EUROPEAN CURRICULUM VITAE FORMAT

PERSONAL INFORMATION

Name	FALCETELLI, Francesco
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Nationality	Italian
Date of birth	02/12/1991

WORK EXPERIENCE

• Dates (from – to)	November 2023 – Present
• Employer name and location	University of Bologna, Department of Industrial Engineering, Bologna, Italy
• Position held	Research fellow
• Research Project	Development of shape sensing algorithms for measuring cables containing multiple optical fibres and optimization of a test bench for hydrogen storage using metal hydrides within the NoMaH (Novel Materials for Hydrogen storage) project.

• Dates (from – to)	November 2022 – November 2023
• Employer name and location	University of Bologna, Department of Industrial Engineering
• Position held	Research fellow
• Research Project	Development of shape sensing algorithms and measurements on fibre optic cables and sensor systems within the European project Horizon 2020 SLAM-DAST.

• Dates (from – to)	April 2021 – September 2021
• Employer name and location	Delft University of Technology, Department of Aerospace Structures and Materials, Delft, The Netherlands
• Position held	Visiting Ph.D. student
• Research Project	Qualification of optical fibre sensors for structural health monitoring of aerospace structures using probability of detection curves.

• Dates (from – to)	July 2020 – September 2020
• Employer name and location	Topomatika d.o.o., Zagreb, Croatia
• Position held	Visiting Ph.D. student
• Research Project	The research activity was carried out under the European project A-MADAM," Advanced Design Rules for OptimMAl Dynamic Properties of Additive Manufacturing Products". The effect of aging in the mechanical behaviour of additive manufactured structures was investigated. Then, it was explored the possibility to embed optical fibre sensors in 3D printed structures to obtain a smart structure providing structural health monitoring data.

• Dates (from – to)	January 2019 – October 2019
• Employer name and location	University of Bologna, Department of Industrial Engineering, Bologna, Italy
• Position held	Research fellow

• Research Project	Development of distributed optical fibre sensors for structural monitoring applications. The research activity was carried out under the project “Pervasive Ubiquitous Lightwave Sensors" PULSe (funded by European Union through Horizon 2020).
• Dates (from – to)	December 2017 – June 2018
• Employer name and location	Clarkson University, Department of Mechanical and Aeronautical Engineering, Potsdam, NY, USA
• Position held	Visiting graduate student
• Research Project	Numerical modelling of Lamb waves propagation in aerospace structures and experimental investigation about acoustic emissions localization algorithms for structural health monitoring systems.

EDUCATION

• Dates (from – to)	November 2019 – March 2023
• Name and type of organization	Alma Mater Studiorum – University of Bologna, Department of Industrial Engineering, Forlì, Italy
• Thesis title	Qualification of optical fibre sensors for the structural health monitoring of aerospace structures
• Title of qualification awarded	Ph.D. in Mechanics and Advanced Engineering Sciences (XXXV cycle)
• Dates (from – to)	2015 – 2018
• Name and type of organization	Alma Mater Studiorum – University of Bologna, Department of Industrial Engineering, Forlì, Italy
• Thesis title	Modelling of pencil-lead break acoustic emission sources using the time reversal technique
• Title of qualification awarded	Master of Science in Aerospace Engineering (Grade: 109/110)
• Dates (from – to)	2010 – 2015
• Name and type of organization	Marche Polytechnic University, Ancona, Italy
• Thesis title	Verification of RANS model behaviour for the simulation of a laminar separation bubble
• Title of qualification awarded	Bachelor’s Degree in Mechanical Engineering (Grade: 99/110)
• Dates (from – to)	2005 – 2010
• Name and type of organization	Galileo Galilei Scientific High School, Ancona, Italy
• Title of qualification awarded	Scientific High School Diploma (Grade: 100/100)

