

## CURRICULUM VITAE



NAME: Antonello Astarita.

POSITION: Associate professor in Manufacturing.

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### PART 1: SUMMARY OF WORK EXPERIENCE AND DIPLOMAS

#### 1.1 WORK EXPERIENCE

Current Position: Associate Professor of Manufacturing (permanent position) at the University of Naples "Federico II" since December 2020.

Previous work experience:

- Tenure Track Assistant Professor (Ricercatore a tempo determinato di tipo B) in Manufacturing, University of Naples "Federico II", from December 2017 to December 2020;
- Assistant Professor (Ricercatore a tempo determinato di tipo A) in Manufacturing, University of Naples "Federico II", from December 2013 to December 2017;
- Invited Professor at the University of Cadiz (Spain), from September 2018 to December 2018;
- Visiting Scientist at the University of Manchester (UK), from September 2011 to May 2012;
- External technical consultant for Bonetti Aircraft Supports (BAS), from January 2012 to October 2013;
- External technical consultant for Mare Engineering, 2009;
- Internship at Alenia Aeronautica (now part of Leonardo Company), from June 2008 to March 2009.

#### 1.2 DIPLOMAS

- Ph.D. in Manufacturing (Tecnologie e Sistemi di Lavorazione) at the University of Naples “Federico II”, title of the thesis: “Study of the hot stretch forming process of Ti6Al4V for aeronautical applications”, thesis defended on May 2013;
- Master Degree in Mechanical Engineering for Design and Manufacturing at the University of Naples “Federico II”, title of the thesis: “Dissimilar Friction stir welding of AA 7075 stringers on AA 2024 panels in overlap configuration”, summa cum laude, 2007/2008;
- Bachelor Degree in Mechanical Engineering at the University of Naples “Federico II”, title of the thesis: “Corrosion Fatigue of Aluminum Alloys, a new experimental approach”, 2006;
- High School Diploma in Classical Studies (Ancient Greek and Latin, History, Philosophy, Italian language, Literature and Art) at “Liceo Classico Statale Tito Lucrezio Caro”, Sarno (SA), grade 100/100, 2002.

## **PART 2 – TEACHING**

### **2.1 LIST OF COURSES TEACHED AT UNIVERSITY OF NAPLES**

- “Manufacturing of metal parts” (Tecnologia Meccanica), 6 CFU (60 hours of teaching in classroom), for the Bachelor Degree in Mechanical Engineering, from 2014 to 2017;
- “Manufacturing of metal parts” (Tecnologia Meccanica), 12 CFU (120 hours of teaching in classroom), for the Bachelor Degree in Mechanical Engineering, from 2017 to date.
- “Manufacturing Systems control and management”, 9 CFU, for the Master Degree in Mechanical Engineering, from 2021 to date.

### **2.2 LIST OF COURSES TEACHED IN OTHER INSTITUTIONS**

- “Advanced Materials and Manufacturing”, 6 CFU (60 hours of teaching in classroom), for the Master Degree in Management Engineering at the University of Salerno, 2017 and 2018;
- “Microstructure in Manufacturing” short course for Ph.D. students within the Ph.D. program of the University of Cadiz, 2018;
- “Advances in Welding of Metals”, one week course (20 hours) within the GIAN program (Global Initiative for Academic Network, central government of India) organized by IIT Kharagpur and hosted by Government Engineering College of Ahmedabad, 2019;
- “Metallurgy and Characterization of Light Alloys”, specialization course for the employers of DEMA SpA (Design and Manufacturing SpA), (50 hours), 2013;
- “Manufacturing of Titanium Parts”, 400 hours teaching, course for the students of a post degree specialization course organized by the University of Naples in the framework of a research grant “PON – TITAFORM”, 2012;

### **2.3 INTERNSHIP AND PLACEMENT SUPERVISION**

Supervision of “Federico II” students during industrial internships, since 2014 two or more students per year in various manufacturing focused industries and research centres: CERN (European Centre for Nuclear Research), CIRA (Italian Center for Aerospace Research), Avio GE (a General Electric Company), Avio Spazio, Hitachi Rail, Sophia High Tech,.....

### **2.4 SUPERVISED MASTER THESES AND PROJECTS**

Since 2014 supervision of more than 300 bachelor degree theses in Mechanical Engineering at the University of Naples, more than 30 master degree theses in Mechanical Engineering at the University of Naples and two master degree theses in Mechanical Engineering at the University of Salerno

## 2.5 INVITED TEACHING

- “Basis of Metal Forming” invited by CERN within the framework of CAS lecture series (CERN Accelerator School), 2020.
- “Additive Manufacturing” invited by CERN within the framework of CAS lecture series (CERN Accelerator School), 2021.
- “Advances in Surface Engineering and Welding Technology”, invited by ASM International – Gujarat Chapter, Government Engineering College Gandhinagar and Institute for Plasma Research (IPR). – Gandhinagar from 29th February to 1st March 2016.
- “Friction Stir Welding for Practitioners”, invited by Pandit Deendayal Petroleum University. PDPU Campus 1st March 2016.
- “Cold Spray Technology” – invited by ASM International – Gujarat Chapter. One day seminar held on 2nd March 2016.
- “Titanium forming technologies” – invited by College of Engineering of Pune – Department of Metallurgy and Material Science, 23 February 2016.
- “Cold Spray Deposition on Polymers” – invited by IIT Madras, October 2019.

## PART 3 – RESEARCH

### 3.1 SUPERVISION OF PHD CANDIDATES

#### Graduated theses as advisor or co-advisor at the University of Naples

- VISCUSI Antonio: “On the critical issues of low pressure cold spray processes: experimental investigations and numerical approach” 07/02/2018 – co-advisor.
- PERNA Alessia Serena “Manufacturing of novel hybrid structures in an industry 4.0 environment: understanding of the physics and development of the process” thesis to be defended in spring 2021 – co-advisor.

#### Ongoing theses as advisor or co-advisor at the University of Naples

- DELLA GATTA Roberta: “Cold Spray Deposition on Polymers and Composites Substrates”, 2019-2022, advisor.
- LAMPITELLA Valerio: “Study of the spreading process in powder bed based additive manufacturing techniques: modelling and experiments”, 2019-2022, advisor.
- COZZOLINO Ersilia: “Study of the sustainability of the additive manufacturing processes”, 2020-2023, advisor.
- SILVESTRI Alessia Teresa: “Study of the Direct Energy Deposition Process for Metals”, 2018-2021, co-advisor.

