacecraft equipped with a cluster of control moment gyroscopes, 2009, Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 223(3), 10.1243/09544100JAERO375	34	0,773
40)	Avanzini G., Giulietti F., Constrained slews for single-axis pointing, 2008, Journal of Guidance, Control, and Dynamics, 31(6), 10.2514/1.38291	21	0,995
41)	Avanzini G., A simple lambert algorithm, 2008, Journal of Guidance, Control, and Dynamics, 31(6), 10.2514/1.36426	83	0,995
42)	Avanzini G., De Matteis G., Design of the flight management system for a shrouded-fan uninhabited aerial vehicle, 2006, Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 220(5), 10.1243/09544100G02804	1	0,143
43)	Avanzini G., Ciniglio U., De Matteis G., Full-envelope robust control of a shrouded-fan unmanned vehicle, 2006, Journal of Guidance, Control, and Dynamics, 29(2), 10.2514/1.14314	20	0,986
44)	Avanzini G., De Matteis G., Petritoli P., Numerical continuation of torque-free motions of gyrostats, 2006, Journal of Guidance, Control, and Dynamics, 29(2), 10.2514/1.16404	0	0,986
45)	Avanzini G., Galeani S., Robust antiwindup for manual flight control of an unstable aircraft, 2005, Journal of Guidance, Control, and Dynamics, 28(6), 10.2514/1.12004	7	0,946
46)	Avanzini G., De Matteis G., Variable speed control moment gyroscopes for reorientation maneuvers of rigid spacecraft, 2004, Journal of the Astronautical Sciences, 52(4)	0	0,364
47)	Avanzini G., Frenet-Based Algorithm for Trajectory Prediction, 2004, Journal of Guidance, Control, and Dynamics, 27(1), 10.2514/1.9338	27	0,852
48)	Avanzini G., D'Angelo S., De Matteis G., Design and development of a vertical take-off and landing uninhabited aerial vehicle, 2003, Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 217(4), 10.1243/095441003769700735	3	0,218
49)	Avanzini G., De Matteis G., A local optimization technique for attitude motion tracking using control moment gyroscopes, 2003. Journal of the Astronautical Sciences, 50(2)	3	0,544
50)	Avanzini G., D'Angelo S., De Matteis G., Performance and stability of ducted-fan uninhabited aerial vehicle model, 2003, Journal of Aircraft, 40(1), 10.2514/2.3061	17	0,49
51)	Avanzini G., Trajectory tracking for a helicopter model, 2001, Aeronautical Journal, 105 (paper no. 1044), 10.1017/S0001924000011519	5	0,255
52)	Avanzini G., De Matteis G., Bifurcation analysis of attitude dynamics in rigid spacecraft with switching control logics, 2001, Journal of Guidance, Control, and Dynamics, 24(5), 10.2514/2.4802	7	0,452
53)	Avanzini G., De Matteis G., Two-timescale inverse simulation of a helicopter model, 2001, Journal of Guidance, Control, and Dynamics, 24(2), 10.2514/2.4716	48	0,452
54)	Avanzini G., Benedetti L., Penna R., Experimental evaluation of ship resistance for RANS code validation, 2000, International Journal of Offshore and Polar Engineering, 10(1)	2	0,278
55)	Avanzini G., De Matteis G., De Socio L.M., Two-timescale-integration method for inverse simulation, 1999, Journal of Guidance, Control, and Dynamics, 22(3), 10.2514/2.4410	34	0,458
56)	Avanzini G., De Matteis G., De Socio L.M., Analysis of aircraft agility on maximum performance maneuvers, 1998, Journal of Aircraft, 35(4), 10.2514/2.2356	15	0,304
57)	Avanzini G., De Matteis G., De Socio L., Natural description of aircraft motion, 1998, Journal of Guidance, Control, and Dynamics, 21(2), 10.2514/2.4247	8	0,432
58)	Avanzini G., De Matteis G., Bifurcation analysis of a highly augmented aircraft model, 1997, Journal of Guidance, Control, and Dynamics, 20(4), 10.2514/2.4108	64	0,4
59)	Avanzini Giulio, de Matteis Guido, Determination of equilibrium points for an aircraft dynamic model, 1996, Journal of Guidance, Control, and Dynamics, 19(6), 10.2514/3.21802	1	0,4
60)	Avanzini G., de Matteis G., Optimal takeoff performance of a vectored thrust aircraft, 1995, Aeronautical Journal, 99(987)	2	0,262

XI.B – Publications on indexed conferences (Scopus database for list and citations). Data retrieved on 8 October 2024.

