

CURRICULUM VITAE

EUROPEAN FORMAT

PERSONAL INFORMATION

Name, Surname Lucia Denti

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Nationality Italian

Place and Date of birth Carpi (MO) February 7th 1981

WORK EXPERIENCE

November 7th 2019 –at present Associate professor of Technology and Manufacturing Systems (SSD ING-IND/16, University of Modena and Reggio Emilia). In charge of the following courses: Manufacturing Technology (Degree in Mechanical Engineering) and Vehicle Technology (Degree in Vehicle Engineering)

2016-2019 Researcher of Technology and Manufacturing Systems (SSD ING-IND/16, University of Modena and Reggio Emilia)

2009-2016 Research grant on projects regarding "non-conventional machining of high-performance material" and "Innovative manufacturing technologies and impact on the didactic laboratory approach" Department of Engineering "Enzo Ferrari" for high-tech network of Emilia Romagna "Intermech"

EDUCATION AND TRAINING

02/03/2009 Ph.D. in Multiscale Modelling, Computational Simulations and Characterization in Material and Life Sciences at the University of Modena and Reggio Emilia. Thesis title: "Study of innovative materials and processes in the dental prosthetic production".

15/12/2005 Degree in Mechanical Engineering achieved at the University of Modena and Reggio Emilia with full marks.

RESEARCH ACTIVITIES

Research sectors
Recent Scientific Activities.

Advanced technologies and materials

The research activity has been focused on these topics:

- Time Compression techniques for the rapid construction of prototypes or tools, the innovations in materials and processes and the integration of these techniques within the cycle product-production system-process.
- Non-conventional materials and processes.
- Additive Manufacturing

Another important line of research from the point of view of scientific results was that dedicated to the study of sintering through microwaves combined with mechanical compaction of nanostructured powders and hollow ceramic particles. Starting from interesting preliminary results achieved in the field of microwave sintering, an equipment was designed and built that allows to combine the electromagnetic field with mechanical compaction, in order to minimize the residual porosity in a short enough time to avoid the growth of the wheat. The paper "Microwave assisted sintering of green metal parts", authored by C. Leonelli, P. Veronesi, L. Denti, A. Gatto, L. Iuliano, (2008)." Journal of Materials Processing Tech., 2008, Vol 205/1-3 pp 489-496 has 131 citations on Scopus. Since October 2016, the undersigned has taken part in a European project H2020 - FOF13-2016 (Photonics and laser-based production) entitled "Driving up Reliability and Efficiency of Additive Manufacturing (DREAM)", with an amount of € 3.3 million, whose coordinator is Prof Bassoli from the "Enzo Ferrari" Department of Engineering. The project involves major partners at European level, including: the German additive manufacturing machine company EOS, the French service company Poly-shape, the Romanian University of Brasov, and the well-known automobile company Ferrari of Maranello. Overall, a deep experience has been developed in the correlation of macroscopic performance with the microstructure and micromechanisms involved in the manufacturing processes. The skills acquired include a vast competence in technological tests, the use of a wide range of laboratory instruments and SEM and ESEM observation, integrated with X-ray microanalysis. Specialized expertise has been developed in the use of the microscope confocal for the study of surface morphology, for various fields of scientific and industrial research, ranging from the finishing of components produced for additive manufacturing to the mechanical processing of dies by extrusion.

Over the years he has participated in numerous research projects with local companies in the sectors of innovative materials, innovative technologies including industrial tomography and additive construction, building a solid experience in this regard, both in the role of research performer and in more organizational roles of project or contract management.

PERSONAL SKILLS

Mother Tongue Italian

Other languages English

- Reading skill good
- Writing skill good
- Language skill Good

Soft skill Excellent capability of organization e coordination of research activities, didactic activities and organization/planning activities.
Strong problem solving attitude and excellent ability to work in team, or in a network team

SELECTED RESEARCH PROJECTS PARTICIPATION

1) H2020 – FOF13-2016 Photonics and lased-based production. Year of funding: 2016. Project: “Driving up Reliability and Efficiency of Additive Manufacturing (DREAM)”. Role: researcher. Amount: 3,3 M€. <https://www.dream-euproject.eu/>

2) H2020 - FORTISSIMO2-2016 Project: “Additive Manufacturing Process Simulation for metal components”. Role: Researcher. Importo: 43.813 €. <https://www.fortissimo-project.eu/en/success-stories/804/simulation-of-additive-manufacturing-processes-for-the-production-of-metal-components>

3) ESA Contract No. 4000133458/20/NL/KML/rk Microwave Heating of ISRU Feedstock (MICROLITH) Year of funding: 2020. Amount: 250.000€. Role: researcher <https://www.rina.org/en/media/CaseStudies/microlith>

4) PRIN -Innovative additively manufactured parts INspection via non-destructive methods based on ThermogrAphy and Computed Tomography (INTACT), (2023-2025) Amount: 197.464 € – Role: head of a research unit

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Scopus H Index 18

Scopus Total Citations 973

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