

PERSONAL
INFORMATION



Andrea Manes

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Sex: Male
Place of birth: La Spezia
Date of birth: 11/08/1976
Nationality: Italian

PERSONAL STATEMENT

I'm a Associate Professor and I'm involved in both higher education and research. Main research topics are in the field of machine design, mechanical behaviour of materials under extreme loading conditions, with special interest in metals, composites and ceramics, and monitoring strategies (Structural Health Monitoring). I'm curious, ambitious, determined and open-minded. In the research activity my main aim is to solve theoretical and/or applied problems using rigorous scientific approaches and innovative methodologies. I have actively participated to several EU, EDA, National, and industrial projects: proposal, research activity, scientific and quality manager, responsible for research unit. I've published more than 170 papers (H_{index} 15) mainly in referred international journals and congresses.

I'm co-founder of SIGMALab, (Structure Impact proGnosis Monitoring mAterial Laboratory), a research team aimed to advanced engineering approaches for the structural integrity assessment and design of mechanical and aerospace components.

WORK EXPERIENCE

Mar 2015–Present

Associate Professor

Department of Mechanical Engineering, Politecnico di Milano, Milan (Italy)

Scientific-Disciplinary Sector: ING-IND/14 - Mechanical Design And Machine Building

Dec 2008–Feb 2015

Research Fellow - Assistant professor
Politecnico di Milano, Milan (Italy)

Teaching: Bachelor, Master, Second level Master/ Tutoring Master, PhD and Alta Scuola Politecnica Theses / Carrying out and leading research and applicative projects / Developing communications to enforce and share achieved results and promote industrial and scientific networking.

Sep 2013–Oct 2013

Visiting Professor at Tongji University
Tongji University, Shanghai (China)

Lecturer of "Machine Design I" inside POLITONG Fellowship.

Aug 2008–Feb 2009

Visiting Scientist
N.T.N.U. - SIMLab, Trondheim (Norway)

Working inside SIMLab Centre for Research-based innovation: modelling of pipelines subjected to trawl gear impact.

Postdoctoral Research Fellow

Curriculum vitae ANDREA MANES

Mar 2007–Dec 2008 Politecnico di Milano, Milan (Italy)

EDUCATION

2004–2007 Doctor of Philosophy (Ph.D.) in Mechanical Engineering Systems
Politecnico di Milano, Milan (Italy)

2002 Enabled to the profession of Engineer by passing the Italian State Exam

1994–2002 Master's Degree in Aerospace Engineering
Politecnico di Milano, Milan (Italy)

1989–1994 High School, Science
Primo Levi, San Donato Milanese (Italy)

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s) English / Proficient User

ADDITIONAL INFORMATION

Research Topic Advanced engineering approaches for the structural integrity assessment and design of mechanical and aerospace components and systems by means of integrated methodologies with focus on material properties, modelling techniques and experimental tests.

Research activities and topics concern with several aspects related to:

- assessment and optimization of components and systems under static, spectrum/fatigue and extreme loads (ballistic damage, low velocity impact, large deformation, crack propagations, delamination, fragmentation, explosions, etc.);
- application of novel approaches in structural integrity design (flaw tolerant, vulnerability, condition based, etc.);
- investigation in mechanical behaviour of materials (metals, composite, ceramic);
- monitoring, diagnosis and prognosis of critical structures under fatigue loads and impact loads.

