



WORK EXPERIENCE Research

July 2017-present Niccolò Cusano University Rome, Italy

Assistant Professor for the bachelor degree in Industrial Engineering - Agricultural Science; **Teaching: Manufacturing materials and technologies** . **Researcher** in the field of **Manufacturing Technologies**.

June 2017-present Technische Universität Chemnitz Chemnitz, Germany

Research Associate at Institute for Machine Tools and Production Processes (IWP). Special focus on planning and management of research activities on **innovative production processes** and **international research projects**.

Oct. 2012-Juni 2017 DII - Department of Industrial Engineering University of Naples, Federico II Naples, Italy

Research fellow at Department of Industrial Engineering - University of Naples "Federico II" as **winner** of a **public competition**. Research topic: *Competitive improvement of manufacturing processes for aerospace industry*.

Oct. 2012-Feb. 2016 Technische Universität Chemnitz Chemnitz, Germany

Research Associate at Institute for Machine Tools and Production Processes (IWP). Special focus on planning and management of research activities on **innovative cutting technology**.

Mar.-Sep. 2012 Technische Universität Chemnitz Chemnitz, Germany

Post-Doc; (Grant **funded from DAAD** - Deutscher Akademischer Austauschdienst) research activity carried out in cooperation with the Department of Aerospace Engineering - University of Naples "Federico II", at Chemnitz University of Technology.

Feb. 2009-Gen. 2012 DIAS - Department of Aerospace Engineering University of Naples, Federico II Naples, Italy

Research Doctorate in "Aerospace, Naval and Quality Engineering – TQM".

Topic: characterization and optimization of technological production processes, in the aerospace industry, by statistical methods. **Objective:** to play a role of integration between statistical skills and technological expertise to achieve innovation; development and innovation management.

Main activities:

- Member of a research team that, for years, has been operating at **AvioAero - GE Aviation business** (in Pomigliano d'Arco, centre of Excellence for combustors, reheats and combustion systems production). Main topics: optimization of **laser micro-drilling** on **nickel-based superalloy** components; **tool wear** in turning.
- Carrying out research activities in collaboration with the CIRTIBS (Interuniversity Research Centre on Innovative Technologies for Capital Goods). Main topics: characterization and optimization of **laser-engraving processes** on aeronautical materials such as titanium alloy and CFRC (Carbon Fibre Reinforced Polymer).

Teaching*Academic Year**2016-2017*

Niccolò Cusano University

Rome, Italy

Lecturer for the bachelor degree in Industrial Engineering - Agricultural Science; **Teaching: Manufacturing materials and technologies.**

2008-2017

University of Naples, Federico II

Naples, Italy

Tutoring of more than 30 students, **in person or by web**, to assist them in thesis development.

Feb. 2013

Technische Universität Chemnitz

Chemnitz, Germany

Lecture for the researchers of Institute for Machine Tools and Production Processes (IWU) about the pre-design (pre-experimental planning phase) of experimental activities based on statistical approach.

Dec 2011

University of Naples, Federico II

Naples, Italy

Lecture for the European School on Robust Design Methodology, *Practical approach to Robust Design and its engineering applications, Naples, 5-7 December 2011.*

*Academic Years**2008-2011*

University of Naples, Federico II

Naples, Italy

Appointed to carry out classroom exercises for the **"Statistical Quality Control"** course of Engineering Faculty, for students of Engineering Management Master Degree Course.

Assistance and management of examinations of Statistics Group (Statistical Quality Control, Statistics, Statistics and Probability, Probability, Reliability and maintenance).

Industry*Dec. 2007-Feb. 2009*IACOBUCCI HF Electronics S.p.A.
(aeronautics industry)Loc. Colle Baiocco
Ferentino (Fr), Italy

Employed under a **permanent contract**, as a mechanical engineer, at the **Technical Department**, having responsibility for Technical Publications, such as airworthiness conformity certificates. Throughout this period is **designing and realizing a database** for the management of the company technical documentation, developed with Microsoft Access sw; playing a connection role between the engineers in charge of production departments for the improvement of the products. **Technical support to Customer Service** for the evaluation of technical documents and drawings to provide to the customers. **Boeing company Focal Point** on behalf of IACOBUCCI HF Electronics S.p.A. regarding to the technical publications.

*May-Dec. 2007*IACOBUCCI HF Electronics S.p.A.
(aeronautics industry)Loc. Colle Baiocco
Ferentino (Fr), Italy

Employee under **annual term contract** as a mechanical engineer, at the **Technical Department** having responsibility for Technical Publications.

