

Allegato B

MARIO TINDARO MIGLIORINO

Curriculum Vitae

Rome, 25/08/2025

Part I – General Information

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| Full Name | Mario Tindaro Migliorino |
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Part II – Education

| Type | Year | Institution | Degree and Notes |
|-----------------------|------|-----------------------------|--|
| PhD | 2018 | Purdue University, IN, USA | Ph.D. in Mechanical Engineering GPA: 4.0/4.0 Thesis Title: <i>Numerical and Theoretical Modeling of Thermoacoustic Instabilities in Transcritical Fluids</i> Advisor: Prof. Carlo Scalo |
| University graduation | 2015 | Sapienza University of Rome | M.Sc. in Space and Astronautical Engineering 110/110 cum laude Thesis Title: <i>Transient Response of Homogeneous Isotropic Turbulence to Heat Sources</i> Advisor: Prof. Bernardo Favini |
| University graduation | 2013 | Sapienza University of Rome | B.Sc. in Aerospace Engineering 110/110 cum laude Thesis Title: <i>Effect of Friction and Cooling on the Performance of Supersonic Nozzles</i> Advisor: Prof. Francesco Nasuti |

Part III – Appointments

III.A – Academic Appointments

| Start | End | Institution | Position |
|------------|---------|-----------------------------|---|
| 05/10/2022 | present | Sapienza University of Rome | Ricercatore a tempo determinato di tipologia A (RTD-A) / Research Assistant Professor Title: <i>Ricerca tecnologica su modelli di ordine ridotto ed analisi CFD per la progettazione e verifica di sistemi propulsivi aerospaziali / Technological research on reduced-order models and CFD analysis for the design and verification of aerospace propulsion systems</i> |

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| 01/02/2019 | 04/10/2022 | Sapienza University of Rome | Assegno di ricerca / Post-doc Title: <i>Ricerca tecnologica su modellistica numerica della propulsione ibrida basata su propellenti a paraffina / Technological research on numerical modeling of hybrid propulsion based on paraffin propellants</i> |
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III.B – Other Appointments

| Start | End | Institution | Position/Activities |
|-------|------|--|---|
| 2017 | 2018 | Rolls-Royce University Technology Center, Purdue University, IN, USA | Rolls-Royce Fellow dedicated to the design of a transcritical thermoacoustic prototype in the thermal management team |
| 2015 | 2017 | Purdue University, IN, USA | Purdue Andrews Fellow dedicated to fundamental research on thermoacoustics in supercritical fluids |

Part IV – Teaching experience

| Year | Institution | Lecture/Course |
|-----------|-----------------------------|--|
| 2023-2025 | Sapienza University of Rome | Teacher of the space propulsion laboratory (3 CFU) course in the B.Sc. of aerospace engineering / Docente del corso di laboratorio di propulsione spaziale (3 CFU) nella laurea triennale in ingegneria aerospaziale |
| 2020-2025 | Sapienza University of Rome | Teacher of the NASA Chemical Equilibrium with Applications (CEA) module (1 CFU) in the II-level Master in Space Transportation Systems: launchers and re-entry vehicles |
| 2024-2025 | Sapienza University of Rome | Teaching assistant of the Conceptual Design of a Space Mission course (3 CFU) in the M.Sc. of Space and Astronautical Engineering |
| 2019-2022 | Sapienza University of Rome | Teaching assistant of the Space Propulsion Laboratory (3 CFU) course in the B.Sc. of Aerospace Propulsion |
| 2019-2023 | Sapienza University of Rome | Teaching assistant of the Rocket Propulsion course (9 CFU) in the M.Sc. of Space and Astronautical Engineering |
| 2019-2024 | Sapienza University of Rome | Co-advisor of more than 20 B.Sc. and 20 M.Sc. theses |
| 2023-2025 | Sapienza University of Rome | Advisor of 20 B.Sc. theses and of 2 M.Sc. theses. Co-advisor of 3 Ph.D. theses |

Part V - Society memberships, Awards, Qualifications, and Invitations

V.A – Society memberships

| Year | Title |
|--------------|---|
| 2023-2025 | Member of the Hybrid Rockets Technical Committee of the American Institute of Aeronautics and Astronautics (AIAA) |
| 2019-present | Italian point of contact for the CVA (Communauté des Villes Ariane) Summer School since the appointment as main academic organizer of the 20th CVA Summer School held in Rome and Colleferro, Italy in 2019 |
| 2021-present | Faculty Advisor of the Sapienza Rocket Team (SRT) of the Sapienza Aerospace Student Association (SASA) |