TRAINING

• Dates (from – to)	June 27, 2022 – July 1, 2022
• Name and type of organization	Los Alamos Dynamics
• Training activity	Course on structural health monitoring using statistical pattern recognition (online)
• Dates (from – to)	14 - 16 June 2022
• Name and type of organization	Delft University of Technology, Department of Aerospace Structures and Materials, Delft, The Netherlands
• Training activity	Summer school: Artificial intelligence and digitalization in structures. *I was awarded a scholarship based on my motivation letter*.
• Dates (from – to)	July 2019
• Name and type of organization	Alma Mater Studiorum – University of Bologna, Department of Physics and Astronomy, Bologna, Italy
• Training activity	Summer school: Physical Sensing and Processing. *The school provided a general overview about physical sensing and the processing of big data. Many lectures were dedicated to advanced examples in different fields such as photodetectors, magnetic sensors, environmental and biomedical applications and quantum information.*
• Dates (from – to)	March 2016 – November 2017
• Name and type of organization	UNIBO Motorsport – Formula SAE Team
• Training activity	CAD and CFD engineer

Conceptualization, design, manufacturing, mechanical testing and aerodynamic numerical simulation of the car nose.

TEACHING

• Dates (from – to)	2024 – Present
• Name and type of organization	University of Bologna, Department of Industrial Engineering, Bologna, Italy
• Position held	Adjunct professor
	Holds the course "Non-Destructive Testing and Measurement Laboratory" in the Bachelor's degree in Polymeric Composite.
• Dates (from – to)	2021 – Present
• Name and type of organization	University of Bologna, Department of Industrial Engineering, Forlì and Bologna, Italy
• Position held	Lecturer assistant
	Holds laboratory exercises for the courses "Mechanical and Thermal Measurements" and "Sensors and Advanced Measurement Techniques for Engineering" held by Prof. Raffaella Di Sante in the Bachelor's degree and Master's Degree courses in Mechanical Engineering at the University of Bologna. The exercises concern: the installation and use of electrical strain gauges, the calculation of the time constant for temperature measurements with thermocouples, and the use of fibre optic sensors (Fiber Bragg Gratings).
• Dates (from – to)	2019 – Present
• Name and type of organization	University of Bologna, Department of Industrial Engineering, Forlì and Bologna, Italy
• Position held	Theses Co-Supervisor
	Co-supervisor of 6 master's degree theses and 9 bachelor's degree theses within the degree courses in mechanical engineering, aerospace engineering, chemical and biochemical engineering, and environmental engineering at the University of Bologna.
• Dates (from – to)	February 2023 – April 2023
• Name and type of organization	Randstad, Faenza, Italy
• Position held	Lecturer
	Course Name: Fundamentals of lamination and finishing for pre-impregnated composite materials.
• Dates (from – to)	February 2022 – April 2022
• Name and type of organization	Randstad, Faenza, Italy
• Position held	Lecturer
	Course Name: Fundamentals of lamination and finishing for pre-impregnated composite materials.

AWARDS FOR SCIENTIFIC ACTIVITY

• Dates (from – to)	December 2023
• Award	Best department paper award.
	Recognition intended for the best five scientific articles of the Department of Industrial Engineering of the Alma Mater Studiorum - University of Bologna published from 01/01/2022 to 31/10/2023 in reviewed journals WOS and/ or SCOPUS.
• Dates (from – to)	12-13 June 2023
• Award	Invited speaker
	He is invited as an external expert in Braunschweig at the DLR (Federal Republic of Germany's research centre for aeronautics and space) by Prof. Inka Mueller (Department of mechatronics and mechanical engineering, Bochum University of Applied Sciences) to hold a seminar on the results obtained on monitoring of aeronautical components with distributed fibre optic sensors and on the development of probability of detection curves to quantify the performance of the monitoring system.
• Dates (from – to)	12-16 March 2023
• Award	Conference program committee
	Program Committee of the session "8th International Workshop on Reliability of NDT/NDE" at the conference "SPIE Smart Structures + Non-destructive Evaluation 2023", 12 - 16 March 2023, Long Beach, California, United States.