Co-founder and scientific manager of SIGMALab, (Structure Impact proGnosis Monitoring mAterial Laboratory), a research team on advanced engineering approach for the structural integrity assessment and design of mechanical and aerospace components by means of integrated methodologies which involve analytical models, numerical simulations and experimental tests. SIGMALab works inside the Politecnico di Milano, Department of Mechanical Engineering, research line: Machine and Vehicle Design. Research activities of SIGMALab are mainly performed inside the laboratories of Department of Mechanical Engineering.: <http://www.giglio.faculty.polimi.it>

Institutional Projects

- European Defence Agency Joint Investment Programme on Innovative Concepts and

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Emerging Technologies (JIP-ICET), Call N. 1, Ref. A-0779-RT-GC: "Monitoring and control", "Helicopter fuselage Crack monitoring and prognosis through on-board sensor" - HECTOR, 2009-2011

- European Defence Agency Tendering procedure, Ad Hoc Research & Technology Project, No B 1288 ESM2 GP, "Aircraft fuselage crack monitoring system and prognosis through on-board expert sensor network" - ASTYANAX, 2012-2015
- Progetto del Ministero della Difesa (Italian MoD) all'interno del Piano Nazionale di Ricerca Militare 2011 "Sviluppo di un Modello predittivo per l'impatto balistico" SUMO, "Development of a software for simulation of small caliber bullet impact against metallic armor" 2012-2013
- European Defence Agency Tendering procedure, Ad Hoc Research & Technology Project, No B 1190 ESM2 GP "Integrated Simulation of Non-Linear Aero-Structural Phenomena Arising On Combat Aircraft In Transonic Flight", ISSA 2013-2016
- Progetto del Ministero della Difesa (Italian MoD) all'interno del Piano Nazionale di Ricerca Militare "Sviluppo di una Metodologia analitica, numerica e sperimentale per la progettazione di protezioni balistiche composite multistrato" SUMO2, "Development of a predictive model for multilayer protection 2017-
- European Defence Agency Tendering procedure, Ad Hoc Research & Technology Project, "SHM Application to Unmanned Aircraft Systems", SAMAS 2017-2020

Publications

- More than 170 papers mainly in peer reviewed international Journals and Congresses.
- 100 documents registered in SCOPUS, h-index: 15
- ID orcid.org/0000-0001-7485-8980

Collaborations

- Industrial collaborations:
Leonardo, Finmeccanica, AgustaWestland, AleniaAermacchi, ENI, ALSTOM, Fiocchi, HBM, AMSA, RFI, Vitrociset, SAAB, KONE, SINTEF, Incico
- Accademic and institutional collaborations:
N.T.N.U., SIMLab, M.I.T., K.T.H., A.G.H., University of Zilina, Università degli Studi di Cassino e del Lazio Meridionale, Tampere University of Technology, Universidade Federal do Rio Grande do Sul, University of Patras, Columbia University, Politecnico di Torino, E.D.A., Italian MoD, Air Force Institute of Technology, I.N.T.A., Regione Lombardia
- Reviewer: International Journal of Structural Integrity, Engineering Fracture Mechanics, Engineering Transactions, International Journal of Impact Engineering, International Journal of Material Forming, Composites Part B, Journal of Testing and Evaluation, Measurement, Composite Structures, Journal of Aerospace Engineering, etc

Job related Skill

- Communication:
At present "Communication Manager" of the research line "Machine and Vehicle Design", Department of Mechanical Engineering, Politecnico di Milano.
- Photography
Professional experience as a photographer and film maker.

Honours and awards

- Best paper award ESREL 2013: M. Corbetta, C. Sbarufatti, A. Manes, M. Giglio, "Fatigue crack growth in structures under random spectrum loading: Markov chain Monte Carlo methods for parameter identification" ESREL 2013, the 22nd Annual European Safety and Reliability Conference, Amsterdam
- Award for publications (Mechanical Department, Politecnico di Milano) for the years:

Curriculum vitae ANDREA MANES

2011, 2012, 2013

Invited Presentations

- Manes and M. Giglio, "Prediction of 3-D Fracture on the example of the Helicopter Rotor Hub" 8TH M.I.T. Workshop On Experimental And Computational Fracture Mechanics, M.I.T., 6-7 Ottobre 2011, Boston, USA
- A. Manes, M. Giglio, S. Amiri, "Behavior of Current Collectors by Micro Indentation", MIT Program on Battery Safety and Crashworthiness, 24 Ottobre 2014, Boston, USA