V.B – Awards

| Year | Title |
|------|---|
| 2021 | AIAA Hybrid Rockets Best Paper Award from the American Institute for Aeronautics and Astronautics (AIAA), for the paper AIAA 2021-3506 “Machine Learning Techniques for Flight Performance Prediction of Hybrid Rocket Engines” |
| 2017 | Rolls-Royce Doctoral Fellowship, Purdue University, IN, USA |
| 2015 | F. N. Andrews Fellowship, Purdue University, IN, USA |
| 2015 | Antonio Ventura Scholarship, Fondazione Roma Sapienza, Rome, Italy |
| 2015 | Excellence Path in Space Engineering, Sapienza University of Rome, Italy |
| 2013 | Excellence Path in Aerospace Engineering and Sapienza Deserving Student, Sapienza University of Rome, Italy |
| 2010 | Italian Ministry of Education Award for High School Excellence, Rome, Italy |

V.C – Qualifications

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| 2023 | 2023 National scientific qualification as associate professor in the Italian higher education system for aeronautical, aerospace, and naval engineering / Abilitazione Scientifica Nazionale (ASN) alle funzioni di professore universitario di Seconda Fascia nel Settore Concorsuale 09/A1 – Ingegneria aeronautica, aerospaziale e navale |
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V.D – Selected Invitations

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| 2025 | Invited speaker at Letara Ltd. in Sapporo, Hokkaido, Japan for the seminar “Multiphysics Analysis of High-density Polyethylene Regression in Hybrid Rocket Engines”. Following the seminar, technical visits and discussion of ongoing and future collaborations were performed |
| 2024 | Invited speaker at the event “Fabbrica di Futuro” in the Sala Consiliare of Colleferro for the establishment of the “Mechspace center” for joint collaboration in the aerospace sector between Sapienza University of Rome and Comune di Colleferro |
| 2024 | Invited to the facilities of Centro Italiano Ricerche Aerospaziali (CIRA) for technical visits, presentations of Ph.D. projects advised by CIRA, Federico II University of Naples, and Sapienza University of Rome, and discussion of collaborative projects with focus on rocket propulsion |
| 2024 | Invited to the facilities of Technology for Propulsion and Innovation (T4i) for technical visits and for the firing test of the final prototype of paraffin-based rocket developed through the project Phaedra. |
| 2023 | Invited to the propulsion laboratory of Federico II University of Naples in Grazzanise for technical visits, observation of a firing test of a hybrid rocket prototype, and analysis of experimental data |
| 2022 | Invited to Purdue University (prof. Carlo Scalo) for technical visits and projects discussions in the framework of the scientific collaboration activities between Sapienza and Purdue, to further |

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| | strengthen the ties between the two institutions |
| 2019 | Invited to Purdue University and Zucrow Laboratories (profs. C. Scalo, S. Heister, T. Pourpoint) for technical visits and projects discussions in the framework of the scientific collaboration activities between Sapienza and Purdue, to further strengthen the ties between the two institutions |
| 2019 | Kick-off of the RIPAS program with the Kenyan Space Agency including a formal visit to the Italian Space Agency's Broglio Space Centre in Malindi, Kenya |

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

VI.A – Grants as PI

| Year | Title | Program | Grant value |
|-----------------------|---|--|-------------|
| 06/02/2024-present | Analysis and Validation of Film Cooling Numerical Modeling in Liquid Rocket Thrust Chambers | Sapienza research funds (progetto Medio di Ateneo) | |
| 11/10/2022-09/11/2023 | Numerical Analysis of Film Cooling and Mixture Ratio Bias in Oxygen-Methane Liquid Rocket Engines | Sapienza research funds (progetto di Avvio Alla Ricerca di Ateneo) | |

