CURRICULUM VITAE

Giuseppe Failla

Personal data

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Place of birth: Palermo
Date of birth: December 22th, 1971

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Academic career

2017: **University of Reggio Calabria, Italy**
On July 13th he is awarded the "National Scientific Qualification" (art.16 of the law 30 December 2010, n.240) as Full Professor in "Structural Mechanics".

2015: **University of Reggio Calabria, Italy**
On October 1st he becomes Associate Professor at the Department of Civil, Energy, Environmental and Materials Engineering, School of Engineering.

2004: **University of Reggio Calabria, Italy**
On December 21st he becomes Assistant Professor at the Department of Mechanics and Materials, School of Engineering.

Education

2002 – 2003: **University of Reggio Calabria, Italy**
From September 2002 to August 2003 he is awarded a Post-Doctoral Grant on "Identification of Structural Parameters", under the supervision of prof. A. Santini, at the Department of Mechanics and Materials, School of Engineering.

1998 – 2001: **University of Palermo, Italy**
In February 1998 he passes the exam to begin a three-year Ph.D. in "Mechanics of Structures", at the Department of Structural Engineering. From September 1999 to March 2000 he works as visiting scholar at Rice University, Houston, USA, under the supervision of prof. P.D. Spanos. He passes the final exam in February 2001, defending a thesis entitled: "Approximate Methods for Randomly-Excited Nonlinear Systems: A Volterra Series Method", under the supervision of prof. M. Di Paola and prof. P.D. Spanos.

1998: **Southampton, Great Britain**
From February to July 1998 he works at the British engineering firm "Gifford and Partners", specializing in bridge engineering, under the European Grant Program "Leonardo da Vinci".

1990 – 1997: **University of Palermo, Italy**
He graduates in Building Engineering, with a final mark of 110/110 cum laude.

1985 – 1990: **Liceo Classico Umberto I, Palermo**
He graduates in humanities with a final mark of 60/60.

Teaching activity

2015 – 2018: **University of Reggio Calabria, Italy**
He is in charge with the course in "Structural Mechanics" for B.Sc. students in Civil-Environmental Engineering, from 2015 to 2018 (12 ECTS).
He is in charge with the course in "Dynamics of Structures" for M.Sc. students in Civil Engineering, from 2016 to 2018 (3 ECTS).
He is in charge with the course in "Theory of Structures" for M.Sc. students in Civil Engineering, from 2017 to 2018 (6 ECTS).

2012 – 2016: **University of Reggio Calabria, Italy**
He is in charge with the course in "Theory of Structures" for M.Sc. students in Civil Engineering, (6 ECTS).

2003 – 2011: **University of Reggio Calabria, Italy**
He is in charge with the course in "Theory of Structures " for M.Sc. students in Civil Engineering from 2003 to 2008 (5 ECTS); for M.Sc. students Civil Engineering from 2008 to 2011 (6 ECTS).

2005 – 2009: **University of Reggio Calabria, Italy**
He is in charge with the course in "Structural Mechanics I" for B.Sc. students in Civil Engineering from 2005 to 2009 (5 ECTS); for B.Sc. students in Environmental Engineering from 2006 to 2008 (5 ECTS).

Teaching activity in foreign institutions

2002: **Rice University, Houston, USA**
He is in charge with the course in "Mechanics of Materials", for B.Sc. students in Civil Engineering.

Research activity

Research activity has been carried out in conjunction with Italian and foreign researchers. He has co-authored publications on international journals with referees, books and proceedings of international conferences. Here follows the list of publications with a brief summary of the research subjects.

Research subjects

Non-local elasticity theories with applications to nanotechnology
Non-local thermodynamics
Structural dynamics of systems with fractional viscoelastic behaviour
Structural dynamics of structures with damping devices

Static and dynamic analyses of beams with internal discontinuities
Structural dynamics of non-linear systems under stochastic excitations
Stochastic differential calculus methods
Dynamic analysis of land-based and offshore wind turbines
Spectral analysis of non-stationary processes via wavelets
Structural damage identification via wavelets
Modal analysis methods
Nonlinear analysis of masonry structures

