

## CURRICULUM VITAE

### EUROPEAN FORMAT



#### PERSONAL INFORMATION

Name, Surname	<b>Andrea Gatto</b>
Address	
House number, street name, postcode, city, country	<b>n 25, Via Sacramento, 60027, Osimo (AN), Italy</b>
Work Address	
House number, street name, postcode, city, country	<b>Dept. of Eng. "Enzo Ferrari", University of Modena and Reggio Emilia n.10, Via Vivarelli 41125 Modena (MO), Italy</b>
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Website	<b><a href="http://www.unimore.it">http://www.unimore.it</a></b>
Nationality	<b>Italian</b>
Place and Date of birth	<b>Osimo (AN) July 29<sup>th</sup> 1962</b>
Fiscal code	<b>GTTNDR62L29G157B</b>

#### WORK EXPERIENCE

April 20 <sup>th</sup> 2005 –at present	<b>Full professor of Technology and Manufacturing Systems (SSD ING-IND/16, University of Modena and Reggio Emilia)</b>
2001–2009	<b>Chairman of the Regional Examination Board for the Technological Curriculum within SSIS (Specialization School for Secondary Teaching) Emilia Romagna</b>
2001–2008	<b>Coordinator of the Technological Curriculum within SSIS (Specialization School for Secondary Teaching) Emilia Romagna</b>
September, 1 <sup>st</sup> , 2000- April 20 <sup>th</sup> 2005	<b>Associated professor of Technology and Manufacturing Systems (SSD ING-IND/16, University of Modena and Reggio Emilia)</b>
1992 -September 1 <sup>st</sup> , 2000	<b>Researcher of Technology and Manufacturing Systems University of Ancona</b>

March, 29<sup>th</sup>, 1991-June,  
29<sup>th</sup>, 1991

**Contract as expert of special devices, Dept. Of Material and Earth Science  
University of Ancona**

1988-1991

**Teacher of Physics in secondary schools**

#### **EDUCATION AND TRAINING**

December, 1<sup>st</sup>, 1988-  
December, 1<sup>st</sup>, 1989

**Scholarship from ENI, graduate course of "off-shore engineering",  
University of Ancona**

April 14<sup>th</sup> 1988

Name and type of organisation  
providing education and  
training

**University of Ancona, Engineering Faculty**

Title of qualification awarded  
Principal subjects  
occupational skills covered

**Master of Science Degree in Mechanical Engineering, with honors  
Experimental thesis "Trattamento dei reflui ittici: realizzazione di un  
impianto pilota a percolazione e prima sperimentazione".**

1982

Name and type of organisation  
providing education and  
training

**Scientific Lyceum of Osimo (AN)**

Title of qualification awarded

**Scientific Lyceum licence, 60/60**

#### **AWARD**

1989

Name and type of organisation  
Title of award

**University of Ancona  
Best engineering researcher of the year.**

## RESEARCH ACTIVITIES

Research sectors  
Recent Scientific Activities

### Advanced technologies and materials

The research activity is focused on two main topics:

- Additive manufacturing
- Non-conventional materials and processes.

Within both fields, a great experience has been made on the correlation between the macroscopic performances, the microstructure and the micromechanisms due to the materials' processing. The developed skills include a wide experience on technologic tests using a variety of laboratory devices, as well as SEM and ESEM observations, with the aid of X-ray microanalysis, mechanical test machines, and also electrochemical pilot plants manufacturing

Among the first to study additive manufacturing in Italy in the early 1990s [Ippolito, R., Iuliano, L., Gatto, A. Benchmarking of Rapid Prototyping Techniques in Terms of Dimensional Accuracy and Surface Finish (1995) CIRP Annals - Manufacturing Technology, 44 (1), pp. 157-160], he continues the research in this field, expanding the study to different technologies and materials.

He shows a strong propensity for research collaborations, both at the national and the international level, and an excellent versatility of topics and skills.

At the national level, he runs numerous collaborations with groups of other universities working in the same field, involved in the CIRTIBS (Interuniversity Research Center for Innovative Technologies for Instrumental Goods). He also boasts collaborations in multidisciplinary studies with groups of different cultural backgrounds, such as the medical and mathematical area.

