Stefano MARIANI.
Associate Professor of Structural Mechanics at the Department of Civil and Environmental Engineering, Politecnico di Milano.
Born in Monza (Milan-ITALY), on 23 August 1969.
June 1995. M.Sc. with Honours at the Politecnico di Milano in Civil (Structural) Engineering. Thesis: *Elasto-plastic fracture mechanics: geometric parameters and their use in the study of pressurized pipelines*.
February 1999. Ph.D. in Structural Engineering. Thesis: *Simulation of ductile fracture: material models, numerical aspects and parameter identification*.
December 1999- December 2001. Research Assistant at the Department of Structural Engineering, Politecnico di Milano.
March 2002. Appointed Assistant Professor at the Department of Structural Engineering, Politecnico di Milano.
February 2011. Appointed Associate Professor at the Department of Structural Engineering (now Department of Civil and Environmental Engineering), Politecnico di Milano.

AWARDS AND SCHOLARSHIPS.
Scholarship from Associazione *Carlo Maddalena* – Milano for young graduate students (1996).
Scholarship from *Fondazione Confalonieri* – Milano for young Ph.D. students (2000).
Young Researcher Funds for participation in the International Congresses:
• Fifth World Congress on Computational Mechanics (WCCM V), Vienna (Austria), 7-12 July 2002;
• 7th US National Congress on Computational Mechanics, Albuquerque (USA), 27-31 July 2003.
• 2004 MRS Fall Meeting, Warsaw (Poland), 6-10 September 2004.

RESEARCH ACTIVITIES ABROAD.
January-March 1997: Research Scholar at the Department of Solid Mechanics, Danish Technical University.
May-July 2007: Adjunct Professor at the Department of Engineering Science and Mechanics, Penn State University.
July-August 2009: Visiting Professor at Polytechnic Institute of New York University.

PUBLICATIONS.
(Co-)guest Editor of the special issues:

- Modeling, Testing and Reliability Issues in MEMS Engineering (2007, 2009, 2011, 2013, now topical collection) of Sensors
- Selected Papers from the International Electronic Conference on Sensors and Applications (since 2014) of Sensors
- State-of-the-Art Sensors Technology in Italy (2012, 2014, 2017) of Sensors
- Numerical Simulation of Discontinuities in Mechanics (2009) of Algorithms
- EUROSIME Thermal, Mechanical and MultiPhysics Simulation and Experiments in Microelectronics and Microsystems (2006) of Sensor Letters.

REVIEW ACTIVITIES.
Member of the Editorial Boards of:

- Advanced Engineering and Technology (http://www.consortiumpublisher.ca/jnb?jnb=Advanced%20Engineering%20and%20Technology)
- Algorithms (http://www.mdpi.com/journal/algorithms)
- Global Journals (https://globaljournals.org/)
- International Journal of Computer & Software Engineering (http://www.graphyonline.com/journal/journal_home.php?journalid=IJCSE)

- International Journal of Mechanical Engineering and Automation (http://www.ethanpublishing.com/index.php?m=content&c=index&a=lists&catid=83)
- International Journal on Advances in Systems and Measurements (http://www.iariajournals.org/systems_and_measurements/index.html)
- Inventions (http://www.mdpi.com/journal/inventions)
- Machines (http://www.mdpi.com/journal/machines)
- Micro and Nanosystems (https://benthamscience.com/journals/micro-and-nanosystems/)
- Micromachines (http://www.mdpi.com/journal/micromachines)
- New Horizons in Mechanical Engineering (http://www.isaacpub.org/AboutThisJournal.aspx?ids=32)
- Open Artificial Intelligence Journal (https://benthamopen.com/TOAIJ/home/)
- Open Cybernetics & Systemics Journal (https://benthamopen.com/TOCSJ/home/)
- Proceedings (http://www.mdpi.com/journal/proceedings)
- Sensors (http://www.mdpi.com/journal/sensors)

Referee for: MIUR-Italian Ministry for Education, University and Research; POR Campania FESR 2014/2020; Austrian Science Fund; French FUTURE project; ETH Zurich Research Grant Program; King Abdullah University of Science and Technology (KAUST) Competitive Research Grants; National Research Council of Romania; Qatar National Research Fund.

