



Curriculum Vitae

PERSONAL INFORMATION

Danilo D'Andrea

Date of birth: [REDACTED]

Nationality: Italian

Address: [REDACTED]

E-mail: [REDACTED]

Mobile: [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

ACTUAL POSITION

- | | |
|--------------------------|--|
| December 2023 – Actually | Postdoc Researcher |
| <i>University</i> | University of Messina (Italy), Dep. of Engineering |
| <i>Supervisor</i> | Prof. Giacomo Risitano |
| <i>Subject area</i> | Additive manufacturing and topology optimization techniques for green components and structures. |
| October 2019 - Actually | CEO and Co-founder of Neural – Open Innovation Network |
| | Innovative Start-up in R&D and Open Innovation field. |
| | https://weareneural.com/ |
| May 2022-Actually | Co-founder of KnoWow srl - Accademy Spin-off |

EDUCATION

- | | |
|-------------------------------|--|
| November 2023 – November 2024 | Postdoc Researcher |
| <i>University</i> | University of Messina (Italy), Dep. of Engineering |
| <i>Supervisor</i> | Prof. Giacomo Risitano |
| <i>Subject area</i> | Fatigue life assessment for Additive Manufacturing materials using energy methods. |
| November 2022 – November 2023 | Postdoc Researcher |
| <i>University</i> | University of Messina (Italy), Dep. of Engineering |
| <i>Supervisor</i> | Prof. Giacomo Risitano |
| <i>Subject area</i> | Study of the thermo-mechanical stresses acting on BIO-MCI fed with innovative fuels. |

<p>October 2021 – October 2022</p> <p><i>University</i></p> <p><i>Supervisor</i></p> <p><i>Subject area</i></p>	<p>Postdoc Researcher</p> <p>University of Messina (Italy), Dep. of Engineering</p> <p>Prof. Giacomo Risitano</p> <p>Study, design, simulation of innovative transmissions for green mobility in an urban environment.</p>
<p>January 2021 – July 2021</p> <p><i>Subject area</i></p> <p><i>Description</i></p>	<p>II level Professional Master in Energy Resources Management (Master SAFE) Disputation date: 30 July 2021</p> <p>Energy Resources Management</p> <p>The Master in Energy Resource Management, organized by SAFE for over 20 years in Rome, it is a high-level professional training course with a multidisciplinary and highly operational program, carried out with the participation of over 150 teachers and more than 100 companies and institutions in the energy sector.</p>
<p>October 2017 – November 2020</p> <p><i>University</i></p> <p><i>Thesis Title/PhD Supervisor</i></p> <p><i>Subject area</i></p>	<p>Ph.D. course in Engineering and Chemistry of Material and Construction Disputation date: 26 Nov 2020</p> <p>University of Messina (Italy), Dep. of Engineering</p> <p>“Design and development of a Continuously Variable Transmission (CVT) for high efficiency and low weight heavy duty applications”</p> <p>Prof. Gabriella Epasto</p> <p>Applied mechanics: innovative hydro-mechanical transmission, wear, energy efficiency</p>
<p>September 2015 – July 2017</p> <p><i>University</i></p> <p><i>Thesis Title/Supervisors</i></p> <p><i>Subject area</i></p>	<p>Master Degree in Mechanical Engineering</p> <p><i>Disputation date: 20 July 2017</i></p> <p>University of Messina (Italy), Dep. of Engineering</p> <p>“Optimization process of the bronze coating of cylinder blocks for hydraulic pumps”</p> <p>Prof. Gabriella Epasto</p> <p>Failure analysis of lead-bronze anti-friction coating</p>
<p>September 2010 – July 2015</p> <p><i>University</i></p> <p><i>Thesis Title/Supervisors</i></p> <p><i>Subject area</i></p>	<p>Bachelor Degree in Industrial Engineering (Curriculum Materials Engineering)</p> <p><i>Disputation date: 27 July 2015</i></p> <p>University of Messina (Italy), Dep. of Engineering</p> <p>“Non-destructive tests using Phased Array ultrasound technique”</p> <p>Prof. Andrea Mariano Sili</p> <p>Non-destructive tests and failure analysis</p>