#### Member of the scientific committee outside of the University of Naples

- TUCCI Fausto: “Multiphysics modelling and numerical simulation of injection pultrusion processes: impregnation flow, heat-transfer and stress-strain analysis”, 25/05/2020 at the University of Salerno

#### Member of the PhD jury outside of the University of Naples

- DEL SOL ILLANA Irene: “Proceso ecoeficiente sustitutivo del fresado químico de pieles metálicas aeronáuticas basado en tecnologías convencionales de mecanizado”, thesis defended on 12/12/2019 at University of Cadiz (Spain)

### 3.2 PUBLICATIONS

Peer reviewed papers on journals with impact factor

1. Perna A. S., Astarita A., Carlone P., Guthmann X., Viscusi A., (2021) Characterization of cold-spray coatings on fiber reinforced polymers through nanoindentation tests – *Metals*, 11(2), 331; <https://doi.org/10.3390/met11020331>.
2. Della Gatta R., Viscusi A., Perna A. S., Caraviello A. and Astarita A. (2020) Feasibility of steel powder deposition on composites through cold spray – *Materials and Manufacturing Processes*, DOI: <https://doi.org/10.1080/10426914.2020.1832693>.
3. Della Gatta R., Viscusi A., Perna A. S., Caraviello A., and Astarita A. (2020) Cold Spray Process for the production of AlSi10Mg coatings on glass fibers reinforced polymers. *Materials and manufacturing Processes*, DOI: <https://doi.org/10.1080/10426914.2020.1813895>.
4. Viscusi A., Antonucci V., Carrino L., Della Gatta R., Lopresto V., Papa I., Perna A. S., Ricciardi M. R., Astarita (2020) Manufacturing of an innovative composite structure: Design, manufacturing and impact behaviour. *Composite Structures*, DOI: <https://doi.org/10.1016/j.compstruct.2020.112637>.
5. Papa, I., Russo, P., Astarita, A., Viscusi, A., Perna, A.S., Carrino, L., Lopresto, V. (2020) Impact behaviour of a novel composite structure made of a polymer reinforced composite with a 3D printed metallic coating. *Composite Structures*, 245, art. no. 112346. DOI: 10.1016/j.compstruct.2020.112346.
6. Silvestri A. T., Astarita A., Boccarusso L., Amorim Carvalho A., Durante M., Garlasche M., (2020) Understanding the friction behaviour of niobium sheets during forming processes. *Journal of Materials Engineering and Performance* DOI: <https://doi.org/10.1007/s11665-020-04868-w>.
7. Hassanin, A.E., Scherillo, F., Prisco, Sansone, R., Astarita, A. (2020) - Selective laser melting of Cu-inconel 718 powder mixtures. *Journal of Manufacturing Processes*, DOI: 10.1016/j.jmapro.2020.10.039.
8. Silvestri A., Borrelli R., Foglia S., Franchitti S., Pirozzi C., Astarita A. (2020) - Electron beam melting of Ti6Al4V: Role of the process parameters under the same energy density. *Journal of Manufacturing Processes*, DOI: 10.1016/j.jmapro.2020.10.065.
9. Singh, A.K., Kumar, B., Jha, K., Astarita, A., Squillace, A., Franchitti, S., Arora, A. (2020) Friction stir welding of additively manufactured Ti-6Al-4V: Microstructure and mechanical properties. *Journal of Materials Processing Technology*, 277, art. no. 116433. DOI: 10.1016/j.jmatprotec.2019.116433
10. Prisco, U., Astarita, A., El Hassanin, A., Franchitti, S. (2019) Influence of processing parameters on microstructure and roughness of electron beam melted Ti-6Al-4V titanium alloy. *Materials and Manufacturing Processes*, 34 (15), pp. 1753-1760. DOI: 10.1080/10426914.2019.1683576
11. El Hassanin, A., Scherillo, F., Astarita, A., Squillace, A. (2019) Cold Spinning of Nimonic 75 Parts: Microstructure Evolution and Heat Treatment. *Metallography, Microstructure, and Analysis*, 8 (4), pp. 488-494. DOI: 10.1007/s13632-019-00561-0
12. Boccarusso, L., Astarita, A., Carlone, P., Scherillo, F., Rubino, F., Squillace, A. (2019) Dissimilar friction stir lap welding of AA 6082 - Mg AZ31: Force analysis and microstructure evolution *Journal of Manufacturing Processes*, 44, pp. 376-388. DOI: 10.1016/j.jmapro.2019.06.022
13. Astarita, A., Ausanio, G., Boccarusso, L., Prisco, U., Viscusi, A. (2019) Deposition of ferromagnetic particles using a magnetic assisted cold spray process. *International Journal of Advanced Manufacturing Technology*, 103 (1-4), pp. 29-36. DOI: 10.1007/s00170-019-03523-6

14. Milagre, M.X., Donatus, U., Machado, C.S.C., Araujo, J.V.S., da Silva, R.M.P., de Viveiros, B.V.G., Astarita, A., Costa, I. (2019) Comparison of the corrosion resistance of an Al–Cu alloy and an Al–Cu–Li alloy. *Corrosion Engineering Science and Technology*, 54 (5), pp. 402-412. DOI: 10.1080/1478422X.2019.1605472
15. Mehta, K.P., Carlone, P., Astarita, A., Scherillo, F., Rubino, F., Vora, P. (2019) Conventional and cooling assisted friction stir welding of AA6061 and AZ31B alloys. *Materials Science and Engineering A*, 759, pp. 252-261. DOI: 10.1016/j.msea.2019.04.120
16. Perna, A.S., Viscusi, A., Astarita, A., Boccarusso, L., Carrino, L., Durante, M., Sansone, R. (2019) Manufacturing of a Metal Matrix Composite Coating on a Polymer Matrix Composite Through Cold Gas Dynamic Spray Technique. *Journal of Materials Engineering and Performance*, 28 (6), pp. 3211-3219. DOI: 10.1007/s11665-019-03914-6
17. Scherillo, F., Astarita, A., Carrino, L., Pirozzi, C., Prisco, U., Squillace, A. (2019) Linear friction welding of Ti-6Al-4V parts produced by electron beam melting. *Materials and Manufacturing Processes*, 34 (2), pp. 201-207. DOI: 10.1080/10426914.2018.1532086
18. Viscusi, A., Astarita, A., Prisco, U. (2019) Mechanical Properties Optimization of Friction Stir Welded Lap Joints in Aluminium Alloy. *Advances in Materials Science and Engineering*, 2019, art. no. 3832873. DOI: 10.1155/2019/3832873
19. Campbell, J.P., Astarita, A., Viscusi, A., Saha, G.C. (2019) Investigation of strain-hardening characteristics of cold-sprayed Al–Al<sub>2</sub>O<sub>3</sub> coatings: a combined nanoindentation and expanding cavity models approach. *Surface Engineering*. DOI: 10.1080/02670844.2019.1620438
20. Rubino, F., Scherillo, F., Franchitti, S., Squillace, A., Astarita, A., Carlone, P. (2019) Microstructure and surface analysis of friction stir processed Ti-6Al-4V plates manufactured by electron beam melting. *Journal of Manufacturing Processes*, 37, pp. 392-401. DOI: 10.1016/j.jmapro.2018.12.015
21. Astarita, A., Campatelli, G., Corigliano, P., Epasto, G., Montevecchi, F., Scherillo, F., Venturini, G. (2019) Microstructure and mechanical properties of specimens produced using the wire-arc additive manufacturing process. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*. DOI: 10.1177/0954406219883324
22. de Sousa Araujo, J.V., Santos Bugarin, A.D.F., Donatus, U., Machado, C.D.S.C., Queiroz, F.M., Terada, M., Astarita, A., Costa, I. (2019) Thermomechanical treatment and corrosion resistance correlation in the AA2198 Al–Cu–Li alloy. *Corrosion Engineering Science and Technology*, 54 (7), pp. 575-586. DOI: 10.1080/1478422X.2019.1637077
23. Scherillo, F., Astarita, A., Prisco, U., Squillace, A. (2018) Selective electrochemical machining of the steel molds in hot isostatic pressing of Ti6Al4V powder. *Materials and Manufacturing Processes*, 33 (14), pp. 1587-1593. DOI: 10.1080/10426914.2018.1424905
24. Scherillo, F., Astarita, A., Prisco, U., Contaldi, V., di Petta, P., Langella, A., Squillace, A. Friction Stir Welding of AlSi10Mg Plates Produced by Selective Laser Melting (2018). *Metallography, Microstructure, and Analysis*, 7 (4), pp. 457-463. DOI: 10.1007/s13632-018-0465-y
25. Del Re, F., Contaldi, V., Astarita, A., Palumbo, B., Squillace, A., Corrado, P., Di Petta, P. (2018) Statistical approach for assessing the effect of powder reuse on the final quality of AlSi10Mg parts produced by laser powder bed fusion additive manufacturing. *International Journal of Advanced Manufacturing Technology*, 97 (5-8), pp. 2231-2240. DOI: 10.1007/s00170-018-2090-y
26. Rubino, F., Astarita, A., Carlone, P. (2018) Thermo-mechanical finite element modeling of the laser treatment of titanium cold-sprayed coatings. *Coatings*, 8 (6), art. no. 219. DOI: 10.3390/coatings8060219