Conferences Chairman

- Chairman of session "Impact behaviour" at ICM11 (2011, Como).
- Chairman of session "Processing and fabrication of advanced composite materials" al ECCM15 (15 European Conference on Composite Materials, Italia, Venezia, 2012)

Other Interest

Practicing regular activities of mountaineering, free climbing, ski-mountaineering (Mezzalama 2015-2017 finisher / Adamellokiraid 2015-2017 finisher / Tour du Rutor Finisher 2018) and SkyRunning (Kima 2014 finisher, VUT 2017 finisher); instructor inside the Italian Alpine Club (CAI) with licenses: -National Instruct of ski Mountaineering (INSA, 2011) -National Instructor of Mountaineering (INA, 2007) - Instructor of Snowboard Mountaineering (ISBA, 2008) -Instructor of Free-climbing (IAL; 2004) -Director of several mountaineering and ski-mountaineering courses - Member of the committee for selection and training of the new instructors (2009 to 2017) -Deputy director of the CAI School for mountaineering and free climbing of Valmadrera (2011-2013) Member of the Italian Safety Commission for mountaineering (2010 to present), www.caimateriali.org, a leading no-profit Committee for the safety research in mountaineering equipment and technique

International journals

- [INT1] Salvetti, M., Gilioli, A., Sbarufatti, C., Manes, A., Giglio, M. "Analytical model of the dynamic behaviour of CFRP plates subjected to low-velocity impacts" (2018) *Composites Part B: Engineering*, 142, pp. 47-55.
- [INT2] Mardalizad, A., Scazzosi, R., Manes, A., Giglio, M. "Testing and numerical simulation of a medium strength rock material under unconfined compression loading" (2018) *Journal of Rock Mechanics and Geotechnical Engineering*. Article in Press.
- [INT3] Salvetti, M., Sbarufatti, C., Gilioli, A., Dziendzikowski, M., Dragan, K., Manes, A., Giglio, M. "On the mechanical response of CFRP composite with embedded optical fibre when subjected to low velocity impact and CAI tests" (2017) *Composite Structures*, 179, pp. 21-34.
- [INT4] Mardalizad, A., Scazzosi, R., Manes, A., Giglio, M. "Four-point bending test on a middle strength rock: Numerical and experimental investigations" (2017) *Frattura ed Integrità Strutturale*, 11 (41), pp. 504-523.
- [INT5] Bresciani, L.M., Manes, A., Romano, T.A., Iavarone, P., Giglio, M. "Numerical modelling to reproduce fragmentation of a tungsten heavy alloy projectile impacting a ceramic tile: Adaptive solid mesh to the SPH technique and the cohesive law" (2016) *International Journal of Impact Engineering*, 87, pp. 3-13.
- [INT6] L.M. Bresciani, A. Manes, A. Ruggiero, G. Iannitti, M. Giglio, "Experimental tests and numerical modelling of ballistic impacts against Kevlar 29 plain-woven fabrics with an epoxy matrix: Macro-homogeneous and Meso-heterogeneous approaches" *Composites Part B: Engineering*, Volume 88, 1 March 2016, Pages 114-130
- [INT7] L.M. Bresciani, A. Manes, T.A. Romano, P. Iavarone, M. Giglio, "Numerical modelling to reproduce fragmentation of a tungsten heavy alloy projectile impacting a ceramic tile: Adaptive solid mesh to the SPH technique and the cohesive law" *International Journal of Impact Engineering*, Volume 87, January 2016, Pages 3–13
- [INT8] S. Amiri, X. Chen, A. Manes, M. Giglio, "Investigation of the mechanical behaviour of lithium-ion batteries by an indentation technique" *International Journal of Mechanical Sciences*, Volume 105, 1 January 2016, Pages 1-10
- [INT9] C. Sbarufatti, M. Corbetta, A. Manes, M. Giglio, "Sequential Monte-Carlo sampling based on a committee of artificial neural networks for posterior state estimation and residual lifetime prediction" *International Journal of Fatigue*, Volume 83, Part 1, February 2016, Pages 2–9