Attended courses:

- Training Course Simcenter Amesim: Simcenter Amesim basic course and Simcenter Amesim Transmission Systems, Torino (Italy), 11-13 March 2019.
- Participation at the XXII Edition of the SAFE Master in "Energy Resource Management", Roma (Italy), 20 January 2021- in progress
- “Failure Analysis”, Italian Society of Metallurgy (AIM), Milan (Italy), 21-22-28-29 November 2018;
- AIAS PhD. Summer School 2018 "Advanced Design of Connections", Ferrara (Italy);

MOBILITY

- **Hp Hydraulic SpA Pieve di Cento (BO)**, 12 mesi durante i tre anni di dottorato, "Development of a power split hydro-mechanical transmission for heavy-duty applications ", Supervisor: **Ing. Giorgio Bombarda**.
- **Universitat Politècnica de Catalunya UPC**, Giugno 2019, Settembre 2019 - Febbraio 2020, "Energy recovery and optimization of oleodynamic component", Supervisor: **Prof. Esteban Codina Macia**.
- **Institute of Physics of Materials, Czech Academy of Sciences**, Maggio 2022, " Characterization of materials and nanostructures of Additive Manufactured metals", Supervisor: **doc. Ing. Luboš Náhlík, Ph.D.**

SCIENTIFIC CONFERENCES

BioM&M The first CONFERENZA INTERNAZIONALE on materials, mimicking, manufacturing from and for Bio Application, Milano (Italy), Giugno 27-29, 2018. [**CONFERENZA INTERNAZIONALE**]

47° Convegno Nazionale AIAS, Villa San Giovanni (Italy), Settembre 5-8, 2018. [**Relatore, CONFERENZA NAZIONALE DI SETTORE**]

50° Virtual AIAS 2021, 1-3 Settembre 2021 [**CONFERENZA NAZIONALE DI SETTORE**]

Second Mediterranean Conference on Fracture and Structural Integrity MedFract2, Catania (Italy), 14-16 Febbraio 2022. [**Relatore, CONFERENZA INTERNAZIONALE**]

2nd Workshop on "Modelling and Simulation of Additively Manufactured Elements" SIAMM22, 4-5 Febbraio 2022 [**CONFERENZA INTERNAZIONALE**]

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10th European Workshop on Structural Health Monitoring, 4-7 Luglio, Palermo (Italia) [**CONFERENZA INTERNAZIONALE**]

51° Convegno Nazionale AIAS, Padova (Italia), Settembre 7-10, 2022. [**Relatore, CONFERENZA NAZIONALE DI SETTORE**]

2022 IEEE Global Fluid Power Society PhD Symposium, 12-14 Ottobre 2022 Napoli (Italia), [**CONFERENZA INTERNAZIONALE**]

53° Convegno Nazionale AIAS, Napoli (Italia), Settembre 4-6, 2024. [**Relatore, CONFERENZA NAZIONALE DI SETTORE**]

European Conference on Fracture (ECF24), Zagabria (Croazia), 26-30 Agosto 2024. [**Relatore, CONFERENZA INTERNAZIONALE**]

