

### Publications of Elena Vuk (last updated 15/03/2024)

- (1) C. Giorgi, E. Vuk, Hysteresis in deformable ferro-electroelastic materials, *Atti della Accademia Peloritana dei Pericolanti, Classe di Scienze Fisiche, Matematiche e Naturali* 101, No.2, A13, (2023), DOI:10.1478/AAPP.1012A13. ISSN:1825-1242
- (2) C. Giorgi, E. Vuk, Three-dimensional nonlocal models of deformable ferroelectrics: a thermodynamically consistent approach, *Appl. Math. Modell.*, 122, (2023), 824-843, doi.org/1016/j.apm.2023.06.22. ISSN:0307-904X
- (3) N. Bazarra, I. Bochicchio, J.R. Fernández, E. Vuk, Asymptotic behavior and numerical approximation of a double-suspended bridge system, *Communications in Nonlinear Science and Numerical Simulation*, 124, (2023) 107302, doi.org/10.1016/j.cnsns.2023.107302. ISSN:10075704
- (4) S. Carillo, M.G. Naso, E. Vuk, and F. Zullo, Non-Rectification of Heat in Graded Si-Ge Alloys. In: Lacarbonara, W., Balachandran, B., Leamy, M.J., Ma, J., Tenreiro Machado, J.A., Stepan, G. (eds) *Advances in Nonlinear Dynamics. NODYCON Conference Proceedings Series*. Springer, Cham., First Online 19 July 2021. [https://doi.org/10.1007/978-3-030-81162-4\\_49](https://doi.org/10.1007/978-3-030-81162-4_49). ISBN online:978-3-030-81162-4
- (5) I. Bochicchio, M.G. Naso, E. Vuk, F. Zullo, Convecting-radiating fins: Explicit solutions, efficiency and optimization, *Appl. Math. Modell.*, 89 (2021) 171-187, DOI:10.1016/j.apm.2020.08.010. ISSN:0307-904X
- (6) M.G. Naso, E. Vuk, F. Zullo, On the optimization of heat rectification in graded materials, *Int. Journal Heat and Mass Transfer*, 143 (2019) 118520, doi.org/10.1016/j.ijheatmasstransfer.2019.118520. ISSN:0017-9310
- (7) M. Campo, J.R. Fernández, M.G. Naso, E. Vuk, Dynamics of nonlinear thermoelastic double-beam systems, *The Quarterly Journal of Mechanics and Applied Mathematics*, 72 (2019), 235-259, doi.org/10.1093/qjmam/hbz004. ISSN:0033-5614
- (8) I. Bochicchio, C. Giorgi, E. Vuk, Steady states and buckling of cable-suspended beam systems, *Meccanica*, 53 (2018), 3365-3381, DOI: 10.1007/s11012-018-0880-9. ISSN:0025-6455
- (9) I. Bochicchio, C. Giorgi, E. Vuk, Buckling and nonlinear dynamics of elastically-coupled double-beam systems, *International Journal Non-Linear Mechanics*, 85 (2016), 161-173, DOI: 10.1016/j.ijnonlinmec.2016.06.009. ISSN:0020-7462
- (10) I. Bochicchio, C. Giorgi, E. Vuk, Well-posedness and longtime behaviour of a coupled nonlinear system modeling a suspension bridge, *Meccanica*, 50 (2015), 665-673, DOI: 10.1007/s11012-014.9996-8. ISSN:0025-6455
- (11) I. Bochicchio, C. Giorgi, E. Vuk, Buckling and nonlinear dynamics of elastically-coupled double beams, *XXII Congresso AIMETA di Meccanica Teorica e Applicata*, Genova 14-17/09/2015, 181, De Ferrari Editore, 2015. (ISBN.978-88-97752-52-3)