*Dec. 2006-May 2007*IACOBUCCI HF Electronics S.p.A.
(aeronautics industry)Loc. Colle Baiocco
Ferentino (Fr), Italy

On the staff of the Technical Department as trainee.

Projects management (EU and National projects)

Horizon 2020 call:

Feb. 2015

Factories of the Future (H2020-FoF-2015)

Managing of project proposal, coordination of European partners for Technische Universität Chemnitz. Topic: Manufacturing of custom made parts for personalised products (FoF-10-2015). Title of Project: FleXeram: Flexible and Customised Production of Technical Ceramics Components.

Horizon 2020 call:

Aug. 2014

Mobility for Growth 2014-2015
(H2020-MG-2014_TwoStages)

Managing of project proposal, focal point for Technische Universität Chemnitz in the project. Topic: Competitiveness of European Aviation through cost efficiency and innovation (H2020-MG-1.1-2014). Title of Project: WISER - Welding InnovationS for aERo engines (Laser Welding). Proposal ID SEP-210151726.

PON (National Operating Programme)

June 2010-May 2015

FIT (Fund for Technological Innovation)

Coordination of partners (GE AvioAero; Department of Aerospace Engineering-University of Naples "Federico II"; CIRTIBS Research Centre) and participation in working group. Project title: Study and implementation of high brilliance and energy saving laser source for aerospace component micro-drilling machining. Funded from **Italian Ministry for Economic Development** (~1'800'000 €).

PRIN (Research programs of significant national
interest)

2008

DIAS **staff** – Department of Aerospace Engineering - University of Naples "Federico II". Project title: Innovation in service quality management: statistical approach and application in some fields of national interest. Funding from **Italian Ministry of Education, University and Research**.

EDUCATIONDIAS - Department of Aerospace Engineering University
of Naples, Federico II

Jan. 2012

Naples, Italy

Doctor of Philosophy (PhD), in "**Aerospace, Naval and Quality Engineering – TQM**"

Thesis title: *Statistics for competitive advantage and technological innovation: applicative scenarios in manufacturing industry and research centres.* **Main fields of study:** Statistics, Processing Technologies (in particular: laser machining, turning, milling). **Winner** of a public **competitive examination** for the admission to the Research Doctorate with **student grant** funded from **MIUR** (Italian Ministry of University and Research).

Feb. 2008

University of Rome, Tor Vergata

Rome, Italy

Graduated in **Mechanical Engineering** with **Honours** (score: **110/110, Master Degree**)

Thesis title: "Sintering of nanostructured powders by Spark Plasma Sintering". Main subjects of study: Mechanical Technology, Metallurgy, Mechanics, Thermodynamics, Technical Physics, Industrial Plants.

Oct. 2004

University of Rome, Tor Vergata

Rome, Italy

Graduated in **Mechanical Engineering** (score: **108/110, Bachelor Degree**)

Thesis title: "Production of medals and collectible coins by Powder Metallurgy" Principal subjects of study: Mechanical, Physics, Structural Engineering, Machine Constructions, Industrial Machines, Technology Laboratory.

1995

National Classic Lyceum Jacopo Sannazaro

Naples, Italy

Classic diploma.