27. Astarita, A., Boccarusso, L., Durante, M., Viscusi, A., Sansone, R., Carrino, L. (2018) Study of the Production of a Metallic Coating on Natural Fiber Composite Through the Cold Spray Technique. *Journal of Materials Engineering and Performance*, 27 (2), pp. 739-750. DOI: 10.1007/s11665-018-3147-7
28. Prisco, U., Squillace, A., Astarita, A., Carrino, L. (2018). Morphology of titanium coatings deposited through single pass cold spraying. *Materials and Manufacturing Processes*, 33 (2), pp. 123-129. DOI: 10.1080/10426914.2016.1198035
29. Viscusi, A., Astarita, A., Genna, S., Leone, C. (2018) On the influence of different superficial laser texturing on the deposition of powders through cold spray process. *Transactions of the Institute of Metal Finishing*, 96 (1), pp. 34-40. DOI: 10.1080/00202967.2018.1403096
30. Prisco, U., Astarita, A. (2018) Strain hardening of a hot stretch formed Ti-6Al-4V alloy aircraft component. *Welding and Cutting*, 17 (1), pp. 42-46.
31. Viscusi, A., Astarita, A., Carrino, L., D'Avino, G., de Nicola, C., Maffettone, P.L., Reina, G.P., Russo, S., Squillace, A. (2018) Experimental study and numerical investigation of the phenomena occurring during long duration cold spray deposition. *International Review on Modelling and Simulations*, 11 (2), pp. 84-92. DOI: 10.15866/iremos.v11i2.13619
32. Formisano, A., Durante, M., Boccarusso, L., Astarita, A. (2017) The influence of thermal oxidation and tool-sheet contact conditions on the formability and the surface quality of incrementally formed grade 1 titanium thin sheets. *International Journal of Advanced Manufacturing Technology*, 93 (9-12), pp. 3723-3732. DOI: 10.1007/s00170-017-0805-0
33. Iebba, M., Astarita, A., Mistretta, D., Colonna, I., Liberini, M., Scherillo, F., Pirozzi, C., Borrelli, R., Franchitti, S., Squillace, A. (2017) Influence of Powder Characteristics on Formation of Porosity in Additive Manufacturing of Ti-6Al-4V Components. *Journal of Materials Engineering and Performance*, 26 (8), pp. 4138-4147. DOI: 10.1007/s11665-017-2796-2
34. Maio, L., Liberini, M., Campanella, D., Astarita, A., Esposito, S., Boccardi, S., Meola, C. (2017) Infrared thermography for monitoring heat generation in a linear friction welding process of Ti6Al4V alloy. *Infrared Physics and Technology*, 81, pp. 325-338. DOI: 10.1016/j.infrared.2017.01.023
35. Durante, M., Boccarusso, L., Velotti, C., Astarita, A., Squillace, A., Carrino, L. (2017) Characterization of Ti-6Al-4V Tribopairs: Effect of Thermal Oxidation Treatment. *Journal of Materials Engineering and Performance*, 26 (2), pp. 571-583. DOI: 10.1007/s11665-016-2477-6
36. Astarita, A., Prisco, U. (2017) Tensile properties of a hot stretch formed Ti-6Al-4V alloy component for aerospace applications. *Manufacturing Technology*, 17 (2), pp. 141-147.
37. Boccarusso, L., Arleo, G., Astarita, A., Bernardo, F., De Fazio, P., Durante, M., Memola Capece Minutolo, F., Sepe, R., Squillace, A. (2017) A new approach to study the influence of the weld bead morphology on the fatigue behaviour of Ti-6Al-4V laser beam-welded butt joints. *International Journal of Advanced Manufacturing Technology*, 88 (1-4), pp. 75-88. DOI: 10.1007/s00170-016-8764-4
38. Astarita, A., Scherillo, F., Curioni, M., Aprea, P., Impero, F., Squillace, A., Zhou, X. (2016) Study of the Linear Friction Welding Process of Dissimilar Ti-6Al-4V–Stainless Steel Joints. *Materials and Manufacturing Processes*, 31 (16), pp. 2115-2122. DOI: 10.1080/10426914.2016.1151048
39. Caiazzo, F., Alfieri, V., Astarita, A., Squillace, A., Barbieri, G. (2016) Investigation on laser welding of Ti-6Al-4V plates in corner joint. *Advances in Mechanical Engineering*, 9 (1). DOI: 10.1177/1687814016685546

