

MARIO GUAGLIANO: CURRICULUM VITAE

Personal information

Name: Mario
Surname: Guagliano
Place of Birth: Pavia (Italy)
Date of Birth: October 18th, 1963
Position: Associate Professor
Organization: Dipartimento di Meccanica, Politecnico di Milano
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Earned degrees and employment

- Nov 2001–present, Associate Professor at the School of Industrial and Information Engineering at Politecnico di Milano (Scientific and Teaching Sector ING-IND 14 “Machine Design”)
- April 1993– Nov 2001, Researcher (Scientific and Teaching Sector I08, Machine Design) at Politecnico di Milano
- Feb 1991–April 1993, Technical Assistant (VII level) , Politecnico di Milano
- April 1988 – Laurea in Mechanical Engineering, Politecnico di Milano

Academic appointments

- 2012–present, Member of the PhD Faculty in Mechanical Engineering, Politecnico di Milano
- 2006–present, Delegate for International Relationships and Student Exchange Mobility Programs for Mechanical Engineering at the School of Industrial and Information Engineering, Politecnico di Milano
- 2000–present, Responsible of the X-Ray Diffraction Laboratory at Mechanical Engineering Department, Politecnico di Milano

Research activities

A. Interests and areas of expertise

- Surface treatments with emphasis on severe plastic deformation treatments aimed at obtaining a nanostructured surface and at studying its effect on the behaviour of the treated parts.
- Gas dynamic cold spray process with emphasis on modelling and on characterization of the cold sprayed surfaces.
- Experimental and numerical methodologies for determining the fracture and damage parameters of materials and mechanical elements, with emphasis on rolling contact and on failure analysis.
- Analysis of the behaviour of composite materials with emphasis on numerical modelling of damage and on the experimental identification of damage parameters.
- Modelling, analysis and monitoring of the mechanical behaviour of composite materials
- Innovative design methods.

B. Publications

- Co-Author of 2 books, Co-Editor of 1 book, author/co-author of 85 papers published in peer-reviewed journals, 3 book chapters, 124 papers published in international and national conference proceedings, co-author of 1 patent.

C. Coordination of research projects

- Responsible for Politecnico di Milano of the research project "Bioactive Coating for Accelerated Bone Regeneration: A Pathway to Enhance Implant Fixation", between Politecnico di Milano and Massachusetts Institute of Technology (MIT) in the program MISTI Global Seed Funds 2015.
- Responsible for Politecnico di Milano of the research project "Exploring and Modeling Interacting Cracks: Toward a Crack Network Model", between Politecnico di Milano and Massachusetts Institute of Technology (MIT) in the program MISTI Global Seed Funds 2015.
- Coordinator of the research project "Cold Spray Radical Solutions for Aeronautic Improved Repairs" (CORSAIR, www.corsair-project.eu), funded in the EU FP7 program (call FP7-AAT-2013-RTD-1), contract number n. 605207 (2013-2016).
- Local responsible for the Mechanical Engineering Department of the project Twin Engine Pack System (TEPS), funded by Regione Lombardia and Fondazione Cariplo (2014-2016).
- Responsible of the Research Unit Politecnico di Milano of the research project "Innovative materials for eco friendly floors", funded in the program MD 2008 Regione Lombardia (n.6735, 05/03/2008) (2008-2010).
- Coordinator of the Local Research Unit at Politecnico di Milano for the project "Analysis and monitoring of damage in composite materials" (AMDACOMP) (2007-2009), funded in the "Research Projects of National Interest" program, by the Italian Minister for Scientific and Technological Research and Education (MIUR).
- National coordinator and responsible of the Local Research Unit at Politecnico di Milano for the project "Methods for the assessment of structural integrity of railway wheels (2004-2006), funded in the "Research Projects of National Interest" program, by the Italian Minister for Scientific and Technological Research and Education (MIUR).
- Responsible of many research projects granted by private and public companies, among them: Brembo, CAMERON VALVES Italy, Casappa, Centro Ricerche FIAT (CRF), CIR Ambiente, ENI, ETS Sistemi Industriali, Ferrari Automotive, Metal Improvement Italy, Norblast Srl, Peenservice Srl, Sicam BOSCH, SPX Seital, Tenaris Dalmine, Trasfor ABB, Wheelabrazor Allevard, WINOA.
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D. Invited Plenary Talks

