CURRICULUM VITAE

PERSONAL INFORMATION

Name	**ELENA BASSOLI**
E-mail	**elena.bassoli@unimore.it**
Nationality	Italian
Date of birth	02 -05- 1974

WORK EXPERIENCE

Dates	Since January 2020
Role	Full Professor in Technology and Manufacturing Systems at the University of Modena and Reggio Emilia, Department of Engineering "Enzo Ferrari".
Main activities	In charge of the following courses: Manufacturing Technology (Degree in Mechanical Engineering), Computer Aided Manufacturing (Master Degree in Mechanical Engineering), Additive Manufacturing (Master Degree in Mechanical Engineering and in Automotive Eng.), Manufacturing and Assembly Technologies (Interuniversity Master Degree in Advanced Automotive Engineering, Motorvehicle University of Emilia Romagna, administrative headquarters at Modena and Reggio Emilia University) Delegate of the Department for the reception of disabled and SLD students. Responsible for the third mission activities of the Department. Contract with the EC as Expert Evaluator for the calls for proposals "HORIZON-CL4-2021-TWIN-TRANSITION-01, HORIZON-CL4-2021-RESILIENCE-01"
Dates	Since September 2017
Role	Scientific Director of the Metal Additive Centre of HPE COXA Srl (Modena, Italy).
Dates	2015-2019
Role	Associate Professor in Technology and Manufacturing Systems at the University of Modena and Reggio Emilia, Department of Engineering "Enzo Ferrari".
Dates	2016-2019
Role	Coordinator of the DREAM project, Horizon 2020- FOF13 2016.
Dates	2016-2019
Role	Member of the Board of Management of the University of Modena and Reggio Emilia
Dates	Since 2008
Role	Member of the scientific Board of CIRTIBS (Interuniversity Research Centre on Innovative Technologies for Instrumentation) in Naples
Dates	2007-2011
Role	In charge of the research collaboration between the manufacturing group (ING-IND/16) of the Department of Mechanical and Civil Engineering and the X-AT Centre (Exeter Advanced Technologies) of Exeter University (UK).

Dates	2005-2015
Role	Researcher in Technology and Manufacturing Systems at the University of Modena and Reggio Emilia, Department of Mechanical and Civil Engineering (Dept. of Engineering "Enzo Ferrari" since 2012).

EDUCATION AND TRAINING

Date	A.A. 2001/2002 – 2003/2004
Institution	University of Modena and Reggio Emilia
Title	**Ph.D. in Materials Engineering**
Thesis	"Innovative technologies for the development and production of non-conventional tools"

Date	2000
Institution	Università di Modena e Reggio Emilia, Facoltà di Ingegneria
Title	**Degree in Materials Engineering achieved at the University of Modena and Reggio Emilia with full marks**

PERSONAL SKILLS

MOTHER TONGUE	**Italian**
OTHER LANGUAGES	**English,** fluent **French,** basic
TECHNICAL SKILLS	Excellent knowledge of MICROSOFT WINDOWS operating systems and OFFICE applications. Modeling software: VISI CAD-CAM 3D Statistical data processing software: Statistica (StatSoft) Software for the management of SEM images and spectra from EDX microanalysis: INCA Knowledge of statistical tools for data analysis and Design of Experiments. Great experience in the use of scientific instruments and for technological tests, including: electron, ion and atomic force microscopy, X-ray microanalysis, X-ray diffraction and confocal profilometry
RELATIONAL SKILLS	Good predisposition to team work, excellent organizational skills, rapid learning ability, strong practical sense.

BIBLIOMETRIC PERFORMANCE	articles in the last 10 years: 33 citations in the last 15 years: 592 H-index calculated through the last 15 years: 14