Publications on international journals with referee

1. Burlon A., Failla G., Arena F. (2018). Coupled bending–torsional frequency response of beams with attachments: exact solutions including warping effects. *Acta Mechanica*, in press, doi: 10.1007/s00707-017-2078-y
2. Di Lorenzo S., Adam C., Burlon A., Failla G., Pirrotta A. (2018). Flexural vibrations of discontinuous layered elastically bonded beams. *Composites Part B: Engineering*, 135, 175-188, doi: 10.1016/j.compositesb.2017.09.059
3. Alotta G., Di Paola M., Failla G., Pinnola F.P. (2018). On the dynamics of non-local fractional viscoelastic beams under stochastic agencies. *Composites Part B: Engineering*, 137, 102-110, doi: 10.1016/j.compositesb.2017.10.014
4. Santangelo F., Failla, G., Arena F., Ruzzo C. (2018). On time-domain uncoupled analyses for offshore wind turbines under seismic loads. *Bulletin of Earthquake Engineering*, 16(2), 1007-1040, doi: 10.1007/s10518-017-0191-x
5. Burlon A., Failla G., Arena F. (2017). Exact stochastic analysis of coupled bending-torsion beams with in-span supports and masses. *Probabilistic Engineering Mechanics*, in press, doi: 10.1016/j.probengmech.2017.07.002
6. Cundari G.A., Milani G., Failla G. (2017). Seismic vulnerability evaluation of historical masonry churches: Proposal for a general and comprehensive numerical approach to cross-check results. *Engineering Failure Analysis*, 82, 208-228, doi: 10.1016/j.engfailanal.2017.08.013
7. Burlon A., Failla G., Arena F. (2017). Coupled bending and torsional free vibrations of beams with in-span supports and attached masses. *European Journal of Mechanics - A/Solids*, 66, 387-411, doi: 10.1016/j.euromechsol.2017.07.015
8. Adam C., Di Lorenzo S., Failla G., Pirrotta A. (2017). On the moving load problem in beam structures equipped with tuned mass dampers. *Meccanica*, 52(13), 3101-3115, doi: 10.1007/s11012-016-0599-4
9. Santangelo F., Failla G., Arena F., Ruzzo, C. (2017). Seismic uncoupled analyses for offshore wind turbines. *IET Renewable Power Generation*, 11(9), 1100-1112, doi: 10.1049/iet-rpg.2016.0954
10. Failla G. (2017). Stationary response of beams and frames with fractional dampers through exact frequency response functions. *Journal of Engineering Mechanics*, 143(5), D4016004, doi: 10.1061/(ASCE)EM.1943-7889.0001076
11. Alotta G., Failla G., Zingales M. (2017). Finite-element formulation of a nonlocal hereditary fractional-order Timoshenko beam. *Journal of Engineering Mechanics*, 143(5), D4015001, doi: 10.1061/(ASCE)EM.1943-7889.0001035
12. Di Lorenzo S., Di Paola M., Failla G., Pirrotta A. (2017). On the moving load problem in Euler–Bernoulli uniform beams with viscoelastic supports and joints. *Acta Mechanica*, 228(3), 805-821, doi: 10.1007/s00707-016-1739-6
13. Failla G., Pinnola F.P., Alotta G. (2017). Exact frequency response of bars with multiple dampers. *Acta Mechanica*, 228(1), 49-68, doi: 10.1007/s00707-016-1691-5
14. Yurchenko D., Burlon A., Di Paola M., Failla G., Pirrotta A. (2017). Approximate analytical mean-square response of an impacting stochastic system oscillator with fractional damping. *ASCE-ASME Journal of Risk and Uncertainty Part B*, 3(3), 030903. doi: 10.1115/1.4036701