- "Characterization and applications of nanocrystalline metal surfaces obtained by severe impact treatment", *2nd International Conference on Surfaces, Coatings & Nanostructured Materials-Asia (NANOSMAT Asia)*, 24 March, 2015, Kayseri University (Turkey).
- "Cold spray for new repair solutions", *European Cold Spray Symposium (EUROSS)*, Paris (France), 26 May 2014.
- "Surface coating by cold spray: properties, problems and future applications", *International Conference on Experimental Solid Mechanics and Dynamics (X-Mech 2014)*, Iran University of Science and Technology (IUST), Teheran (Iran), 18-19 Feb 2014.
- "Nanostructured surfaces obtained by severe impact treatments: properties, problems and applications", *3rd International Conference on Engineering Against Failure (ICEAF 3)*, Kos (Greece), 27-29 June 2013.
- "Fatigue behaviour improvement by surface treatments: some recent experiences and critical assessment of the results." *International Conference on Experimental Solid Mechanics and Dynamics (X-Mech 2012)*, Iran University of Science and Technology (IUST), Teheran (Iran), 6-8 March 2012.

- “Recent experiences, perspectives and problems in shot peening, a mechanical treatment to improve the fatigue behavior of structural parts”, *XXVIII Encuentro del Grupo Español de Fractura (GEF), Gijon (Spain), 6-8 April 2011.*

Professional Activities

A. Positions held in foreign institution

- Cycle of lectures on “Mechanical properties and fracture behavior of materials”, Master “Materials Science and Technology”, University of Oviedo (Spain) –2010.
- Cycle of lectures at the Summer School of Fatigue of Materials at the University of Zilina (SK), area “Increasing fatigue lifetime by deformation strengthening the surface layer”– 2010.
- Cycle of lectures on “Mechanical properties and fracture behavior of materials”, Master “Materials Science and Technology”, University of Oviedo (Spain) –2009.
- Cycle of lectures at the Summer School of Fatigue of Materials at the University of Zilina (SK), area “Increasing fatigue lifetime by deformation strengthening the surface layer”– 2008.
- Cycle of lectures at the Summer School of Fatigue of Materials at the University of Zilina (SK), area “Increasing fatigue lifetime by deformation strengthening the surface layer”– 2004.
- Cycle of lectures at the Summer School of Fatigue of Materials at the University of Zilina (SK), area “Increasing fatigue lifetime by deformation strengthening the surface layer”– 2002.

B. Editorial Boards

- Structural Damage and Health Monitoring (Tech Science Press – ISSN: 1930-2983) (2005-present).
- Materials Engineering (Materialove Inzinierstvo – ISSN: 1335-0803 (2011-present).
- Il Progettista Industriale (Tecniche Nuove, in Italian, ISSN 0392-4823), Editor-in-chief (2008-present).
- Frattura e Integrità Strutturale (Fracture and Structural Integrity) (Gruppo Italiano Frattura – ISSN: 1971-8993 (2008-2014).
- Guest Editor of special issues of the journals: Engineering Fracture Mechanics, Surface and Coatings Technology, International Journal of Fatigue, International Journal of Structural Integrity.

C. Scientific Committees

- President of the International Conference on the Mechanical Behaviour of Materials (ICM), (2011-present).
- Member of the Advisory Board of the project Promo-Air, co-funded by the European Commission Research area: AAT.2013.7-3. FP7-AAT-2013-RTD-1.
- Member of the Board of Directors of the European Aeronautic Science Network (EASN) association as Treasurer (2010-present)
- Member of the International Scientific Committee of the Conference: Fracture and Damage of Materials (FDM) (1999-present)
- Member of the International Scientific Committee of the 16th Colloquium on the Mechanical Fatigue of Metals (ICMFM16) (2012)
- Member of the International Scientific Committee on Experimental Solid Mechanics and Dynamics (X-Mech 2012 and XMech 2014) (2012-2014).
- Member of the International Scientific Committee of the 10th International Conference on the Mechanical Behaviour of Materials (ICM10), (2007).
- Member of the International Scientific Committee of the 3rd International Conference on Engineering Against Failure (ICEAF3), (2013).
- Member of the Scientific Committee of the Italian Group of Fracture (IGF), (2007-2009).