	Authors, Title, Year, Conference, d.o.i. (when available)	**Cit.**
1)	Monaco G.D., Zavoli A., De Matteis G., Avanzini G., Optimal Formation Control for Cooperative Slung Load Transportation, 2024, AIAA SciTech Forum and Exposition 2024, 10.2514/6.2024-2743	0
2)	Avanzini G., Curiazio G., Vampo L., A tool for risk assessment after a catastrophic event during suborbital flight operations, 2023, AIDAA XXVII International Congress, Padova, 4-7 September 2023, in Materials Research Proceedings, 10.21741/9781644902813-25	0
3)	Avanzini G., Zona D., Giulietti F., Palmas A., Application of singular perturbation theory to space flight dynamics problems, 2022, Proceedings of the 73rd International Astronautical Congress, IAC2022, 18-22 September 2022	0
4)	Zona D., Avanzini G., Federici L., Zavoli A., Optimization of chaser trajectory for active debris removal missions, 2022, Proceedings of the 73rd International Astronautical Congress, IAC2022, 18-22 September 2022	0
5)	Avanzini G., Bernardini G., Moretti S., Serafini J., Serie, Series-hybrid retrofit of an XV-15 tiltrotor and emergency procedure energetic analysis, 2022, 33rd Congress of the International Council of the Aeronautical Sciences, ICAS 2022, Stockholm, 4–9 September 2022	1
6)	Avanzini G., de Angelis E.L., Fattizzo D., Giulietti F., Autorotation design and simulation for a small-scale helicopter, 2022, 48rd European Rotorcraft Forum, ERF 2022, Winterthur, Switzerland, 6-8 Sept. 2022	1
7)	Avanzini G., De Luca V., Pascarelli C., Integrated Platform for sUAS Operations in Sensitive Areas with Improved Pilot Situation Awareness, 2021, Proceedings of the 2021 IEEE International Conference on Cognitive and Computational Aspects of Situation Management, CogSIMA 2021, Tallinn, Estonia, May 14-22, 2021, 10.1109/CogSIMA51574.2021.9475927	2
8)	Avanzini G., Nisio A.D., Lanzolla A.M.L., Stigliano D., A test-bench for battery-motor-propeller assemblies designed for multirotor vehicles, 2020, 2020 IEEE International Workshop on Metrology for AeroSpace, MetroAeroSpace 2020, Pisa, Italy, June 22 - 24, 2020, 10.1109/MetroAeroSpace48742.2020.9160320	6
9)	Avanzini G., de Angelis E.L., Giulietti F. Two-time-scale magnetic attitude control of leo spacecraft, 2020, Fifth IAA Conference on University Satellite Missions and CubeSat Workshop 2020, Rome, January 28-31, 2020, in Advances in the Astronautical Sciences 173, paper AAS 20-249	0
10)	Avanzini G., De Luca V., Pascarelli C., AR-based visual aids for SUAs operations in security sensitive areas, 2020, International Conference on Augmented Reality, Virtual Reality and Computer Graphics, Lecce, Italy, 7-10 September 2020, in Lecture Notes in Computer Science , 10.1007/978-3-030-58465-8_22	1
11)	Avanzini G., Liberati F., de Matteis G., Inverse simulation of a helicopter-towing cable-sonar system, 2019, 45th European Rotorcraft Forum 2019, ERF 2019, Warsaw, Poland, 17-20 September 2019	1
12)	Avanzini G., De Angelis E.L., Giulietti F., Minisci E., Optimal sizing of electric multirotor configurations, 2018, 8th EASN-CEAS International Workshop on Manufacturing for Growth & Innovation, Glasgow, Scotland, 4-7 Septembe 2018, in MATEC Web of Conferences, 10.1051/matecconf/201823300028	1
13)	Avanzini G., De Matteis G., Giulietti F., Zavoli A., Minimum-error single-axis pointing for an underactuated spacecraft in the presence of a residual angular momentum, 2018, Proceedings of the 69th International Astronautical Congress, IAC2018, Bremen, Germany, 1-5 October 2018	0
14)	Avanzini G., Stabile C., Giulietti F., De Angelis E.L, Magnetic control for attitude slew maneuvers, 2018, Proceedings of the 69th International Astronautical Congress, IAC2018, Bremen, Germany, 1-5 October 2018	0