15. Alotta G., Failla G., Pinnola F.P. (2017). Stochastic analysis of a nonlocal fractional viscoelastic bar forced by Gaussian white noise. *ASCE-ASME Journal of Risk and Uncertainty Part B*, 3(3), 030904, doi: 10.1115/1.4036702
16. Santangelo F., Failla G., Santini A., Arena F. (2016). Time-domain uncoupled analyses for seismic assessment of land-based wind turbines. *Engineering Structures*, 123, 275-299, doi: 10.1016/j.engstruct.2016.05.043
17. Burlon A., Failla G., Arena F. (2016). Exact frequency response analysis of axially loaded beams with viscoelastic dampers. *International Journal of Mechanical Sciences*, 115-116, 370-384, doi: 10.1016/j.ijmecsci.2016.07.024
18. Ruzzo C., Fiamma V., Nava V., Collu M., Failla G., Arena F. (2016). Progress on the experimental set-up for the testing of a floating offshore wind turbine scaled model in a field site. *Wind Engineering*, 40(5), 455-467, doi: 10.1177/0309524X16660023
19. Ruzzo C., Failla G., Collu M., Nava V., Fiamma V., Arena F. (2016). Operational modal analysis of a spar-type floating platform using frequency domain decomposition method. *Energies*, 9(11), 870, doi: 10.3390/en9110870
20. Failla G. (2016). An exact generalised function approach to frequency response analysis of beams and plane frames with the inclusion of viscoelastic damping. *Journal of Sound and Vibration*, 360, 171-202, doi: 10.1016/j.jsv.2015.09.006
21. Zingales M., Failla G. (2015). The finite element method for fractional non-local thermal energy transfer in non-homogeneous rigid conductors. *Communications in Nonlinear Science and Numerical Simulation*, 29, 116-127, doi: 10.1016/j.cnsns.2015.04.023
22. Alotta G., Di Paola M., Failla G. (2015). A Mellin transform approach to wavelet analysis. *Communications in Nonlinear Science and Numerical Simulation*, 28, 175-193, doi: 10.1016/j.cnsns.2015.04.001
23. Failla G., Sofi A., Zingales M. (2015). A new displacement-based framework for non-local Timoshenko beams. *Meccanica*, 50, 2103-2122, doi: 10.1007/s11012-015-0141-0
24. Alati N., Failla G., Arena F. (2015). Seismic analysis of offshore wind turbines on bottom-fixed support structures. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 373(2035), 20140086, doi: 10.1098/rsta.2014.0086
25. Failla G., Arena F. (2015). New perspectives in offshore wind energy. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 373(2035), 20140228, doi: 10.1098/rsta.2014.0228
26. Failla G. (2014). On the dynamics of viscoelastic discontinuous beams. *Mechanics Research Communications*, 60, 52-63, doi: 10.1016/j.mechrescom.2014.06.001
27. Alati N., Failla G., Santini A. (2014). Complex modal analysis of rods with viscous damping devices. *Journal of Sound and Vibration*, 333(7), 2130-2163, doi: 10.1016/j.jsv.2013.11.030
28. Alati N., Nava V., Failla G., Arena F., Santini A.(2014). On the fatigue behavior of support structures for offshore wind turbines. *Wind and Structures*, 18(2), 117-134, doi: 10.12989/was.2014.18.2.117
29. Alotta G., Failla G., Zingales M. (2014). Finite element method for a nonlocal Timoshenko beam model. *Finite Elements in Analysis and Design*, 89, 77-92, doi: 10.1016/j.finel.2014.05.011
30. Zingales M., Failla G., Rizzo U. (2014). Fractional-order thermal energy transport for small-scale engineering devices. *Journal of Nanomechanics and Micromechanics*, 4(1), A4013006, doi: 10.1061/(ASCE)NM.2153-5477.0000074
31. Di Paola M., Failla G., Zingales M. (2014). Mechanically based nonlocal Euler-Bernoulli beam model. *Journal of Nanomechanics and Micromechanics*, 4(1), A4013002, doi: 10.1061/(ASCE)NM.2153-5477.0000077
32. Di Paola M., Failla G., Pirrotta A., Sofi A., Zingales M. (2013). The mechanically based non-local elasticity: An overview of main results and future challenges. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 371(1993), 20120433, doi: 10.1098/rsta.2012.0433

33. Failla G., Santini A., Zingales M. (2013). A non-local two-dimensional foundation model. *Archive of Applied Mechanics*, 83(2), 253-272, doi: 10.1007/s00419-012-0650-4
34. Di Paola M., Failla G., Zingales M. (2013). Non-local stiffness and damping models for shear-deformable beams. European Journal of Mechanics - A/Solids, 40, 69-83, doi: 10.1016/j.euromechsol.2012.12.009
35. Failla G., Pirrotta A. (2012). On the stochastic response of a fractionally-damped Duffing oscillator. *Communications in Nonlinear Science and Numerical Simulation*, 17(12), 5131-5142, doi: 10.1016/j.cnsns.2012.03.033
36. Di Paola M., Failla G., Sofi A., Zingales M. (2012). On the vibrations of a mechanically based non-local beam model. *Computational Materials Science*, 64, 278-282, doi: 10.1016/j.commatsci.2012.03.031
37. Di Paola M., Failla G., Pirrotta A. (2012). Stationary and non-stationary stochastic response of linear fractional viscoelastic systems. *Probabilistic Engineering Mechanics*, 28, 85-90, doi: 10.1016/j.probengmech.2011.08.017
38. Failla G., Impollonia N. (2012). General finite element description for non-uniform and discontinuous beam elements. *Archive of Applied Mechanics*, 82(1), 43-67, doi: 10.1007/s00419-011-0538-8
39. Di Paola M., Failla G., Sofi A., Zingales M. (2011). A mechanically based approach to non-local beam theories. *International Journal of Mechanical Sciences*, 53(9), 676-687, doi: 10.1016/j.ijmecsci.2011.04.005
40. Failla G., Pappatico M., Cundari G.A. (2011). A wavelet-based spectrum for non-stationary processes. *Mechanics Research Communications*, 38(5), 361-367, doi: 10.1016/j.mechrescom.2011.04.010
41. Failla G. (2011). Closed-form solutions for Euler-Bernoulli arbitrary discontinuous beams. *Archive of Applied Mechanics*, 81(5), 605-628, doi: 10.1007/s00419-010-0434-7
42. Cundari G.A., Milani G., Failla G.,Nucera F., Santini A. (2010). Two-step pushover analysis of an ancient masonry oil-mill in the Southern Italy. *Advanced Materials Research*, 133-134, 361-366, doi: 10.4028/www.scientific.net/AMR.133-134.361
43. Di Paola M., Failla G., Zingales M. (2010). The mechanically-based approach to 3D non-local linear elasticity theory: Long-range central interactions. *International Journal of Solids and Structures*, 47(18-19), 2347-2358, doi: 10.1016/j.ijsolstr.2010.02.022
44. Failla G., Santini A., Zingales M. (2010). Solution strategies for 1D elastic continuum with long-range interactions: Smooth and fractional decay. *Mechanics Research Communications*, 37(1), 13-21, doi: 10.1016/j.mechrescom.2009.09.006
45. Di Paola M., Failla G., Zingales M. (2009). Physically-based approach to the mechanics of strong non-local linear elasticity theory. *Journal of Elasticity*, 97(2), 103-130, doi: 10.1007/s10659-009-9211-7
46. Failla G., Santini A. (2009). Bending problem of Euler-Bernoulli discontinuous beams. *International Journal of Engineering Education*, 25(4), 849-860
47. Failla G., Santini A. (2008). A solution method for Euler-Bernoulli vibrating discontinuous beams. *Mechanics Research Communications*, 35(8), 517-529, doi: 10.1016/j.mechrescom.2008.04.002
48. Failla G., Santini A. (2007). On Euler-Bernoulli discontinuous beam solutions via uniform-beam Green's functions. *International Journal of Solids and Structures*, 44(22-23), 7666-7687, doi: 10.1016/j.ijsolstr.2007.05.003
49. Spanos P.D., Failla G., Santini A., Pappatico M. (2006). Damage detection in Euler-Bernoulli beams via spatial wavelet analysis. *Structural Control and Health Monitoring*, 13(1), p. 472-487, doi: 10.1002/stc.118
50. Di Paola M., Failla G. (2005). Stochastic response of linear and non-linear systems to α-stable Lévy white noises. *Probabilistic Engineering Mechanics*, 20(2), 128-135, doi: 10.1016/j.probengmech.2004.12.001