RESEARCH

The research involves a number of aspects related to manufacturing technologies and systems, with a focus on additive manufacturing applied to innovative materials, but also to non-conventional processes. In all the areas addressed, the activity has always been characterized by an approach in which the study of the macroscopic performance of the process is integrated with the understanding and modelling of the

mechanisms that regulate it at a microscopic scale. This methodology was built through extensive knowledge and direct use of micro-nano scale instrumentation and analysis techniques. Electron, ion and atomic force microscopy, X-ray microanalysis, X-ray diffraction and confocal profilometry are some examples. Since the early years, the activity has included a constant collaboration with the research group in Manufacturing Technology of the Department of Production Systems and Economics of Politecnico di Torino. There has been a strong propensity for research collaborations, which has first translated into contacts with groups of the same sector at other universities involved in the CIRTIBS (Interuniversity Research Centre on Innovative Technologies for Instrumental Goods), then in multidisciplinary research with groups of different cultural extraction, such as the medical and mathematical fields. In recent years, these experiences have been put to good use by establishing international collaborations with the University of Exeter (UK), Loughborough University (UK) and the Federal Technological University (Brazil). In the last years, the experience in the field of additive metal construction has been specified on the aspects of fatigue life, in collaboration with leading players in the industry such as EOS GmBH, Poly-shape and Ferrari GES. In this context, a specific research group, RAM (Research group on Additive Manufacturing), has been set up, involving the two locations of the University of Modena and Reggio Emilia, the University of Parma and the Polytechnic University of Marche. The framework described led to the important result of the approval of the project Driving up Reliability and Efficiency of Additive Manufacturing (DREAM), Horizon 2020- FOF13 2016, which sees the undersigned coordinator of the entire project.

SELECTED PROJECTS

- H2020 – FOF13-2016 Photonics and lased-based production. Anno di finanziamento: 2016. Project: “Driving up Reliability and Efficiency of Additive Manufacturing (DREAM)”. Funding: 3,3 M€. Role: coordinator

- H2020 - FORTISSIMO2-2016 project: “Additive Manufacturing Process Simulation for metal components”. Funding: 43.813 €. Role: head of a research unit

- EX-SITU REGENERATIVE BIOLOGY OF GLANDULAR PARENCHYMAL ORGANS: THE MODEL OF THE ORGANOMORPHIC SKELETON" (Scientific Coordinator: Prof. Roberto Toni - Prot. 2008ZCCJX4_004). Subproject: "Production of a three-dimensional biodegradable and organomorphic scaffold for the growth and differentiation of the cells of human thyroid”. Role: researcher

