UNIVERSITÀ
DI PARMA

DIPARTIMENTO DI INGEGNERIA
E ARCHITETTURA

Luca Collini

Brief CV

Personal data

Born in , Luca Collini is Associate Professor since 2014 at the Department of Engineering and Architecture of the University of Parma, Italy.

He's graduated in Mechanical Engineering in 2000 at the University of Parma, discussing a thesis on the dynamical behavior of F3 competition tires and F3 handling.

In 2004 he got the PhD in Industrial Engineering discussing the thesis "*Micromechanical modeling of the elasto-plastic behavior of heterogeneous nodular cast iron".*

In the same year 2004 he becomes researcher at the Department of Engineering and Architecture of the University of Parma, Italy.

Research activity

His research activity is actually focused on the mechanical behavior of materials, including fatigue and fracture strength and particularly on the micromechanics simulation, on the development of mechanical design methodologies and analysis, and on nondestructive techniques based on mechanical vibrations.

He is author of about 150 papers of which about 40 published on international journals.

Teaching activity

He currently teaches Industrial Design for master students in Management Engineering, and Mechanics of Materials and Structural Integrity at the master degree course in Mechanical Engineering.

He is coordinator of the Exchange program Erasmus+ KA1 with the Russia Federation.

Scientific activity

Prof. Collini is expert for the Italian Ministry of Education for the evaluation of scientific programs about industrial development and technological research; he is actually reviewer of the international journals: Journal of Materials: Design and Application; Journal of Mechanical Engineering Science, Metals, and is member of the Editorial Board of the journal Fracture and Structural Integrity (FIS). He has been editor of the book "Copper Alloys Early Applications and Current Performance - Enhancing Processes", ISBN 978-953-51-0160-4.

Awards

- Award for best paper 2013 *Journal of Strain Analysis for Engineering Design*, "Collini L., Bonardi A., A micromechanical model of the evolution of stress & strain fields in ultrafine-grained metal structures under tension";
- 2014 Best Paper Award *Case Studies in Non-destructive Testing and Evaluation*, "Collini L., Degasperi F., MRT detection of fretting fatigue cracks in a cableway locked coil rope".

Relevant publications

Design and Additive Manufacturing of Closed Cells from Supportless Lattice Structure	A. Kumar, L. Collini, A. Daurel, J.-Y. Jeng.	2020	Additive Manufacturing Available online 19 March 2020, 101168
Optimal design of shape memory alloy composite under deflection constraint	Gandhi, Y., Pirondi, A., Collini, L.	2019	Materials 12(11),1733 Open Access
Detection of cracks in axially loaded tie-rods by vibration analysis	Collini, L., Garziera, R., Riabova, K.	2019	Nondestructive Testing and Evaluation Article in Press
Design of an instrumentation for the automated damage detection in ceilings	Belletti, B., Berardengo, M., Collini, L., Foresti, R., Garziera, R.	2018	NDT and E International 94, pp. 31-37
Measurements of loudspeakers with a laser doppler vibrometer and the exponential sine sweep excitation technique	Bellini, M.C., Collini, L., Farina, A., Pinardi, D., Riabova, K.	2018	AES: Journal of the Audio Engineering Society 65(7-8), pp. 600-612
Mechanical vibrations applied to nondestructive evaluation of materials and structures	Collini, L., Gasparini, G., Palermo, M., Russo, S.	2017	Shock and Vibration 2017,3769401 Open Access
Fatigue crack growth analysis in porous ductile cast iron microstructure	Collini, L., Pirondi, A.	2014	International Journal of Fatigue 62, pp. 258-265
Modal tests on buildings: Correlating large amounts of acquisitions with different space-time collocations	Garziera, R., Collini, L., Manconi, E.	2013	Proceedings of the Institution of Mechanical Engineers. Part I: Journal of Systems and Control Engineering 227(7), pp. 577-587
A contact-less diagnosis system for frescoes. Part two: Acoustic excitation-acoustic response	Collini, L., Garziera, R.	2013	NDT and E International 56, pp. 76-81
Thermomechanical stress analysis of dissimilar welded joints in pipe supports: Structural assessment and design optimization	Collini, L., Giglio, M., Garziera, R.	2012	Engineering Failure Analysis 26, pp. 31-49

Scopus databse link

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