40. Carlone, P., Astarita, A., Rubino, F., Pasquino, N., Aprea, P. (2016) Selective Laser Treatment on Cold-Sprayed Titanium Coatings: Numerical Modeling and Experimental Analysis. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, 47 (6), pp. 3310-3317. DOI: 10.1007/s11663-016-0636-7
41. Astarita, A., Coppola, M., Esposito, S., Liberini, M., Maio, L., Papa, I., Scherillo, F., Squillace, A. (2016) Experimental characterization of Ti6Al4V T joints welded through linear friction welding technique: microstructure and NDE. *Advances in Manufacturing*, 4 (4), pp. 305-313. DOI: 10.1007/s40436-016-0160-7
42. Astarita, A., Coticelli, F., Prisco, U. (2016) Repairing of an engine block through the cold gas dynamic spray technology. *Materials Research*, 19 (6), pp. 1226-1231. DOI: 10.1590/1980-5373-MR-2016-0109
43. Astarita, A., Genna, S., Leone, C., Memola Capece Minutolo, F., Squillace, A., Velotti, C. (2016) Study of the laser marking process of cold sprayed titanium coatings on aluminium substrates. *Optics and Laser Technology*, 83, pp. 168-176. DOI: 10.1016/j.optlastec.2016.04.007
44. Rubino, F., Astarita, A., Carlone, P., Genna, S., Leone, C., Memola Capece Minutolo, F., Squillace, A. (2016) Selective Laser Post-Treatment on Titanium Cold Spray Coatings. *Materials and Manufacturing Processes*, 31 (11), pp. 1500-1506. DOI: 10.1080/10426914.2015.1037912
45. Astarita, A., Marzocchi, V., Squillace, A., Bellucci, F. (2016) Electrochemical characterization of anodized AA 2139 friction stir-welded butt joint for aeronautical applications. *Surface and Interface Analysis*, 48 (8), pp. 870-876. DOI: 10.1002/sia.5860
46. Astarita, A., Rubino, F., Carlone, P., Ruggiero, A., Leone, C., Genna, S., Merola, M., Squillace, A. (2016) On the improvement of AA2024 wear properties through the deposition of a cold-sprayed titanium coating. *Metals*, 6 (8), art. no. 185. DOI: 10.3390/met6080185
47. Liberini, M., De Falco, G., Scherillo, F., Astarita, A., Commodo, M., Minutolo, P., D'Anna, A., Squillace, A. (2016) Nano-TiO<sub>2</sub> coatings on aluminum surfaces by aerosol flame synthesis. *Thin Solid Films*, 609, pp. 53-61. DOI: 10.1016/j.tsf.2016.04.025
48. Prisco, U., Squillace, A., Scherillo, F., Coticelli, F., Astarita, A. (2016) Form and dimensional accuracy of surfaces generated by longitudinal turning. *Manufacturing Technology*, 16 (3), pp. 595-600.
49. Liberini, M., Scherillo, F., Astarita, A., Prisco, U., Bruno, M., Monetta, T., Bellucci, F., Squillace, A. (2016) Microstructure of a Hot Forged Ti 5-5-5-3 Aeronautical Component. *Metallography, Microstructure, and Analysis*, 5 (3), pp. 207-216. DOI: 10.1007/s13632-016-0278-9
50. Tammaro, D., Astarita, A., Di Maio, E., Iannace, S. (2016) Polystyrene Foaming at High Pressure Drop Rates. *Industrial and Engineering Chemistry Research*, 55 (19), pp. 5696-5701. DOI: 10.1021/acs.iecr.5b04911
51. Viscusi, A., Ammendola, P., Astarita, A., Raganati, F., Scherillo, F., Squillace, A., Chirone, R., Carrino, L. (2016) Aluminum foam made via a new method based on cold gas dynamic sprayed powders mixed through sound assisted fluidization technique. *Journal of Materials Processing Technology*, 231, pp. 265-276. DOI: 10.1016/j.jmatprotec.2015.12.030
52. Carlone, P., Astarita, A., Rubino, F., Pasquino, N. (2016) Microstructural Aspects in FSW and TIG Welding of Cast ZE41A Magnesium Alloy. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, 47 (2), pp. 1340-1346. DOI: 10.1007/s11663-015-0536-2

53. Astarita, A., Squillace, A., Nele, L. (2016) Mechanical characteristics of welded joints of aluminum alloy 6061 T6 formed by ARC and friction stir welding. *Metal Science and Heat Treatment*, 57 (9-10), pp. 564-569. DOI: 10.1007/s11041-016-9923-9
54. Astarita, A., Prisco, U., Squillace, A., Villano, P., Scherillo, F., Coticelli, F. (2016) Theoretical analysis of a friction stir welded panel in comparison with the baseline version. *Welding and Cutting*, 15 (4), pp. 238-240.
55. Carlone, P., Astarita, A., Palazzo, G.S., Paradiso, V., Squillace, A. (2015) Microstructural aspects in Al-Cu dissimilar joining by FSW. *International Journal of Advanced Manufacturing Technology*, 79 (5-8), pp. 1109-1116. DOI: 10.1007/s00170-015-6874-z
56. Scherillo, F., Aprea, P., Astarita, A., Scherillo, A., Testani, C., Squillace, A. (2015) On the Interface Generated by Hot Isostatic Pressing Compaction Process Between an AISI 304 Container and the Ti6Al4V Powders. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, 46 (6), pp. 2376-2379. DOI: 10.1007/s11661-015-2868-6
57. Astarita, A., Dr., Prisco, U., Squillace, A., Velotti, C., Tronci, A. (2015) Mechanical characterization by DOE analysis of AA6156-T4 friction stir welded joints in as-welded and post-weld aged condition. *Materialprüfung/Materials Testing*, 57 (3), pp. 192-199. DOI: 10.3139/120.110698
58. De Fenzo, A., Scherillo, F., Astarita, A., Testani, C., Squillace, A., Bellucci, F. (2015) Influence of hot deformation on the electrochemical behavior of natural oxides of hiped Ti6Al4V. *Corrosion Science*, 94, pp. 79-87. DOI: 10.1016/j.corsci.2015.01.042
59. Astarita, A., Curioni, M., Squillace, A., Zhou, X., Bellucci, F., Thompson, G.E., Beamish, K.A. (2015) Corrosion behaviour of stainless steel-titanium alloy linear friction welded joints: Galvanic coupling. *Materials and Corrosion*, 66 (2), pp. 111-117. DOI: 10.1002/maco.201307476
60. Astarita, A., Squillace, A., Carrino, L. (2014) Experimental Study of the Forces Acting on the Tool in the Friction-Stir Welding of AA 2024 T3 Sheets. *Journal of Materials Engineering and Performance*, 23 (10), pp. 3754-3761. DOI: 10.1007/s11665-014-1140-3
61. Astarita, A., Testani, C., Scherillo, F., Squillace, A., Carrino, L. (2014) Beta Forging of a Ti6Al4V Component for Aeronautic Applications: Microstructure Evolution. *Metallography, Microstructure, and Analysis*, 3 (6), pp. 460-467. DOI: 10.1007/s13632-014-0171-3
62. Astarita, A., Durante, M., Langella, A., Squillace, A. (2013) Improving of steel superficial properties through thermal sprayed coatings. *International Journal of Surface Science and Engineering*, 7 (4), pp. 366-381. DOI: 10.1504/IJSURFSE.2013.057616
63. Prisco, U., Squillace, A., Astarita, A., Velotti, C. (2013) Influence of welding parameters and post-weld aging on tensile properties and fracture location of AA2139-T351 friction-stir-welded joints. *Materials Research*, 16 (5), pp. 1106-1112. DOI: 10.1590/S1516-14392013005000099
64. Astarita, A., Durante, M., Langella, A., Squillace, A. (2013) Experimental characterization of Thermal sprayed coatings on steel substrate. *Metallurgia Italiana*, 105 (9), pp. 45-50.
65. Astarita, A., Durante, M., Langella, A., Squillace, A. (2013) Elevation of tribological properties of alloy Ti-6% Al-4% v upon formation of a rutile layer on the surface. *Metal Science and Heat Treatment*, 54 (11-12), pp. 662-666. DOI: 10.1007/s11041-013-9567-y
66. Ciliberto, S., Astarita, A., Squillace, A. (2013) FSW of T joints in overlap configuration: Process optimization in joining dissimilar aluminium alloys for the aeronautic application. *Surface and Interface Analysis*, 45 (10), pp. 1631-1637. DOI: 10.1002/sia.5214



