

CURRICULUM VITAE

Name: ALBERTO ANDRIGHETTO

Education

- 1991-1994 PhD in Physics, Università di Padova, Italy
- 1985-1990 Master Degree in Physics, Università di Padova, Italy.

Current work position

- Senior Scientist at LNL (Dirigente Tecnologo)
- SPES Technical Coordinator
- ISOLPHARM Project Leader

Activity at LNL


- Since 2002 is INFN Researcher at Laboratori Nazionali Legnaro Italy. He is involved in the SPES Project an accelerator based facility to be built in Legnaro intended to provide intense neutron-rich radioactive ion beams. He is also coordinator of the ISOLPHARM project, collaboration focused on the medical applications of radioactive isotopes


Research Experience

- Development of Radioactive Ion Beam (RIB) production techniques: a) Perform on-line tests to optimize design of RIB production targets. b) Development of target sources devices for high power beam deposition. c) Measurement of RIB yields and release efficiency from various target. d) Research of new high temperature target materials. e) Characterization of target materials at very high temperature (above 2000°C)
- Design, construction, operation and upgrade of high temperature devices, such furnaces, instrumentations and utility support systems.
- Analysis and interpretation of experimental data.
- Montecarlo Simulation (using, Geant., MCNP, FISPACT, codes)
- Experimental research in nuclear physics structure and reactions and in neutron production. Working at the many RIB facilities: HRIBF (Oak Ridge, USA), ISOLDE/CERN (Geneva, Switzerland), PNPI (Gatchina, Russia), JYFL(Jyvaskyla, Finland), ALTO (Orsay), Ithemba(Cape Town) and others;
- He published more than 150 papers in peer-reviewed journals.

PERSONAL INFORMATION

Alberto Campagnolo

 University of Padova
 Department of Industrial Engineering


Enterprise	University	EPR
<input type="checkbox"/> Management Level	<input type="checkbox"/> Full professor	<input type="checkbox"/> Research Director and 1st level Technologist / First Researcher and 2nd level Technologist / Principal Investigator
<input type="checkbox"/> Mid-Management Level	<input type="checkbox"/> Associate Professor	<input type="checkbox"/> Level III Researcher and Technologist
<input type="checkbox"/> Employee / worker level	<input checked="" type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

02/2021 – to date

Type B fixed-term researcher (Assistant professor) of Machine Design

Department of Industrial Engineering, University of Padova, Via Venezia 1, 35131, Padova (Italy)

Teaching and research activities within the scientific disciplinary sector ING-IND / 14 – Machine design
 Main research topics:

- Static and fatigue strength assessment of components obtained by Additive Manufacturing (AM) adopting approaches based on non-conventional applications of the Linear Elastic Fracture Mechanics (LEFM). The research activity has been based on experimental tests performed on both traditional materials (e.g. Ti6Al4V) and non-traditional materials (e.g. copper alloys, molybdenum and tantalum, silicon oxycarbide), as well as on analytical/numerical developments to calculate the LEFM-parameters and to theoretically estimate the strength of the AMed components.
- Development of the peak stress method (PSM) approach for the fatigue design of welded structures in presence of complex loadings and geometries. The PSM has been extended to treat welded structures undergoing multiaxial variable amplitude fatigue loadings. Recently, an automated analysis tool has been developed in Ansys® FE code to assist the FE analyst in the fatigue design of complex structures according to the PSM.

Teaching activities:

- Machine Design 2 (3 Credits/24 teaching hours, M. Sc. Degree in Mechanical Engineering, approximately 130 students attending the Course)
- Machine Design 1 (6 Credits/48 teaching hours, B.Sc. Degree in Mechanical Engineering, approximately 150 students attending the Course)

Education - University

03/2018 – 01/2021

Type A fixed-term researcher (Research assistant) of Machine Design

Department of Industrial Engineering, University of Padova, Via Venezia 1, 35131, Padova (Italy)

Teaching and research activities within the scientific disciplinary sector ING-IND / 14 – Machine design
 Main research topics:

- Development of the approach based on the averaged strain energy density (SED) for the static and fatigue design of mechanical components in presence of stress raisers and complex loading conditions. Recently, the application of the averaged SED approach to notched components has been further refined by monitoring the crack initiation and propagation phases through the direct current potential drop method (DCPD), allowing a SED-based estimation of the fatigue life to crack initiation.
- Development of the peak stress method (PSM) approach for the fatigue design of welded structures in presence of complex loadings and geometries. The considered welded materials include structural steels and aluminum alloys. The method has been extended to treat also bi-material joints made of steel and austempered ductile iron.