Reviewer for the following International Journals: Advanced Modeling and Simulation in Engineering Sciences; Advances in Engineering Software; Advances in Research; Aerospace Science and Technology; AIAA Journal; Algorithms; Applied Mathematical Modelling; Applied Ocean Research; Applied Sciences; Archives of Mechanics; ASCE Journal of Engineering Mechanics; ASCE Journal of Structural Engineering; Asian Journal of Control; Asian Journal of Mathematics and Computer Research; British Journal of Mathematics & Computer Science; Composites Part A: Applied Science and Manufacturing; Composites Part B: Engineering; Composite Structures; Computational Materials Science; Computer Methods in Applied Mechanics and Engineering; Computers and Concrete; Computers & Structures; Control Engineering Practice; Current Nanomaterials; Digital Signal Processing; Electronics; Engineering Computations; Engineering Fracture Mechanics; Engineering Structures; Engineering with Computers; European Journal of Mechanics A/Solids; Finite Elements in Analysis and Design; Frontiers in Materials; Frontiers in Mechanical Engineering; IEEE Journal of Microelectromechanical Systems; IEEE Sensors Journal; IEEE Transactions on Signal Processing; IETE Journal of Research; Industrial Engineering; Indian Journal of Engineering & Materials Sciences; International Journal of Computer Science and Application; International Journal of Energy Research; International Journal of Engineering, Science and Technology; International Journal of Fracture; International Journal of Information and Computer Science; International Journal of Mechanical Engineering and Applications; International Journal of Non-Linear Mechanics; International Journal of Solids and Structures; International Journal on Advances in Systems and Measurements; Inverse Problems in Science & Engineering; Iranian Journal of Science and Technology, Transactions of Civil Engineering; Journal of Electrical Engineering & Technology; Journal of Mechanical Engineering Science; Journal of Mechanics of Materials and Structures; Journal of Micromechanics and Microengineering; Journal of Nanoscience and Nanotechnology; Journal of Sensors; Journal of Solid Mechanics; Journal of Sound and Vibration; Journal of Structural Control; Journal of The Franklin Institute; Journal of Vibration and Control; Journal of Zhejiang University-Science A (Applied Physics & Engineering); Journal of Zhejiang University Science C (Computers & Electronics); Materials; Materials & Design; Materials and Structures; Mathematical Methods in the Applied Sciences; Mathematical Problems in Engineering; Measurement Science and Technology; Meccanica; Mechanical Systems and Signal Processing; Mechanics of Materials; Mechanics Research Communications; Mechatronics; Metals; Micro and Nanosystems; Microelectronics Journal; Microelectronics Reliability; Micromachines; Multibody System Dynamics; Neural Computing and Applications; Nonlinear Dynamics; Open Transactions on Wireless Sensor Network; Progress in Aerospace Science; Remote Sensing; Sensors; Sensors & Actuators A

Physical; Smart Materials and Structures; Smart Structures and Systems; Solar Energy Materials & Solar Cells; Songklanakarin Journal of Science and Technology; Steel Research International; Structural Engineering and Mechanics; Structure and Infrastructure Engineering; Symmetry; Sustainability; The Open Artificial Intelligence Journal; Theoretical and Applied Fracture Mechanics; Thin Solid Films.

ORGANIZATION OF CONGRESSES.

- Member of the Organizing Committee of MACSI Workshop (MAthematics, Computing and Simulation for Industry) on "*Parameter identification in structural and materials engineering* ", Milan, 20-22 November 2002.
- Member of the Local Organizing Committee of the International Congress EuroSIME 2006 on "*Thermal, Mechanical and Multiphysics Simulation and Experiments in Micro-Electronics and Micro-Systems*", Como, 23-26 April 2006.
- Member of the Local Scientific Committee of the International Congress WCCM8, 8th *World Congress on Computational Mechanics*, Venice, 30 June-5 July 2008.