D. Organization of Conferences

- Co-Chairman of the 17th International Colloquium on Mechanical Fatigue of Metals, Verbania (Italy), 25-27 June 2014.
- Chairman of the 11th International Conference on the Mechanical Behaviour of Materials (ICM11), Como, 5-9 June 2011.
- Co-Chairman of the 2th International Conference on Fracture and Damage Mechanics, Milano, 18-20 September 2001.

E. Other organizational activities

- Director of the Continuing Education course "Fatigue Design of Machine and Structural elements", Politecnico di Milano (2004-present).
- Member of the Organizing Committee of the XXXIV National AIAS Conference (Italian Association of Stress Analysis), Milano, 14-17 September 2005.
- Member of the Organizing Committee of the XIX National IGF Conference (Italian Group of Fracture), Milano, 2-4 July 2007.

F. Reviewer of the following international journals (multiple reviews for most journals):

- International Journal of Fatigue
- Surface and Coatings Technology
- Applied Surface Science
- Acta Materialia
- Engineering Fracture Mechanics
- Structural Health and Damage Monitoring
- International Journal of Structural Integrity
- Measurements
- Composite Structures
- Theoretical and Applied Fracture Mechanics
- Fatigue and Fracture of Engineering Materials and Structures
- Measurements
- Materials and Design
- Frattura e Integrità Strutturale

G. Doctoral students (supervisor):

- Sara Bagherifard, 2008-2010, thesis title "Severe shot peening to obtain nanostructured surfaces: process development and mechanical characterization of materials"
- Ramin Ghelichi, 2009-2011, thesis title "A new compound surface treatment aimed to obtain nano-structured coating"
- Mostafa Hassani, 2011-2013 thesis title "surface nanocrystallization by severe shot peening; from concept to application"
- Davide Crivelli, 2011-2013 thesis title "Structural health monitoring with acoustic emission and neural networks"
- Atieh Moridi, 2012-2014 thesis title "Cold spray coating: process evaluation and combination with other surface treatments"
- Giorgia Galimberti, 2014-2016 thesis title "From metallic powder to the object: how manufacturing production can be modified".

H. MSc students (supervisor)

- Supervisor of more than 60 MSc theses.

I. Host visitors from foreign Institutions

- Pavel Pokorny (PhD student, topic: cold spray coating), University of Brno, Czech Republic, 2014.
- Denisa Zavodska (MSc student, topic: fatigue behaviour of shot peened and polished low alloy steels). Univeristy of Zilina, Slovakia, 2014.
- Shaker Meguid (Full Professor, topic: FE and multiscale simulations), University of Toronto, 2013.
- Bohuslav Masa (PhD student, topic: cold spray coating), University of Brno, Czech Republic, 2013.
- Libor Trsko (PhD student, topic: severe shot peening). Univeristy of Zilina, Slovakia, 2013.
- Katarina Mikova (PhD student, topic: severe shot peening). Univeristy of Zilina, Slovakia, 2012, 2013.
- Victor Llaneza Menéndez (PhD student, topic: residual stress measurements with the X-ray diffraction). Univeristy of Oviedo, Spain, 2010.
- Inés Fernandez Pariente (Associate Professor, topic: shot peening and severe shot peening for improving the fatigue behaviour of metals), Univeristy of Oviedo, Spain, 2007, 2008, 2009.
- Mahnaz Zakeri (PhD student, topic: photoelasticity for fracture mechanics analysis under mixed mode conditions), Iranian University of Science and Technology, Theran, Iran, 2006.

M. Invited member in PhD final defences in foreign Institutions

- Mahnaz Zakeri "On the presence of T-Stress in mode II crack problems: numerical analysis and experimental investigation", Supervisor Prof. M.R. Ayatollahi, Iranian University of Science and Technology, Teheran August 31st, 2008.
- Hong Yan Miao "Numerical and Theoretical study of shot peening and stress peen forming process", Supervisor Prof. M. Lévesque, Ecole Polytechnique de Montréal, Montréal June 1th, 2010.
- Pedro Perez Sanjurjo "Influencia del proceso de shot peening en el comportamiento a fatiga de un acero inoxidable duplex", Supervisor: M.C. Rodriguez Gonzalez, I. Penuelas Sanchez, University of Oviedo, Gijon, July 21th 2012.