- [INT10] M. Corbetta, C. Sbarufatti, A. Manes, M. Giglio, "Real-time prognosis of random loaded structures via Bayesian filtering: A preliminary discussion" *Engineering Fracture Mechanics*, Volume 145, August 01, 2015, Pages 143-160
- [INT11] M. Corbetta, C. Sbarufatti, A. Manes, M. Giglio, "Real-time prognosis of crack growth evolution using Sequential Monte Carlo methods and statistical model parameters" *IEEE -753TRANSACTIONS ON RELIABILITY*, VOL. 64, NO. 2, JUNE 2015, 736
- [INT12] L. M. Bresciani, A. Manes, M. Giglio, "An analytical model for ballistic impacts against plain-woven fabrics with a polymeric matrix" *International Journal of Impact Engineering*, 78 (2015) 138- 149
- [INT13] Nima Allahverdzadeh, Andrea Gilioli, Andrea Manes, Marco Giglio, "An experimental and numerical study for the damage characterization of a Ti-6Al-4V titanium alloy", *International Journal of Mechanical Sciences* 93 (2015) 32–47
- [INT14] A. Gilioli, A. Manes, M. Giglio, T.Wierzbicki, "Predicting ballistic impact failure of aluminium 6061-T6 with the rate-independent Bao-Wierzbicki fracture model " *International Journal of Impact Engineering*, Volume 76, February 2015, Pages 207–220
- [INT15] A. Gilioli, C. Sbarufatti, A. Manes, M. Giglio, "Compression after impact test (CAI) on nomextm honeycomb sandwich panels with thin aluminium skins " *Composites: Part B*, 6 (2014), 313–325
- [INT16] A. Manes, M. Pagani, M. Saponara, D. Mombelli, C. Mapelli, M Giglio, "Metallographic characterisation of Al6061-T6 aluminium plates subjected to ballistic impact" *Materials Science & Engineering A*, 608 (2014) 207–220
- [INT17] C. Sbarufatti, A. Manes, M. Giglio, "Application of Sensor Technologies for Local and Distributed Structural Health Monitoring", *Structural Control and Health Monitoring*, Volume 21, Issue 7, pages 1057–1083, July 2014
- [INT18] S. Amiri; N. Lecis; A. Manes; M. Giglio, "A study of a micro-indentation technique for estimating the fracture toughness of Al6061-T6" *Mechanics Research Communications*, 58 (2014), pages 10-16
- [INT19] A. Gilioli, A. Manes, M. Giglio, "Numerical simulation of a fracture toughness test of an Al6061-T6 aluminium alloy using a ductile criterion", *Mechanics Research Communications*, 58 (2014) 2–9
- [INT20] A. Manes, F. Serpellini, M. Pagani, M. Saponara; M. Giglio, "Perforation and penetration of aluminium target plates by armour piercing bullets", *International Journal of Impact Engineering* 69 (2014) 39- 54
- [INT21] M. Corbetta, C. Sbarufatti, A. Manes, M. Giglio, "On Dynamic State-Space Models for Fatigue-Induced Structural Degradation" *International Journal of Fatigue*, 61 (2014) 202–219
- [INT22] C. Mapelli, A. Manes, M. Giglio, D. Mombelli, " Structural Effect of ballistic impact on a shaft by means of crystallographic investigation" *SDHM Structural Durability and Health Monitoring*, Vol. 9, Issue 2, 2013, pp. 181-199
- [INT23] M. Giglio, M. Fossati, D. Lumassi , A. Manes, "Use of numerical simulations in damage assessment due to high velocity impacts" , *Int. J. Materials and Structural Integrity*, Vol. 7, No. 4, 2013, pp. 215-230
- [INT24] M. Giglio, A. Manes, C. Mapelli, D. Mombelli, "Relation between ductile fracture locus and deformation of phases in Ti-6Al-4V alloy", *ISIJ International*, Vol. 53, 2013, No. 12, pp. 2250–2258
- [INT25] C.Sbarufatti, A.Manes, M. Giglio, "Performance optimization of a diagnostic system based upon a simulated strain field for fatigue damage characterization" *Mechanical Systems and Signal Processing* 40, 2013, 667–690
- [INT26] A. Manes, A. Gilioli, C. Sbarufatti, M. Giglio, "Experimental and numerical investigations of low velocity impact on sandwich panels" *Composite Structures*, 99, pp. 8-18, 2013
- [INT27] G. Vallone, A. Manes, C. Sbarufatti, M. Giglio, "Helicopter Harsh Landing Events: a Computational Hybrid