67. Astarita, A., Durante, M., Langella, A., Montuori, M., Squillace, A. (2013) Mechanical characterization of low-pressure cold-sprayed metal coatings on aluminium. *Surface and Interface Analysis*, 45 (10), pp. 1530-1535. DOI: 10.1002/sia.5224
68. Astarita, A., Carrino, L., Franchitti, S., Langella, A., Paradiso, V. (2013) Manufacturing of innovative components formed using SPF processes and filled with aluminum metal foams. *Surface and Interface Analysis*, 45 (10), pp. 1638-1642. DOI: 10.1002/sia.5215
69. Astarita, A., Bitondo, C., Squillace, A., Armentani, E., Bellucci, F. (2013) Stress corrosion cracking behaviour of conventional and innovative aluminium alloys for aeronautic applications. *Surface and Interface Analysis*, 45 (10), pp. 1610-1618. DOI: 10.1002/sia.5234
70. Astarita, A., Scala, A., Paradiso, V., Squillace, A., Iodice, M., Indolfi, M., Monetta, T., Bellucci, F. (2013) Structural health monitoring of metal components: A new approach based on electrochemical measurements. *Surface and Interface Analysis*, 45 (10), pp. 1570-1574. DOI: 10.1002/sia.5195
71. Velotti, C., Astarita, A., Squillace, A., Ciliberto, S., Villano, M.G., Giuliani, M., Prisco, U., Montuori, M., Giorleo, G., Bellucci, F. (2013) On the critical technological issues of friction stir welding lap joints of dissimilar aluminum alloys. *Surface and Interface Analysis*, 45 (10), pp. 1643-1648. DOI: 10.1002/sia.5277
72. Astarita, A., Squillace, A., Armentani, E., Ciliberto, S. (2012) Friction stir welding of AA 2198 T3 rolled sheets in butt configuration [Saldatura in configurazione testa a testa di lamiera in lega 2198 T3 mediante procedimento friction stir welding]. *Metallurgia Italiana*, 104 (7-8), pp. 31-40.
73. Astarita, A., Squillace, A., Scala, A., Prisco, A. (2012) On the critical technological issues of friction stir welding T-joints of dissimilar aluminum alloys. *Journal of Materials Engineering and Performance*, 21 (8), pp. 1763-1771. DOI: 10.1007/s11665-011-0073-3
74. Squillace, A., Prisco, U., Ciliberto, S., Astarita, A. (2012) Effect of welding parameters on morphology and mechanical properties of Ti-6Al-4V laser beam welded butt joints. *Journal of Materials Processing Technology*, 212 (2), pp. 427-436. DOI: 10.1016/j.jmatprotec.2011.10.005
75. Astarita, A., Scala, A., Squillace, A., Iodice, M., Monetta, T., Mitton, D.B., Bellucci, F. (2010) A new approach in the monitoring of metal coupon subjected at fatigue load in aggressive solution. *International Journal of Material Forming*, 3 (SUPPL. 1), pp. 203-206. DOI: 10.1007/s12289-010-0742-z

#### Peer reviewed review papers published on journals with impact factor

1. Viscusi, A., Astarita, A., Gatta, R.D., Rubino, F. (2019) A perspective review on the bonding mechanisms in cold gas dynamic spray. *Surface Engineering*, 35 (9), pp. 743-771. DOI: 10.1080/02670844.2018.1551768

#### Editorials published on peer reviewed journals with impact factor

1. Carlone, P., Astarita, A. (2019) Dissimilar metal welding. *Metals*, 9 (11), art. no. 1206. DOI: 10.3390/met9111206
2. Lopresto, V., Astarita, A., Porfiri, M., Shukla, A. (2019) The International Symposium on Dynamic Response and Failure of Composite Materials, Draf2018. *Journal of Materials Engineering and Performance*, 28 (6), pp. 3157-3160. DOI: 10.1007/s11665-019-04145-5

3. Sudarshan, T.S., Astarita, A., Squillace, A., Carlone, P. (2019) Preface. Key Engineering Materials, 813 KEM.

Selected conference papers presented at international conferences and indexed on Scopus

1. Liberini, M., Astarita, A., Campatelli, G., Scippa, A., Montevecchi, F., Venturini, G., Durante, M., Boccarusso, L., Minutolo, F.M.C., Squillace, A. (2017) Selection of Optimal Process Parameters for Wire Arc Additive Manufacturing. Procedia CIRP, 62, pp. 470-474. DOI: 10.1016/j.procir.2016.06.124
2. Velotti, C., Astarita, A., Leone, C., Genna, S., Minutolo, F.M.C., Squillace, A. (2016). Laser Marking of Titanium Coating for Aerospace Applications. Procedia CIRP, 41, pp. 975-980. DOI: 10.1016/j.procir.2016.01.006
3. Astarita, A., Genna, S., Leone, C., Memola Capece Minutolo, F., Rubino, F., Squillace, A. (2015) Study of the laser remelting of a cold sprayed titanium layer. Procedia CIRP, 33, pp. 452-457. DOI: 10.1016/j.procir.2015.06.101
4. Silvestri A. T., Astarita A., El Hassanin A., Manzo A., Iannuzzo U., Iannuzzo G., De Rosa V., Acerra F., Squillace A. (2020) Assessment of the mechanical properties of AlSi10Mg parts produced through selective laser melting under different conditions. Procedia Manufacturing 47, 1058-1064. DOI: 10.1016/j.promfg.2020.04.115.
5. Viscusi A., Durante M., Astarita A., Boccarusso L., Carrino L., Perna A.S. (2020) Experimental evaluation of metallic coating on polymer by cold spray. Procedia Manufacturing 47, 761-765. DOI: 10.1016/j.promfg.2020.04.232
6. Rubino F., Tucci F., Esperto V., Perna A. S., Astarita A., Carlone P., Squillace A. (2020) Metallization of fiber reinforced composite by surface functionalization and cold spray deposition. Procedia Manufacturing 47, 1084-1088. DOI: 10.1016/j.promfg.2020.04.353
7. Durante, M., Formisano, A., Boccarusso, L., Astarita, A., Langella, A. (2019) Single point incremental forming of cold-rolled polycarbonate sheets. AIP Conference Proceedings, 2113, art. no. 060007. DOI: 10.1063/1.5112602
8. Hassanin, A.E., Scherillo, F., Silvestri, A.T., Caraviello, A., Sansone, R., Astarita, A., Squillace, A. (2019) Heat treatment of inconel selective laser melted parts: Microstructure evolution. AIP Conference Proceedings, 2113, art. no. 060004. DOI: 10.1063/1.5112599
9. Impero, F., Scherillo, F., Silvestri, A.T., Casarin, R., Astarita, A., Squillace, A. (2019) Stationary shoulder friction stir processing: Influence of tool wear on surface properties. Key Engineering Materials, 813 KEM, pp. 393-398. DOI: 10.4028/www.scientific.net/KEM.813.393
10. Papa, I., Russo, P., Astarita, A., Viscusi, A., Perna, A.S., Carrino, L., Lopresto, V. (2019) Influence of the metallic cold spray deposition on the low-velocity impact behaviour of composite laminates. Key Engineering Materials, 813 KEM, pp. 376-380. DOI: 10.4028/www.scientific.net/KEM.813.376
11. Perna, A.S., Viscusi, A., Astarita, A., Boccarusso, L., Caraviello, A., Carrino, L., Durante, M., Sansone, R. (2019) Experimental study of functionalized polymer matrix composite with multi-material metal coatings produced by means of cold spray technology. Key Engineering Materials, 813 KEM, pp. 267-272. DOI: 10.4028/www.scientific.net/KEM.813.267
12. Viscusi, A., Perna, A.S., Astarita, A., Boccarusso, L., Caraviello, A., Carrino, L., Gatta, R.D., Durante, M., Sansone, R. (2019) Experimental study of cold sprayed metallic coatings on thermoplastic matrix