VI.B – Grants as I

| Year | Title | Committer | Notes |
|--------------|--|----------------------|---|
| 2025-present | GRECS (Green Resistojet for CubeSat) | Italian Space Agency | Design, manufacturing, and testing of a water resistojet for cubesats and smallsats |
| 2022-2023 | SLOWD (SLOshing Wing Dynamics) | EU Horizon 2020 | Reduced-order modeling of sloshing dynamics, WP6 task 3 and WP2 |
| 2022-present | MPGE (Multi-Purpose Green Engine) | AVIO s.p.a. | Design of the altitude test infrastructure and support for the design of combustion chamber, thrust chamber and injectors |
| 2022-present | HTE (High Thrust Engine) | AVIO s.p.a. | Computational fluid dynamics simulations and analysis for hot-gas-side wall heat flux predictions |
| 2020-2024 | PHAEDRA (Paraffinic Hybrid Advanced Engine Demonstrator for Rocket Application) | Italian Space Agency | Computational fluid dynamics simulations and analysis of the internal ballistics of paraffin-based hybrid rockets |
| 2019-2021 | RIPAS (Rilancio dei Programmi di Accesso allo Spazio dalla Base di Malindi Luigi Broglio Space Centre (BSC)) | Italian Space Agency | Design and analysis of sounding rockets for possible launch from the BSC |

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| 2019-2020 | CaStAShape (Modelling Capsule Stability Accounting for Shape Change) | European Space Agency | Numerical and modeling expertise joined by experimental testing to shed light on the possible impact of the ablation-driven shape change of the heat shield on the capsule aerodynamic behaviour |
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Part VII – Research Activities, International collaborations, and references

| Keywords | Brief Description |
|------------------------|---|
| Fluid Dynamics | <p>My research has been devoted to the modeling and analysis of fluid dynamics flows for mechanical and aerospace engineering applications. Most of the work has been paired with experimental testing aiming at validation of the models. The research has spanned the following topics:</p> <ul style="list-style-type: none"> - Numerical and experimental analysis of thermoacoustic instabilities in supercritical fluids - Numerical simulations and analysis of experimental data of hypersonic reentry capsules - Numerical simulations, modeling, and analysis of experimental data of hybrid and liquid rocket engines thrust chambers - Design of high-altitude test facilities - Modeling and experimental testing of sloshing tanks - Experimental testing of water-based resistojets for cubesats |
| Reduced-order modeling | |
| Computational Analysis | |
| Rocket engines | |
| Design of experiments | |
| | <p>International collaborations: Prof. James Braun, North Carolina State University, USA Dr. Landon Kamps, Hokkaido University & Letara ltd., Japan Prof. Harunori Nagata, Hokkaido University, Japan Prof. Carlo Scalo, Purdue University, USA Prof. Stephen D. Heister, Purdue University, USA</p> |
| | <p>References: Prof. Francesco Nasuti (PostDoc/RTDA Mentor and B.Sc. Advisor, Sapienza University) Prof. Daniele Bianchi (PostDoc/RTDA Mentor, Sapienza University) Prof. Carlo Scalo (Ph.D. Advisor and Mentor, Purdue University) Prof. Stephen D. Heister (Ph.D. Mentor, Purdue University) Prof. Bernardo Favini (M.Sc. Advisor, Sapienza University)</p> |

Part VIII – Summary of Scientific Achievements

| Product type | Number | Data Base | Start | End |
|-------------------|--------|-----------|-------|---------|
| Papers [total] | 53 | Scopus | 2017 | present |
| Journal papers | 19 | Scopus | 2017 | present |
| Conference papers | 34 | Scopus | 2017 | present |

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|-------------------------------------|------|
| Total Impact factor* | 48,4 |
| Average Impact factor per product** | 2,5 |

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|----------------------------------|-----|
| Total Citations | 286 |
| Average Citations per Product*** | 5,4 |
| Hirsch (H) index | 10 |
| Normalized H index**** | 1,4 |

* Sum of Clarivate journal impact factor (JIF) of each journal paper's journal relative to its year of publication

** Total impact factor divided by number of journal papers (19)

*** Total citations divided by number of papers (53)

**** H index divided by the academic seniority (7 years from end of Ph.D.).

Part IX – Selected Publications

List of the 12 publications selected for the evaluation: for each publication the authors, title, reference data, and citations are reported.