- Methodology to estimate Fuselage Damage", *Journal Of Aircraft*, Vol. 50, No. 6, November–December 2013, pp.1896-1907
- [INT28] A. Manes, D. Lumassi, L. Giudici, M. Giglio, "An experimental-numerical investigation on aluminium tubes subjected to ballistic impact with soft core 7.62 ball projectiles" *Thin-Walled Structures* 73, 2013, 68-80
- [INT29] V. Bedogni, A. Manes " An experimental investigation of the effect of the placement angle on the collapse of ice screw anchors" *Engineering Failure Analysis* 26 (2012) 139–150
- [INT30] N. Allahverdizadeh, A. Manes, M. Giglio, "Identification of damage parameters for Ti-6Al-4v titanium alloy using continuum damage mechanics" *Materialwissenschaft und Werkstofftechnik*, 2012, 43, No. 5, pp. 435-440.
- [INT31] M. Giglio, A. Gilioli, A. Manes "Numerical Investigation Of A Three Point Bending Test On Sandwich Panels With Aluminum Skins And Nomex™ Honeycomb Core" *Computational Materials Science* 56, 2012, 69–78
- [INT32] C. Mapelli, A. Manes, M. Giglio, D. Mombelli, L. Giudici, C. Baldizzone, A. Gruttadauria, "Survey about the effects of shot peening technique on the fatigue performances of Ti-6Al-4V mechanical specimens featured by different cross-section geometries", *Materials Science and Technology*, Volume 28, Number 5, May 2012 , pp. 543-548(6)
- [INT33] M. Giglio, A. Manes, F. Viganò " Numerical simulation of the slant fracture of a helicopter's rotor hub with ductile damage failure criteria " *Fatigue and Fracture of Engineering Materials and Structures*, Volume 35, Issue 4, April 2012, pages 317–327
- [INT34] M. Giglio, A. Manes, F. Viganò " Ductile fracture locus of Ti-6Al-4V titanium alloy" *International Journal of Mechanical science* 54, 2012, 121–135
- [INT35] M. Giglio, A. Manes, A. Gilioli, "Investigations on sandwich core properties through an experimental–numerical approach " *Composites Part B: Engineering*, 43, 2012, 361–374
- [INT36] A. Manes, R. Porcaro, H. Iltad, E. Levoldd, M. Langseth and T. Børvik, "The behaviour of an offshore steel pipeline subjected to bending and stretching" *Ships and Offshore Structures*, pages 371-387 Volume 7, Issue 4, 2012
- [INT37] A. Manes, M. Giglio, F. Viganò "Effect of riveting process parameters on the local stress field of a T-joint" *International Journal of Mechanical Sciences* Volume 53, Issue 12, December 2011, Pages 1039-1049
- [INT38] M. Giglio, A. Manes " Terminal ballistic effect on the crack growth assessment of a helicopter rotor drive" *Engineering Fracture Mechanics* Volume 78, Issue 8, May 2011, Pages 1542-1554
- [INT39] M. Fossati, D. Colombo, A. Manes, M. Giglio "Numerical modelling of crack growth profiles in integral skin-stringer panels" *Engineering Fracture Mechanics* Volume 78, Issue 7, May 2011, Pages 1341-1352
- [INT40] F. Viganò, A. Manes, M. Giglio " Investigation on the Fatigue Life of an Al 8090 Helicopter Riveted T-Joint" *Journal Of Aircraft* Volume 48, Issue 1, January 2011, Pages 315-323
- [INT41] F. Viganò, A. Manes, M. Giglio, U. Mariani "Failure analysis of a composite main rotor helicopter hub" *Engineering Failure Analysis* Volume 18, Issue 1, January 2011, Pages 97-109
- [INT42] T. Pulecchi, A. Manes, M. Lisignoli, M. Giglio "Digital filtering of acceleration data acquired during the intervention of a lift safety gears" *Measurement* 43, 2010, pages 455–468
- [INT43] M. Giglio, A. Manes, M. Fossati, U. Mariani, C. Giani " Comparison of fatigue crack propagation behaviour of Al 2024 and Al - Li 8090 Helicopter fuselage panels" *Journal of Testing and evaluation*, Vol 38, No 1, 2010, Page 73-82
- [INT44] M. Giglio, A. Manes, "Experimental and numerical damage evaluation of a lift safety gear", *Int. J. Materials and Structural Integrity*, Vol. 2, No. 3, 2008, pages 291- 317
- [INT45] M. Giglio, A. Manes, "Crack propagation on helicopter panel: Experimental test and analysis", *Engineering Fracture Mechanics* 75, 2008, pages 866–879
- [INT46] D. Colombo, M. Giglio, A. Manes "3D fatigue crack propagation analysis of a helicopter component" *International Journal of Materials & Product Technology* 30 1/2/3, 2007, pages 107-123
- [INT47] M. Giglio, A. Manes "Crack propagation on aluminum nomex panels: experimental and numerical approach " *Arabian Journal for Science and Engineering* 31 2C, 2006, 1-16.
- [INT48] M. Giglio, A. Manes "Life prediction of a wire rope subjected to axial and bending loads" *Engineering Failure Analysis* 12, 2004 , pages 549-568
- [INT49] M. Giglio, A. Manes "Bending fatigue tests on a metallic wire rope for aircraft rescue hoist" *Engineering Failure Analysis* 10, 2003, pages 223-235