RESEARCH TOPICS.

1) *Ductile fracture.*
2) *Damage and fracture in quasi-brittle materials.*
3) *Parameter identification via Kalman filtering.*
4) *Reliability analysis of MEMS (Micro-Electro-Mechanical-Systems) subject to shocks.*
5) *Structural health monitoring through MEMS sensors.*

PUBLICATIONS.

1. A. Corigliano, S. Mariani. Un metodo semplificato per la simulazione di prove di frattura. *Rendiconti dell'Istituto Lombardo - Accademia di Scienze e Lettere*, 130, pp. 143-162, 1996.
2. A. Corigliano, S. Mariani. Modelli analitici per la descrizione di prove di frattura elastica-lineare. *XII Congresso Nazionale del Gruppo Italiano Frattura*, pp. 49-58, Parma, 12-13 Giugno 1996.
3. A. Corigliano, G. Maier, S. Mariani, S. Testolina. Simulation of ductile crack processes based on geometrical parameters. *Joint Conference of Italian Group of Computational Mechanics and Ibero-Latin American Association of Computational Methods in Engineering*, pp. 225-228, Padova, 25-27 Settembre 1996.
4. A. Corigliano, G. Maier, S. Mariani, S. Testolina. Simulation of ductile crack processes in pipelines based on geometrical parameters. *VII Congresso Nazionale Abagroup*, Segrate, 23-24 Settembre 1996.
5. A. Corigliano, G. Maier, S. Mariani. Analysis of ductile fracture in damaged pipelines by a geometric parameter method. *Engineering Structures*, **21**, pp.924-936, 1999.
6. A. Corigliano, G. Maier, S. Mariani. Numerical simulation of ductile crack processes based on geometrical parameters. *Complas 5, V International Conference on Computational Plasticity*, pp. 1033-1038, Barcelona (Spagna), 17-20 marzo 1997.
7. U. Perego, G. Maier, A. Corigliano, S. Mariani. ABAQUS applications for research at the Department of Structural Engineering of the Politecnico of Milan. *Abaqus Users' Conference*, pp. 57-72, Milano, 4-6 Giugno 1997.
8. G. Maier, V. Carvelli, A. Corigliano, S. Mariani. Fracture and collapse analyses of damaged pressurized pipelines. *VII Workshop on Fracture Mechanics approach to corrosion assisted Cracking*, S. Donato Milanese, 4-5 Settembre 1998.
9. A. Corigliano, S. Mariani. Constitutive models for metals containing non-spherical voids. *IV World Congress on Computational Mechanics*, Buenos Aires (Argentina), 29 Giugno-2 Luglio 1998.
10. A. Corigliano, G. Maier, S. Mariani. A comparison of geometrical parameters and Gurson's model approaches to simulations of ductile fracture in pipelines. *ECF12, 12th European Conference on Fracture*, pp. 927-932, Sheffield (UK), 14-18 Settembre 1998 e *Abaqus Users' Group Italia, 9th National Congress*, Milano, 1-2 Ottobre 1998.
11. S. Mariani. An anisotropic constitutive model for void-cointaining ductile solids. *XIV Congresso Nazionale del Gruppo Italiano Frattura*, pp. 331-338, Trento, 27-28 Maggio 1998.
12. S. Mariani, A. Corigliano. Effective properties of non-linear orthotropic porous-ductile materials. *ICCM12, 12th International Conference on Composite Materials*, Paris (Francia), 5-9 Luglio 1999.
13. A. Corigliano, S. Mariani. Parameter identification of interface models for the simulation of debonding in composites. *ECCM'99, European Congress on Computational Mechanics*, Munich (Germania), 31 Agosto-3 Settembre 1999.
14. S. Mariani, A. Corigliano. Anisotropic behaviour of porous, ductile media. *International Journal of Solids and Structures*, **38**, pp. 2427-2451, 2001.
15. A. Corigliano, S. Mariani. Constitutive models for porous-ductile media with anisotropic microstructure. *XIV Congresso Nazionale AIMETA*, Como, 6-9 Ottobre 1999.
16. A. Corigliano, S. Mariani, B. Orsatti. Identification of Gurson-Tvergaard material model parameters via Kalman filtering Technique- I. Theory. *International Journal of Fracture*, **104**, pp. 347-371, 2000.
17. A. Corigliano, S. Mariani. Delamination growth in layered composites: numerical modeling and parameter identification. *IGF 2000, XV Congresso Nazionale del Gruppo Italiano Frattura*, Bari , 3-5 Maggio 2000.