51. Spanos P.D., Failla G. (2005). Wavelets: Theoretical concepts and vibrations related applications. *The Shock and Vibration Digest*, 37(5), 359-375, doi: 10.1177/0583102405055441
52. Spanos P.D., Failla G. (2004). Evolutionary spectra estimation using wavelets. *Journal of Engineering Mechanics*, 130(8), 952-960, 0733-9399, doi: 10.1061/(ASCE)0733-9399(2004)130:8(952)
53. Di Paola M., Failla G. (2004). A correction method for dynamic analysis of linear systems. *Computers and Structures*, 82(15-16), 1217-1226, doi: 10.1016/j.compstruc.2004.03.001
54. Failla G., Spanos P.D., Di Paola M. (2003). Response power spectrum of multi-degree-of-freedom nonlinear systems by a Galerkin technique. *Journal of Applied Mechanics*, 70(5), 708-714, doi: 10.1115/1.1599916
55. Spanos P.D., Failla G., Di Paola M. (2003). Spectral approach to equivalent statistical quadratization and cubicization methods for nonlinear oscillators. *Journal of Engineering Mechanics*, 129(1), 31-42, doi: 10.1061/(ASCE)0733-9399(2003)129:1(31)
56. Cavaleri L., Di Paola M., Failla G. (2003). Some properties of multi-degree-of-freedom potential systems and application to statistical equivalent non-linearization. *International Journal of Non-Linear Mechanics*, 38(3), 405-421, doi: 10.1016/S0020-7462(01)00080-4
57. Spanos P.D., Di Paola M., Failla G. (2002). A Galerkin approach for power spectrum determination of nonlinear oscillators. *Meccanica*, 37(1-2), 51-65, doi: 10.1023/A:1019610512675
58. Di Paola M., Failla G. (2002). Stochastic response of offshore structures by a new approach to statistical cubicization. *Journal of Offshore Mechanics and Arctic Engineering*, 124(1), 6-13, doi: 10.1115/1.1425395

Publications on books

59. Failla G. (2014). Seismic analysis of wind energy converters. In: Beer M., Kougioumtzoglou I.A., Patelli E., Au I.S.-K., Encyclopedia of Earthquake Engineering, ISBN: 978-3-642-36197-5, doi: 10.1007/978-3-642-36197-5_328-1, Springer, Berlin, Germany.
60. Spanos P.D., Failla G., Politis N.P. (2005). Wavelets: Concepts and applications. In: De Silva C.W., Vibration and Shock Handbook, Chapter 11, ISBN: 978-0-8493-1580-0, CRC Press, Taylor & Francis Group, Boca Raton, USA.