composites. *Key Engineering Materials*, 813 KEM, pp. 68-73. DOI: 10.4028/www.scientific.net/KEM.813.68

13. Paradiso, V., Rubino, F., Tucci, F., Astarita, A., Carlone, P. (2018) Thermo-mechanical modeling of laser treatment on titanium cold-spray coatings. *AIP Conference Proceedings*, 1960, art. no. 100011. DOI: 10.1063/1.5034951
14. Astarita, A., Boccarusso, L., Carrino, L., Durante, M., Minutolo, F.M.C., Squillace, A. (2018) Study of the joining of polycarbonate panels in butt joint configuration through friction stir welding. *AIP Conference Proceedings*, 1960, art. no. 100002. DOI: 10.1063/1.5034942
15. Hassanin, A.E., Astarita, A., Scherillo, F., Velotti, C., Squillace, A., Liguori, A. (2018) On the manufacturing of a gas turbine engine part through metal spinning process. *AIP Conference Proceedings*, 1960, art. no. 160005. DOI: 10.1063/1.5035031
16. Boccarusso, L., Viscusi, A., Durante, M., Astarita, A., De Fazio, D., Sansone, R., Caraviello, A., Carrino, L. (2018) Deposition of aluminum coatings on bio-composite laminates. *AIP Conference Proceedings*, 1960, art. no. 100004. DOI: 10.1063/1.5034944
17. Astarita, A., Mandolino, C., Lertora, E., Gambaro, C., Squillace, A., Scherillo, F. (2017) Effect of fibre laser marking on surface properties and corrosion resistance of a Fe-Ni-Cr alloy. *AIP Conference Proceedings*, 1896, art. no. 180001. DOI: 10.1063/1.5008206
18. Scherillo, F., Astarita, A., Di Martino, D., Contaldi, V., Di Matteo, L., Di Petta, P., Casarin, R., Squillace, A., Langella, A. (2017) On the microstructure analysis of FSW joints of aluminium components made via direct metal laser sintering. *AIP Conference Proceedings*, 1896, art. no. 040007. DOI: 10.1063/1.5008033
19. Hassanin, A.E., Velotti, C., Scherillo, F., Astarita, A., Squillace, A., Carrino, L. (2017) Study of the solid state joining of additive manufactured components. *RTSI 2017 - IEEE 3rd International Forum on Research and Technologies for Society and Industry, Conference Proceedings*, art. no. 8065967. DOI: 10.1109/RTSI.2017.8065967
20. Milagre, M.X., Machado, C.S.C., Araujo, J.V., Astarita, A., Pébère, N., Vivier, V., Costa, I. (2017) Intergranular corrosion susceptibility of Al-Cu-Li alloys. *EUROCORR 2017 - The Annual Congress of the European Federation of Corrosion, 20th International Corrosion Congress and Process Safety Congress 2017*, .
21. Scherillo, F., Liberini, M., Astarita, A., Franchitti, S., Pirozzi, C., Borrelli, R., Cirillo, P., Caraviello, A., Squillace, A., Carrino, L. (2017) On the Microstructural Analysis of LFW Joints of Ti6Al4V Components Made via Electron Beam Melting *Procedia Engineering*, 183, pp. 264-269. DOI: 10.1016/j.proeng.2017.04.034
22. Astarita, A., Liberini, M., Velotti, C., Sinagra, C., Squillace, A. (2016) Experimental study of the Portevin-Le Chatelier effect in AA 5754 sheets: Influence of the different rolling routes. *AIP Conference Proceedings*, 1769, art. no. 130007. DOI: 10.1063/1.4963526
23. Arora, A., Astarita, A., Boccarusso, L., Mahesh, V.P. (2016) Experimental Characterization of Metal Matrix Composite with Aluminium Matrix and Molybdenum Powders as Reinforcement. *Procedia Engineering*, 167, pp. 245-251. DOI: 10.1016/j.proeng.2016.11.694
24. Astarita, A., Liberini, M., Velotti, C., Sinagra, C., Squillace, A. (2016) On the investigation of the Portevin-Le Chatelier Effect in the rolling of AA 5083. *Key Engineering Materials*, 710, pp. 175-180. DOI: 10.4028/www.scientific.net/KEM.710.175
25. Faggiano, B., Iovane, G., Ricci, A., Squillace, A., Astarita, A., Passeggio, F., Canteli, A.F., Mazzolani, F.M. (2016) The use of structural aluminum for the design of large span roofs: The case of the