18. A. Ghisi, G. Maier, S. Mariani. Temperature-dependent fracture properties of a Ti-5Al-2.5Sn ELI alloy. *IGF 2000, XV Congresso Nazionale del Gruppo Italiano Frattura,* Bari, 3-5 Maggio 2000.
19. A. Corigliano, S. Mariani. Parameter identification issues in FE simulation of composite delamination. *4th EUROMECH, Solid Mechanics Conference,* Metz (Francia), 26-30 Giugno 2000.
20. S. Mariani, A. Corigliano. Micromechanical modeling of ductile tearing phenomena. *ECF13, 13th European Conference on Fracture*, San Sebastian (Spagna), 6-9 Settembre 2000.
21. S. Mariani, A. Corigliano. Numerical simulation of ductile fracture phenomena: model calibration. *ECCOMAS 2000, European Congress on Computational Methods in Applied Sciences and Engineering,* Barcelona (Spagna), 11-14 Settembre 2000.
22. A. Corigliano, S. Mariani. Parameter identification of a time-dependent elastic-damage interface model for the simulation of debonding in composites. *Composites Science & Technology,* **61**, pp. 191-203, 2001.
23. A. Corigliano, S. Mariani. Simulation of damage in composites by means of interface models: parameter identification. *Composites Science & Technology,* **61**, pp. 2299-2315, 2001.
24. R. Giampieretti, C.G. Guida, A. Corigliano, S. Mariani, A. Catenacci. Cyclic bending tests on fibreglass, high strength, structural composites for electrical transmission lines. *FRC2000-Composites for the Millennium, 8th International Conference on Fibre Reinforced Composites,* Newcastle (UK), 13-15 Settembre 2000.
25. A. Corigliano, S. Mariani. Identification of a constitutive model for the simulation of time-dependent interlaminar debonding processes in composites. *Computer Methods in Applied Mechanics and Engineering*, **191**, pp. 1861-1894, 2002.
26. S. Mariani, U. Perego. A PU-FE approach to quasi-brittle fracture. *XV Congresso Nazionale AIMETA*, Taormina, 26-29 Settembre 2001.
27. A. Corigliano, S. Mariani. Parameter identification of interface models for delamination analysis in the presence of dynamic loading. *Third Joint Conference of Italian Group of Computational Mechanics and Ibero-Latin American Association of Computational Methods in Engineering,* Giulianova, 24-26 Giugno 2002.
28. A. Corigliano, S. Mariani, A. Pandolfi. Rate-dependent interface models and dynamic delamination processes. *Third Joint Conference of Italian Group of Computational Mechanics and Ibero-Latin American Association of Computational Methods in Engineering*, Giulianova, 24-26 Giugno 2002.
29. C. Comi, S. Mariani, U. Perego. On the transition from continuum nonlocal damage to quasi-brittle discrete crack models. *Third Joint Conference of Italian Group of Computational Mechanics and Ibero-Latin American Association of Computational Methods in Engineering,* Giulianova, 24-26 Giugno 2002.
30. C. Comi, S. Mariani, U. Perego. From localized damage to discrete cohesive crack propagation in nonlocal continua. *Fifth World Congress on Computational Mechanics (WCCM V),* Vienna (Austria), 7-12 Luglio 2002, ISBN 3-9501554-0-6.
31. A. Corigliano, S. Mariani, A. Pandolfi. Numerical modeling of rate-dependent debonding processes in composites. *Composite Structures*, **61**, pp. 39-50, 2003.
32. S. Mariani, U. Perego. Extended finite element method for quasi-brittle fracture. *International Journal for Numerical Methods in Engineering*, **58**, pp. 103-126, 2003.
33. A. Corigliano, S. Mariani. Calibration of constitutive models for composite delamination: a Kalman filter approach. *MACSI-net Workshop on Parameter identification in structural and materials engineering*, Milano, 20-22 November 2002.
34. A. Corigliano, S. Mariani. The Extended Kalman Filter for model identification in impact dynamics. *Computational Plasticity VII. Fundamentals and Applications*, Barcelona (Spagna), 7-10 Aprile 2003.