LIST OF PAPERS

Publications: 29

Papers (Journal): 23

Reviews: 55

Corresponding (*): 8

First name: 12

Last name: 6

Single Author: 1

	Citations H-Index	
<i>Scopus</i>	271	11
<i>Web of Science</i>	218	9

1. Alberti, F., **D'Andrea, D.**, Macor, A., Risitano, G., Rosseti, A., & Sedmak, A. (2024). NOVEL SMART DESIGN OF REAR HALF SHAFT OF LARGE URBAN TRANSPORT VEHICLE. *Facta Universitatis, Series: Mechanical Engineering*. <https://doi.org/10.22190/FUME240203027A> [**JOURNAL – I.F. = 10.1 (2023)**]
2. Crisafulli, D., Fintová, S., Santonocito, D., & **D'Andrea, D.** (2024). Microstructural characterization and mechanical behaviour of laser powder Bed Fusion stainless steel 316L. *Theoretical and Applied Fracture Mechanics*, 104343. <https://doi.org/10.1016/j.tafmec.2024.104343> [**JOURNAL - I.F. = 5.3 (2023)**]
3. Ahmadi, R., **D'Andrea, D.**, Santonocito, D., & Risitano, G. (2024). Fatigue investigation of 3D-printed notched PLA specimens by Thermographic methods with FEM Simulation Integration. *Procedia Structural Integrity*, 53, 97-111. <https://doi.org/10.1016/j.prostr.2024.01.013> [**PROCEDIA- CONFERENZA INTERNAZIONALE**]
4. Milone, D., **D'Andrea, D.**, & Santonocito, D. (2023). Smart Design of Hip Replacement Prostheses Using Additive Manufacturing and Machine Learning Techniques. *Prosthesis*, 6(1), 24-40. <https://doi.org/10.3390/prosthesis6010002> [**JOURNAL - I.F. = 3.4 (2023)**]
5. Alito, A., Fenga, D., Tropeano, G., Milardi, D., Leonetti, D., Migliorato, A., ... & Filardi, V. (2023). Screw Stress Distribution in a Clavicle Fracture with Plate Fixation: A Finite Element Analysis. *Bioengineering*, 10(12), 1402. <https://doi.org/10.3390/bioengineering10121402> [**JOURNAL - I.F. = 4.2 (2023)**]
6. **D'Andrea, D.** (2023). Additive manufacturing of AISI 316L stainless steel: a review. *Metals*, 13(8), 1370. <https://doi.org/10.3390/met13081370> [**JOURNAL - I.F. = 3.4 (2023)**]
7. Alberti, F., Foti, P., Berto, F., Risitano, G., & **D'Andrea, D.** (2023). Fatigue life evaluation of automotive mechanical components by using smart design algorithm. *Fatigue & Fracture of Engineering Materials & Structures*, 46(4), 1401-1412. <https://doi.org/10.1111/ffe.13934> [**JOURNAL - I.F. = 3.373 (2021)**]
8. **D'Andrea, D.**, Gatto, A., Guglielmino, E., Risitano, G., & Santonocito, D. (2022). A comparison on static and fatigue behaviour between traditional and SLM AISI 316L. *Journal of Mechanical Science and Technology*, 1-6. <https://doi.org/10.1007/s12206-022-2103-5> [**JOURNAL - I.F. = 1.810 (2021)**]
9. Santonocito, D., Fintová, S., Di Cocco, V., Iacoviello, F., Risitano, G., & **D'Andrea, D.** (2022). Comparison on mechanical behavior and microstructural features between traditional and AM AISI 316L. *Fatigue & Fracture of Engineering Materials & Structures*. <https://doi.org/10.1111/ffe.13872> [**JOURNAL - I.F. = 3.373 (2021)**]
10. **D'Andrea D.**, Risitano G, Alberti F. Fuel Consumption Reduction and Efficiency Improvement in Urban Street Sweeper Using Power Split with Lockup Clutch Transmission. *Applied Sciences*. 2022; 12(19):10160. <https://doi.org/10.3390/app121910160> [**JOURNAL - I.F. = 2.838 (2021)**]
11. **D'Andrea, D.**, Guglielmino, E., Risitano, G., & Santonocito, D. (2023). Rapid Determination of the Fatigue Behavior at Different Stress Ratios of Steels by Measuring the Energy Release. In *European Workshop on Structural Health Monitoring* (pp. 589-599). Springer, Cham.