15)	Ingrosso R., De Palma D., Indiveri G., Avanzini G., Preliminary results of a dynamic modelling approach for underwater multi-hull vehicles , 2018, 11th IFAC Conference on Control Applications in Marine Systems, Robotics, and Vehicles, CAMS 2018, Opatija, Croatia, 10–12 September 2018, 10.1016/j.ifacol.2018.09.474	6
16)	Nicassio F., Scarselli G., Avanzini G., Del Core G., Numerical and experimental study of bistable plates for morphing structures, 2017, Smart Structures and Materials + Nondestructive Evaluation and Health Monitoring, SPIE 2017, Portland, OR, United States, 25-29 March 2017, 10.1117/12.2260099	14
17)	Razzanelli M., Aringhieri S., Franzini G., Avanzini G., Giulietti F., Innocenti M., Pollini L., A visual-haptic display for human and autonomous systems integration, 2016, 3rd International Workshop,	3

	MESAS 2016, Rome, 15-16 June 2016, in Lecture Notes in Computer Science, 10.1007/978-3-319-47605-6_6	
18)	Piacenza I.A., Giulietti F., Avanzini G., Inverse simulation of unconventional maneuvers for a quadcopter with tilting rotors, 2013, 2nd IFAC Workshop on Research, Education and Development of Unmanned Aerial Systems, Compiegne, France, 20 November 2013, in IFAC Proceedings Volumes (IFAC-PapersOnline) 2, Part 1, 10.3182/20131120-3-FR-4045.00035	2
19)	Ferrarese G., Giulietti F., Avanzini G., Modeling and simulation of a quad-tilt rotor aircraft, 2013, 2nd IFAC Workshop on Research, Education and Development of Unmanned Aerial Systems, Compiegne, France, 20 November 2013, in IFAC Proceedings Volumes (IFAC-PapersOnline) 2, Part 1, 10.3182/20131120-3-FR-4045.00037	19
20)	Avanzini G., Fedi M., Effects of eccentricity of the parent body on multi-tethered satellite formations, 2012, Proceedings of the 1st International Academy of Astronautics Conference on Dynamics and Control of Space Systems (DyCoSS), Porto, Portugal, 19–21 March 2012, in Advances in the Astronautical Sciences Vol. 145	0
21)	Avanzini G., Fedi M., Effects of J2 perturbations on multi-tethered satellite formations, 2011, 2011 Astrodynamics Specialists Conference. Girdwood, AK, USA, 31 July - 4 August 2011, in Advances in the Astronautical Sciences, Vol. 142, 2012 1	1
22)	Avanzini G., Palmas A., Vellutini E., Implicit solution for the low-thrust Lambert problem by means of a perturbative expansion of equinoctial elements, 2011, 2011 Astrodynamics Specialists Conference. Girdwood, AK, USA, 31 July - 4 August 2011, in Advances in the Astronautical Sciences, Vol. 142, 2012	1
23)	Avanzini G., De Angelis E.L., Giulietti F., Single-axis pointing of a magnetically actuated spacecraft: A non-nominal Euler axis approach, 2011, 2011 Astrodynamics Specialists Conference. Girdwood, AK, USA, 31 July - 4 August 2011, in Advances in the Astronautical Sciences, Vol. 142, 2012	3
24)	Avanzini G., Capello E., Piacenza I.A., Mixed Newtonian-Lagrangian approach for the analysis of flexible aircraft dynamics, 2011, AIAA Atmospheric Flight Mechanics Conference 2011, Portland, OR, USA, 8-11 August 2011	0
25)	Avanzini G., Thomson D., Torasso A., Model predictive control scheme for rotorcraft inverse simulation, 2011, AIAA Guidance, Navigation, and Control Conference 2011, Portland, OR, USA, 8-11 August 2011	2
26)	Avanzini G., De Matteis G., Torasso A., Assessment of helicopter model fidelity through inverse simulation, 2011, AIAA Atmospheric Flight Mechanics Conference 2011, Portland, OR, USA, 8-11 August 2011, 10.2514/6.2011-6299	2
27)	Avanzini G., De Matteis G., Cistriani L., Valentini M., Development of a simplified helicopter model for piloted training simulation, 2011, AIAA Modeling and Simulation Technologies Conference 2011 , Portland, OR, USA, 8-11 August 2011, 10.2514/6.2011-6280	1
28)	Avanzini G., De Matteis G., Lucertini F.F., Torasso A., Performance analysis of a lightweight helicopter featuring a two-bladed gimballed rotor, 2011, 37th European Rotorcraft Forum, ERF 2011, Vergiate and Gallarate, Italy, 13-15 September 2011	0