35. S. Mariani, C. Comi , U. Perego. Cohesive crack propagation analysis in damaging nonlocal continua. *7th US National Congress on Computational Mechanics,* Albuquerque (USA), 27-31 Luglio 2003.
36. C. Comi, S. Mariani, U. Perego. Un approccio integrato continuo-discreto per l'analisi di strutture quasi-fragili. *XVI Congresso Nazionale AIMETA,* Ferrara, 9-12 Settembre 2003.
37. A. Corigliano, S. Mariani. Parameter identification of nonlinear interface models for dynamic composite delamination. *XVI Congresso Nazionale AIMETA,* Ferrara, 9-12 Settembre 2003.
38. A. Corigliano, S. Mariani, A. Pandolfi. Time dependent fracture processes in dynamic delamination of composites. *XVI Congresso Nazionale AIMETA,* Ferrara, 9-12 Settembre 2003.
39. A. Corigliano, S. Mariani. Parameter identification in explicit structural dynamics: performance of the extended Kalman filter. *Computer Methods in Applied Mechanics and Engineering,* **193**, pp. 3807-3835, 2004.
40. A. Corigliano, S. Mariani, A. Pandolfi. Rate dependency in dynamic delamination of composites. *Advances in the statics and dynamics of delamination,* Cachan (Francia), 15-17 Settembre 2003.
41. A. Corigliano, S. Mariani, A. Pandolfi. Numerical analysis of rate-dependent dynamic composite delamination. *Composites Science and Technology,* **66**, pp. 766-775, 2006.
42. A. Corigliano, A. Ghisi, S. Mariani. Parameter identification in nonlinear structural dynamics by extended Kalman filter: stability and accuracy issues. *XV Convegno Italiano di Meccanica Computazionale*, Genova, 21-23 Giugno 2004.
43. A. Corigliano, A. Ghisi, S. Mariani. State and parameter identification in nonlinear structural dynamics: an unscented Kalman filter approach. *XV Convegno Italiano di Meccanica Computazionale*, Genova, 21-23 Giugno 2004.
44. C. Comi, S. Mariani, M. Negri, U. Perego. Una formulazione variazionale per la frattura coesiva in una barra in trazione. *XV Convegno Italiano di Meccanica Computazionale*, Genova, 21-23 Giugno 2004.
45. C. Comi, S. Mariani, U. Perego. An extended finite element strategy for the analysis of crack growth in damaging concrete structures. *ECCOMAS 2004, 4th European Congress on Computational Methods in Applied Sciences and Engineering*, Jyväskylä (Finlandia), 24-28 Luglio 2004.
46. S. Mariani, A. Corigliano. Impact induced composite delamination: state and parameter identification via joint and dual extended Kalman filters. *Computer Methods in Applied Mechanics and Engineering,* **194**, pp. 5242-5272, 2005.
47. S. Mariani, A. Pandolfi, R. Pavani. Time multiscale analysis of dynamic delamination. *E-MRS 2004 Fall Meeting*, Warsaw (Polonia), 6-10 Settembre 2004.
48. S. Mariani, A. Pandolfi, R. Pavani. Coupled space-time multiscale simulations of dynamic delamination tests. *Materials Science*, **23**, pp. 509-519, 2005.
49. U. Perego, S. Mariani, C. Comi. A continuous-discontinuous approach to numerical modelling of concrete cracking. *EUROMECH Colloquium 460 on Numerical Modelling of Concrete Cracking*, Innsbruck (Austria), 21-23 Febbraio 2005.
50. L. Andena, A. Corigliano, R. Frassine, S. Mariani**.** Mixed-mode crack growth in toughened PMMA. *11th International Congress on Fracture*, Torino, 20-25 Marzo 2005 e *XVII Congresso Nazionale del Gruppo Italiano Frattura,* Bologna, 16-18 Giugno 2004.
51. A. Corigliano, S. Mariani. Identification of laminate mechanical properties via extended Kalman filter. *11th International Congress on Fracture*, Torino, 20-25 Marzo 2005.
52. C. Comi, S. Mariani, U. Perego. Cohesive crack propagation in damaging concrete structures discretized by extended finite elements. *11th International Congress on Fracture*, Torino, 20-25 Marzo 2005.
53. C. Comi, S. Mariani, M. Negri, U. Perego. A variational approach to cohesive-damaging crack propagation in a bar. *11th International Congress on Fracture*, Torino, 20-25 Marzo 2005.