- https://doi.org/10.1007/978-3-031-07258-1_60 [PROCEDIA- CONFERENZA INTERNAZIONALE]
12. **D'Andrea, D.**, Risitano, G., Raffaele, M., Cucinotta, F., & Santonocito, D. (2022). Damage assessment of different FDM-processed materials adopting Infrared Thermography. *Frattura ed Integrità Strutturale*, 16(62), 75-90. <https://doi.org/10.3221/IGF-ESIS.62.06> [JOURNAL]
 13. Fiorillo, L., Milone, D., **D'Andrea, D.**, Santonocito, D., Risitano, G., Cervino, G., & Cicciù, M. (2022). Finite Element Analysis of Zirconia Dental Implant. *Prosthesis*, 4(3), 490-499. <https://doi.org/10.3390/prosthesis4030040> [JOURNAL - I.F. = 3.4 (2023)]
 14. **D'Andrea, D.**, Risitano, G., Guglielmino, E., Piperopoulos, E., & Santonocito, D. (2022). Correlation between mechanical behaviour and microstructural features of AISI 316L produced by SLM. *Procedia Structural Integrity*, 41, 199-207. <https://doi.org/10.1016/j.prostr.2022.05.022> [PROCEDIA- CONFERENZA INTERNAZIONALE]
 15. Risitano, G., Scappaticci, L., Alberti, F., Santonocito, D., & **D'Andrea, D.** (2022). On the influence of the elastic characteristics of composite materials on the vibrating properties. *Journal of Vibration and Control*, 10775463221098228. <https://doi.org/10.1177/10775463221098228> [JOURNAL- I.F. = 2.633 (2021)]
 16. Khaskhoussi A, Risitano G, Calabrese L, **D'Andrea D.** Investigation of the Wettability Properties of Different Textured Lead/Lead-Free Bronze Coatings. *Lubricants*. 2022; 10(5):82. <https://doi.org/10.3390/lubricants10050082> [JOURNAL- I.F. = 3.584 (2022)]
 17. **D'Andrea D.**, Milone D, Nicita F, Risitano G, Santonocito D. Qualitative and Quantitative Evaluation of Different Types of Orthodontic Brackets and Archwires by Optical Microscopy and X-ray Fluorescence Spectroscopy. *Prosthesis*. 2021; 3(4):342-360. <https://doi.org/10.3390/prosthesis3040031> [JOURNAL]
 18. **D'Andrea, D.**, Pistone, A., Risitano, G., Santonocito, D., Scappaticci, L., & Alberti, F. (2021). Tribological characterization of a hip prosthesis in Si₃N₄-TiN ceramic composite made with Electrical Discharge Machining (EDM). *Procedia Structural Integrity*, 33, 469-481. <https://doi.org/10.1016/j.prostr.2021.10.054> [PROCEDIA- CONFERENZA INTERNAZIONALE]
 19. Scappaticci, L.; Risitano, G.; Santonocito, D.; **D'Andrea, D.**; Milone, D. An Approach to the Definition of the Aerodynamic Comfort of Motorcycle Helmets. *Vehicles* 2021, 3, 545-556. <https://doi.org/10.3390/vehicles3030033> [JOURNAL]
 20. **D'Andrea, D.**, Guglielmino, E., Risitano, G., & Santonocito, D. (2022). A comparison on the Energy Release between traditional and Additive Manufactured AISI 316L steel during static tensile test. In *IOP Conference Series: Materials Science and Engineering* (Vol. 1214, No. 1, p. 012013). IOP Publishing. [PROCEDIA]
 21. Alberti, F, Risitano, G, Scappaticci, L, Benoit-Maréchal, L, **D'Andrea, D.** Dynamic analysis of a Drum Charger: Large amplitude vibrations of clamped circular thin plate on a linear foundation. *Mat Design Process Comm*. 2021;e265. <https://doi:10.1002/mdp2.265> [JOURNAL]
 22. **D'Andrea, D.**, Risitano, G., Desiderio, E., Quintarelli, A., Milone, D., & Alberti, F. (2021). Artificial Neural Network Prediction of the Optimal Setup Parameters of a Seven Degrees of Freedom Mathematical Model of a Race Car: IndyCar Case Study. *Vehicles*, 3(2), 300-329. <https://doi.org/10.3390/vehicles3020019> [JOURNAL]
 23. Carputo, F., **D'Andrea, D.**, Risitano, G., Sakhnevych, A., Santonocito, D., & Farroni, F. (2021). A Neural-Network-Based Methodology for the Evaluation of the Center of Gravity of a Motorcycle Rider. *Vehicles*, 3(3), 377-389. <https://doi.org/10.3390/vehicles3030023> [JOURNAL]
 24. **D'Andrea, D.**; Risitano, G.; Scappaticci, L. Performance Analysis of a Magnetorheological Shock Absorber Prototype Designed According to a Quasi-Static No-Slip Model. *Actuators* 2021, 10, 13. <https://doi.org/10.3390/act10010013> [JOURNAL- I.F. = 2.523 (2021)]
 25. **D'Andrea, D.**, Cucinotta, F., Farroni, F., Risitano, G., Santonocito, D., & Scappaticci, L. (2021). Development of Machine Learning Algorithms for the Determination of the Centre of Mass. *Symmetry*, 13(3), 401. <https://doi.org/10.3390/sym13030401> [JOURNAL- I.F. = 2.940 (2021)]