Teaching activities:

- Machine Design 2 (3 Credits/24 teaching hours, M. Sc. Degree in Mechanical Engineering, approximately 130 students attending the Course)
- Machine Design 1 (6 Credits/48 teaching hours, B.Sc. Degree in Mechanical Engineering, approximately 150 students attending the Course)

Education - University

02/2016 – 02/2018

Research fellow of Machine Design

Department of Industrial Engineering, University of Padova, Via Venezia 1, 35131, Padova (Italy)

- Research activity with scientific supervisor Prof. Giovanni Meneghetti: development, experimental validation and implementation in commercial FE codes of methods for the prediction of the structural integrity of welded structures subjected to multiaxial cyclic loadings
- Teaching activity: Machine Design 2 (3 Credits/24 teaching hours, M. Sc. Degree in Mechanical Engineering, approximately 130 students attending the Course)

Education - University

EDUCATION AND TRAINING

01/2013-12/2015

PhD title in Mechatronics and Product Innovation Engineering

EQF 8

Department of Management and Engineering, University of Padova, Stradella San Nicola 3, 35131, Padova (Italy)

- Research activity on the structural integrity of mechanical components weakened by cracks, notches and weldments on the basis of energy-based or stress-based approaches. Analysis of the fatigue life of structural components under uniaxial and multiaxial cyclic loadings. Analyses of three-dimensional effects on the singular stress fields at the tip of cracks or notches in structural components.
- Dissertation title: "Local approaches applied to fracture and fatigue problems" (Supervisors: Prof. Paolo Lazzarin and Filippo Berto)

10/2009 – 03/2012

Master's degree in Mechanical Engineering (110/110 cum laude)

EQF 7

Department of Industrial Engineering, University of Padova, Via Venezia 1, 35131, Padova (Italy)

- Subjects: Mechanics of materials, Machine design 2, Composite materials, Mechanics of vibrations, Hydraulic machines 2, Applied thermodynamics, Logistics, Industrial plants
- Thesis title: "Local approaches for the static and fatigue design of mechanical components with notch effects" (Supervisor: Prof. Paolo Lazzarin).

10/2006 – 09/2009

Bachelor's degree in Mechanical Engineering (110/110 cum laude)

EQF 6

Department of Management and Engineering, University of Padova, Stradella San Nicola 3, 35131, Padova (Italy)

- Subjects: engineering drafting, applied thermodynamics, metallic materials, applied mechanics, mechanical thermal measurements, energy conversion systems and machines, machine design 1, industrial plants, electrical industrial applications, manufacturing processes
- Thesis title: "Turbines for marine currents" (Supervisor: Prof. Alarico Macor).

09/2001 – 07/2006

High school diploma (100/100)

EQF 5

Tito Lucrezio Caro, Via Alfieri, 58, 35013, Cittadella (Italy)

- Italian, Mathematics, Physics, Chemistry, Science, Drawing, Foreign language (English), Latin, Philosophy, History

WORK ACTIVITIES

Awards

- In 2022 he won the "IIW Welding in the World Best Paper 2022 Award Cat C – Structural Integrity, Design and Fitness for Service" from the Editorial board of the international journal "Welding in the World" for the paper *Meneghetti, G.; Campagnolo, A.; Berto, D.; Pullin, E.; Masaggia, S. Fatigue strength of austempered ductile iron-to-*

steel dissimilar arc-welded joints. *Welding in the World*; 65: 667-689 (2021).