SELECTED PUBLICATIONS

1. A. Gatto, E. Bassoli, M. Fornari, "P.T.A. deposition of powdered high performances alloys: process parameters optimisation as a function of alloy and geometrical configuration", Surface and Coatings Technology, Vol. 187, Issues 2-3, October 2004, pp. 265-271.
2. A. Gatto, E. Bassoli, L. Iuliano, M.G. Violante, "3D Printing technique applied to Rapid Casting", Rapid Prototyping Journal, Vol. 13 Issue 3, 2007, pp. 148-155.
3. E. Bassoli, E. Atzeni, "Direct Metal Rapid Casting: mechanical optimization and tolerance calculation.", Rapid Prototyping Journal, Vol. 15 Issue 4 2009, pp. 238-243.
4. E. Bassoli, L. Iuliano, A. Salmi, "Deep drilling of aluminium die-cast parts: surface roughness, dimensional tolerance and tool-chip interaction", Materials and Manufacturing Processes, Vol. 25 Issue 6, 2010, 442 — 449.
5. E. Bassoli, A. Salmi, P. Minetola "High Speed Milling of tool steel dies for aluminium extrusion: surface roughness, dimensional tolerance and chip removal mechanisms", Materials and Manufacturing Processes, Volume 26 Issue 5, 2011, 764-769
6. E. Atzeni, E. Bassoli, L. Iuliano, "Grinding micro-mechanisms of a sintered friction material", J. Manuf. Sci. Eng., Volume 133, Issue 1, 2011, 47-52.
7. G. Malaguti, L. Denti, E. Bassoli, I. Franchi, S. Bortolini, A. Gatto, "Dimensional tolerances and assembly accuracy of dental implants and machined- versus cast-on abutments.", Clinical Implant Dentistry and Related Research, Vol. 13 Issue 2, 2011, 134-140
8. R. Toni, A. Tampieri, N. Zini, V. Strusi, M. Sandri, D. Dallatana, G. Spaletta, E. Bassoli, A. Gatto, A. Ferrari, I. Martin, 2011. Ex situ bioengineering of bioartificial endocrine glands: A new frontier in regenerative medicine of soft tissue organs. Ann. Anatomy, 2011, Vol. 193, issue 5, pp. 381-394. doi:10.1016/j.aanat.2011.06.004
9. E. Bassoli, A. Gatto, L. Iuliano, "Joining mechanisms and mechanical properties of PA composites obtained by Selective Laser Sintering", Rapid Prototyping J., volume 18, Issue 2 (2012), PP. 100-108. doi 10.1108/13552541211212087
10. A. Gatto, L. Iuliano, F. Calignano, E.Bassoli, "Electro-Discharge Drilling performance on parts produced by DMLS", International Journal of Advanced Manufacturing Technology, volume 58, issues 9-12 (2012), pp. 1003-1018. DOI: 10.1007/s00170-011-3446-8
11. P. Fabbri, E. Bassoli, S. Bittolo Bon, L. Valentini, Preparation and characterization of poly (butylene terephthalate) / graphene composites by in-situ polymerization of cyclic butylene terephthalate, Polymer, volume 53, 2012, pp.897-902 doi: 10.1016/j.polymer.2012.01.015
12. F. Calignano, L. Denti, E. Bassoli, A. Gatto, L. Iuliano, (2013). Studies on electro discharge drilling of an Al2O3 –TiC composite, International Journal of Advanced Manufacturing Technology, Volume 66, Issue 9, pp. 1757-1768 DOI 10.1007/s00170-012-4455-y
13. Gatto, A., Bassoli, E., Denti, L., Iuliano, L. (2013). Bridges of debris in the edd process: going beyond the thermo-electrical model, Journal of Materials Processing Technology, Volume 213, issue 3, pp. 349-360. doi 10.1016/j.jmatprotec.2012.10.020
14. E. Bassoli, N. Sewell, L. Denti, A. Gatto (2013). Investigation into the failure of inconel exhaust collector produced by laser consolidation, Engineering Failure Analysis, Volume 35, pp. 397–404, doi 10.1016/j.engfailanal.2013.03.025.
15. G. Barucca, E. Santecchia, G. Majni, E. Girardin, E. Bassoli, L. Denti, A. Gatto, L. Iuliano, T. Moskalewicz, P. Mengucci (2015). Structural characterization of biomedical Co-Cr-Mo components produced by Direct Metal Laser Sintering, Materials Science & Engineering C, Volume 48, pp. 263-269, doi:10.1016/j.msec.2014.12.009.
16. A. Gatto, M. Sofroniou, G. Spaletta, E. Bassoli (2015). On the chaotic nature of Electro-Discharge Machining, International Journal of Advanced Manufacturing Technology: Volume 79, Issue 5, pp. 985-996, doi: 10.1007/s00170-015-6894-8