29)	Avanzini G., De Matteis G., Torasso A., Stability and response of two-bladed gimballed rotors with coning hinges, 2011, 37th European Rotorcraft Forum, ERF 2011, Vergiate and Gallarate, Italy, 13-15 September 2011	0
30)	Avanzini G., Minisci E.A., Evolutionary design of a full-envelope flight control system for an unstable fighter aircraft, 2010, 2010 IEEE World Congress on Computational Intelligence, WCCI 2010 - 2010 IEEE Congress on Evolutionary Computation, CEC 2010, Barcelona, Spain, 18-23 July 2010, 10.1109/CEC.2010.5586316	6
31)	Zuiani F., Vasile M., Palmas A., Avanzini G., Direct transcription of low-thrust trajectories with finite trajectory elements, 2010, 61st International Astronautical Congress, IAC 2010 Prague, Czech Republic, 27 September - 1 October 2010	3
32)	Avanzini G., Capello E., Piacenza I.A., Quagliotti F., Hovakimyan N., Xargay E., L1 adaptive control of flexible aircraft: Preliminary results, 2010, AIAA Atmospheric Flight Mechanics Conference 2010, Toronto, Canada, 2-5 August 2010, 10.2514/6.2010-7501	8
33)	Avanzini G., De Matteis G., Torasso A., Modelling issues in helicopter inverse simulation, 2010, 36th European Rotorcraft Forum, ERF 2010, Paris, France, 7-9 September 2010	7
34)	Avanzini G., De Matteis G., Lucertini F.F., Torasso A., Dynamic behaviour and response of a two-bladed gimballed rotor, 2010, 36th European Rotorcraft Forum, ERF 2010, Paris, France, 7-9 September 2010	4
35)	Minisci E.A., Avanzini G., Orbit transfer manoeuvres as a test benchmark for comparison metrics of evolutionary algorithms, 2009, 2009 IEEE Congress on Evolutionary Computation, CEC 2009, Trondheim, Norway, 18-21 May 2009, 10.1109/CEC.2009.4982968	9

36)	Minisci E.A., Avanzini G., Comparative study on the application of evolutionary optimization techniques to orbit transfer maneuvers, 2008, 59th International Astronautical Congress, IAC 2008, Glasgow, Scotland, 29 September - 3 October 2008	1
37)	Avanzini G., Radice G., Ali I., Potential approach for constrained autonomous manoeuvres of a spacecraft equipped with a cluster of control moment gyros, 2008, AAS/AIAA Spaceflight Mechanics Meeting 2008, Galveston, Texas, 27-31 January 2008, in Advances in the Astronautical Sciences, Vol. 130 PART 1	1
38)	Avanzini G., De Matteist G., Effects of nonlinearities on ground resonance instability, 2008, 34th European Rotorcraft Forum, ERF34, Liverpool, UK, 16-18 September 2008	6
39)	Avanzini G., De Matteis G., Analysis of helicopter rotor nonlinear dynamics by numerical continuation method, 2007, AIAA Atmospheric Flight Mechanics Conference, Hilton Head, SC, USA, 20-23 August 2007	1
40)	Avanzini G., De Matteis G., Tarantini V., Structural analogy for control of satellite formations, 2005, Astrodynamics Conference 2005, South Lake Tahoe, CA, USA, 7-11 August 2005, in Advances in the Astronautical Sciences Vol. 123 I 2006	0
41)	Avanzini G., De Matteis G., Tarantini V., Control of an orbiting formation of satellites using the virtual structure approach, 2005, Astrodynamics Conference 2005, South Lake Tahoe, CA, USA, 7-11 August 2005, in Advances in the Astronautical Sciences Vol. 123 I 2006	0
42)	Avanzini G., Gimbal-position command generation for a cluster of Control Moment Gyroscopes, 2005, Astrodynamics Conference 2005, South Lake Tahoe, CA, USA, 7-11 August 2005, in Advances in the Astronautical Sciences Vol. 123 III 2006	2
43)	Avanzini G., De Santis A., Beyond Possio equation: The legacy of Camillo Possio to Flight Dynamics and Hydrodynamics, 2006, Proceedings of the 22nd IFIP TC7 Conference, Turin, Italy, 18-22 July 2005, in Ceragioli, F., Dontchev, A., Futura, H., Marti, K., Pandolfi, L. (eds) System Modeling and Optimization. CSMO 2005. IFIP International Federation for Information Processing, vol 199. Springer, Boston, MA, 10.1007/0-387-33006-2_3	2