- [1]. **M. T. Migliorino**, C. Scalò, *Real-fluid effects on standing-wave thermoacoustic instability*, Journal of Fluid Mechanics 883 (2020) A23. doi:10.1017/jfm.2019.856
Citations (Scopus): 21
- [2]. **M. T. Migliorino**, C. Scalò, *Heat-induced planar shock waves in supercritical fluids*, Shock Waves 30 (2020) 153–167. doi:10.1007/s00193-019-00934-y
Citations (Scopus): 8
- [3]. A. Martínez, **M. T. Migliorino**, C. Scalò, S. D. Heister, *Experimental and numerical investigation of standing-wave thermoacoustic instability under transcritical temperature conditions*, The Journal of the Acoustical Society of America 150 (4) (2021) 2900–2911. doi:10.1121/10.0006659
Citations (Scopus): 7
- [4]. S. A. Hunt, **M. T. Migliorino**, C. Scalò, S. D. Heister, *Onset criteria for bulk-mode thermoacoustic instabilities in supercritical hydrocarbon fuels*, Journal of Fluids Engineering, Transactions of the ASME 143 (4) (2021). doi:10.1115/1.4049401
Citations (Scopus): 5
- [5]. **M. T. Migliorino**, D. Bianchi, F. Nasuti, *Numerical Analysis of Paraffin-Wax/Oxygen Hybrid Rocket Engines*, Journal of Propulsion and Power 36 (6) (2020) 806–819. doi:10.2514/1.B37914
Citations (Scopus): 26
- [6]. D. Bianchi, **M. T. Migliorino**, M. Rotondi, A. Turchi, *Numerical analysis and wind tunnel validation of low-temperature ablators undergoing shape change*, International Journal of Heat and Mass Transfer 177 (121430) (2021). doi:10.1016/j.ijheatmasstransfer.2021.121430
Citations (Scopus): 18
- [7]. D. Bianchi, **M. T. Migliorino**, M. Rotondi, L. Kamps, H. Nagata, *Numerical Analysis of Nozzle Erosion in Hybrid Rockets and Comparison with Experiments*, Journal of Propulsion and Power 38 (3) (2022) 389–409. doi:10.2514/1.B38547
Citations (Scopus): 21
- [8]. **M. T. Migliorino**, D. Bianchi, F. Nasuti, *Graphite Nozzle Erosion Trends in Paraffin/Oxygen Hybrid Rockets*, Journal of Propulsion and Power 38 (4) (2022) 508–522. doi:10.2514/1.B38574
Citations (Scopus): 19

- [9]. M. Rotondi, **M. T. Migliorino**, D. Bianchi, P. Pagani, A. Turchi, *Numerical assessment of camphor ablation flight relevance in hypersonic wind-tunnel testing*, *Journal of Spacecraft and Rockets* 59 (5) (2022) 1574–1591. doi:10.2514/1.A35318
Citations (Scopus): 5
- [10]. **M. T. Migliorino**, M. Fabiani, C. Paravan, D. Bianchi, F. Nasuti, L. Galfetti, R. C. Pellegrini, E. Cavallini, *Numerical and experimental analysis of fuel regression rate in a lab-scale hybrid rocket engine with swirl injection*, *Aerospace Science and Technology* 140 (2023) 108467.
doi:10.1016/j.ast.2023.108467
Citations (Scopus): 10
- [11]. **M. T. Migliorino**, G. Gubernari, D. Bianchi, F. Nasuti, D. Cardillo, F. Battista, *Numerical Simulations of Fuel Shape Change in Paraffin-Oxygen Hybrid Rocket Engines*, *Journal of Propulsion and Power* 39 (6) (2023) 785–799. doi:10.2514/1.B39086
Citations (Scopus): 4
- [12]. F. Saltari, M. Pizzoli, **M. T. Migliorino**, A. Binni, G. Coppotelli, F. Mastroddi, T. Pagliaroli, F. D. Duchetto, F. Gambioli, R. Abarca, *Experimental methodological investigations of sloshing-induced mass transfer coefficients for aircraft tanks*, *Journal of Thermophysics and Heat Transfer* 39 (2) (2025) 386-397. doi:10.2514/1.T7056
Citations (Scopus): 0

Part X – Speaker at International Conferences

List of the conference papers that I have presented at international conferences:

1. “Numerical Investigation of Chemical Mechanism Effect in Hydrogen/Methane Film-Cooled Nozzles”, M. T. Migliorino, S. Forte, M. Grossi, D. Bianchi, F. Nasuti, European Conference for Aeronautics and Aerospace Sciences (EUCASS), Rome, Italy, 2025.
2. “Conjugate Heat Transfer Numerical Simulations of a Methane-Oxygen Liquid Rocket Engine”, M. T. Migliorino, M. Grossi, M. Fabiani, B. Latini, M. Fiore, A. Sereno, D. Bianchi, F. Nasuti, D. Simone, D. Liuzzi, International Conference on Space Propulsion, Glasgow, UK, 2024
3. “Modeling and Analysis of Film Cooling in Oxygen-Kerosene Rocket Thrust Chambers”, G. Cocirla, M. Grossi, M. T. Migliorino, D. Bianchi, F. Nasuti, AIAA Scitech, Orlando, FL, USA, 2024
4. “Experimental investigations on the sloshing-induced pressure drop in tanks for hydrogen-powered aircraft”, F. Saltari, M. Pizzoli, M. T. Migliorino, A. Binni, G. Coppotelli, F. Mastroddi, T. Pagliaroli, F. Del Duchetto, F. Gambioli, R. Abarca, H. Scheufler, AIAA Scitech, Orlando, FL, USA, 2024
5. “Surrogate Neural Network Model for Integrated Ascent Trajectory Optimization of Throttleable Hybrid Rockets”, P. M. Zolla, A. Zavoli, M. T. Migliorino, D. Bianchi, International Astronautical Congress (IAC), Baku, Azerbaijan, 2023
6. “Study, development, implementation and testing of a water resistojet propulsion system for cubesats”, F. Larizza, P. Marzioli, F. Piergentili, M. T. Migliorino, F. Nasuti, International Astronautical Congress (IAC), Baku, Azerbaijan, 2023
7. “Convective and Radiative Wall Heat Transfer Evaluation in Film-Cooled Liquid Rocket Thrust Chambers”, M. T. Migliorino, G. Cocirla, M. Fabiani, M. Grossi, D. Bianchi, F. Nasuti, International Astronautical Congress (IAC), Baku, Azerbaijan, 2023
8. “Numerical Simulations of a Paraffin-Hydrogen Peroxide Hybrid Rocket with Swirl Injection”, M. T. Migliorino, M. Fabiani, D. Bianchi, F. Nasuti, F. Barato, N. Bellomo, D. Pavarin, S. Pizzurro, M. Pizzarelli, R. C. Pellegrini, E. Cavallini, AIAA Scitech, National Harbor, MD, USA, 2023

9. "Numerical and Experimental Analysis of a Paraffin-based 1000 N Thrust Class Hybrid Rocket including Nozzle Erosion", M. T. Migliorino, G. Gubernari, D. Bianchi, F. Nasuti, D. Cardillo, F. Battista, S. Pizzurro, M. Pizzarelli, R. C. Pellegrini, E. Cavallini, AIAA Scitech, National Harbor, MD, USA, 2023
10. "Student activities in manufacturing and launching advanced small-scale solid-propellant rockets", M. T. Migliorino, M. G. Leone, V. Lomanno, T. De Rito, S. Coluzzi, R. Tortorolo, M. Della Monica, A. Cantello, E. Corradini, L. Salustri, C. Di Giovannandrea, M. Fiore, D. Bianchi, International Astronautical Congress (IAC), Paris, France, 2022
11. "Numerical Simulations of Fuel Shape Change in Paraffin-Oxygen Hybrid Rocket Engines", Migliorino, M.T., Bianchi, D., Nasuti, F., AIAA Aviation Forum, Chicago, Illinois, USA, 2022
12. "Student firing tests and launches with commercial and self-made solid rocket motors", Migliorino, M.T., Aiello, M., Berti, M., Rotondi, M., D'Alessandro, S., Bianchi, D., Jahjah, M., Pizzarelli, M., International Astronautical Congress, Dubai, UAE, 2021
13. "Gas-Phase Reaction Effects on Nozzle Erosion in Paraffin/Oxygen Hybrid Rockets", Migliorino, M.T., Bianchi, D., Nasuti, F., AIAA Propulsion and Energy Forum, virtual, 2021
14. "A sensitivity study on a CFD model for paraffin-based hybrid rockets", Migliorino, M.T., Bianchi, D., Nasuti, F., AIAA Propulsion and Energy Forum, virtual, 2020
15. "CFD analysis of paraffin-based hybrid rockets with coupled nozzle erosion characterization", Bianchi, D., Migliorino, M.T., Nasuti, F., Onofri, M., AIAA Propulsion and Energy Forum, Indianapolis, Indiana, USA, 2019
16. "Predictive CFD model for internal ballistics of hybrid rocket engines using supercritical paraffin-wax and oxygen", Migliorino, M.T., Bianchi, D., Nasuti, F., AIAA Propulsion and Energy Forum, Indianapolis, Indiana, USA, 2019
17. "Assessment of spurious numerical oscillations in high-order spectral difference solvers for supercritical flows", Migliorino, M.T., Chapelier, J.-B., Scalo, C., Lodato, G., AIAA Aviation Forum, Atlanta, Georgia, USA, 2018
18. "Real fluid effects on thermoacoustic standing-wave resonance in supercritical CO₂", Migliorino, M.T., Gupta, P., Scalo, C., AIAA Aviation Forum, Denver, Colorado, USA, 2017
19. "Dimensionless scaling of heat-release-induced planar shock waves in near-critical CO₂", Migliorino, M.T., Scalo, C., AIAA SciTech Forum, Grapevine, Texas, USA, 2017
20. "Gas dynamics of heat-release-induced waves in supercritical fluids: revisiting the Piston Effect", Migliorino, M.T., Scalo, C., 69th APS Division of Fluid Dynamics, Portland, Oregon, USA, 2016