- (12) A. Berti, C. Giorgi, E. Vuk, Hysteresis and temperature-induced transitions in ferromagnetic materials, *Appl. Math. Modell.*, 39 (2015), 820-837, DOI: 10.1016/j.apm.2014.07.004. ISSN:0307-904X
- (13) A. Berti, C. Giorgi, E. Vuk, First-order phase transitions and hysteresis, *Acta Appl. Math.*, 132 (2014), 73-82, DOI 10.1007/s10440-014-9906-z. ISSN:0167-8019
- (14) I. Bochicchio, C. Giorgi, E. Vuk, Long-term Dynamics of a Viscoelastic Suspension Bridge, *Meccanica*, 49 (2014), 2139-2151, DOI 10.1007/s11012-014-9887-z. ISSN:0025-6455
- (15) I. Bochicchio, C. Giorgi, E. Vuk, On the viscoelastic coupled suspension bridge, *Evolution Equations and Control Theory*, 3 (2014), 373-397, DOI 10.3934/EECT.2014.3.373. ISSN:2163-2480
- (16) C. Giorgi, E. Vuk, Steady-state solutions for a suspension bridge with intermediate supports, *Boundary Value Problems*, 2013, 2013:204, DOI: 10.1186/1687-2770-2013-204. ISSN:1687-2770
- (17) I. Bochicchio, C. Giorgi, E. Vuk, Asymptotic dynamics of non linear coupled suspension bridge equations, *J. Math. Anal. Appl.*, 402 (2013), 319-333, DOI: 10.1016/j.jmaa.2013.01.036. ISSN:0022-247X
- (18) A. Berti, C. Giorgi, E. Vuk, Free energies and pseudo-elastic transitions for shape memory alloys, *Discrete Contin. Dyn. Syst. Ser. S*, 6 (2013), 293-316, DOI:10.3934/DCDSS.2013.6.293. ISSN:1937-1632
- (19) I. Bochicchio, C. Giorgi, E. Vuk, Long-term dynamics of the coupled suspension bridge system, *Math. Models Methods Appl. Sci.*, 22 (2012), 1250021 (22 pages), DOI:10.1142/S0218202512500212. ISSN:0218-2025
- (20) I. Bochicchio, C. Giorgi, E. Vuk, On some nonlinear models for suspension bridges, in *Evolution Equations and Materials with Memory, Atti del Convegno, Roma (Italy) 12-14 luglio 2010*, 1-17, Eds: D. Andreucci, S. Carillo, M. Fabrizio, P. Loreti and D. Sforza, Univ. La Sapienza Ed., Roma 2011. (ISBN 978-88-95814-51-3).
- (21) A. Berti, C. Giorgi, E. Vuk, Free energies in one-dimensional models of magnetic transitions with hysteresis, *Nuovo Cimento Soc. Ital. Fis. B*, 125 (2010), 371-394, DOI: 10.1393/ncb/i2010-10891-5. ISSN:2037-4895
- (22) I. Bochicchio, C. Giorgi, E. Vuk, Longterm dynamics of an extensible elastic suspension bridge, *Int. J. Diff. Eqs.*, 2010, Article ID 383420, 420.1-420.19, DOI: 10.1155/2010/383420. ISSN:1687-9643
- (23) I. Bochicchio, E. Vuk, Longtime behavior for oscillations of an extensible viscoelastic beam with elastic external supply, *Int. J. Pure and Appl. Math.*, 58 (2010), 61-76. ISSN:1311-8080