54. A. Corigliano, A. Ghisi, S. Mariani. Parameter identification of nonlinear constitutive laws by an unscented Kalman filter. *COMPLAS 2005, VIII International Conference on Computational Plasticity. Fundamentals and Applications*, Barcelona (Spagna), 5-8 Settembre 2005.
55. C. Comi, S. Mariani. Extended finite elements for fracture analysis of functionally graded materials. *COMPLAS 2005, VIII International Conference on Computational Plasticity. Fundamentals and Applications*, Barcelona (Spagna), 5-8 Settembre 2005.
56. S. Mariani, A. Corigliano, A. Ghisi. Calibration of composite constitutive laws by a sigma-point Kalman filter. *XVII Congresso Nazionale AIMETA*, Firenze, 11-15 Settembre 2005.
57. S. Mariani, A. Pandolfi, R. Pavani. Space-time multiscale FE simulations of dynamic composite delamination. *XVII Congresso Nazionale AIMETA*, Firenze, 11-15 Settembre 2005.
58. C. Comi, S. Mariani. Numerical analysis of cohesive crack propagation in functionally graded materials. *XVII Congresso Nazionale AIMETA*, Firenze, 11-15 Settembre 2005.
59. S. Mariani, A. Ghisi. Unscented Kalman filtering for nonlinear structural dynamics. *Nonlinear Dynamics*, **49**, pp. 131-150, 2007.
60. A. Ghisi, S. Mariani. Mechanical characterization of Ti-5Al-2.5Sn ELI alloy at cryogenic and room temperatures. *International Journal of Fracture*, **146**, pp. 61-77, 2007.
61. C. Comi, S. Mariani, U. Perego. An extended FE strategy for transition from continuum damage to mode I cohesive crack propagation. *International Journal for Numerical and Analytical Methods in Geomechanics*, **31**, pp. 213-238, 2007.
62. C. Comi, S. Mariani, M. Negri, U. Perego. A one-dimensional variational formulation for quasi-brittle fracture. *Journal of Mechanics of Materials and Structures*, **1**, pp. 1323-1343, 2006.
63. U. Perego, C. Comi, S. Mariani. An adaptive approach to the analysis of damage growth and crack propagation in concrete. *Challenges in Computational Mechanics*, Cachan (Francia), 10-12 Maggio 2006.
64. A. Corigliano, A. Ghisi, S. Mariani. Impact induced composite delamination: state and parameter identification via unscented Kalman filter. *ECF16, 16th European Conference on Fracture*, Alexandroupolis (Grecia), 3-7 Luglio 2006.
65. C. Comi, S. Mariani. Extended FE simulations of crack growth in layered and functionally graded materials. *ECF16, 16th European Conference on Fracture*, Alexandroupolis (Grecia), 3-7 Luglio 2006.
66. C. Comi, S. Mariani. Extended finite element simulation of quasi-brittle fracture in functionally graded materials. *Computer Methods in Applied Mechanics and Engineering*, **196**, pp. 4013-4026, 2007.
67. A. Ghisi, F. Fachin, S. Mariani, A. Corigliano, S. Zerbini. Multi-Scale Modeling of Shock-Induced Failure of Polysilicon MEMS. *EuroSime 2007, Thermal, Mechanical and Multiphysics Simulation and Experiments in Micro-Electronics and Micro-Systems*, London (UK), 16-18 Aprile 2007.
68. A. Ghisi, F. Cacchione, S. Mariani, A. Corigliano. A decoupled three-scale approach to MEMS failure. *XIX Congresso Nazionale del Gruppo Italiano Frattura*, pp. 275-282, Milano, 2-4 Luglio 2007.
69. F. Cacchione, A. Ghisi, S. Mariani, A. Corigliano, S. Zerbini. Drop test modelling of packaged MEMS by a simplified multi-scale approach. *9th US National Congress on Computational Mechanics*, San Francisco (USA), 23-36 Luglio 2007.
70. A. Ghisi, F. Fachin, S. Mariani, A. Corigliano, S. Zerbini. Multi-scale analysis of polysilicon MEMS subject to drop impacts. (Key-note presentation) *1st International Congress on Microreliability and Nanoreliability in Key Technology Applications*, Berlino (Germania), 2-5 Settembre 2007.
71. S. Mariani, A. Ghisi, A. Corigliano, S. Zerbini. Multi-scale analysis of MEMS sensors subject to drop impacts. *Sensors*, **7**, pp. 1817-1833, 2007.

