

List of publications

Peer-reviewed papers

- [1] A. GARRONI: *A Wiener estimate for relaxed Dirichlet problems in dimension $N \geq 2$* , Differential and Integral Equations, Vol. 8 (1995), 849-866.
- [2] G. DAL MASO, A. GARRONI: *New results on the asymptotic behaviour of the solutions of Dirichlet problems in perforated domains*, Mathematical Models and Methods in Applied Sciences, Vol. 4, N. 3 (1994), 373-407.
- [3] A. BRAIDES, A. GARRONI: *Homogenization of nonlinear media with stiff and soft inclusions*, Mathematical Models and Methods in Applied Sciences, Vol. 5, N. 4 (1995) 543-564.
- [4] G. BUTTAZZO, G. DAL MASO, A. GARRONI, A. MALUSA: *On the relaxed formulation of some shape optimization problems*, Advances in Mathematical Sciences and Applications, Vol. 7 (1997), 1-24.
- [5] G. DAL MASO, A. GARRONI: *The capacity method for asymptotic Dirichlet problems* Asymptotic Analysis, Vol. 15 (1997), 299-324.
- [6] J. CASADO DIAZ, A. GARRONI: *Asymptotic behaviour of nonlinear elliptic systems on varying domains*, SIAM J. Math. Anal., Vol. 31 (2000), no. 3, 581-624.
- [7] G. DAL MASO, A. GARRONI, I.V. SKRYPNIK: *Capacitary method for monotone operators*, J. Anal. Math., Vol. 71 (1997), 263-313
- [8] L. AMBROSIO, A. BRAIDES, A. GARRONI: *Special functions with bounded variation and with weakly differentiable traces on the jump set*, Nonlinear Diff. Equations Appl., Vol. 5 (1998), 219-243.
- [9] J. CASADO DIAZ, A. GARRONI: *A non homogeneous extra term for the limit of nonlinear Dirichlet problems in perforated domains*, in "Homogenization and applications to material sciences" (Nice, 1995), 81-94, GAKUTO Internat. Ser. Math. Sci. Appl., 9, Gakkotosho, Tokyo, 1995 (peer-reviewed publication).
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- [13] A. GARRONI, B. NIETHAMMER: *Correctors and error estimates in the homogenization of a Mullins-Sekerka problem*, Ann. Inst. H. Poincaré Anal. Non Linéaire, Vol. 19 (2002), no. 4, 371-393.

- [14] A. GARRONI, V. NESI, M. PONSIGLIONE: *Dielectric breakdown: optimal bounds*, Proc. Royal Soc. London A, Vol. 457 (2001), 2317-2335.
- [15] A. GARRONI, S. MÜLLER: *Concentration phenomena for the volume functional in unbounded domains: Identification of concentration points*, J. Funct. Anal. Vol. 199 (2003), no. 2, 386–410.
- [16] M. AMAR, A. GARRONI: *Γ -convergence of concentration problems with critical growth*, Ann. Sc. Norm. Super. Pisa Cl. Sci. (5) Vol. 2 (2003), no. 1, 151–179.
- [17] A. GARRONI, R.V. KOHN: *Some three-dimensional problems related to dielectric breakdown and polycrystal plasticity*, Proc. R. Soc. London A Vol. 459 (2003), 2613-2625.
- [18] A. GARRONI, V. NESI: *Rigidity and lack of rigidity for solenoidal matrix fields*, Proc. R. Soc. London A Vol. 460 (2004), no. 2046, 1789–1806.
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- [20] A. GARRONI, S. MÜLLER: *Γ -limit of a phase field model of dislocations*, SIAM J. Math. Anal., Vol. 36 (2005), no. 6, 1943–1964.
- [21] A. GARRONI, S. MÜLLER: *A variational model for dislocations in the line tension limit*, Arch. Rational Mech. Anal., Vol. 181 (2006), no. 3, 535–578
- [22] G. FRANCFORT, A. GARRONI: *A variational view of brittle damage evolution*, Arch. Rational Mech. Anal., Vol. 182 (2006), no. 1, 125–152.
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- [33] R. ALICANDRO, L. DE LUCA, A. GARRONI, M. PONSIGLIONE: *Metastability and dynamics of discrete topological singularities in two dimensions: a Γ -convergence approach*, Arch. Rational Mech. Anal., Vol. 214 (2014), no. 1, pp 269–330.
- [34] A. BRAIDES, B. CASSANO, A. GARRONI, D. SARROCCO: *Quasi-static damage evolution and homogenization: a paradigmatic case of non-commutability*, Ann. Inst. H. Poincaré Anal. Non Linéaire, published online October 2014.
- [35] S. CONTI, A. GARRONI, A. MASSACCESI: *Modeling of dislocations and relaxation of functionals on 1-currents with discrete multiplicity*, Calc. Var. Partial Differential Equations, Volume 54, n. 2 (2015), 1847-1874
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- [37] S. CONTI, A. GARRONI, S. MÜLLER: *Dislocation microstructures and strain-gradient plasticity with one active slip plane*, J. Mech. Phys. Solids, in print.
- [38] A. GARRONI, M. PELETIER, L. SCARDIA, P. VAN MEURS: *Boundary-layer analysis of a pile-up of walls of edge dislocations at a lock*, Mathematical Models and Methods in Applied Sciences, in print.
- [39] R. ALICANDRO, L. DE LUCA, A. GARRONI, M. PONSIGLIONE: *Dynamics of discrete screw dislocations on glide directions*, J. Mech. Phys. Solids, 92 (2016), pp. 87-104
- [40] S. CONTI, A. GARRONI, S. MÜLLER: *Homogenization of vector-valued partition problems and dislocation cell structures in the plane*, BUMI, in print.
- [41] A. BRAIDES, A. GARRONI, M. PALOMBARO: *Interfacial energies of systems of chiral molecules*, Multiscale Modeling and Simulation, in print.

Preprints

- [42] P. ARIZA, S. CONTI, A. GARRONI, M. ORTIZ: *Variational modeling of dislocations in crystals in the line-tension limit*

Book chapters

- [43] A. GARRONI: *Γ -convergence of concentration problems*, in “Topics on concentration phenomena and problems with multiple scales”, Lect. Notes Unione Mat. Ital., Vol. 2, Springer, Berlin, 2006, 233–266

Proceedings and other publications

- [44] G. DAL MASO, A. GARRONI: *Capacity theory for non-symmetric elliptic operators*, Preprint SISSA (1993).
- [45] L. AMBROSIO, A. BRAIDES, A. GARRONI: *Free Discontinuity Problems*, Proceedings of the International Conference “Nonlinear Differential Equations” (Kiev, Aug. 21-27, 1995) in “Nonlinear boundary value problems”, Vol. 7 (1997), 3-12.
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- [48] A. GARRONI: *Asymptotics of phase-field models of dislocations*, Oberwolfach Reports Vol. 2 (2005).
- [49] A. GARRONI: *Threshold-based quasi-static brittle damage evolution*, Oberwolfach Reports Vol. 4 (2007).
- [50] A. GARRONI: *Variational models for plasticity by homogenization of discrete dislocations*, Oberwolfach Reports Vol. 4 (2007).