44)	Avanzini G., D'Angelo S., De Matteis G., Development of a shrouded-fan UAV for environmental monitoring, 2004, AIAA 3rd "Unmanned-Unlimited" Technical Conference, Workshop, and Exhibit, Chicago, IL, USA, 20-23 September 2004, AIAA 2004-6383, 10.2514/6.2004-6383	3
45)	Avanzini G., De Matteis G., Petritoli P., Numerical continuation of torque-free motions of gyrostats, 2004, AIAA/AAS Astrodynamics Specialist Conference, Providence, RI, USA, 16-19 August 2004, AIAA-2004-5206 928, 10.2514/6.2004-5206	1
46)	Avanzini G., Boserman F., Ciniglio U., de Matteis G., Design of a rate command μ-controller for a shrouded fan uninhabited aerial vehicle, 2003, AIAA Guidance, Navigation, and Control Conference and Exhibit, Austin, TX, USA, 11-14 August 2003	4
47)	Avanzini G., D'Angelo S., De Matteis G., Modeling and simulation of a shrouded-fan UAV for environmental monitoring, 2002, 1st UAV Conference, Portsmouth, VA, USA, 20-23 May 2002	6
48)	Avanzini G., De Matteis G., Analysis of variable speed control moment gyroscopes for reorientation maneuvers of rigid spacecraft, 2002, AAS/AIAA Spaceflight Mechanics Meeting 2002, San Antonio, TX, USA, 27-30 January 2002, in Advances in the Astronautical Sciences Vol. 112 II	0
49)	Avanzini G., de Matteisy G., Fresta F., Robust multivariable control of a shrouded-fan uninhabited aerial vehicle, 2002, AIAA Atmospheric Flight Mechanics Conference and Exhibit, Monterey, CA, USA, 5-8 August 2002, 10.2514/6.2002-4703	9
50)	Avanzini G., De Matteis G., Command generation for flexible spacecraft maneuvers using single gimbal control moment gyroscopes, 2001, AAS/AIAA Astrodynamics Conference 2001, Quebec City, Canada, 30 July – 2 August 2001, in Advances in the Astronautical SciencesVol. 109 II 2002	3
51)	Avanzini G., De Matteis G., A local optimization technique for attitude motion tracking using control moment gyroscopes, 2001, AAS/AIAA Spaceflight Mechanics Meeting 2001, Santa Barbara, CA, USA, 11-15 February 2001, in Advances in the Astronautical Sciences Vol. 108 I	2
52)	Avanzini G., D'Angelo S., De Matteis G., Performance and stability of a ducted-fan uninhabited aerial vehicle, 2001, 39th Aerospace Sciences Meeting and Exhibit, Reno, NV, USA, 08-11 January 2001, 10.2514/6.2001-844	3
53)	Avanzini G., Busato A., de Matteis G., Trajectory generation and tracking for ship deck landing of a VTOL vehicle, 2001, AIAA Atmospheric Flight Mechanics Conference and Exhibit, Montreal, Canada, 6-9 August 2001, 10.2514/6.2001-4004	4
54)	Avanzini G., A frenet-based algorithm for trajectory prediction, 2000, Atmospheric Flight Mechanics Conference, Denver, CO, USA, 14-17 August 2000, 10.2514/6.2000-3997	0
55)	Avanzini G., De Matteis G., Bifurcation analysis of spacecraft attitude control systems, 1999, AAS/AIAA Spaceflight Mechanics Meeting 1999, Breckenridge, CO, USA, 7-10 February 1999, in Advances in the Astronautical Sciences Vol. 102 I	0
56)	Avanzini G., De Matteis G., Two time-scale inverse simulatilon of a helicopter model, 1999, 24th Atmospheric Flight Mechanics Conference, Portland, OR, USA, 9-11 August 1999	1

57)	Avanzini G., Benedetti L., Penna R., Experimental evaluation of ship resistance for RANS code validation, 1998, Proceedings of the International Offshore and Polar Engineering Conference, Montréal, Canada, 24 – 29 May 1998	3
58)	Avanzini G., De Matteis G., De Socio L.M., Aircraft equilibrium and response to controls in intrinsic co-ordinates, 1997, 35th Aerospace Sciences Meeting and Exhibit, Reno, NV, USA, 6-9 January 1997, AIAA Paper 97-0323 10 3	3
59)	Avanzini G., De Matteis G., Desocio L., A natural description of aircraft motions, 1996, 21st Atmos-pheric Flight Mechanics Conference, San Diego, CA, USA, 29-31 July 1996, 10.2514/6.1996-3375	1