- In 2021 he won the "Top Cited Paper award" from the Editorial board of "Fatigue & Fracture of Engineering Materials & Structures" for the paper: *Meneghetti, G.; Campagnolo, A.; Avalor, M.; Castagnetti, D.; Colussi, M.; Corigliano, P.; De Agostinis, M.; Dragoni, E.; Fontanari, V.; Frenzo, F.; Goglio, L.; Marannano, G.; Marulo, G.; Moroni, F.; Pantano, A.; Rebora, A.; Scattina, A.; Spaggiari, A.; Zuccarello, B. Rapid evaluation of notch stress intensity factors using the peak stress method: comparison of commercial finite element codes for a range of mesh patterns. Fatigue and Fracture of Engineering Materials and Structures*; 41: 1044-1063 (2018).
- In 2020, 2019, 2018, 2017, 2016 he won the "Top Reviewer Award" from the Editorial board of "Fatigue & Fracture of Engineering Materials & Structures" with motivation "for distinguished performance as a reviewer".
- In 2019 he won the "Top Peer Reviewer" award from the database "Publons - Clarivate Analytics" with motivation "for placing in the top 1% of reviewers in Cross-field on Publons' global reviewer database".
- In 2018 he won the "Top Cited Paper award" from the Editorial board of "Fatigue & Fracture of Engineering Materials & Structures" for the paper: *Berto, F.; Campagnolo, A.; Lazzarin, P. Fatigue strength of severely notched specimens made of Ti-6Al-4V under multiaxial loading. Fatigue and Fracture of Engineering Materials and Structures*; 38: 503-517 (2015).
- In 2018 he won the "Publons Peer Review Awards" from the database "Publons - Clarivate Analytics" with motivation "for placing in the top 1% of reviewers in Materials science on Publons' global reviewer database".
- In 2017 he won the "Outstanding Article Award" from the Editorial board of "ASTM International – Journal of Testing and Evaluation" for the paper: *Torabi, A. R.; Campagnolo, A.; Berto, F. Mode II brittle fracture assessment of key-hole notches by means of the local energy. ASTM Journal of Testing and Evaluation*; 44 (3): 1261-1270 (2016).
- In 2016 he won the "Prof. Paolo Lazzarin - PhD award" from the Department of Management and Engineering of the University of Padova.

Editorial activity

He serves in the Editorial Boards of the following international journals

- From 2021: *Metals* – MDPI – 2019-IF 2.117 (Q1, metallurgy & metallurgical engineering)
- From 2018: *Applied Sciences Basel* – MDPI – 2019-IF 2.474 (Q2, engineering, multidisciplinary)
- From 2018: *Mathematical Problems in Engineering* – Hindawi – 2019-IF 1.009 (Q3, engineering, multidisciplinary)

He is reviewer for several international journals: "Fatigue & Fracture of Engineering Materials & Structures", "International Journal of Fatigue", "Engineering Fracture Mechanics", "International Journal of Fracture", "Theoretical and Applied Fracture Mechanics", "International Journal of Solids and Structures", "European Journal of Mechanics / A Solids", "International Journal of Mechanical Sciences", "Engineering Failure Analysis", "Materials and Design", "Composite Structures", "Composites Part B", "Polymer testing", "International Journal of Damage Mechanics", "Journal of Testing and Evaluation", "Journal of the Mechanical Behavior of Biomedical Materials", "Frattura ed Integrità Strutturale", "Advances in Materials Science and Engineering", "Advances in Mechanical Engineering", "Mathematical Problems in Engineering", "International Journal of Rock Mechanics and Mining Sciences"; "Actuators"; "Material Design and Processing Communication"; "Meccanica – Springer"; "Metals"; "Applied Mathematical Modelling"

Editorial activities are documented in Publons database:

<https://publons.com/researcher/1391406/alberto-campagnolo/>

Grants

- In 2022 he was principal investigator of the research project entitled "BIRD227491 Structural durability of welded joints between 3D-printed and traditionally-manufactured parts". Funding source: University of Padova. Amount: 34 k€.
- In 2021 he was principal investigator of the research project entitled "Development of methods for the structural integrity analysis of welded frames for refrigeration compressor groups". Funding source: SCM FRIGO SpA (Sant'Angelo di Piove di Sacco, PD). Amount: 10 k€.
- In 2018 he was principal investigator of the research project entitled "Stress analysis on welded tubular frames for refrigeration compressor groups". Funding source: SCM FRIGO SpA (Sant'Angelo di Piove di Sacco, PD). Amount: 7.5 k€.
- Since 2022 he is participant to the research project entitled "ENGINE - Zero-defect

manufacturing for green transition in Europe". Funding source: European Commission (Horizon-CL4-2021-Twin-Transition-01). Scientific coordinator of UNIPD unit: Prof. Giovanni Meneghetti. Amount for UNIPD unit: 600 k€.