TRAINING COURSES AND LICENSES	Dec. 2011	University of Naples, Federico II	Naples, Italy
	European School on Robust Design Methodology: "A practical approach to Robust Design and its engineering applications" .		
	Jan. 2011	Italian Resuscitation Council	Brindisi, Italy
	IRC-BLS License (Italian Resuscitation Council - Basic Life Support Defibrillation) – First Aid – Basic Cardiopulmonary Resuscitation with use of an Automated External Defibrillator (AED). N. 346014.		
	Nov. 2010	IMM - Institute for Microelectronics and Microsystems, Unit of Naples, CNR (National Research Council)	Naples, Italy
	- Integrated Optics: structures, technologies and characterization – G. Coppola, M. Iodice - CNR-IMM (Naples). Course time: 20 hours.		
	Mar. 2010-July 2011	University of Naples, Federico II	Naples, Italy
	- Management of Emerging Technology – Prof. Venky Venkatachalam – University of New Hampshire (USA) . Course time: 20 hours.		
	- Game Theory and analysis of competitive dynamics for industrial systems – Prof. Lina Mallozzi – University of Naples, Federico II. Course time: 20 hours		
	- Innovation Management – Prof. Luca Iandoli – University of Naples, Federico II. Course time: 20 hours.		
- Top-Down design – Prof. D. E. Whitney – MIT Massachusetts Institute of Technology (USA) . Course time: 20 hours.			
Mar. 2008	Confindustria Frosinone, Fondimpresa, ATI Cicerone, IN.SI. S.p.A. (Consulman) on behalf of IACOBUCCI HF Electronics S.p.A.	Loc. Colle Baiocco Ferentino (Fr), Italy	
"F.M.E.A. (Failure Mode Effect Analysis) for product" course, ID 5586. Course time: 40 hours. Certificate: successfully attended.			
Mar. 2008	IN.SI. S.p.A. (Consulman) on behalf of IACOBUCCI HF Electronics S.p.A.	Loc. Colle Baiocco Ferentino (Fr), Italy	
Basic firefighting course for industrial work environments. Course time: 8 hours Result: able and included into the Emergency Team of the company program.			
July 2007	BOEING Company	Seattle, USA	
"Boeing Supplier Data Training" course for technical use of the SEDS (Supplier Electronic Data System) online on the Boeing portal for the Boeing 787 programme . Course time: 20 hours. Authorized with the release of personal password in order to have access to the portal and to the SEDS.			
PUBLICATIONS	F. Impero, M. Dix, A. Squillace, U. Prisco, B. Palumbo, F. Tagliaferri, <i>A comparison between wet and cryogenic drilling of CFRP/Ti stacks</i> , Materials and Manufacturing Processes, 33:12, 1354-1360, 2018, DOI: 10.1080/10426914.2018.1453162 .		
F. Tagliaferri, S. Genna, C. Leone, B. Palumbo, G. De Chiara, <i>Experimental study of fiber laser microdrilling of aerospace superalloy by trepanning technique</i> , Int. J. Adv. Manuf. Technol., pp. 3203-3210, Vol. 93, 2017, DOI: 10.1007/s00170-017-0773-4 .			
S. Genna, F. Tagliaferri, I. Papa C. Leone, B. Palumbo, <i>Multi-Response Optimization of CFRP laser milling process based on response surface methodology</i> , Polymer Engineering & Science, pp. 595-605, Vol. 57, 2017, DOI:10.1002/pen.24560 .			

S. Genna, F. Tagliaferri, C. Leone, B. Palumbo, G. De Chiara, *Experimental study on fiber laser microcutting of Nimonic 263 superalloy*, Procedia CIRP, 10th CIRP Conference on Intelligent Computation in Manufacturing Engineering, (CIRP ICME2016), pp. 281-286, vol. 62, 2017, DOI: 10.1016/j.procir.2016.06.109.

C. Leone, S. Genna, F. Tagliaferri, B. Palumbo, M. Dix, *Experimental investigation on laser milling of aluminium oxide using a 30W Q-Switched Yb:YAG fiber laser*, Optics & Laser Technology, pp. 127-137, Vol. 76, 2016, Elsevier. DOI: 10.1016/j.optlastec.2015.08.005.

S. Genna, F. Tagliaferri, I. Papa C. Leone, B. Palumbo, *Experimental investigation on CFRP milling by low power Q-switched Yb:YAG laser source*, AIP Conference Proceedings, 1736, 020159, 2016. DOI: 10.1063/1.4949734.

F. Tagliaferri, M. Dittrich, B. Palumbo, *A systematic approach to Design of Experiments in Waterjet Machining of High Performance Ceramics*, as **chapter of book**: Management and Industrial Engineering, Davim: Design of Experiments in Production Engineering, pp. 109-133, 2016, Springer. DOI: 10.1007/978-3-319-23838-8_4.

M. Putz, F. Tagliaferri, M. Dix, R. Wertheim, *Methodology for Analysing Hybrid Cutting Processes with Thermal Assistance*, Production Engineering, pp. 537-549, Vol. 9 2015:624, Springer. DOI: 10.1007/s11740-015-0624-9.

G. Leopardi, F. Tagliaferri, C. Rüger, M. Dix, *Analysis of Laser assisted milling (LAM) of Inconel 718 with ceramic tools*, Procedia CIRP, 9th CIRP Conference on Intelligent Computation in Manufacturing Engineering (CIRP ICME2014) pp. 514-519, Vol. 33, 2015, ISSN: 2212-8271, DOI: 10.1016/j.procir.2015.06.066.

S. Genna, C. Leone, B. Palumbo, F. Tagliaferri, *Statistical approach to fiber laser microcutting of nimonic C263 superalloy sheet used in effusion cooling system of aero engines*, Procedia CIRP, 9th CIRP Conference on Intelligent Computation in Manufacturing Engineering (CIRP ICME2014) pp. 520-525, Vol. 33, 2015, ISSN: 2212-8271, DOI: 10.1016/j.procir.2015.06.067.