Part XI – All Publications

XI.A – Patents

- P. C. Sweeney, S. D. Heister, S. A. Hunt, C. Scalo, M. T. Migliorino, System and method for stabilizing transcritical air-to-fuel heat exchange, US Patent No. US 10,890,114 B2 (2021).

XI.B – Peer-reviewed journal articles indexed in Scopus

1. F. Saltari, M. Pizzoli, M. T. Migliorino, A. Binni, G. Coppotelli, F. Mastroddi, T. Pagliaroli, F. D. Duchetto, F. Gambioli, R. Abarca, Experimental methodological investigations of sloshing-induced mass transfer coefficients for aircraft tanks, *Journal of Thermophysics and Heat Transfer* 39 (2) (2025) 386–397. doi:10.2514/1.T7056.
2. M. Stella, L. Zeni, L. Nichelini, N. Bellomo, D. Pavarin, M. T. Migliorino, M. Fabiani, D. Bianchi, F. Nasuti, C. Paravan, L. Galfetti, A. Cretella, R. C. Pellegrini, E. Cavallini, F. Barato, Experimental Investigation of a H₂O₂ Hybrid Rocket with Different Swirl Injections and Fuels, *Applied Sciences* 14 (13) (2024). doi:10.3390/app14135625.
3. P. M. Zolla, R. Rosa, M. T. Migliorino, D. Bianchi, Multi-disciplinary optimization of single-stage hybrid rockets for lunar ascent, *Acta Astronautica* 222 (2024) 493–507. doi:https://doi.org/10.1016/j.actaastro.2024.06.026.