Chapter in books

- [CL1] M. Giglio, A. Gilioli, A. Manes, "Mechanical behaviour of Al 6061-T6 aluminium alloy Under large strain and failure" *Numerical Modeling of Materials Under Extreme Conditions, Advanced Structured Materials*, 35, pp. 143-171, DOI: 10.1007/978-3-642-54258-9_7, Springer-Verlag Berlin Heidelberg 2014
- [CL2] M. Giglio, A. Manes and C. Sbarufatti "MEMS for structural health monitoring in aircrafts", *MEMS for automotive and aerospace applications*, Woodhead publishing 2013 Editors: Michael Kraft and Neil M White, Southampton University, UK ISBN-13: 978 0 85709 118 5 doi:10.1533/9780857096487.2.220
- [CL3] M. Giglio, A. Manes " Effect of Flight Spectrum Loads on the Damage Tolerance Evaluation of a Helicopter Frame" *Materials with Complex Behaviour, Advanced Structured Materials*, 2010, Volume 3, Part 3, 311-329, DOI: 10.1007/978-3-642-12667-3

Italian Scientific journal

- [RN1] L. Giudici, A. Manes, M. Giglio "Valutazione della capacità di rientro alla base di un elicottero in presenza di danno balistico ad un albero di trasmissione della linea rotore di coda" *Frattura ed Integrità Strutturale*, 11 (2009) 21-35; DOI: 10.3221/IGF-ESIS.11.03

