

JOURNAL PAPERS (J)

[J68] M. Giaquinta P. M. Mariano, G. Modica (2015), Stress constraints in simple bodies undergoing large strain: a variational approach, *Proceedings of the Royal Society of Edinburgh*, **145A**, in print (pp. 32).

[J67] M. Focardi, P. M. Mariano, E. N. Spadaro (2015), Multi-value microstructural descriptors for complex materials: analysis of ground states, *Archive for Rational Mechanics and Analysis*, **215**, 899-933.

[J66] P. M. Mariano, L. Salvatori (2015), Spatial decay of the phason field in quasicrystal linear elasticity, *Modelling and Simulation in Materials Science and Engineering*, **23**, art. n° 045004 (19pp)

[J65] G. Capriz, P. M. Mariano (2014), Objective fluxes in a multi-scale continuum description of sparse medium dynamics, *Physica A – Statistical Mechanics and its Applications*, **415**, 354-365.

[J64] P. M. Mariano (2014), Mechanics of material mutations, *Advances in Applied Mechanics*, **47**, 1-91.

[J63] M. Bacci, P. M. Mariano (2014), Protein dynamics: an approach based on the Cauchy-Born rule, *Physica E - Low Dimensional Systems and Nanostructures*, **61**, 69-82.

[J62] P. M. Mariano (2013), Covariance in plasticity, *Proc. Royal Soc. London A.*, **469**, 20130073 (1-17).

[J61] P. M. Mariano, J. Planas (2013), Self-actions in quasicrystals, *Physica D – Nonlinear Phenomena*, **249**, 46-57.

[J60] P. M. Mariano (2012), Line defect evolution in finite-dimensional manifolds, *Discrete and Continuous Dynamical Systems - B*, **17**, 575-596.

[J59] P. M. Mariano (2012), Crystal plasticity: the Hamilton-Eshelby stress in terms of the metric in the intermediate configuration, *Theoretical and Applied Mechanics*, **39**, 55-69.

[J58] E. Radi , P. M. Mariano (2011), Steady-state propagation of dislocations in quasicrystals, *Proceedings of the Royal Society of London A*, **467**, 3490-3508.

[J57] S. Colli, P. M. Mariano (2011), The standard description of quasicrystal linear elasticity may produce non-physical results, *Physics Letters A*, **375**, 3335-3339.

[J56] E. Radi , P. M. Mariano (2011), Dynamic steady state crack propagation in quasicrystals, *Mathematical Methods in the Applied Sciences*, **34**, 1-23.

- [J55] P. M. Mariano (2010), Spin field topological linear defects in quasicrystals with magnetic order, *Physics Letters A*, **375**, 80-83.
- [J54] M. Giaquinta, P. M. Mariano, G. Modica (2010), A variational problem in the mechanics of complex materials, *Discrete and Continuous Dynamical Systems - A*, **28**, 519-537.
- [J53] E. Radi, P. M. Mariano (2010), Stationary straight cracks in quasicrystals, *International Journal of Fracture*, **166**, 105-120.
- [J52] M. Giaquinta, P. M. Mariano, G. Modica, D. Mucci (2010), Ground states of simple bodies that may undergo brittle fracture, *Physica D - Nonlinear Phenomena*, **239**, 1485-1502.
- [J51] P. M. Mariano (2010), Physical significance of the curvature varifold-based description of crack nucleation, *Rendiconti Lincei, Matematica e Applicazioni*, **21**, 215-233.
- [J50] P. M. Mariano (2009), The relative power and its invariance, *Rendiconti Lincei, Matematica e Applicazioni*, **20**, 227-242.
- [J49] P. M. Mariano, P. Paoletti (2009), Complex bodies with memory: linearized setting, *Mathematical Methods in the Applied Sciences*, **32**, 1041-1067.
- [J48] M. Focardi, P. M. Mariano (2009), Discrete dynamics of complex bodies: variational integrators and convergence, *Discrete and Continuous Dynamical Systems - B*, **11**, 109-130.
- [J47] P. M. Mariano, G. Modica (2009), Ground states in complex bodies, *ESAIM -- Control, Optimization and Calculus of Variations*, **15**, 377-402.
- [J46] G. Augusti, P. M. Mariano, F. L. Stazi (2009), Semi-dense and concentrated fullerene-based composites: microdeformation and strain gradient effects, *Journal of the Mechanical Behavior of Materials*, **19**, 125-133.
- [J45] M. Focardi, P. M. Mariano (2008), Convergence of asynchronous variational integrators in linear elastodynamics, *International Journal for Numerical Methods in Engineering*, **75**, 755-769.
- [J44] P. M. Mariano (2008), Mechanics of complex bodies: commentary on the unified modelling of material substructures, *Theoretical and Applied Mechanics*, **35**, 233-251.
- [J43] P. M. Mariano (2008), Cracks in complex bodies: covariance of tip balances, *Journal of Nonlinear Science*, **18**, 99-141.