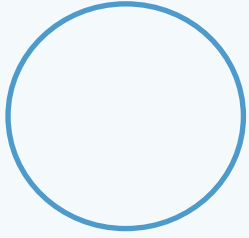
- Since 2022 he is participant to the research project entitled "BIRD217014 Static and fatigue design of recycled short fibre reinforced components". Funding source: University of Padova. Principal investigator: Prof. Mauro Ricotta.
- In 2020-2021 he was participant to the research project entitled "Additive Manufacturing Technologies for ISOL systems". Funding source: National Institute for Nuclear Physics (INFN-CSN5).
- In 2018-2019 he was participant to the project consortium "SPRING – Strategic Partnership for Researched-based, Innovative and Networked Growth" of the Regional Network "SINFONET - Smart and Innovative Foundry Network (rif. POR FESR 2014-2020. Asse 1. Azione 1.1.4 "Sostegno alle attività collaborative di R&S per lo sviluppo di nuove tecnologie sostenibili, di nuovi prodotti e servizi". DGR n. 1139 del 19 luglio 2017 e s.m.i.). Amount: 70 k€.
- In 2018-2019 he was participant to the research project entitled "BIRD182185 Machining-induced surface functionalization to enhance corrosion resistance of magnesium alloy temporary prostheses". Funding source: University of Padova. Principal investigator: Prof. Marco Sorgato. Amount: 35 k€.
- In 2014 he was participant to the research project entitled "CPDA145872 Development of experimental methods for structural integrity estimations based on temperature measurements". Funding source: University of Padova. Principal investigator: Prof. Giovanni Meneghetti. Amount: 40 k€.

ADDITIONAL INFORMATION

Publications Total number of publications in peer-review journals 84
 Total Impact Factor (IF) (average IF/paper) 4.8
 Total number of citations 2093 (1652 without self-citations)
 H index (Scopus) 30 (24 without self-citations)

A selection of 5 recent publications is reported below:

1. Campagnolo, A.; Vecchiato, L.; Meneghetti, G. Multiaxial variable amplitude fatigue strength assessment of steel welded joints using the Peak Stress Method. *International Journal of Fatigue*; 163: 107089 (2022)
2. Rebesan, P.; Ballan, M.; Bonesso, M.; Gennari, C.; Visconti, E.; Campagnolo, A.; Meneghetti, G.; Corradetti, S.; Manzolaro, M.; Mancin, S.; Longo, G.A.; Dima, R.; Pepato, A.; Vedani, M. Pure molybdenum manufactured by Laser Powder Bed Fusion: thermal and mechanical characterization at room and high temperature. *Additive Manufacturing*; 47: 102277 (2021).
3. Vecchiato, L.; Campagnolo, A.; Meneghetti, G. Numerical calibration and experimental validation of the direct current potential drop (DCPD) method for fracture mechanics fatigue testing of single-edge-crack round bars. *International Journal of Fatigue*; 150: 106316 (2021).
4. Campagnolo, A.; Bär, J.; Meneghetti, G. Analysis of crack geometry and location in notched bars by means of a three-probe potential drop technique. *International Journal of Fatigue*; 124: 167-187 (2019).
5. Meneghetti, G.; Campagnolo, A.; Berto, F.; Tanaka, K. Notched Ti-6Al-4V titanium bars under multiaxial fatigue: Synthesis of crack initiation life based on the averaged strain energy density. *Theoretical and Applied Fracture Mechanics*; 96: 509-533 (2018)



Giorgia Franchin

Dipartimento di Ingegneria Industriale - Università degli Studi di Padova

● ESPERIENZA LAVORATIVA

15/11/2021 – ATTUALE – Padova, Italia

RICERCATRICE RTDB – UNIVERSITÀ DEGLI STUDI DI PADOVA

Faccio parte del gruppo di ricerca su ceramici e vetri avanzati **CERAMGLASS**, responsabile con i Prof. Paolo Colombo ed Enrico Bernardo.

Mi occupo di Additive Manufacturing di materiali ceramici e vetri, sia nel campo dei materiali (utilizzando precursori liquidi e processi sol-gel), sia in quello tecnologico (sviluppando tecnologie ibride e processi multimateriale).

Supervisiono l'attività di dottorato di diversi studenti iscritti alla Scuola di dottorato in Industrial Engineering.

Sono titolare del corso di **Fondamenti di scienza dei materiali** (9 CFU) per il Corso di laurea in Ingegneria Chimica e dei Materiali.

09/2019 – 06/2022 – Padova, Italia

DOCENTE – ITS RED

Moduli di **Materiali metallici, Materiali ceramici, Materiali compositi, Additive Manufacturing, Nano materiali porosi** per il il corso di **Nanotech Manager**.

09/2017 – ATTUALE – Montebelluna (TV), Italia

DOCENTE – ITS COSMO

Modulo di **Materiali compositi** all'interno del corso di Scienza e Tecnologie dei Materiali per il corso **Sport System Specialist**.