• Dates (from – to)	07 June 2022 – Present
• Award	Member of the Specialist International Group (SIG) in NDT Reliability
	Member of the Specialist International Group (SIG) in NDT Reliability, part of the International Committee for Non-Destructive Testing (ICNDT). Presents to the group a research entitled: "Reliability assessment of Optical Fibre Sensors for the Structural Health Monitoring of Aerospace Structures".
	The SIG in NDT Reliability is a group of international experts with the aim of promoting research on the reliability of non-destructive testing. Link to the group reference page: https://www.icndt.org/ICNDT-Activities/NDTReliability.
• Dates (from – to)	12 November 2020
• Award	Editor's choice article
	Editor's choice articles recognition by the journal Sensors for the publication "Falcetelli F, Rossi L, Di Sante R, Bolognini G. Strain Transfer in Surface-Bonded Optical Fiber Sensors. Sensors. 2020;20(11):3100. https ://doi.org/10.3390/s20113100". Editor's choice articles are based on recommendations from scientific editors of MDPI journals around the world.
• Dates (from – to)	2019 – Present
• Award	Reviewer
	Reviewer for several scientific journals including: Measurement: Journal of the International Measurement Confederation, Measurement Science and Technology, Structural Health Monitoring, Smart Materials and Structures, Journal of Intelligent Material Systems and Structures, Smart Structures and Systems, IEEE Transactions on Reliability, Scientific Reports, Sensors, Structural Control and Health Monitoring, Engineering Research Express.
• Dates (from – to)	2017
• Award	Special achievement through working abroad
	Statement of recognition of a special Achievement through Working Abroad for academic Research or industrial Development projects - Issued by the University of Bologna.

CERTIFICATES

• Dates (from – to)	2023
• Type of certificate	National Scientific Habilitation for the functions of Second Level university professor in the Competition Sector 09/E4 - MEASUREMENTS. - certified by "Ministero dell'Università e della Ricerca"
• Dates (from – to)	2022
• Type of certificate	Professional Engineering License in Industrial Engineering - Issued by the University of Bologna, II Session
• Dates (from – to)	2022
• Type of certificate	BLSD (Basic Life Support Defibrillation) - certified by IRC (Italian Resuscitation Council)
• Dates (from – to)	2022
• Type of certificate	III Level Sailing Instructor - Issued by the Italian Sailing Federation

PERSONAL SKILLS AND COMPETENCES

MOTHER TONGUE	**ITALIAN**
OTHER LANGUAGES	
	ENGLISH
• Reading skills	Excellent
• Writing skills	Excellent
• Verbal Skills	Excellent

COMPUTER SKILLS	Languages: Python, MATLAB, LaTeX, C++ OS: Windows, Ubuntu, macOS FEM: Abaqus/CAE CAD: SolidWorks, Inventor Other software: MS Office, Vallen AE-Suite, AFGROW, ARAMIS Professional
SPORT COMPETITIONS	
Sailing prototype	1st place at 1001VelaCup, 2017, Palermo, Italy. *Sailing university competition with boat prototypes developed and built by students. Helmsman of the University of Bologna.*
Sailing 470 M	3rd place at Mediterranean Games, 2013, Mersin Turkey
Sailing 420 M	2nd place at World Championship, 2010, Haifa, Israel 1st place at Italian Championship, 2008, Crotone, Italy
DRIVING LICENCES	Car driving licence - B Sailing and motor nautical licence without limits from the coast
ANNEXES	See the list of publications in the attached file publication_list.pdf

Ai sensi dell'art. 46 e 47 del DPR 445/2000, dichiaro che le informazioni inserite nel mio CV corrispondono a verità.
Inoltre, autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae in base all'art. 13 del D. Lgs. 196/2003 e all'art. 13 del Regolamento UE 2016/679 relativo alla protezione delle persone fisiche con riguardo al trattamento dei dati personali.

Date: 02/12/2024
Place: Bologna

Signature