- [J42] P. M. Mariano (2007), Representation of material elements and geometry of substructural interactions, *Quaderni di Matematica*, **20**, 80-100.
- [J41] P. M. Mariano (2007), Thermodynamic stability for materials with substructure, *Journal of the Mechanical Behavior of Materials*, **18**, 97-104.
- [J40] G. Capriz, P. M. Mariano (2007), Symmetries and Poisson structures for complex materials, *Journal of the Mechanical Behavior of Materials*, **18**, 89-96.
- [J39] P. M. Mariano (2007), Geometry and balance of hyperstresses, *Rendiconti Lincei, Matematica e Applicazioni*, **18**, 311-331.
- [J38] P. M. Mariano, F. L. Stazi , M. Gioffrè (2006), Stochastic clustering and self-organization of gross deformation and phason activity in quasicrystals : modeling and simulations, *Journal of Computational and Theoretical Nanoscience*, **3**, 478-486.
- [J37] P. M. Mariano (2006), Mechanics of quasi-periodic alloys, *Journal of Nonlinear Science*, **16**, 45-77.
- [J36] P. M. Mariano (2005), Walk of a line defect in quasicrystals, *Meccanica*, **40**, 511-525.
- [J35] P. M. Mariano (2005), Migration of substructures in complex fluids, *Journal of Physics A*, **38**, 6823-6839.
- [J34] P. M. Mariano, F. L. Stazi (2005), Computational aspects of the mechanics of complex materials, *Archives for Computational Methods in Engineering*, **12**, 391-478.
- [J33] P. M. Mariano (2005), SO(3) invariance and covariance in mixtures of simple bodies, *International Journal of Non-Linear Mechanics*, **40**, 1023-1030.
- [J32] C. de Fabritiis, P. M. Mariano (2005), Geometry of interactions in complex bodies, *Journal of Geometry and Physics*, **54**, 301-323.
- [J31] P. M. Mariano (2005), Influence of material substructure on crack propagation: a unified treatment, *Proceedings of the Royal Society of London A*, **461**, 371-395.
- [J30] P. M. Mariano, F. L. Stazi , G. Augusti (2004), Phason effects around a crack in Al-Pb - Mn quasicrystals : stochastic aspects of the phonon- phason coupling, *Computers & Structures*, **82**, 971-983.
- [J29] P. M. Mariano (2004), Some thermodynamical aspects of the solidification of two-phase flows, *Meccanica*, **4**, 369-382.