- "Cubierta de Oviedo". *Key Engineering Materials*, 710, pp. 371-377. DOI: 10.4028/www.scientific.net/KEM.710.371
26. Ducato, A., Buffa, G., Astarita, A., Squillace, A., Fratini, L., Micari, F. (2015) Metallurgical evolutions in hot forging of dual phase titanium alloys: Numerical simulation and experiments. *Key Engineering Materials*, 651-653, pp. 225-230. DOI: 10.4028/www.scientific.net/KEM.651-653.225
  27. Impero, F., Scherillo, F., Astarita, A., Beamish, K.A., Curioni, M., Squillace, A., Zhou, X. (2015) Study of the metallurgy of dissimilar Ti-6Al-4V - Stainless steel linear friction welded joints. *Key Engineering Materials*, 651-653, pp. 1427-1432. DOI: 10.4028/www.scientific.net/KEM.651-653.1427
  28. Buffa, G., Campanella, D., Cammalleri, M., Ducato, A., Astarita, A., Squillace, A., Esposito, S., Fratini, L. (2015) Experimental and Numerical Analysis of Microstructure Evolution during Linear Friction Welding of Ti6Al4V. *Procedia Manufacturing*, 1, pp. 429-441. DOI: 10.1016/j.promfg.2015.09.053
  29. Rubino, F., Ammendola, P., Astarita, A., Raganati, F., Squillace, A., Viscusi, A., Chirone, R., Carrino, L. (2015) An innovative method to produce metal foam using cold gas dynamic spray process assisted by fluidized bed mixing of precursors. *Key Engineering Materials*, 651-653, pp. 913-918. DOI: 10.4028/www.scientific.net/KEM.651-653.913
  30. Formisano, A., Astarita, A., Boccarusso, L., Capece Minutolo, F., Carrino, L., Durante, M., Langella, A., Squillace, A. (2015) Formability evaluation of grade 1 Titanium sheets depending on the temperature by FE analyses. *Key Engineering Materials*, 651-653, pp. 1054-1059. DOI: 10.4028/www.scientific.net/KEM.651-653.1054
  31. Boccarusso, L., Arleo, G., Astarita, A., Bernardo, F., De Fazio, P., Durante, M., Giudice, G., Memola Capece Minutolo, F., Sepe, R., Squillace, A. (2015) Effect of the process parameters on the geometrical defects of Ti-6Al-4V hot rolled sheets laser beam welded. *Key Engineering Materials*, 651-653, pp. 901-906. DOI: 10.4028/www.scientific.net/KEM.651-653.901
  32. Testani, C., Squillace, A., Astarita, A. (2014) Beta-forging of titanium Ti6Al4V alloy powders: Phase evolution modeling and strain-rate relation. *Key Engineering Materials*, 622-623, pp. 15-26. DOI: 10.4028/www.scientific.net/KEM.622-623.15
  33. Astarita, A., Giorleo, L., Scherillo, F., Squillace, A., Ceretti, E., Carrino, L. (2014) Titanium Hot Stretch Forming: Experimental and modeling residual stress analysis. *Key Engineering Materials*, 611-612, pp. 149-161. DOI: 10.4028/www.scientific.net/KEM.611-612.149
  34. Astarita, A., Genna, S., Leone, C., Memola Capece Minutolo, F., Paradiso, V., Squillace, A. (2014) Laser cutting of Aluminium sheets with a superficial cold spray titanium coating. *Key Engineering Materials*, 611-612, pp. 794-803. DOI: 10.4028/www.scientific.net/KEM.611-612.794
  35. Astarita, A., Carrino, L., Durante, M., Formisano, A., Langella, A., Memola Capece Minutolo, F., Paradiso, V., Squillace, A. (2014) Experimental study on the incremental forming of coated aluminum alloy sheets. *Key Engineering Materials*, 622-623, pp. 398-405. DOI: 10.4028/www.scientific.net/KEM.622-623.398
  36. Astarita, A., Genna, S., Leone, C., Memola, C.M.F., Paradiso, V., Squillace, A. (2013) Ti-6Al-4V cutting by 100W fibre laser in both CW and modulated regime. *Key Engineering Materials*, 554-557, pp. 1835-1844. DOI: 10.4028/www.scientific.net/KEM.554-557.1835
  37. Paradiso, V., Astarita, A., Carrino, L., Durante, M., Franchitti, S., Scherillo, F., Squillace, A., Velotti, C. (2013) Numerical optimization of selective superplastic forming of friction stir processed AZ31 Mg alloy. *Key Engineering Materials*, 554-557, pp. 2212-2220. DOI: 10.4028/www.scientific.net/KEM.554-557.2212

38. Astarita, A., Ducato, A., Fratini, L., Paradiso, V., Scherillo, F., Squillace, A., Testani, C., Velotti, C. (2013) Beta forging of Ti-6Al-4V: Microstructure evolution and mechanical properties. *Key Engineering Materials*, 554-557, pp. 359-371. DOI: 10.4028/www.scientific.net/KEM.554-557.359
39. Astarita, A., Armentani, E., Ceretti, E., Giorleo, L., Mastrilli, P., Paradiso, V., Scherillo, F., Squillace, A., Velotti, C. (2013) Hot stretch forming of a titanium alloy component for aeronautic: Mechanical and modeling. *Key Engineering Materials*, 554-557, pp. 647-656. DOI: 10.4028/www.scientific.net/KEM.554-557.647
40. Velotti, C., Astarita, A., Buonadonna, P., Dionoro, G., Langella, A., Paradiso, V., Prisco, U., Scherillo, F., Squillace, A., Tronci, A. (2013) FSW of AA 2139 plates: Influence of the temper state on the mechanical properties. *Key Engineering Materials*, 554-557, pp. 1065-1074. DOI: 10.4028/www.scientific.net/KEM.554-557.1065
41. Serroni, G., Bitondo, C., Astarita, A., Scala, A., Gloria, A., Prisco, U., Squillace, A., Bellucci, F. (2011) A comparison between mechanical and electrochemical tests on Ti6Al4V welded by LBW. *AIP Conference Proceedings*, 1353, pp. 1391-1396. DOI: 10.1063/1.3589711

### Book chapters

1. Rubino, F., Paradiso, V., Astarita, A., Carlone, P., Squillace, A. (2017) Advances in titanium on aluminium alloys cold spray coatings. *Cold-Spray Coatings: Recent Trends and Future perspectives*, pp. 225-249. DOI: 10.1007/978-3-319-67183-3\_7
2. Astarita A., Boccarusso L., Carrino L., Durante M., Perna A. S., Viscusi A. (2020) Cold Spray Deposition on Polymeric and Composite Substrates. *Cold Spray in the Realm of Additive Manufacturing*, Springer in press.

### 3.3. EXTERNAL FUNDING

#### Research contracts held as scientific responsible

- Research Contract with CERN (European Nuclear Research Centre): study of the formability of niobium sheets for the fabrication of RF cavities (2018, 10k euro);
- Research Contract with CIRA (Italian Centre for Aerospace Research): study of the 3D printing, through EBM, of aerospace parts (2018, 10k euro);
- Research Contract with AVIO spa: study of the 3D printing of tailored parts for rocket application (2017- ongoing, 180k euro);
- Research Contract with Vessel Technical Services: study of the production of naval engine parts (2019, 10k euro);
- Research Contract with MEDEA srl: study of the fabrication process of metal cans for food packaging (2017, 10k euro);
- Research Contract with DEMA SpA: study of the corrosion behavior of aircraft doors (2019, 2k euro).

#### Research grants held as local coordinator

- COSMEC: cold spray deposition on composite substrates. Grant founded by the Italian Ministry (PRIN2017- COSMEC, 2019-2022, 150k euro. PI: prof. Pierpaolo Carlone (University of Salerno – pcarlone@unisa.it).

### 3.4. ORGANISATION OF SYMPOSIA AND CONFERENCES

### Organiser

- SMT33, International Conference on Surface Modifications Technologies, Naples (Italy) June 30 – July 1 2019 - Chair

### Member of the organising committee

- ASST 2012 – VI Aluminium Surface Science and Technology Symposium – May 27-31 2012 Hilton Sorrento Palace, Sorrento, Italy.
- X ConvegnoAITeM – Enhancing the science of manufacturing – 12-14 Settembre 2011, Napoli, Italia.
- III Congresso Nazionale del Coordinamento della Meccanica Italiana – Napoli, 30 Giugno- 1 Luglio 2014, Italia.