Publications on proceedings of international conferences

61. Ruzzo C., Failla G., Collu M., Nava V., Fiamma V., Arena F. (2017). Output-only identification of rigid body motions of floating structures: a case study. *Procedia Engineering*, 199, 930-935. Proceedings of 10th International Conference on Structural Dynamics, EURODYN 2017, Roma, 10-13 September 2017.
62. Yurchenko D., Burlon A., Di Paola M., Failla G., Pirrotta A. (2017). Stochastic response of a fractional vibroimpact system. *Procedia Engineering*, 199, 1086-1091. Proceedings of the 10th International Conference on Structural Dynamics, EURODYN 2017, Roma, 10-13 September 2017.
63. Di Lorenzo S., Adam C., Failla G., Pirrotta A. (2017). On the moving multi-loads problem in discontinuous beam structures with interlayer slip. *Procedia Engineering*, 199, 2531-2536. Proceedings of the 10th International Conference on Structural Dynamics, EURODYN 2017, Roma, 10-13 September 2017.
64. Burlon A., Failla G., Arena F. (2017). Response of viscoelastic discontinuous beams to random loads in time and frequency domain. In: Proceedings of 12th International Conference on Structural Safety and Reliability, ICOSSAR 2017, Vienna, Austria, 6-10 August 2017.
65. Burlon A., Failla G., Arena F. (2016). Exact stochastic analysis of coupled bending-torsion beams with in-span supports and masses. In: Proceedings of Stochastic Mechanics and Meccanica Stocastica, SM&MS 2016, Capri, Italy, 12-15 June 2016.

66. Alati N., Failla G., Arena F. (2015). Coupled vs. uncoupled analyses for seismic assessment of offshore wind turbines. In: Proceedings of the 3rd International Conference on Mathematical, Computational and Statistical Sciences, MCSS 2015, Dubai, United Arab Emirates, 22-24 February 2015.
67. Failla G. (2014). Stochastic response of 2D frames with internal and external viscoelastic dampers. In: Proceedings of the 7th International Conference on Computational Stochastic Mechanics, CSM-7, Santorini, Greece, 15-18 June 2014.
68. Failla G., Santini A. (2013). On the vibrations of multi-span beams with external and internal flexibility and damping. In: Proceedings of the 11th International Conference on Structural Safety and Reliability, ICOSSAR 2013, New York, USA, 16-20 June 2013.
69. Alati N., Nava V., Failla G., Arena F., Santini A. (2013). Fatigue analysis of offshore wind turbines on fixed support structures. Key Engineering Materials, 569-570, 539-546. Proceedings of the 10th International Conference on Damage Assessment of Structures, DAMAS 2013, Dublin, Irland, 8-10 July 2013.
70. Di Paola M., Failla G., Pirrotta A. (2011). Stochastic dynamic analysis of fractional viscoelastic systems. In: Proceedings of the 8th International Conference on Structural Dynamics, EURODYN 2011, Leuven, Belgium, 4-6 July 2011.
71. Alati N., Arena F., Failla G., Nava V. (2011). Fatigue analysis of tripods and jackets for offshore wind turbines. In: Proceedings of the 14th International Congress of the International Maritime Association of the Mediterranean, IMAM 2011, Genoa, Italy, 13-16 September 2011.
72. Di Paola M., Failla G., Pirrotta A. (2010). Fractional viscoelastic systems under normal white noise. In: Proceedings of the 6th International Conference on Computational Stochastic Mechanics, CSM-6, Rodi, Greece, 13-16 June 2010.
73. Di Paola M., Failla G., Zingales M. (2010). Wavelet representation of arbitrary signals using fractional calculus. In: Proceedings of the 6th International Conference on Computational Stochastic Mechanics, CSM-6, Rodi, Greece, 13-16 June 2010.
74. Tripepi C., Failla G., Santini A., Nucera F. (2008). A comparison among plastic deformation capacities of RC members according to international codes. In: Proceedings of the 2008 Seismic Engineering International Conference Commemorating the 1908 Messina and Reggio Calabria Earthquake, MERCEA 2008, Reggio Calabria, Italy, 8-11 July 2008.
75. Failla G., Santini A. (2007). On the vibrations of multi-discontinuity Euler-Bernoulli beams. In: Proceedings of the International Symposium on Recent Advances in Mechanics, Dynamical Systems and Probability Theory, MDP 2007, Palermo, Italy, 3-6 June 2007.
76. Failla G., Santini A., Pappatico M. (2006). A closed-form spatial wavelet analysis for damage detection in statically loaded Euler-Bernoulli beams. In: Proceedings of the 3rd International Conference on Advances in Mechanical Engineering and Mechanics, ICAMEM 2006, Hammamet, Tunisia, 17-19 December 2006.
77. Spanos P.D., Failla G. (2002). Multi-scale modelling via wavelets of evolutionary spectra in mechanics applications. In: Proceedings of the International Symposium of Multiscaling in Mechanics, Messini, Greece, 2-6 September 2002.
78. Spanos P.D., Tratskas P., Failla G. (2002). Wavelets applications in structural dynamics. In: Proceedings of the 4th International Conference on Structural Dynamics, EURODYN 2002, Munich, Germany, 2-5 September 2002.
79. Di Paola M., Failla G. (2001). Stochastic response of offshore structures by a new approach to statistical cubicization. In: Proceedings of the 20th International Conference on Offshore Mechanics and Arctic Engineering, OMAE 2001, Rio de Janeiro, Brazil, 3-8 June 2001.
80. Cavaleri L., Failla G. (2001). A time domain method for identification of randomly excited non linear systems. In: Proceedings of the 1st Albert Caquot International Conference, Paris, France, 3-5 October 2001.