- [J28] P. M. Mariano, F. L. Stazi (2004), Strain localization due to crack- microcrack interactions: X-FEM for a multifield approach, *Computer Methods in Applied Mechanics and Engineering*, **193**, 5035-5062.
- [J27] P. M. Mariano, C. M. Casciola , E. De Angelis (2004), Substructural interactions and transport in polymer flows, *International Journal of Non-Linear Mechanics*, **39**, 457-465.
- [J26] P. M. Mariano, M. Giofrè , F. L. Stazi , G. Augusti (2004), Elastic microcracked bodies with random properties, *Probabilistic Engineering Mechanics*, **19**, 127-143.
- [J25] P. M. Mariano (2004), Consequences of "changes" of material metric in simple bodies, *Meccanica*, **39**, 77-79.
- [J24] G. Capriz, P. M. Mariano (2003), Symmetries and Hamiltonian formalism for complex materials, *Journal of Elasticity*, **72**, 57-70.
- [J23] P. M. Mariano (2003), Cancellation of vorticity in steady-state non-isentropic flows of complex fluids, *Journal of Physics A*, **36**, 9961-9972.
- [J22] P. M. Mariano, M. Giofrè , F. L. Stazi , G. Augusti (2002), Microcracked bodies with random properties: a preliminary investigation on localization phenomena, *Computers & Structures*, **80**, 1027-1047.
- [J21] P. M. Mariano (2002), A note on Ceradini - Capurso -Maier's theorem in plasticity, *International Journal of Plasticity*, **18**, 1749-1773.
- [J20] P. M. Mariano (2002), Multifield theories in mechanics of solids, *Advances in Applied Mechanics*, **38**, 1-93.
- [J19] F. Davì, P. M. Mariano (2001), Evolution of domain walls in ferroelectric solids, *Journal of the Mechanics and Physics of Solids*, **49**, 1701-1726.
- [J18] P. M. Mariano, F. L. Stazi (2001), Strain localization in elastic microcracked bodies, *Computer Methods in Applied Mechanics and Engineering*, **190**, 5657-5677.
- [J17] P. M. Mariano, G. Augusti (2001), Basic topics on damage pseudo-potentials, *International Journal of Solids and Structures*, **38**, 1963-1974.
- [J16] P. M. Mariano (2001), Coherent interfaces with junctions in continua with microstructure, *International Journal of Solids and Structures*, **38**, 1243-1267.
- [J15] P. M. Mariano, L. Sabatini (2000), Homothermal acceleration waves in multifield theories of continua, *International Journal of Non-Linear Mechanics*, **35**, 963-977.

- [J14] P. M. Mariano (2000), Configurational forces in continua with microstructure, *ZAMP - Zeitschrift für angewandte Mathematik und Physik* , **51**, 752-791.
- [J13] P. M. Mariano, P. Trovalusci (1999), Constitutive relations for elastic microcracked bodies: from a lattice model to a multifield continuum description, *International Journal of Damage Mechanics*, **8**, 153-173.
- [J12] P. M. Mariano (1999), Some remarks on the variational description of microcracked bodies, *International Journal of Non-Linear Mechanics*, **34**, 633-642.
- [J11] G. Augusti, P. M. Mariano (1999), Stochastic evolution of microcracks in continua, *Computer Methods in Applied Mechanics and Engineering*, **168**, 155-171.
- [J10] P. M. Mariano, G. Augusti (1998), Ordering and transport in generalized continua with arbitrary order parameters, *Journal de Physique*, IV Pr8, 223-230.
- [J9] P. M. Mariano, G. Augusti (1998), Multifield description of microcracked continua. A local model, *Mathematics and Mechanics of Solids*, **3**, 237-254.
- [J8] P. M. Mariano, D. Bernardini (1998), Flow rules for porous elastic-plastic materials, *Mechanics Research Communications*, **25**, 443-448.
- [J7] P. M. Mariano (1998), On the axioms of plasticity, *International Journal of Solids and Structures*, **35**, 1313-1324.
- [J6] P. M. Mariano (1997), Natural entropies in the state space of damaged bodies, *ZAMP - Zeitschrift für angewandte Mathematik und Physik*, **48**, 1002-1011.
- [J5] P. M. Mariano, G. Augusti (1997), Some axioms and theorems in damage mechanics and fatigue of materials, *International Journal of Solids and Structures*, **34**, 3337-3350.
- [J4] P. M. Mariano (1996), Nöther's theorem in the elastic dynamics of microcracked bodies, *Mechanics Research Communications*, **23**, 233-238.
- [J3] G. Augusti, P. M. Mariano (1996), Introduction to computational methods of damage dynamics under stochastic actions, *Probabilistic Engineering Mechanics*, **11**, 107-112.
- [J2] P. M. Mariano (1995), Fracture in structured continua, *International Journal of Damage Mechanics*, **4**, 283-289.
- [J1] P. M. Mariano (1994), Discussion on J. M. Zhang and K. Y. Lam, "On material symmetry and deformation-induced anisotropy", *Meccanica* , **29**, 217-220.