26. Senatore A, Risitano G, Scappaticci L, **D'Andrea D.** Investigation of the Tribological Properties of Different Textured Lead Bronze Coatings under Severe Load Conditions. *Lubricants*. 2021; 9(4):34. <https://doi.org/10.3390/lubricants9040034> [**JOURNAL- I.F. = 3.584 (2022)**]
27. **D'Andrea, D.**, Epasto, G., Bonanno, A., Guglielmino, E., & Benazzi, G. (2019). Failure analysis of anti-friction coating for cylinder blocks in axial piston pumps. *Engineering Failure Analysis*, 104, 126-138. <https://doi.org/10.1016/j.engfailanal.2019.05.041> [**JOURNAL- I.F. = 3.634 (2021)**]
28. Epasto, G., Palomba, G., **D'Andrea, D.**, Di Bella, S., Mineo, R., Guglielmino, E., & E., Traina, F. (2018). Experimental investigation of rhombic dodecahedron micro-lattice structures manufactured by Electron Beam Melting, Convegno: BioM&M 2018 (indexed on Scopus) <https://doi.org/10.1016/j.matpr.2018.12.011> [**PROCEDIA - CONFERENZA INTERNAZIONALE**]
29. G. Epasto, G. Palomba, **D. D'Andrea**, E. Guglielmino, S. Di Bella, F. Traina, "Ti-6Al-4V ELI microlattice structures manufactured by electron beam melting: Effect of unit cell dimensions and morphology on mechanical behaviour" *Materials Science and Engineering: A.*, Mar. 2019 <https://doi.org/10.1016/j.msea.2019.03.014> [**JOURNAL- I.F. = 6.044 (2021)**]

PEER REVIEW PROCESS

Peer review record: 55 (from Web of Sciences)

Applied Sciences [IF: 2.838 (2021)] (MDPI, <https://www.mdpi.com/journal/applsci>) 13 Reviews.

Materials [IF: 3.748 (2021)] (MDPI, <https://www.mdpi.com/journal/materials>) 14 Reviews.

Lubricants [IF: 3.584 (2021)] (MDPI, <https://www.mdpi.com/journal/lubricants>) 15 Reviews.

Actuators [IF: 2.523 (2021)] (MDPI, <https://www.mdpi.com/journal/actuators>) 1 Reviews.

Sustainability [IF: 3.889 (2021)] (MDPI, <https://www.mdpi.com/journal/sustainability>) 2 Reviews.

Mathematics [IF: 2.592 (2021)] (MDPI, <https://www.mdpi.com/journal/mathematics>) 1 Review.

Coatings [IF: 3.236 (2021)] (MDPI, <https://www.mdpi.com/journal/coatings>), 7 Reviews.

Machines [IF: 2.6 (2021)] (MDPI, <https://www.mdpi.com/journal/machines>), 2 Reviews.

Messina, 12/11/2024