81. Spanos P.D., Di Paola M., Failla G. (2000). A Galerkin approach for power spectrum determination of nonlinear oscillators. In: Proceedings of Euromech 413 Colloquium on Stochastic Dynamics of Nonlinear Mechanical Systems, Palermo, Italy, 12-14 June 2000.

Publications on proceedings of national conferences

82. Di Lorenzo S., Adam C., Failla G., Pirrotta A. (2017). Moving multi-loads problem in layered cracked beams with interlayer slip. In: Proceedings of the XXIII Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2017, ISBN: 978-889-42484-7-0. Salerno, Italy, 4-7 September 2017.
83. Failla G., Santini A., Zingales M. (2011). A non-local two-dimensional foundation model. In: Proceedings of the XX Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2011, ISBN: 978-88-906340-1-7. Bologna, Italy, 12-15 September 2011.
84. Di Paola M., Failla G., Pirrotta A. (2011). Non-stationary response of fractionally-damped viscoelastic systems. In: Proceedings of the XX Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2011, ISBN: 978-88-906340-1-7. Bologna, Italy, 12-15 September 2011.
85. Failla G., Santini A., Zingales M. (2009). A Wavelet-Galerkin method for a 1D elastic continuum with long-range interactions. In: Proceedings of the XIX Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2009, ISBN: 978-88-96378-08-3. Ancona, Italy, 14-17 September 2009.
86. Failla G., Santini A., Pappatico M., Francomano A. (2009). Wavelet-based estimation of fully non-stationary spectra and applications to seismic engineering. In: Proceedings of the XIX Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2009, ISBN: 978-88-96378-08-3. Ancona, Italy, 14-17 September 2009.
87. Di Paola M., Failla G., Inzerillo G., Zingales M. (2009). Non-local finite element method for the analysis of elastic continuum with long-range central interactions. In: Proceedings of the XIX Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2009, ISBN: 978-88-96378-08-3. Ancona, Italy, 14-17 September 2009.
88. Failla G., Santini A., Spanos P.D. (2007). Closed-form solutions for stochastic Euler-Bernoulli discontinuous beams. In: Proceedings of the XVIII Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2007, ISBN: 978-88-89720-69-1. Brescia, Italy, 11-14 September 2007.
89. Failla G., Santini A., Pappatico M. (2005). Spatial wavelet analysis of statically-loaded Euler-Bernoulli damaged beams. In: Proceedings of the XVII Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2005, ISBN: 88-8453-248-5. Florence, Italy, 11-15 September 2005.
90. Failla G., Santini A., Di Giovanna M. (2003). Static analysis of damaged arches and damage identification. In: Proceedings of the XVI Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2003. Ferrara, Italy, 9-12 September 2003.
91. Failla G., Pirrotta A. (2003). Simulazione di Monte-Carlo per sistemi sollecitati da rumori bianchi parametrici. In: Proceedings of the XVI Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2003. Ferrara, Italy, 9-12 September 2003.
92. Cavaleri L., Di Paola M., Failla G. (2001). Approximate solutions for randomly excited nonlinear systems by a generalized entropy functional. In: Proceedings of the XV Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2001, ISSN: 1592-8950. Taormina, Italy, 26-29 September 2001.
93. Benfratello S., Di Paola M., Failla G. (2001). Response statistics of randomly excited nonlinear systems by a new approach to the Volterra series method. In: Proceedings of the XV Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2001, ISSN: 1592-8950. Taormina, Italy, 26-29 September 2001.

94. Cavaleri L., Di Paola M., Failla G. (1999). Risposta approssimata di sistemi isteretici soggetti a forzanti aleatorie. In: Proceedings of the IX National Conference on Seismic Engineering in Italy, ANIDIS 1999. Turin, Italy, 20-23 September 1999.

Ph.D. thesis

95. Failla G., 2000, "Approximate Methods for Randomly-Excited Nonlinear Systems: A Volterra Series Method", Palermo, Italy.

Research activity in foreign institutions

2001 – 2002: **Rice University, Houston, USA**
From October 2001 to July 2002 he works as visiting scholar at the Department of Civil Engineering, under the supervision of prof. P.D. Spanos.

1998 – 2001: **Rice University, Houston, USA**
From September 1999 to March 2000 he works as visiting scholar at the Department of Civil Engineering, under the supervision of prof. P.D. Spanos.