4. M. Rotondi, M. T. Migliorino, D. Bianchi, L. Kamps, H. Nagata, Computational Analysis and Regression Laws for Nozzle Erosion Prediction in Hybrid Rockets, *Journal of Propulsion and Power* 40 (3) (2024) 439–459. doi:10.2514/1.B39322.
5. M. T. Migliorino, M. Fabiani, C. Paravan, D. Bianchi, F. Nasuti, L. Galfetti, R. C. Pellegrini, E. Cavallini, Numerical and experimental analysis of fuel regression rate in a lab-scale hybrid rocket engine with swirl injection, *Aerospace Science and Technology* 140 (2023) 108467. doi:10.1016/j.ast.2023.108467.
6. M. T. Migliorino, G. Gubernari, D. Bianchi, F. Nasuti, D. Cardillo, F. Battista, Numerical Simulations of Fuel Shape Change in Paraffin-Oxygen Hybrid Rocket Engines, *Journal of Propulsion and Power* 39 (6) (2023) 785–799. doi:10.2514/1.B39086.
7. P. Concio, M. T. Migliorino, D. Bianchi, F. Nasuti, Numerical Estimation of Nozzle Throat Heat Flux in Oxygen-Methane Rocket Engines, *Journal of Propulsion and Power* 39 (1) (2023) 71–83. doi:10.2514/1.B38811.
8. M. T. Migliorino, D. Bianchi, F. Nasuti, Graphite Nozzle Erosion Trends in Paraffin/Oxygen Hybrid Rockets, *Journal of Propulsion and Power* 38 (4) (2022) 508–522. doi:10.2514/1.B38574.
9. D. Bianchi, M. T. Migliorino, M. Rotondi, L. Kamps, H. Nagata, Numerical Analysis of Nozzle Erosion in Hybrid Rockets and Comparison with Experiments, *Journal of Propulsion and Power* 38 (3) (2022) 389–409. doi:10.2514/1.B38547.
10. M. Rotondi, M. T. Migliorino, D. Bianchi, P. Pagani, A. Turchi, Numerical assessment of camphor ablation flight relevance in hypersonic wind-tunnel testing, *Journal of Spacecraft and Rockets* 59 (5) (2022) 1574–1591. doi:10.2514/1.A35318.
11. A. Zavoli, P. M. Zolla, L. Federici, M. T. Migliorino, D. Bianchi, Surrogate neural network for rapid flight performance evaluation of hybrid rocket engines, *Journal of Spacecraft and Rockets* 59 (6) (2022) 2003–2016. doi:10.2514/1.A35369.
12. M. T. Migliorino, M. Aiello, M. Berti, M. Rotondi, S. D’Alessandro, D. Bianchi, M. Jahjah, M. Pizzarelli, Student firing tests and launches with commercial and self-made solid rocket motors, *Acta Astronautica* 197 (2022) 23–34. doi:10.1016/j.actastro.2022.04.025.
13. D. Bianchi, M. T. Migliorino, M. Rotondi, A. Turchi, Numerical analysis and wind tunnel validation of low-temperature ablaters undergoing shape change, *International Journal of Heat and Mass Transfer* 177 (121430) (2021). doi:10.1016/j.ijheatmasstransfer.2021.121430.
14. M. T. Migliorino, D. Bianchi, F. Nasuti, Numerical simulations of the internal ballistics of paraffin-oxygen hybrid rockets at different scales, *Aerospace* 8 (8) (2021). doi:10.3390/aerospace8080213.
15. S. A. Hunt, M. T. Migliorino, C. Scalo, S. D. Heister, Onset criteria for bulk-mode thermoacoustic instabilities in supercritical hydrocarbon fuels, *Journal of Fluids Engineering, Transactions of the ASME* 143 (4) (2021). doi:10.1115/1.4049401.
16. A. Martinez, M. T. Migliorino, C. Scalo, S. D. Heister, Experimental and numerical investigation of standingwave thermoacoustic instability under transcritical temperature conditions, *The Journal of the Acoustical Society of America* 150 (4) (2021) 2900–2911. doi:10.1121/10.0006659.
17. M. T. Migliorino, D. Bianchi, F. Nasuti, Numerical Analysis of Paraffin-Wax/Oxygen Hybrid Rocket Engines, *Journal of Propulsion and Power* 36 (6) (2020) 806–819. doi:10.2514/1.B37914.
18. M. T. Migliorino, C. Scalo, Real-fluid effects on standing-wave thermoacoustic instability, *Journal of Fluid Mechanics* 883 (2020) A23. doi:10.1017/jfm.2019.856.
19. M. T. Migliorino, C. Scalo, Heat-induced planar shock waves in supercritical fluids, *Shock Waves* 30 (2020) 153–167. doi:10.1007/s00193-019-00934-y.

XI.C – Peer-reviewed journal articles not indexed in Scopus

20. M. Fabiani, M. T. Migliorino, D. Bianchi, F. Nasuti, Spectral and Global Radiative Heat Transfer Models for Liquid Propellant Rocket Engines, *Journal of Propulsion and Power*. doi:10.2514/1.B39892 (accepted, article in advance 2025, will be indexed)
21. M. Fabiani, S. Cassese, V. M. Capone, M. T. Migliorino, S. Mungiguerra, D. Bianchi, F. Nasuti, and R. Savino, Numerical and experimental analysis of a 200 N class GOX-ABS hybrid rocket engine, *Aerospace Science and Technology* (under review)
22. M. Fabiani, G. Gubernari, M. T. Migliorino, D. Bianchi, F. Nasuti, Numerical Simulations of Fuel Shape Change and Swirling Flows in Paraffin/Oxygen Hybrid Rocket Engines, *Aerotecnica Missili & Spazio* 102 (2023) 91–102. doi:10.1007/s42496-022-00141-6.

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Le informazioni contenute nel presente Curriculum vitae et studiorum sono rese sotto la personale responsabilità del sottoscritto ai sensi degli artt. 46 e 47 del D.P.R. 28 dicembre 2000 n. 445, consapevole della responsabilità penale, civile e amministrativa prevista dagli artt. 75 e 76 del medesimo D.P.R., per le ipotesi di falsità in atti e dichiarazioni mendaci. La presente versione del CV è approvata per la destinazione ai fini della pubblicazione.

Rome, 25/08/2025