L. Invited seminars in foreign Institutions

- "Numerical and Experimental Analysis of Internal Cracks in Railway Wheels", Iranian University of Science and Technology, Teheran August 30th, 2008.
- "Shot peening for obtaining nano structured metal surfaces: a predictive model and experimental results", Ecole Polytechnique Montréal, Montréal, May 31th 2010.
- "Surface coating by cold spray: properties, problems and perspectives", University of Oviedo, Spain, 4 March, 2015.

M. Other appointments

- Appointed Technical Consultant for the Courts of Milano, Piacenza and Pavia in different legal penal actions.
- Appointed Technical Consultant for the Chamber of Commerce of Milano in different legal civil actions.

List of Publications

A. Authored books

1. P. Davoli, L. Vergani, S. Beretta, M. Guagliano, S. Baragetti (2007). *Costruzione di Macchine 1*. p. 1-280, MILANO:McGraw-Hill, ISBN: 8838663807.
2. O. Bokuvka, G. Nicoletto, M. Guagliano, L. Kunz, P. Palcek, F. Novy, M. Chapulova (2014). *Fatigue of Materials at Low and High Frequency Loads*. Published by University of Zilina (SK). ISBN: 9788055408576.

B. Book Chapters

1. M. Guagliano (2009). Application of shot peening in the automotive industry . In: *SHOT PEENING --- A Dynamic Application and Its Future (2nd Edition)* (Edited by S. Baker). MFN Publishing House. ISBN: 9783033020269, pp. 220-239.
2. M. Guagliano, L. Vergani (2010). Fracture Mechanics approach and Propagation of Cracks. In: N. Bachschmid, P. Pennacchi, E. Tanzi "Cracked Rotors- A Survey on Static and Dynamic Behaviour Including Modelling and Diagnosis", Springer, Berlin. ISBN: 9783642014840.
3. M. Guagliano (2012). Severe shot Peening to obtain nanostructured surfaces: processes, properties and applications. In: *SHOT PEENING --- A Dynamic Application and Its Future (3rd Edition)* (Edited by S. Baker). MFN Publishing House. ISBN: 9783033035911, pp. 220-243.

C. Edited books

1. M. Guagliano, M.H. Aliabadi (Eds.) (2004) *Fracture and Damage of Composites*. Series: *Advances in Fracture Mechanics*, Vol. 8. WIT Press.

D. Papers published in Peer-Reviewed Journals

1. S.M. Hassani-Gangaraj, K.S. Cho, H.-J.L. Voigt, M. Guagliano, C. Schuh (2015). Experimental assessment and simulation of surface nanocrystallization by severe shot peening, *ACTA MATERIALIA*, 97, pp. 105-115, ISSN: 1359-6454.
2. S. Bagherifard, R. Ghelichi, A. Khademhosseini, M. Guagliano (2014). Cell response to nanocrystallized metallic substrates obtained through severe plastic deformation. *ACS APPLIED MATERIALS AND INTERFACES*, in press. DOI: 10.1021/am501119k.
3. A. Moridi, S. M. Hassani-Gangaraj, M. Guagliano, M. Dao (2014). Cold spray coating: review of material systems and future perspectives. *SURFACE ENGINEERING*, in press. DOI: <http://dx.doi.org/10.1179/1743294414Y.0000000270>.
4. L. Trško, O. Bokůvka, F. Nový, M. Guagliano (2014). Effect of severe shot peening on ultra-high-cycle fatigue of a low-alloy steel. *MATERIALS AND DESIGN*, 57, pp. 103-113. ISSN: 0264-1275.
5. S.M.H. Gangaraj, M. Guagliano, G.H. Farrahi (2014). An approach to relate shot peening finite element simulation to the actual coverage. *SURFACE AND COATINGS TECHNOLOGY*, 243, pp. 39-45. ISSN: 0257-8972.