17. Minetola, P., Iuliano, L., Bassoli, E., & Gatto, A. (2015). Impact of additive manufacturing on engineering education–evidence from Italy. Rapid Prototyping Journal, 21(5), 535-555. doi: 10.1108/RPJ-09-2014-0123
18. Gatto, A., Bassoli, E., Denti, L., Iuliano, L., & Minetola, P. (2015). Multi-disciplinary approach in engineering education: learning with additive manufacturing and reverse engineering. Rapid Prototyping Journal, 21(5), 598-603. doi: 10.1108/RPJ-09-2014-0134
19. E. Bassoli, L. Denti, A. Gatto, L. Iuliano (2016) "Influence of electrode size and geometry in edd of inconel 718 ", International Journal of Advanced Manufacturing Technology, Volume 86, Issue 5, pp 2329–2337 doi:10.1007/s00170-016-8339-4
20. P. Mengucci, G. Barucca, A. Gatto, E. Bassoli, L. Denti, E. Girardin, P. Bastianoni, B. Rutkowski, A. Czyrska-Filemonowicz (2016) "Effects of thermal treatments on microstructure and mechanical properties of a Co-Cr-Mo-W biomedical alloy produced by laser sintering" J. of the Mechanical Behaviour of Biomedical Materials, doi: 10.1016/j.jmbbm.2015.12.045
21. P. Mengucci, A. Gatto, E. Bassoli, L. Denti, F. Fiori, E. Girardin, P. Bastianoni, B. Rutkowski, A, Czyrska-Filemonowicz, G. Barucca (2017) Effects of build orientation and element partitioning on microstructure and mechanical properties of biomedical Ti-6Al-4V alloy produced by laser sintering, Journal of the Mechanical Behavior of Biomedical Materials 71:1-9 doi 10.1016/j.jmbbm.2017.02.025
22. E. Bassoli, L. Denti, A. Comin, A. Sola, E. Tognoli (2018) Fatigue Behavior of As-Built L-PBF A357.0 Parts, Metals 8, 634; doi:10.3390/met8080634.
23. Leone, C., Bassoli, E., Genna, S., & Gatto, A. (2018). Experimental investigation and optimisation of laser direct part marking of Inconel 718. Optics and Lasers in Engineering, 111, 154-166. doi:10.1016/j.optlaseng.2018.08.004
24. Bassoli, E., & Denti, L. (2018). Assay of secondary anisotropy in additively manufactured alloys for dental applications. Materials, 11(10), 1831. doi: 10.3390/ma11101831
25. Bassoli, E., Sola, A., Celesti, M., Calcagnile, S., & Cavallini, C. (2018). Development of Laser-Based Powder Bed Fusion Process Parameters and Scanning Strategy for New Metal Alloy Grades: A Holistic Method Formulation. Materials, 11(12), 2356. doi: 10.3390/ma11122356
26. Esposito, F., Gatto, A., Bassoli, E., & Denti, L. (2018). A Study on the Use of XCT and FEA to Predict the Elastic Behavior of Additively Manufactured Parts of Cylindrical Geometry. Journal of Nondestructive Evaluation, 37(4), 72. doi: 10.1007/s10921-018-0525-x
27. Gatto, A., Bassoli, E., & Denti, L. (2018). Repercussions of powder contamination on the fatigue life of additive manufactured maraging steel. Additive Manufacturing, 24, 13-19. doi: 10.1016/j.addma.2018.09.004
28. Denti, L., Bassoli, E., Gatto, A., Santecchia, E., & Mengucci, P. (2019). Fatigue life and microstructure of additive manufactured Ti6Al4V after different finishing processes. Materials Science and Engineering: A. doi: 10.1016/j.msea.2019.03.119.
29. Gatto, A., Bassoli, E., Denti, L., Sola, A., Tognoli, E., Comin, A., ... & Ocaña, J. L. (2019). Effect of Three Different Finishing Processes on the Surface Morphology and Fatigue Life of A357.0 Parts Produced by Laser-Based Powder Bed Fusion. Advanced Engineering Materials, 1801357. DOI: 10.1002/adem.201801357
30. Santecchia, E., Gatto, A., Bassoli, E., Denti, L., Rutkowski, B., Mengucci, P., & Barucca, G. (2019). Precipitates formation and evolution in a Co-based alloy produced by powder bed fusion. Journal of Alloys and Compounds, 797, 652-658. doi.org/10.1016/j.jallcom.2019.05.169
31. Bedo, T., Varga, B., Cristea, D., Nitoi, A., Gatto, A., Bassoli, E., ... & Pop, M. A. (2019). Metastable Al–Si–Ni Alloys for Additive Manufacturing: Structural Stability and Energy Release during Heating. Metals, 9(5), 483.
32. Santecchia, E., Mengucci, P., Gatto, A., Bassoli, E., Defanti, S., & Barucca, G. (2019). Cross-Contamination Quantification in Powders for Additive

Manufacturing: A Study on Ti-6Al-4V and Maraging Steel. Materials, 12(15), 2342.
33. Bassoli, E., Sola, A., Denti, L., & Gatto, A. (2019). Experimental approach to measure the restraining force in deep drawing by means of a versatile draw bead simulator. Materials and Manufacturing Processes, 1-10.
34. Gabor, C., Cristea, D., Velicu, I. L., Bedo, T., Gatto, A., Bassoli, E., ... & Codescu, M. M. (2019). Ti–Zr–Si–Nb Nanocrystalline Alloys and Metallic Glasses: Assessment on the Structure, Thermal Stability, Corrosion and Mechanical Properties. Materials, 12(9).

Personal data, I hereby authorize the use of my personal data in accordance to the GDPR 679/16 - "European regulation on the protection of personal data".

Date: 19/11/2021