In fact, he was scientific responsible for the Modena unit of the PRIN 2008 project "Ex situ regenerative biology of organs with glandular / parenchymal structure: the model of the organomorphous skeleton", a study in collaboration with Prof. Roberto Toni of Parma Department of Anatomy and with Prof. Giulia Spaletta of the Department of Mathematics of Bologna. The study involved the production by additive manufacturing of a bioabsorbable scaffolds that reproduced the stromal / vascular structure of the thyroid, in order to exploit the ability of stem cells to differentiate themselves according to the three-dimensional geometry of the support. Examples of international collaborations are: the University of Exeter (UK), the University of Loughborough (UK), Transilvania University of Brasov (Romania), and the Federal University of Technology – Paraná (Brazil).

The experience in the field of metal additive manufacturing has been specified on the aspects of fatigue life, in collaboration with leading players in the sector such as EOS GmbH, Poly-shape, Maserati and Ferrari.

He leads a specific research group, RAM (Research group on Additive Manufacturing), which involves the two head offices of the University of Modena and Reggio Emilia, the University of Parma and the Polytechnic University of Marche.

As a member of the INSTM consortium that coordinates the entire project, he is involved in the European project H2020 - FOF13-2016 (Photonics and laser-based production) entitled "Driving up Reliability and Efficiency of

**Additive Manufacturing (DREAM)", with a funding of 3.3 M €. Prof Gatto is the Project Risk Manager. The project aims to implement additive manufacturing technology through three actions: study of the raw material, study of process parameters and study of the design of the parts to be produced. The project involves very important partners in Europe, such as: the German manufacturer of additive manufacturing machines EOS, the French service company Poly-shape, Transilvania University of Brasov, and the well-known automotive company Ferrari of Maranello.**

**Over the years, he has been responsible for numerous research projects with local companies regarding innovative materials, innovative technologies such as industrial tomography and additive manufacturing, building an unexceptionable experience in this field.**

**He collaborates with a company (3D4MEC, Sasso Marconi (BO)) for the development of a new metal additive manufacturing machine made in Italy.**

## PERSONAL SKILLS

Mother Tongue	<b>Italian</b>
Other languages	<b>English</b>
• Reading skill	<b>good</b>
• Writing skill	<b>good</b>
• Language skill	<b>Good</b>
Organisational skill	<b>Excellent capability of organization, coordination, management and running of human resources toward research objectives, didactic activities and organization/planning activities.</b> <b>Since 2000, as head of the Technology and Manufacturing Systems research group in Modena, he tutored several PhD students creating a solid group now consisting (in addition to himself) of an associated professor and two assistant professors.</b> <b>He manages the Technology and Manufacturing Systems laboratory, where research and technological transfer activities are carried out, always with an interest in acquiring innovative technologies, such as a recent electrochemical finishing machine.</b>

## 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: Risk Manager. Amount: 3,3 M€. <https://www.dream-euproject.eu/>

2) H2020 - FORTISSIMO2-2016 Project: “Additive Manufacturing Process Simulation for metal components”. Amount: 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: Head of the research unit  
<https://www.rina.org/en/media/CaseStudies/microlith>

## PATENT

dates	13/03/2017
author	A.Gatto, F. Gatto, E. Bassoli, L.Denti
Patent number	202017000027243 (patent pending)
subject	Molla elicoidale conica perfezionata
dates	31/07/2013
author	A.Gatto, E.Frontoni
Patent number	AN2013A000141, concessione n° IT 1418987
subject	Sistema Per La Raccolta Di Energia
dates	14 January 1997
author	A Gatto, L. Iuliano:
Patent number	N° 012266372, issued by the Ministry of Industry, Trade and Crafts D.G.P.I., Patent and Trademark Office
subject	Procedure to improve the wear resistance of Composite Ceramic Tool and High wear resistance Tool obtained

## ADDITIONAL INFORMATION

ORCID ID	0000-0001-5547-624X
SCOPUS H INDEX	24
SCOPUS TOTAL CITATIONS	1994
SCOPUS AUTHOR ID	7006875870
THOMSON REUTERS RESEARCHER ID	A-6297-2012

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Date: 15/05/2024