6. S. Bagherifard, R. Ghelichi, M. Guagliano (2014). Mesh sensitivity assessment of shot peening finite element simulation aimed at surface grain refinement SURFACE AND COATINGS TECHNOLOGY, 243, pp. 58-64. ISSN: 0257-8972.
7. S.M. Hassani-Gangaraj, A. Moridi, M. Guagliano, A. Ghidini (2014). Nitriding duration reduction without sacrificing mechanical characteristics and fatigue behavior: The beneficial effect of surface nano-crystallization by prior severe shot peening. MATERIALS AND DESIGN, 55, pp. 492-498. ISSN: 0264-1275.
8. S. Bagherifard, M. Guagliano (2014) Application of different fatigue strength criteria on shot peened notched parts. Part 2: Nominal and local stress approaches. APPLIED SURFACE SCIENCE, 289, pp. 173-179. ISSN: 0169-4332
9. S. Bagherifard, C. Colombo, M. Guagliano (2014). Application of different fatigue strength criteria to shot peened notched components. Part 1: Fracture Mechanics based approaches. APPLIED SURFACE SCIENCE, 289, pp. 180-187. ISSN: 0169-4332
10. G. Shayegan, H. Mahmoudi, R. Ghelichi, J. Villafuerte, J. Wang, M. Guagliano, H. Jahed (2014). Residual stress induced by cold spray coating of magnesium AZ31B extrusion. MATERIALS AND DESIGN, 60, pp. 72-84. ISSN: 0264-1275.
11. R. Ghelichi, S. Bagherifard, D. Macdonald, I. Fernandez-Pariente, B. Jodoin, M. Guagliano (2014) Experimental and numerical study of residual stress evolution in cold spray coating. APPLIED SURFACE SCIENCE, 289, pp. 26-33. ISSN: 0169-4332
12. S.M. Hassani-Gangaraj, A. Moridi, M. Guagliano, A. Ghidini, M. Boniardi (2014). The effect of nitriding, severe shot peening and their combination on the fatigue behavior and micro-structure of a low-alloy steel. INTERNATIONAL JOURNAL OF FATIGUE, 62, pp. 67-76. ISSN: 0142-1123.
13. D. Crivelli, M. Guagliano, A. Monici (2014). Development of an artificial neural network processing technique for the analysis of damage evolution in pultruded composites with acoustic emission. COMPOSITES PART B: ENGINEERING, 56, pp. 948-959.
14. R. Ghelichi, S. Bagherifard, D. Mac Donald, M. Brochu, H. Jahed, B. Jodoin, M. Guagliano (2013). Fatigue strength of Al alloy cold sprayed with nanocrystalline powders. INTERNATIONAL JOURNAL OF FATIGUE. Article in Press.
15. S. Bagherifard, I. Fernandez-Pariente, R. Ghelichi, M. Guagliano (2013). Effect of severe shot peening on microstructure and fatigue strength of cast iron. INTERNATIONAL JOURNAL OF FATIGUE. Article in Press.
16. S. Bagherifard, I. Fernández Pariente, M. Guagliano (2013). Failure analysis of a large ball valve for pipe-lines. ENGINEERING FAILURE ANALYSIS, 32, pp. 167-177.
17. Fernández-Pariente, S. Bagherifard, M. Guagliano, R. Ghelichi (2013) Fatigue behavior of nitrided and shot peened steel with artificial small surface defects. ENGINEERING FRACTURE MECHANICS, 103, pp. 2-9.
18. Moridi, S.M. Hassani-Gangaraj, M. Guagliano (2013). A hybrid approach to determine critical and erosion velocities in the cold spray process. APPLIED SURFACE SCIENCE, vol. 273, p. 617-624, ISSN: 0169-4332.