60)	Avanzini G., De Matteis G., Bifurcation analysis of a highly augmented aircraft model, 1996, 21st Atmos-pheric Flight Mechanics Conference, San Diego, CA, USA, 29-31 July 1996	10

XI.C – Non indexed publications

	Authors, Title, Year, Journal/Conference
1)	Giulio Avanzini, Daniele Fattizzo, Francesco Nicassio, Gennaro Scarselli, Attitude dynamics and control of a large flexible space structure by means of a minimum complexity model, 2019, 25th A.I.D.A.A. Congress 2019, Rome, 9-12 September 2019
2)	Avanzini G., Carlà A., Donateo T., Analysis and optimization of hybrid powertrains for rotocraft applications, 2016, 6th EASN International Conference, Porto, Portugal, 18-21 October 2016
3)	Tortora P., Avanzini G., de Angelis E.L., Giulietti F., Magnetic-only spacecraft attitude control: a non-nominal Euler axis approach, 2011, 8th International ESA Conference on Guidance and Navigation Control Systems, Noordwijk, the Netherlands, 5-10 June, 2011
4)	Avanzini G., De Matteis G., Torasso A., Comparison of trimo techniques for helicopter models, 2009, XX Congresso Nazionale dell'Associazione Italiana di Aeronautica ed Astronautica. Milan, 29 June - 3 July 2009
5)	Avanzini G., Giulietti F., Tortora P., Three-axis spacecraft magnetic attitude control, 2009, XX Congresso Nazionale dell'Associazione Italiana di Aeronautica ed Astronautica. Milan, 29 June - 3 July 2009
6)	Avanzini G., Minisci E. A, D'Angelo S., Dutto M., Multi-Objective Design of Robust Flight Control System, 2008, ICNPAA 2008 (Mathematical Problems in Engineering, Aerospace and Sciences). Genova, 25-27 June 2008
7)	Avanzini G., De Matteis G., Lucertini F., Bifurcation Analysis of Critical Flight Regimes for Light Helicopters, 2008, ICNPAA 2008 (Mathematical Problems in Engineering, Aerospace and Sciences). Genova, 25-27 June 2008
8)	Avanzini G., De Matteis G., Lucertini F., Numerical continuation for light rotorcraft dynamic analysis, 2007, 19th A.I.D.A.A. Congress, Forlì, 17-20 september 2007
9)	Avanzini G., Palmas A., Singularity-free control moment gyroscope steering law by potential function approach, 2007, 19th A.I.D.A.A. Congress, Forlì, 17-20 september 2007
10)	Avanzini G., De Matteis G., Inverse Simulation of Attitude Maneuvers for Underactuated Rigid Spacecraft, 2006, Mathematical Problems in Engineering and Aerospace Sciences: ICNPAA 2006, Budapest, 21-23 June 2006
11)	Avanzini G., D'Angelo S., De Matteis G., Design and Development of the Engine Unit for a Twin-Rotor Unmanned Aerial Vehicle, 2005, Acta Polytechnica, 45, ISSN: 1210-2709
12)	G. Avanzini, S. Galeani. A robust anti-windup scheme for manual flight control of an unstable aircraft, 2004, IEEE Mediterranean Conference on Control and Automation, Kusadasi, Aydin, Turkey, 6-9 June 2004
13)	Avanzini G., Badami M., D'Angelo S., De Matteis G., Design and Development of the Engine Unit for a Twin-Rotor Unmanned Aerial Vehicle, 2003, XVII Congresso Nazionale AIDAA, Rome, 15-19 September 2003
14)	Avanzini G., De Matteis G., Design of a Shipboard Recovery System for a Shrouded-Fan UAV, 2002, 23rd International Congress of Aeronautical Sciences (ICAS2022), Toronto, Canada, 8-13 September, 2002
15)	Avanzini G., D'Angelo S., De Matteis G., Barbini R., Colao F., Fantoni R., Ferrante D., Palucci A., A Remotely Piloted Platform for Environmental Monitoring in Antarctica, 2002, Fifth Airborne Remote Sensing Conference and Exhibition, San Francisco, CA, USA, 17-20 September 2001
16)	Avanzini G., D'Angelo S., De Matteis G., Design and Development of a VTOL Uninhabited Aerial Vehicle, 2001, XVI Congresso Nazionale AIDAA, Palermo, 24-28 September 2001
17)	Avanzini G., De Matteis G., Nonlinear Dynamics in the Attitude Control System of a Flexible Spacecraft, 2000, Third International Conference on Nonlinear Problems in Aviation and Aerospace (ICNPAA200), Daytona Beach, FL, USA, 10-12 May 2000.