72. S. Mariani, A. Ghisi. Constrained Kalman filtering for nonlinear structural dynamics. *XVIII Congresso Nazionale AIMETA*, Brescia, 11-14 Settembre 2007.
73. A. Ghisi, S. Mariani. MPI-based architecture for unscented Kalman filtering. *XVIII Congresso Nazionale AIMETA*, Brescia, 11-14 Settembre 2007.
74. F. Cacchione, F. Fachin, A. Ghisi, S. Mariani, A. Corigliano, S. Zerbini. Reliability analysis of MEMS sensors subject to drop impacts. *XVIII Congresso Nazionale AIMETA*, Brescia, 11-14 Settembre 2007.
75. S. Mariani, A. Ghisi, F. Fachin, F. Cacchione, A. Corigliano, S. Zerbini. A three-scale FE approach to reliability analysis of MEMS sensors subject to impacts. *Meccanica*, **43**, pp. 469-483, 2008.
76. A. Ghisi, F. Fachin, S. Mariani, S. Zerbini. Multi-scale analysis of polysilicon MEMS sensors subject to accidental drops: Effect of packaging. *Microelectronics Reliability*, **49**, pp. 340-349, 2009.
77. A. Ghisi, S. Kalicinski, S. Mariani, I. De Wolf, A. Corigliano. Numerical-experimental comparison of low-*g* and high-*g* tests on a polysilicon MEMS accelerometer. *EuroSime 2008, Thermal, Mechanical and Multiphysics Simulation and Experiments in Micro-Electronics and Micro-Systems*, Freiburg-im-Breisgau (Germania), 21-23 Aprile 2008.
78. S. Mariani, F. Fachin, A. Ghisi, F. Cacchione. Failure analysis of polysilicon MEMS allowing for randomness at the micro-scale. *8th World Congress on Computational Mechanics (WCCM8) and 5th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venezia, 30 Giugno-4 Luglio 2008.
79. A. Ghisi, S. Kalicinski, S. Mariani, I. De Wolf, A. Corigliano. Polysilicon MEMS accelerometers exposed to shocks: numerical-experimental investigation. *Journal of Micromechanics and Microengineering*, **19**, 035023, 2009.
80. S. Mariani. Failure of layered composites subject to impacts: constitutive modeling and parameter identification issues. In: *Strength of Materials*, G. Mendes and B. Lago Editors, Nova Science Publishers, New York (USA), pp. 97-131, 2009.
81. S. Mariani, A. Ghisi, A. Corigliano, S. Zerbini. Failure analysis of polysilicon MEMS sensors exposed to shocks. *EUROSENSORS 2008*, Dresden (Germania), 7-10 Settembre 2008.
82. S. Mariani, A. Ghisi, A. Corigliano, S. Zerbini. Modeling impact-induced failure of polysilicon MEMS: a multi-scale approach. *Sensors*, **9**, pp. 556-567, 2009.
83. S. Mariani, R. Martini, A. Ghisi. A finite element flux-corrected transport method for wave propagation in heterogeneous solids. *Algorithms*, **2**, pp. 1-18, 2009.
84. G. Salerno, S. Mariani, A. Corigliano, L. Andena, F. Caimmi, R. Frassine. Impact-induced composite failure: an experimental-numerical investigation. *Composites2009*, Londra (UK), 1-3 Aprile 2009.
85. S. Mariani, A. Ghisi, R. Martini, A. Corigliano, B. Simoni. A multiscale-stochastic finite element approach to shock-induced polysilicon MEMS failure. *EuroSime 2009, Thermal, Mechanical and Multiphysics Simulation and Experiments in Micro-Electronics and Micro-Systems*, Delft (Olanda), 27-29 Aprile 2009.
86. G. Salerno, S. Mariani, A. Corigliano, L. Andena, F. Caimmi, R. Frassine. Experimental-numerical investigation of impact-induced failure in layered composites. (Key-note presentation) *Computer Methods in Mechanics (CMM-2009)*, Zielona Góra (Polonia), 18–21 Maggio 2009.
87. A. Ghisi, S. Mariani, R. Martini, A. Corigliano. Multi-scale Monte Carlo simulation of micro-cracking in polysilicon MEMS. *10th US National Congress on Computational Mechanics*, Columbus (USA), 16-19 Luglio 2009.
88. C. Comi, S. Mariani, M. Negri, U. Perego. Step-by-step variational cohesive propagation in one dimension. *XIX Congresso Nazionale AIMETA*, Ancona, 14-17 Settembre 2009.
89. S. Mariani. Failure assessment of layered composites subject to impact loadings: a finite element, sigma-point Kalman filter approach. *Algorithms*, **2**, pp. 808-827, 2009.