19. K. Miková, S. Bagherifard, O. Bokuvka, M. Guagliano, L. Trško (2013). Fatigue behavior of X70 microalloyed steel after severe shot peening. *INTERNATIONAL JOURNAL OF FATIGUE*, 55, p. 33-42, ISSN: 0142-1123
20. S. Bagherifard, I. Fernandez-Pariente, R. Ghelichi, M. Guagliano (2013). Fatigue behavior of notched steel specimens with nanocrystallized surface obtained by severe shot peening. *MATERIALS & DESIGN*, vol. 45, p. 497-503, ISSN: 0264-1275.
21. D. Crivelli, M. Guagliano, A. Monici (2012). Damage Assessment in Pultruded GFRP with AE. *STRUCTURAL DURABILITY & HEALTH MONITORING*, vol. 8, p. 177-191, ISSN: 1930-2983.
22. R. Ghelichi, D. MacDonald, S. Bagherifard, H. Jahed, M. Guagliano, B. Jodoin (2012). Microstructure and fatigue behavior of cold spray coated Al5052. *ACTA MATERIALIA*, vol. 60, p. 6555-6561, ISSN: 1359-6454.
23. Sara Bagherifard, Ramin Ghelichi, Mario Guagliano (2012). Numerical and experimental analysis of surface roughness generated by shot peening. *APPLIED SURFACE SCIENCE*, vol. 258, p. 6831-6840, ISSN: 0169-4332.
24. S. Bagherifard, R. Ghelichi, M. Guagliano (2012). On the shot peening surface coverage and its assessment by means of finite element simulation: A critical review and some original developments. *APPLIED SURFACE SCIENCE*, vol. 259, p. 186-194, ISSN: 0169-4332.
25. M. Zakeri, M. R. Ayatollahi, M. Guagliano (2011). A Photoelastic Study of T-stress in Centrally Cracked Brazilian Disc Specimen Under Mode II Loading. *STRAIN*, vol. 47, p. 268-274, ISSN: 1475-1305
26. R. Ghelichi, A. Bernasconi, M. Guagliano (2011). Geometrical optimization of notches under multi-axial fatigue loading. *INTERNATIONAL JOURNAL OF FATIGUE*, vol. 33, p. 985-991, ISSN: 0142-1123.
27. S.Rech, A. Trentin, S. Vezzu`, J.-G. Legoux, E. Irissou, M. Guagliano (2011). Influence of Pre-Heated Al 6061 Substrate Temperature on the Residual Stresses of Multipass Al Coatings Deposited by Cold Spray. *JOURNAL OF THERMAL SPRAY TECHNOLOGY*, vol. 20, p. 243-251, ISSN: 1059-9630.
28. R. Ghelichi, S. Bagherifard, M. Guagliano, M. Verani (2011). Numerical simulation of cold spray coating. *SURFACE & COATINGS TECHNOLOGY*, vol. 205, p. 5294-5301, ISSN: 0257-8972.
29. S. Bagherifard, R. Ghelichi, M. Guagliano (2010). A numerical model of severe shot peening (SSP) to predict the generation of a nanostructured surface layer of material. *SURFACE & COATINGS TECHNOLOGY*, vol. 204, p. 4081-4090, ISSN: 0257-8972.
30. M. Guagliano, S. Bagherifard, I. Fernandez Parienete, R. Ghelichi (2010). Assessment of Severe Shot Peening on Surface Characteristics of Al Alloys. *STRUCTURAL DURABILITY & HEALTH MONITORING*, vol. 6, p. 31-42, ISSN: 1930-2983.
31. R. Ghelichi, S. Bagherifard, I. Fernandez Parienete, M. Guagliano, S. Vezzù (2010). Experimental Study of Shot Peening Followed by Cold Spray Coating on Residual Stresses of the Treated Parts. *STRUCTURAL DURABILITY & HEALTH MONITORING*, vol. 6, p. 17-29, ISSN: 1930-2983.