- (24) I. Bochicchio, E. Vuk, Buckling and longterm dynamics of a nonlinear model for the extensible beam, *Math. Comput. Modelling*, 51 (2010), 833-846, DOI: 10.1016/j.mcm.2009.10.010. ISSN:0895-7177
- (25) I. Bochicchio, C. Giorgi, E. Vuk, Steady states analysis and exponential stability of an extensible thermoelastic system, *Communications to SIMAI Congress*, 3 (2009), 232.1-232.12, DOI: 10.1685/CSC09232. ISSN:1827-9015
- (26) C. Giorgi, V. Pata, E. Vuk, On the extensible viscoelastic beam, *Nonlinearity*, 21 (2008), 713-733. ISSN:0951-7715
- (27) C. Giorgi, V. Pata, E. Vuk, Global attractor for an extensible viscoelastic beam, XVIII Congresso AIMETA di Meccanica Teorica e Applicata, Brescia 11-14/09/2007, 358, Starrylink Editrice, 2007.
- (28) I. Bochicchio, E. Vuk, Longtime behavior for damped oscillations of a nonlinear viscoelastic beam, XVIII Congresso AIMETA di Meccanica Teorica e Applicata, Brescia 11-14/09/2007, 356, Starrylink Editrice, 2007.
- (29) S. Gatti, E. Vuk, Singular limit of equations for linear viscoelastic fluids with periodic boundary conditions, *Int. J. Nonlinear Mechanics*, 41 (2006), 518-526. ISSN:0020-7462
- (30) M.G. Naso, J. Muñoz Rivera, E. Vuk, Asymptotic behavior for electromagnetic systems with memory, *Math. Meth. Appl. Sci.*, 7 (2004), 819-841, DOI: 10.1002/mma.473. ISSN:0170-4214
- (31) A. Marzocchi, E. Vuk, Global attractor for damped semilinear elastic beam equations with linear memory, *Z. angew. Math. Phys.*, 54 (2003), 224-234. ISSN:0044-2275
- (32) A. Marzocchi, E. Vuk, Asymptotic behavior for a model of transverse vibrations of a bar with linear memory, *Mathematical models and methods for smart materials*, Cortona 25-29/06/2001, 231-234, Ser. Adv. Math. Appl. Sci., 62, World Sci. Publishing, River Edge, NJ, 2002.
- (33) M.G. Naso, E. Vuk, Uniform attractors for a semilinear evolution problem in hereditary simple fluids, *Internat. J. Engng. Sci.*, 40 (2002), 727-742, DOI: 10.1016/S0020-7225(01)00095-7. ISSN:0020-7225
- (34) M.G. Naso, E. Vuk, On the exponential stability of electromagnetic systems with memory, *Int. Math. J.*, 1 (2002), 575-590. ISSN:1311-6797
- (35) C. Giorgi, M.G. Naso, E. Vuk, Exponential stability in viscoelastic and elastic systems with thermal memory, *Int. J. Diff. Eqs. and Appl.*, 2 (2001), 55-91. ISSN:1311-2872
- (36) E. Vuk, Variational principles in electromagnetism with memory, *Ann. Mat. Pura Appl.*, 179 (2001), 95-110. ISSN:0373-3114

- (37) V. Pata, E. Vuk, On the exponential stability in thermoelasticity, *Cont. Mech. Thermodyn*, 12 (2000), 121-130. ISSN:0935-1175
- (38) B. Lazzari, E. Vuk, Minimum principles in electromagnetism with memory, *Int. J. Appl. Math.*, 1 (1999), 461-474. ISSN:1311-1728
- (39) C. Giorgi, E. Vuk, Extremum principles in electromagnetic systems, *Rend. Circ. Mat. Palermo*, 48 (1999), 265-284. ISSN:0009-725X
- (40) B. Lazzari, E. Vuk, Asymptotic behaviour for symmetric hyperbolic dissipative systems, *Differential Integral Equations*, 10 (1997), 273-287. ISSN:0893-4983
- (41) E. Vuk, A dynamic problem in linear thermoviscoelasticity, *Riv. Mat. Univ. Parma*, (5) 4 (1995), 121-135. ISSN:0035-6298
- (42) B. Lazzari, E. Vuk, Dominio di dipendenza in termoviscoelasticità lineare, *Atti del XV Congresso U.M.I.*, Padova 11-16/09/1995, 183.
- (43) B. Lazzari, E. Vuk, Constitutive equations and quasi-static problem in linear thermoviscoelasticity, *Internat. J. Engng. Sci.*, 30 (1992), 533-544. ISSN:0020-7225
- (44) E. Vuk, Un teorema di esistenza e unicità per un fluido viscoso con memoria, *Ann. Univ. Ferrara, Sez.VII (N.S.)*, 36 (1990), 63-72. ISSN:0430-3202
- (45) B. Lazzari, E. Vuk, Sul comportamento asintotico dell'energia elettromagnetica in un materiale dielettrico lineare, *Boll. Un. Mat. Ital. B(7)*, 4 (1990), 155-177. ISSN:0392-4041
- (46) B. Lazzari, E. Vuk, Stability problems for an integrodifferential evolution equation for theories of non conducting material dielectrics, *Proceeding of the IV International Conference on Waves and Stability in Continuous Media*, Taormina (CT), 4-9/10/1987, 314-319, A. Donato and S. Giambò, Eds. Editel, Cosenza, 1989.
- (47) B. Lazzari, E. Vuk, Un teorema di esistenza e unicità per un problema dinamico in viscoelasticità lineare, *Atti Sem. Mat. Fis. Univ. Modena*, 35 (1987), 309-317. ISSN:0041-8986