### Member of the scientific committee

- SMT 30 - The 30th International Conference on Surface Modification Technologies 29TH JUNE - 1ST JULY, 2016 POLITECNICO DI MILANO, CAMPUS BOVISA MILAN, ITALY.
- SMT 31 - The 31th International Conference on Surface Modification Technologies 4TH JULY – 6TH JULY, 2017 UNIVERSITY OF MONS – MONS – BELGIUM.
- DRAF 2018 - International Symposium on Dynamic Response and Failure of Composite Materials" Island of Ischia, Italy - June 12-15, 2018 - HOTEL CONTINENTAL TERME.
- AJP 2019 – International Conference on Advanced Joining Processes – Azzorres October 2019
- AJP 2021 – International Conference on Advanced Joining Processes – University of Porto, 2021.
- INALCO 2019 – International Conference on Aluminum Structures – Tokyo November 2019
- DRAF 2020 - International Symposium on Dynamic Response and Failure of Composite Materials" Island of Ischia, Italy – Postponed due to COVID 19.
- SMT 34 - The 34th International Conference on Surface Modification Technologies October 2020, Futurescope Poitiers, France.
- 2019 AITEM Conference – University of Padova, September 2019.
- ICSP 2022 – International Conference on Shot Peening, Polytechnic of Milan 2022.

### Session organizer

Co-chair of the Additive Manufacturing Minisymposia within the ESAFORM conference series from 2018 – ongoing.

### Session chair

Session chair for several conferences (SMT series, ESAFORM series, DRAF series, AJP series)

## 3.5 INVITED TALKS, KEYNOTES, PLENARIES

### Plenary keynote talks

- METAL FORMING 2014 - C. Testani, A. Squillace, A. Astarita, Beta-forging of Titanium Ti6Al4V alloy powders: phase evolution modelling and strain rate relation, Metal Forming 2014, Palermo (Italy), September 21-24, 2014.
- M&MT 2016 – A. Astarita, Repairing of Automotive components through cold gas dynamic spray technology, Conference on Materials and manufacturing technologies, Pune (India) 2016, ASM International.
- MET and HTS 2016, Navi Mumbai India, October 2016, Invited Keynote Speaker.

- COM 2015 – P. Carlone, A. Astarita, F. Rubino, Numerical and Experimental analysis in selective laser post-treatment of cold sprayed titanium coatings. 54th annual Conference of Metallurgists: "Sustainability in Metals and Materials Processing and Use", Fairmont Royal York in Toronto, Ontario, Canada, August 23-26th, 2015.
- AMPT 2018 – Additive Manufacturing of Metals: powder based techniques. 21<sup>st</sup> International Conference on Advances in materials and Processing Technologies, Dublin City University September 4-7, 2018.
- EAFORM 2018 – Keynote Lecture as Recipient of the ESAFORM Scientific Prize.

#### Invited talks

- “Advances in Surface Engineering and Welding Technology”, invited by ASM International – Gujarat Chapter, Government Engineering College Gandhinagar and Institute for Plasma Research (IPR). – Gandhinagar from 29<sup>th</sup> February to 1<sup>st</sup> March 2016.
- “Friction Stir Welding for Practitioners”, invited by Pandit Deendayal Petroleum University. PDPU Campus 1<sup>st</sup> March 2016.
- “Cold Spray Technology” – invited by ASM International – Gujarat Chapter. One day seminar held on 2<sup>nd</sup> March 2016.
- “Titanium forming technologies” – invited by College of Engineering of Pune – Department of Metallurgy and Material Science, 23 February 2016.
- Cold Spray Deposition on Polymers – invited by IIT Madras, October 2019.

### 3.6 EDITORIAL ACTIVITIES

#### Member of the Editorial Board

- Surface Engineering;
- Journal of Materials Engineering and Performance;
- Advanced Joining Processes.

#### Guest Editor

- “Dissimilar Metal Welding”, special issue for the journal “Metals”, (ISSN 2075-4701);
- DRAF 2018, Proceedings of the DRAF 2018 conference published as a special issue of “Journal of Materials Engineering and Performance”;
- Section Editor for the Elsevier Encyclopaedia of Materials (Joining of Composites).

### 3.7 REVIEWER ACTIVITIES

Reviewer for the following journals (more than 250 reviewed papers)

Materials And Design, Journal of Material Processing Technology, Materials and Manufacturing Processes, Materials and Metallurgical Transactions – part A, Journal of Advanced Manufacturing Technologies , Journal of Materials Engineering and Performances, Transactions of Non-Ferrous Society of China, Surface Engineering, Journal of Engineering Manufacture (Proceedings of the Institution of Mechanical Engineers, Part B), Materials Research Ibero – American Journal of Materials, Journal of Materials Science and Engineering, Journal of Manufacturing Processes, Surface and Interface Analysis, Surface and coatings Technology, Metals, Materials, Materials Today, Journal of Alloys and Compounds.

### 3.8 AWARDS

- 2016 ASM-IIM Visiting Lecturer Award;
- 2018 ESAFORM (European Scientific Association for Forming Materials) Scientific Prize.

## **PART 4 – SERVICE**

### **4.1 PUBLIC SERVICE**

Several interventions for younger students, on steelmaking, metal in everyday life, history of manufacturing, Design of metal parts, 3D printing of metals and microscopy.

### **4.2 EXPERTISES**

Very active as an expertise provider for local industries, mainly in the fields of mechanical characterization, corrosion behaviour, processing issues and manufacturing problems.

### **4.3 SCIENTIFIC AND PROFESSIONAL SOCIETIES**

- Member of the Italian Association of Industrial Engineers, since 2010;
- Member of AITEM, Associazione Italiana Tecnologie Manifatturiere (Italian Association of Manufacturing), since 2011;
- Member of ESAFORM (European Scientific Association for Forming Materials), since 2009;
- Member of ASM International since 2016;
- Member of the Metallography Society;
- Member of the Thermal Spray Society;
- Member of the Cold Spray Club.

### **4.4 ADMINISTRATIVE CHARGES IN HOME INSTITUTION**

- Member of the Board of Professors of the Ph.D. program of the Dept. of Chemical, Materials and Industrial Production Engineering (DICMAPI) of the University of Naples since 2018;
- Member and coordinator of the Teaching commission of the DICMAPI since 2019;
- Member of the communication commission of the DICMAPI since 2019;
- Member of the Outreach commission of the Polytechnic and Basic Sciences School (Scuola Politecnica e delle Scienze di Base) of the University of Naples since 2019;
- Member of the Traineeship commission of the Polytechnic and Basic Sciences School (Scuola Politecnica e delle Scienze di Base) of the University of Naples since 2019;
- Member of the Jury for the admission in the Ph.D. program of the DICMAPI in 2019.

### **4.5 MISCELLANEOUS**

Amatorial theatre actor, recipient of some awards for acting at amatorial level.