32. Colombo, M. Guagliano (2010). Photoelastic analysis of cylindrical elements with internal cracks under hertz contact loading. *FATIGUE & FRACTURE OF ENGINEERING MATERIALS & STRUCTURES*, vol. 33, p. 885-896, ISSN: 8756-758X.
33. M. Pau, B. Leban, M. Guagliano (2010). Propagation of Sub-surface Cracks in Railway Wheels for Wear-induced Conformal Contacts. *JOURNAL OF MECHANICAL SYSTEMS FOR TRANSPORTATION AND LOGISTICS*, vol. 3, p. 3-10, ISSN: 1882-1782
34. M. Annoni, F. Arleo, M. Guagliano (2010). Water Jet Peening of a low-alloy steel by means of a standard water jet cutting machine under different process conditions. *STRUCTURAL DURABILITY & HEALTH MONITORING*, vol. 6, p. 1-16, ISSN: 1930-2983
35. R.Ghelichi, M.Guagliano (2009). Coating by cold spray process: a state of the art. *FRATTURA E INTEGRITÀ STRUTTURALE*, vol. 8, p. 30-44, ISSN: 1971-8993
36. I. Fernández Pariente, M. Guagliano (2009). Contact fatigue damage analysis of shot peened gears by means of X-ray measurements. *ENGINEERING FAILURE ANALYSIS*, vol. 16, p. 964-971, ISSN: 1350-6307
37. S. Bagherifard, M. Guagliano (2009). Effects of surface nanocrystallization induced by shot peening on material properties : a Review. *FRATTURA E INTEGRITÀ STRUTTURALE*, vol. 7, p. 3-16, ISSN: 1971-899
38. C. Colombo, M. Guagliano, L. Vergani (2009). High-cycle fatigue strength of a pultruded composite material. *FRATTURA E INTEGRITÀ STRUTTURALE*, vol. 7, p. 65-72, ISSN: 1971-8993
39. I. Fernandez Pariente, M. Guagliano (2009). Influence of Shot Peening Process on contact Fatigue Behavior of Gears. *MATERIALS AND MANUFACTURING PROCESSES*, vol. 24, p. 1436-1441, ISSN: 1042-6914
40. S. Bagherifard, M. Guagliano (2009). Review of shot peening processes to obtain nanocrystalline surfaces in metal alloys. *SURFACE ENGINEERING*, vol. 25, p. 3-14, ISSN: 0267-0844
41. C. Colombo, M. Guagliano, L. Vergani (2008). A numerical analysis of flat internal cracks under mixed mode loading. *THEORETICAL AND APPLIED FRACTURE MECHANICS*, vol. 50, p. 66-73.
42. I. Fernandez Pariente, M. Guagliano (2008). About the role of residual stresses and surface work hardening on fatigue the ΔK_{th} of a low-alloy nitrided and shot peened steel. *SURFACE & COATINGS TECHNOLOGY*, vol. 202, p. 3072-3080, ISSN: 0257-8972.
43. M. Guagliano, M. Pau (2008). An experimental-numerical approach for the analysis of internally cracked railway wheels. *WEAR*, vol. 265, p. 1387-1395, ISSN: 0043-1648.
44. I. Fernández Pariente, M. Guagliano (2008). Effect of shot peening on fatigue limit of nitrided low-alloy steels with small defects. *MATERIÁLOVÉ INŽINIERSTVO*, vol. 15, p. 22-26, ISSN: 1335-0803.
45. C. Colombo, M. Guagliano, L. Vergani (2008). Experimental Assessment of Stress Intensity Factors in Internal Cracks under Mixed-mode Loading. *STRUCTURAL DURABILITY & HEALTH MONITORING*, vol. 4, p. 67-75, ISSN: 1930-2983.
46. M. Guagliano, M. Sangirardi, L. Vergani (2008). Experimental analysis of surface cracks in rails under rolling contact loading. *WEAR*, vol. 265, p. 1380-1386, ISSN: 0043-1648.

47. M. Guagliano, L. Vergani, M. Vimercati (2008). Sub-surface crack propagation analysis in hypoid gears. *ENGINEERING FRACTURE MECHANICS*, vol. 75, p. 417-426, ISSN: 0013-7944.
48. I. Fernandez Pariente, M. Guagliano (2008). X-ray fractography of a diesel engine crankshaft. *FATIGUE & FRACTURE OF ENGINEERING MATERIALS & STRUCTURES*, vol. 31, p. 111-124, ISSN: 8756-758X.
49. M. Guagliano, M. Pau (2007). Analysis of internal cracks in railway wheels under experimentally determined pressure distributions. *TRIBOLOGY INTERNATIONAL*, vol. 40, p. 1147-1160, ISSN: 0301-679X.
50. M. Guagliano, L. Vergani, M. Vimercati (2006). Determination of stress intensity factors for three-dimensional subsurface cracks in hypoid gears. *ENGINEERING FRACTURE MECHANICS*, vol. 73, p. 1947-1958, ISSN: 0013-7944.
51. C. Colombo, M. Guagliano, L. Vergani (2006). Fatigue Crack Growth Behaviour of Nitrided and Shot Peened Specimens. *STRUCTURAL INTEGRITY & DURABILITY*, vol. 1(2005), p. 253-265, ISSN: 1551-3750.
52. M. Guagliano, M. Sangirardi, L. Vergani (2006). Photoelastic methods to determine KI, KII and KIII of internal cracks subjected to mixed mode loading. *INTERNATIONAL JOURNAL OF FATIGUE*, vol. 28, p. 576-582, ISSN: 0142-1123.
53. G. Donzella, M. Guagliano, M. Pau (2006). Un approccio integrato per la valutazione del danneggiamento per contatto ciclico di ruote ferroviarie. *INGEGNERIA FERROVIARIA*, vol. 61, p. 11-21, ISSN: 0020-0956.
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