18)	Avanzini G., Trajectory Tracking for a Helicopter Model, 1999, XIV Congresso Nazionale AIMETA, Como, 6-9 October 1999
19)	Avanzini G., Evaluation of aircraft performance by a numerical continuation method, 1997, XIII Congresso Nazionale AIMETA, Siena, 29 September - 3 October 1997
20)	Avanzini G., De Matteis G., Dinamica non lineare di un velivolo per alte prestazioni, XII Congresso Nazionale AIMETA, Naples, 3-6 October 1995
21)	Avanzini G., De Matteis G., High Alpha Dynamics of a Vectored Thrust Aircraft, 1995, XIII Congresso Nazionale AIDAA, Rome, 11-15 September 1995

XI.D – Ph.D. Thesis

1)	Giulio Avanzini, Dynamic Analysis and Simulation Techniques for High Performance Aircraf, "Sapienza" Università di Roma, Dottorato in Meccanica Teorica e Applicata, IX Ciclo, 1997

Part XII – Technology transfer, social and cultural activities ("Terza Missione")

Year	Title	Brief Description
2007	Drones are no games	Seminar in the framework of Glasgow University initiative "Café Scientifique," an informal series of seminars and open discussions for a non-specialist public in diverse locations throughout the city.
2018	Lecce Festival Letteratura (III edizione): Letteratura e scienza	Artistic director (with Elisabetta Cucurachi). Member of the Organizing Committee. Author of two events ("La Fisica dei Supereroi", based on an idea by James Kakalios, in collaboration with Prof. Rosaria Rinaldi, UniSalento, and Marco Laggetta, Scuola del Fumetto di Lecce; "Da La chiave a stella, di Primo Levi, a La dismissione, di Ermanno Rea: un percorso di lettura," with Raffaele Gorgoni, former journalist at RAI TG2) and two laboratories in the schools ("Matemasìa o poemàtica? Trilussa e i suoi numeri", a practical laboratory on numbers and statistics for primary schools, stemming from two Trillussa poems; "Eppur si muove: dialogo su 'Vita di Galileo' di Bertold Brecht", an open discussion on philosophy of science and much more with high school students).
2019	Leonardo, dall'officina alla cucina	Member of the organizing committee, in cooperation with the Accademia Pugliese delle Scienze, for the 500th anniversary of Leonardo's death. Author of the paper: "Critical design review of Leonardo's flying machines."
2019	Abbiamo bisogno di spazio	One-day conference for a non specialist audience, organized in collaboration with Lion's Club International, on impact and perspectives of space engineering on knowledge and everyday life.
2021	Dante e le scienze	Member of the organizing committee, in cooperation with the Accademia Pugliese delle Scienze, for the 700th anniversary of Dante Alighieri's death. Author of the paper: "Dante's Cosmology, from Aristoteles to Einstein."
2022-23	Scuole in Ste@m	Member of the work group for the project, under the supervision of prof. E. Mangino (Dep. of Mathematics and Physics "Ennio de Giorgi", UniSalento); organization of teaching activities and knowledge transfer to high-school teachers and laboratories for high-school students on topics related to aeronautics and space.
2022-…	Letture prossime	Member of the organizing committee of the on-going initiative by University of Salento, aimed at encouraging literary creativity and promote writing and reading experiences that mature throughout the Apulian region, strengthening the exchange between University and local communities.
2023	L'ingenium femminile alle frontiere della conoscenza	One-day conference for a non specialist audience, organized in collaboration with Lion's Club International, on the achievements obtained by women in science and technology.

Lecce, 9 ottobre 2024 Firma