International congresses (updated to 2018)

- [CI1] M. Fossati, A. Manes, C. Sbarufatti, M. Giglio, "Analysis of a Helicopter Main Gearbox by means of Numerical Modelling approach" 43rd European Rotorcraft Forum – ERF 2017
- [CI2] A. Manes, A. Gilioli, M. Giglio, "An investigation in hi-fi finite element modelling aimed to improve LCO prediction" International Forum on Aeroelasticity and Structural Dynamics" IFASD 2017, 25-28 June 2017, Como - Italy
- [CI3] A. Mardalizad, A. Manes, M. Giglio, "Investigating the tensile fracture behaviour of a middle strength rock: experimental tests and numerical models" 14th International Conference on Fracture (ICF 14) June 18-23, 2017, Rhodes, Greece
- [CI4] A. Mardalizad, A. Manes, M. Giglio, "The numerical modelling of a middle strength rock material under Flexural test by Finite Element method-coupled to-SPH", *Procedia Structural Integrity* 3 (2017) 395–401, XXIV Italian Group of Fracture Conference, 1-3 March 2017, Urbino, Italy
- [CI5] Mardalizad, A., Manes, A., Giglio, M. "Investigation on the unconfined compression strength of rocks by experimental tests and advanced numerical modelling technique" (2017) *Key Engineering Materials*, 754 KEM, pp. 321-324. 16th International Conference on Fracture and Damage Mechanics, 2017; Florence; Italy; 18 July 2017 through 20 July 2017;
- [CI6] Salvetti, M., Gilioli, A., Sbarufatti, C., Dragan, K., Chalimoniuk, M., Manes, A., Giglio, M. "Analytical Model to Describe Damage in CFRP Specimen When Subjected to Low Velocity Impacts" (2016) *Procedia Engineering*, 167, pp. 2-9. International Symposium on Dynamic Response and Failure of Composite materials, DRAF 2016; Hotel Continental Termelsland of Ischia; Italy; 7 September 2016 through 9 September 2016
- [CI7] A. Manes, A. Ruggiero, G. Iannitti, M. Giglio, "Ballistic impact on ceramic-composite tiles: experimental and numerical investigation" International Conference on Impact Loading of Structures and Materials, ICILSM 2016 22/26 May Turin, Italy
- [CI8] C. Sbarufatti, A. Gilioli, M. Dziendzikowski, K. Dragan, A. Manes, M. Frovel, M. Giglio, "Compression after impact (CAI) test on CFRP panels with embedded FBG sensors", International Conference on Impact Loading of Structures and Materials, ICILSM 2016 22/26 May Turin, Italy
- [CI9] A. Gilioli, C. Sbarufatti, M. Dziendzikowski, K. Dragan, A. Manes, M. Giglio, "Impact on CFRP panel with embedded FBG sensors" International Conference on Impact Loading of Structures and Materials, ICILSM 2016 22/26 May Turin, Italy
- [CI10] C. Sbarufatti, A. Gilioli, A. Manes, M. Giglio, "Mechanical characterization of a carbon fibre composite through a combined experimental and numerical approach" ICCS18 – 18th International Conference on Composite Structures Lisbon, Portugal 15 - 18 June 2015
- [CI11] C. Sbarufatti, A. Manes, M. Giglio, "Performance qualification of an on-board model-based diagnostic system for fatigue crack monitoring" Annual Forum Proceedings - AHS International, Volume 3, Issue January, 2015, Pages 1696-1704
- [CI12] M. Giglio, S. Klimaszewski, M. Kurdelski, A. Leski, A. Manes, C. Sbarufatti, M. Stefaniuk, G. Vallone, W. Zielinski, "Model-based structural integrity assessment of helicopter fuselage during harsh Landing" Annual Forum Proceedings - AHS International, Volume 2, Issue January, 2015, Pages 1023-1032
- [CI13] A. Manes, M. Giglio, "A numerical optimization of lightweight multilayer armour", Annual Forum Proceedings - AHS International, Volume 4, Issue January, 2015, Pages 2453-2460
- [CI14] A. Gilioli, A. Manes, M. Giglio, "Experimental and numerical evaluation of the residual structural integrity of a helicopter tail rotor shaft subjected to ballistic impact" Annual Forum Proceedings - AHS International, Volume 3, Issue January, 2015, Pages 2054-2061
- [CI15] C. Sbarufatti, A. Gilioli, A. Manes, M. Giglio, "Low-velocity impact monitoring system for a helicopter frame by means of an artificial neural network", Annual Forum Proceedings - AHS International, Volume 3, Issue January, 2015, Pages 1673-1682
- [CI16] Sina Amiri, Xi Chen, Andrea Manes, Marco Giglio "An analysis of copper film mechanical properties by means of nanoindentation technique" 2014 IEEE 9th Nanotechnology Materials and Devices Conference, NMDC 2014
- [CI17] A. Manes, L.M. Bresciani, M. Giglio, "Ballistic performance of multi-layered fabric composite plates impacted by different 7.62 mm calibre projectiles" DRAFT 2014, International Symposium on Dynamic Response and Failure of Composite Materials, *Procedia Engineering* 88 (2014) 208 – 215
- [CI18] M. Corbetta, C. Sbarufatti, A. Manes, M. Giglio, "Sequential Monte Carlo sampling for crack growth prediction providing for several uncertainties" European Conference of the Prognostics and Health Management Society 2014
- [CI19] C. Sbarufatti, A. Manes, M. Giglio, "Performance qualification for a structural health monitoring system aimed to fatigue crack diagnosis on helicopter fuselage" 2nd international conference on airworthiness and fatigue, ICAF 2014
- [CI20] A. Gilioli, A. Manes M. Giglio, " Experimental and numerical estimation of the strain rate of a honeycomb sandwich panel with aluminum skins and nomex core" ICCE 22, 2014