Supervision of Ph.D. students

2016 – present: **University of Reggio Calabria, Italy**
Ph.D. in "Civil, Environmental and Safety Engineering". Thesis: "Dynamic Response of Offshore Wind Turbines on Floating Supports: A Numerical and Experimental Investigation". Ph.D. student: M. Ghassempour. Supervisors: prof. G. Failla, prof. F. Arena.

2015 – present: **University of Reggio Calabria, Italy**
Ph.D. in "Civil, Environmental and Safety Engineering". Thesis: "Exact Computational Methods for Coupled Bending-Torsional Dynamic Response of Systems with Attachments". Ph.D. student: A. Burlon. Supervisors: prof. G. Failla, prof. F. Arena.

2013 – 2016: **University of Reggio Calabria, Italy**
Ph.D. in "Civil, Environmental and Safety Engineering". Thesis: "A New Approach for Intermediate-Scale Open-Sea Experimental Activities on Offshore Structures: Application to Spar Buoys for Wind Energy Exploitation via a 1:30 Scale Activity". Ph.D. student: C. Ruzzo. Supervisors: prof. F. Arena, prof. M. Collu, prof. G. Failla.

2011 – 2015: **University of Reggio Calabria, Italy**
Ph.D. in "Marine, Materials and Structural Engineering". Thesis: "Seismic Analysis of Offshore Wind Turbines on Fixed Support Structures". Ph.D. student: N. Alati. Supervisors: prof. G. Failla, prof. F. Arena.

Supervision of research students

2016 – 2017: **University of Reggio Calabria, Italy**
Research scholarship on "Dynamic Analysis of Offshore Wind Turbines on Fixed and Floating Supports", within the project "GREEN PORTS", POR REGIONE CALABRIA FESR 2007/2013. Time duration: 6 months. Supervisors: prof. G. Failla, prof. F. Arena. Student: F. Santangelo.

2016 – 2017: **University of Reggio Calabria, Italy**
Research scholarship on Borsa di studio "Protection of Masonry Architectural Heritage from Natural Hazards", within the project "SIMONA - Systems and Technologies for Monitoring Underwater and Terrestrial Areas of Cultural Interest" financed by POR REGIONE CALABRIA FESR 2007/2013. Time duration: 9 months. Student: A. Cundari.

2015 – 2016: **University of Reggio Calabria, Italy**
Research scholarship on "Risk Assessment of Archaeological Assets", within the project "SIMONA - Systems and Technologies for Monitoring Underwater and Terrestrial Areas of Cultural Interest" financed by POR REGIONE CALABRIA FESR 2007/2013. Time duration: 12 months. Student: F. Santangelo.

Expert activity in European research programs

2016 – present: **University of Reggio Calabria, Italy**
He acts as Expert for the Research Executive Agency (REA) of the European Commission in the evaluation of "Marie Sklodowska-Curie Individual Fellowships" proposals (H2020-MSCA-IF). Number of proposals evaluated: 30.

Editorial activity

- Guest editor of a special issue of *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, entitled "New Perspectives in Offshore Wind Energy", published on February 2015 (vol. 373, n. 2035), with prof. F. Arena
- Member of the Editorial Board of *Coupled Systems Mechanics* (Techno-Press) since 2016
- Member of the Editorial Board of *Vibration* (MDPI) since 2017

Reviewer activity

He acts as reviewer for the following international journals:

Probabilistic Engineering Mechanics (Elsevier) since 2002
International Journal of Non-Linear Mechanics (Elsevier) since 2008
Journal of Sound and Vibration (Elsevier) since 2008
Earthquake Spectra (EERI) since 2012
Journal of Intelligent Material Systems and Structures (SAGE) since 2012
Structural Engineering and Mechanics (Techno Press) since 2012
Mechanical Systems and Signal Processing (Elsevier) since 2013
Applied Mathematics and Computation (Elsevier) since 2013
Applied Mathematical Modelling (Elsevier) since 2013

Archive of Applied Mechanics (Springer) since 2013
Meccanica (Springer) since 2014
Journal of Engineering Mechanics (ASCE) since 2014
Journal of Vibration and Control (SAGE) since 2014
Experimental Mechanics (Springer) since 2015
Finite Elements in Analysis and Design (Elsevier) since 2015
Communications in Nonlinear Science and Numerical Simulation (Elsevier) since 2015
International Journal for Numerical Methods in Engineering (John Wiley & Sons) since 2015
International Journal of Mechanical Sciences (Elsevier) since 2015
ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering since 2015
ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering since 2015
Chaos, Solitons and Fractals (Elsevier) since 2016
Engineering Structures (Elsevier) since 2016
European Journal of Mechanics A/Solids (Elsevier) since 2016
Wind Energy (John Wiley & Sons) since 2016
Computers and Structures (Elsevier) since 2017
Bulletin of Earthquake Engineering (Springer) since 2017
International Journal of Solids and Structures (Elsevier) since 2017

Participations to national research programs

2017 – present: **University of Reggio Calabria, Italy**
PRIN 2015: "Advanced Mechanical Modeling of New Materials and Structures for the Solution of 2020 Horizon Challenges". Principal Investigator: prof. M. Di Paola, Research Unit Coordinator: prof. M. Di Paola. Role: participant.