03/09/2021 – 14/11/2021 – Padova, Italia

ASSEGNISTA DI RICERCA – UNIVERSITÀ DEGLI STUDI DI PADOVA

03/09/2018 – 02/09/2021 – Padova, Italia

RICERCATRICE RTDA – UNIVERSITÀ DEGLI STUDI DI PADOVA

Ho fatto parte del gruppo **CERAMGLASS**, responsabile con i Prof. Paolo Colombo ed Enrico Bernardo.

Sono stata titolare dei corsi:

- **Materiali** (6 CFU) per il corso di laurea in **Ingegneria dell'Energia**, AA 2018/19
- **Chimica e tecnologie dei materiali** (6 CFU) per il corso di laurea in **Tecniche e gestione dell'edilizia e del territorio**, AA 2019-20 e 2020-21

01/01/2017 – 02/09/2018 – Padova, Italia

ASSEGNISTA DI RICERCA – UNIVERSITÀ DEGLI STUDI DI PADOVA

Svolgo attività di consulenza per la pianificazione di progetti di ricerca e sviluppo e per la redazione di report di progetto.

Ho collaborato con il Massachusetts Institute of Technology (MIT), con BI Research Srl, con Mida Solutions

● ISTRUZIONE E FORMAZIONE

01/01/2014 – 17/03/2017

DOTTORATO DI RICERCA IN INGEGNERIA INDUSTRIALE – Università degli Studi di Padova

Campo di studio Materiali (vetro, carta, plastica e legno), Attività manifatturiere e di trasformazione non classificate altrove

Voto finale Positivo con lode | **Livello EQF** Livello 8 EQF | **Tesi** Additive Manufacturing of Ceramics

01/10/2011 – 18/10/2013

LAUREA MAGISTRALE IN INGEGNERIA DEI MATERIALI – Università degli Studi di Padova

Campo di studio Materiali (vetro, carta, plastica e legno), Attività manifatturiere e di trasformazione non ulteriormente definite, Professioni inerenti alla metallurgia e alla meccanica

Voto finale 110 e lode | **Livello EQF** Livello 7 EQF

LAUREA IN INGEGNERIA DEI PROCESSI INDUSTRIALI E DEI MATERIALI – Università degli Studi di Padova

Campo di studio Materiali (vetro, carta, plastica e legno), Attività manifatturiere e di trasformazione non ulteriormente definite, Professioni inerenti alla metallurgia e alla meccanica, Ingegneria chimica e processi chimici

Voto finale 110 e lode | **Livello EQF** Livello 6 EQF

● COMPETENZE LINGUISTICHE

Lingua madre: **ITALIANO**

Altre lingue:

	COMPRESIONE		ESPRESSIONE ORALE		SCRITTURA
	Ascolto	Lettura	Produzione orale	Interazione orale	
INGLESE	C2	C2	C1	C1	C1
TEDESCO	B1	B2	B1	B1	B1

Livelli: A1 e A2: Livello elementare B1 e B2: Livello intermedio C1 e C2: Livello avanzato

● **COMPETENZE DIGITALI**

Le mie competenze digitali

Padronanza del Pacchetto Office (Word Excel PowerPoint ecc) | Conoscenza base di 3D CAD design software (SOLIDWORKS) | Utilizzo di software di slicing (Cura Slic3r Ultimaker) | Conoscenza Wordpress

● **DICHIARAZIONE**

Dichiarazione di veridicità delle informazioni

Autorizzo il trattamento dei miei dati personali presenti nel CV ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali" e del GDPR (Regolamento UE 2016/679).

Il sottoscritto è consapevole che in caso di dichiarazioni non veritiere, di formazione o uso di atti falsi verrà punito ai sensi del Codice Penale e delle Leggi speciali in materia così come previsto dall'art. 76 del D.P.R. n. 445/2000 e che, inoltre, qualora dal controllo effettuato emerga la non veridicità del contenuto delle dichiarazioni rese, decadrà dai benefici eventualmente conseguenti al provvedimento emanato sulla base della dichiarazione non veritiera - art. 75 del D.P.R. n. 445/2000.

Autorizzo il trattamento dei miei dati personali presenti nel CV ai sensi dell'art. 13 d. lgs. 30 giugno 2003 n. 196 - "Codice in materia di protezione dei dati personali" e dell'art. 13 GDPR 679/16 - "Regolamento europeo sulla protezione dei dati personali".