

PERSONAL INFORMATION

Matteo Di Manno✉ matteo.dimanno@uniroma1.it

PERSONAL STATEMENT

Bachelor Degree in Aerospace Engineering. Master Degree in Aeronautical Engineering. Currently Ph.D in Theoretical and Applied Mechanics. My work focuses on the identification of mechanical properties of non-linear joints

EDUCATION AND TRAINING

2020-Present

PhD Theoretical and Applied Mechanics

La Sapienza, University of Rome, Rome (Italy)

- Dynamic substructuring
- Experimental testing of structures
- Nonlinear vibrations
- Modal testing
- Linear and nonlinear joint identification
- Nonlinear system identification
- Expansion techniques
- winner of "progetto per Avvio alla Ricerca - Tipo 1" for the year 2022

Jun-Dec 2022

Research period at Technical University of Munich (TUM), Germany

Development and assessment of a novel nonlinear joint identification method based on sub-structure decoupling

Sep 2021

pyFBS Summer School 2021

Application of frequency based substructuring and transfer path analysis in Python

2017-2020

Master Degree in Aeronautical Engineering

La Sapienza, University of Rome, Rome (Italy)

- Vibration and noise control (graduation mark: 30/30)
- Aeronautical structures
- Aeroelasticity
- Helicopter flight mechanics
- Flight dynamics
- Gasdynamics

Thesis: "Hub loads of an articulated helicopter rotor in hovering: a multidisciplinary approach"

Graduation mark: 110 (cum laude)/110

Extracurricular Activities:

- AUVI SUAS student competition: member of aircraft design subteam at Sapienza Flight Team
- Multidisciplinary design of a composite wing: member of the aeroelastic analysis team

2014-2017

Bachelor Degree in Mechanical Engineering

La Sapienza, University of Rome, Rome (Italy)

- Meccanica applicata e disegno (graduation mark: 30/30)
- Modelli matematici per la meccanica
- Meccanica dei solidi e delle strutture
- Metodi numerici con elementi di programmazione
- Costruzioni aerospaziali
- Scienza e tecnologia dei materiali
- Aerodinamica

Graduation mark: 110/110

PERSONAL SKILLS

Mother tongue Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
[Common European Framework of Reference for Languages](#)

Job-related skills

- Python 3.9: Anaconda/Spyder/Jupyter Notebook (modules: numpy, scipy, matplotlib, pandas, altair)
- Nastran-Patran
- Actran
- Adams Ansys (FE Analysis)
- Adams (multibody simulation)
- Actran (acoustic simulation)
- Matlab/Simulink/Octave
- Catia v5/Solidworks/Inventor
- DewesoftX

Laboratory equipment experience

- Data Acquisition Systems (DEWESOFT SIRIUSi, PAK MKII, dSPACE)
- single-axis/triaxial accelerometers
- modal hammer
- vibration exciter
- power amplifier

Digital competences

SELF-ASSESSMENT				
Information Processing	Communication	Content creation	Safety	Problem solving
Independent user	Independent user	Basic user	Independent user	Independent user

[Digital competences - Self-assessment grid](#)

Computer skills

- competent with most Microsoft Office programmes
- competent with LaTeX

Driving licence

B

ADDITIONAL INFORMATION

Publications

- Brunetti J., D'Ambrogio W., Di Manno M., Fregolent A., Latini F., *Identification of Bolted Joint Properties Through Substructure Decoupling*, In: Dynamics Substructures, Volume 4. Conference Proceedings of the Society for Experimental Mechanics Series, pp. 85-95, Springer International Publishing, Mar 2022, https://doi.org/10.1007/978-3-031-04094-8_11
- Brunetti J., D'Ambrogio W., Di Manno M., Fregolent A., Latini F., *Possible improvements in SEMM-based joint identification*, Proceedings of the ISMA-International Conference on Noise and Vibration Engineering, Springer International Publishing, Sep 2022
- Brunetti J., D'Ambrogio W., Di Manno M., Fregolent A., A critical evaluation of SEMM-based joint identification procedure to reduce the error propagation effects, Mechanical Systems and Signal Processing, Maggio 2023 (sottomesso e revisionato, in attesa del parere dell'editor)
- Di Manno M., Trainotti F., Rixen D.J., Fregolent A., Multi-DoFs nonlinear joint identification through substructure decoupling, Mechanical Systems and Signal Processing, Luglio 2023 (sottomesso)

- International Conferences
- IMAC XXXXI (2023) - Conference and Exposition on Structural Dynamics, Austin (Texas), **speaker**
 - ECAM Fall 2022 - External Conference of the Chair of Applied Mechanics Fall 2022, Zugspitze, Germany, **speaker**
 - ISMA-USD (2022) - International Conference on Noise and Vibration Engineering, Leuven (Belgium), **speaker**
 - Virtual IMAC XL (2022) - Conference and Exposition on Structural Dynamics, online, **speaker**
 - IMAC XXXIX (2021) - Virtual Conference and Exposition on Structural Dynamics, online