2013 – 2016: **University of Reggio Calabria, Italy**
PRIN 2010-2011: "Dynamics, Stability and Control of Flexible Structures". Principal Investigator: prof. A. Luongo, Research Unit Coordinator: prof. M. Di Paola. Role: participant.

2014 – 2015: **University of Reggio Calabria, Italy**
PON04a2_F "AquaSystem - Innovative Technologies and Procedures for Integrated Management of Water Resources, Energy Optimization and Quality Control in Water Cycle". Principal Investigator: prof. P. Filianoti. Role: participant.

2011 – 2015: **University of Reggio Calabria, Italy**
PON01_01869: "TEMA DI TUTELA - Innovative Technologies and Materials for Environmental Protection". Principal Investigator: prof. N. Moraci. Role: participant.

2002 – 2003: **University of Reggio Calabria, Italy**
PRIN 2003: "Non-destructive Testing for Identification of Materials and Structures". Principal Investigator: prof. A. Morassi, Research Unit Coordinator: prof. A. Santini. Role: participant.

Major research collaborations

- Prof. P.D. Spanos, Rice University, Houston, USA
- Prof. M. Collu, Cranfield University, Cranfield, UK
- Prof. D. Yurchenko, Heriot-Watt University, Edinburgh, UK
- Prof. C. Adam, University of Innsbruck, Innsbruck, Austria
- Prof. I. Kougioumtzoglou, Columbia University, New York, USA

Services in academic education

2005 – present: **University of Reggio Calabria, Italy**
Member of the Doctoral School in "Civil, Environmental and Safety Engineering", University of Reggio Calabria, Italy

Memberships of scientific societies

- Italian Association of Theoretical and Applied Mechanics (AIMETA) since 2017
- European Mechanics Society (EUROMECH) since 2017
- Interdepartmental Centre of Structural Theoretical and Experimental Dynamics (C.I.Di.S) since 2014

Memberships of scientific committees

- Member of the Scientific Committee of Stochastic Mechanics and Meccanica Stocastica, SM&MS 2016, Capri, Italy, 12-15 June 2016

Participations to international and national conferences

- XXIII Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2017. Salerno, 4-7 September 2017 (speaker)
- Stochastic Mechanics and Meccanica Stocastica, SM&MS 2016, Capri, Italy, 12-15 June 2016
- 3rd International Conference on Mathematical, Computational and Statistical Sciences, MCSS 2015. Dubai, United Arab Emirates, 22-24 February 2015 (speaker)
- 2014 International Conference on Fractional Differentiation and Its Applications, ICFDA 2014. Catania, Italy, 23-25 June 2014 (speaker)
- 7th International Conference on Computational Stochastic Mechanics, CSM-7. Santorini, Greece, 15-18 June 2014 (speaker)
- 11th International Conference on Structural Safety and Reliability, ICOSSAR 2013. New York, United States, 16-20 June 2013 (speaker)
- Stochastic Mechanics 2012. Ustica, Italy, 7-10 June 2012 (speaker)
- XX Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2011. Bologna, Italy, 12-15 September 2011 (speaker)
- 2008 Seismic Engineering Conference Commemorating the 1908 Messina and Reggio Calabria Earthquake, MERCEA08. Reggio Calabria, Italy, 8-11 July 2008
- International Symposium on Recent Advances in Mechanics, Dynamical Systems and Probability Theory, MDP 2007. Palermo, Italy, 3-6 June 2007 (speaker)
- XVIII Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2007. Brescia, Italy, 11-14 September 2007 (speaker)
- 3rd International Conference on Advances in Mechanical Engineering and Mechanics, ICAMEM 2006. Hammamet, Tunisia, 17-19 December 2006 (speaker)
- XVII Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2005. Firenze, Italy, 11-15 September 2005 (speaker)

- XVI Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2003. Ferrara, Italy, 9-12 September 2003 (speaker)
- XV Conference of the Italian Association of Theoretical and Applied Mechanics, AIMETA 2001. Taormina, Italy, 26-29 September 2001
- 20th International Conference on Offshore Mechanics and Arctic Engineering, OMAE 2001. Rio de Janeiro, Brazil, 3-8 June 2001 (speaker)
- International Conference on Monte Carlo Simulation, MCS 2000. Monte Carlo, 18-21 June 2000.
- Euromech Colloquium No. 413 on Stochastic Dynamics of Nonlinear Mechanical Systems. Palermo, Italy, 12-14 June 2000 (speaker)