M. Dittrich, M. Dix, M. Kuhl, B. Palumbo, F. Tagliaferri, *Process Analysis of Water Abrasive Fine Jet Structuring of Ceramic Surfaces via Design of Experiment*, Procedia CIRP, 6th CIRP International Conference on High Performance Cutting (CIRP HPC2014) pp. 442-447, Vol. 14, 2014, ISSN: 2212-8271, DOI: 10.1016/j.procir.2014.03.030.

C. Leone, I. Papa, F. Tagliaferri, V. Lopresto, *Investigation of CFRP laser milling using a 30 W Q-switched Yb:YAG fiber laser: Effect of process parameters on removal mechanisms and HAZ formation*, Composites Part A: Applied Science and Manufacturing, pp. 129-142, Vol. 55, 2013, ISSN 1359-835X, DOI: 10.1016/j.compositesa.2013.08.004.

F. Tagliaferri, G. Leopardi, U. Semmler, M. Kuhl, B. Palumbo, *Study of the Influences of Laser Parameters on Laser Assisted Machining Processes*, Procedia CIRP, 14th CIRP Conference on Modeling of Machining Operations (CIRP CMMO2013) pp. 170-175, Vol. 8, 2013, ISSN: 2212-8271, DOI: 10.1016/j.procir.2013.06.084.

F. Tagliaferri, N. Pagano, C. Leone, B. Palumbo, *Statistical analysis of fiber laser machining of titanium alloy*, In: D.T. Pham, E.E. Eldukhri, A.J. Soroka, Innovative Production Machines And Systems, Cardiff University, p.112-117, Vol. 1, 2012, ISBN: 978-1471050268.

G. De Chiara, R. Marrone, B. Palumbo, F. Tagliaferri, "Sperimentazione industriale per l'incremento di produttività di un processo di micro-foratura laser DOF: studio statistico ed interpretazione tecnologica". Applicazioni Laser, vol. 39, pp. 48-53, 2012, ISSN 1973-7238.

Co-relation of many thesis, for the **aerospace and industrial engineering master degree** courses of the University of Naples - Federico II, always developed at a **company**, a **research centre** or a **foreign university**.

International Conferences

F. Tagliaferri, B. Palumbo, M. Putz, M. Dittrich, M. Dix. *Statistical approach for knowledge improvement in Waterjet Machining of High Performance Ceramics*. Proceedings of the 16th Annual Meeting of the European Network for Business and Industrial Statistics; University of

Sheffield, Sheffield, United Kingdom, 11th-15th September 2016 (ENBIS16). ISBN: 9789612403072.

F. Tagliaferri, B. Palumbo, M. Dix, M. Kuhl, *Process improvement via Design of Experiment: applicative examples in technological field*, 14th Annual Conference of European Network for Business and Industrial Statistics, Johannes Kepler Universität, Linz (Austria), September 21st-25th, 2014 (ENBIS14).

M. Kuhl, M. Dix, G. Leopardi, F. Tagliaferri, C. Rüger, *Laser assisted milling of a nickel based alloy using different insert geometries*, In: Proceedings of the International Conference on Advanced Manufacturing Engineering and Technologies NEWTECH 2013, Stockholm, Sweden 27th-30th October 2013, KTH Royal Institute of Technology, Sweden, pp. 347-356, Vol. 2, 2013, ISBN 978-9175018935.

G. De Chiara, R. Marrone, B. Palumbo, F. Tagliaferri, *A systematic approach to process improvement via Design of Experiments: a case study in tack-welding process*. In Proceedings of 10th A.I.Te.M. Conference "Enhancing the science of manufacturing", Naples, 12th-14th September 2011 pp. 12, ISBN 978-8890606106.

R. Marrone, M. Cardinali, F. Tagliaferri, *Statistical knowledge for industrial competitive advantage in laser drilling process*, 45th Scientific Meeting Italian Statistical Society (SIS) - Padua, 15th June 2010.

OTHER **Coordination of international students** at Institute for Machine Tools and Production Processes (IWP) of Technische Universität Chemnitz.

LANGUAGES **ITALIAN:** Mother tongue.
ENGLISH: Fluent.
GERMAN: Pre-intermediate.

DRIVE LICENCE *from Jan. 1996* Drive Licence B

June 04, 2018

Flaviana Tagliaferri