90. G. Salerno, S. Mariani, A. Corigliano, L. Andena, F. Caimmi, R. Frassine. Experimental-numerical assessment of impact-induced damage in cross-ply laminates. In: *Computer Methods in Mechanics, ASM 1*, M. Kuczma, K. Wilmanski Editors, Springer-Verlag (Berlin Heidelberg), pp. 493–504, 2010.
91. S. Mariani, R. Martini, A. Ghisi, A. Corigliano, B. Simoni. Monte Carlo simulation of micro-cracking in polysilicon MEMS exposed to shocks. *International Journal of Fracture*, **167**, pp. 83-101, 2011.
92. S. Mariani, A. Ghisi, R. Martini, A. Corigliano, B. Simoni. Two-scale vs three-scale FE analyses of shock-induced failure in polysilicon MEMS. (Key-note presentation) *EuroSime 2010, Thermal, Mechanical and Multiphysics Simulation and Experiments in Micro-Electronics and Micro-Systems*, April 2010.
93. S. Mariani, A. Ghisi, R. Martini, A. Corigliano, B. Simoni. Analysis of shock-induced polysilicon MEMS failure: a multiscale finite element approach. *DTIP 2010, Symposium on Design, Test, Integration & Packaging of MEMS/MOEMS*, Seville (Spain), 5-7 May 2010.
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