¹ Corresponding author
E-mail address: aria.mardalizad@polimi.it (A. Mardalizad)

- [CI21] C. Sbarufatti, M. Corbetta, A. Manes, M. Giglio "Real-time sequential Monte Carlo sampling based on a committee of artificial neural networks for residual lifetime prediction of a component subjected to fatigue crack growth", XVII International Colloquium on Mechanical Fatigue of Metals (ICMFM17), *Procedia Engineering* 74 (2014) 347 – 351
- [CI22] M. Fossati, M. Pagani, S. Miccoli, A. Manes, M. Giglio, "Numerical calculation of crack parameters for propagation assessment in a complex component with residual stresses", XVII International Colloquium on Mechanical Fatigue of Metals (ICMFM17), *Procedia Engineering* 74 (2014) 360 – 367
- [CI23] M. Corbetta, C. Sbarufatti, A. Manes, M. Giglio, "Continuous crack growth monitoring and residual life prediction under variable-amplitude loading conditions" , XVII International Colloquium on Mechanical Fatigue of Metals (ICMFM17), *Procedia Engineering* 74 (2014) 343 – 346
- [CI24] N. Allahverdizadeh, A. Manes, M. Giglio, A. Gilioli, "Geometry transferability of Lemaitre's continuum damage mechanics model in the plane stress specimens", *Key Engineering Materials Vols. 592-593* (2014) pp 266-270, Proc. Seventh International Conference on Materials Structure & Micromechanics Of Fracture, Brno, Czech Republic, July 1 - 3, 2013
- [CI25] S. Amiri, N. Lecis, A. Manes, M. Giglio, "Determining elastic-plastic properties of Al6061-T6 from micro-indentation technique", *Key Engineering Materials Vols. 592-593* (2014) pp 610-613, Proc. Seventh International Conference on Materials Structure & Micromechanics Of Fracture, Brno, Czech Republic, July 1 - 3, 2013
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