

GRAZIANO CRASTA

Curriculum Vitæ

Rome, September 28, 2021

General Information

Full Name Graziano Crasta
Citizenship Italian
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 Sapienza Università di Roma,
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Spoken Languages Italian (native), English

Education

1995 PhD in Functional Analysis, SISSA, Trieste.
 Title of the thesis: Nonconvex problems in control theory and calculus of variations. Advisor: Prof. Alberto Bressan.
1993 Magister Philosophiæ in Functional Analysis, cum laude, SISSA, Trieste.
 Title of the thesis: Extremal selections of multifunctions generating a continuous flow. Advisor: Prof. Alberto Bressan.
1991 University graduation in Physics, cum laude, Università degli Studi di Milano.
 Title of the thesis: Studi recenti sul modello di Fermi–Pasta–Ulam. Advisor: Prof. Antonio Giorgilli.

Fellowships

1999 CNR senior Fellowship for research activities at École Polytechnique, Palaiseau (France); 6 months.

Academic positions

ASN National Scientific Qualification 2012, 2013, 2016: 01/A3, Full Professor (2013/12/30 – 2024/07/27).
present Associate Professor in Mathematical Analysis (SSD MAT/05), Sapienza Università di Roma, Facoltà di Scienze MMFFNN.
2003 – 2004 Research Associate (Ricercatore Universitario) in Mathematical Analysis (SSD MAT/05), Sapienza Università di Roma, Facoltà di Scienze MMFFNN.

1994 – 2003 Research Associate (Ricercatore Universitario) in Mathematical Analysis (SSD MAT/05), Università di Modena e Reggio E., Facoltà di Ingegneria

Other academic appointments

- 2019 – present Scientific board, PhD in Mathematics (Dipartimento di Matematica, Sapienza Università di Roma)
- 2012–2016 Scientific board, Phd in *Scienze Applicate alla Protezione dell’Ambiente e dei Beni Culturali* (Sapienza Università di Roma)
- 2016 – 2020 Commissione Paritetica della Facoltà di Scienze MMFFNN (Sapienza Università di Roma)
- 2014 – 2015 Commissione Ricerca di Ateneo (Sapienza Università di Roma)
- 2003 – 2010 Nucleo di Valutazione (Quality Assurance Committee), Facoltà di Scienze MMFFNN (Sapienza Università di Roma)
- 1999 – 2002 Consiglio di Facoltà, Università di Modena e Reggio E.
- 2021 Evaluator for the *Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding*, for the three programmes *Fundamental and groundbreaking research*, *Exploratory research projects 2021*, *Research projects for stimulating young independent teams 2021* and *Postdoctoral Research Projects 2021*
- 2020 Evaluator for the *Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding*, programme *Exploratory Research Projects 2020*
- 2019 Evaluator for the *Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding*, programme *Research Projects for Stimulating Young Independent Teams*
- 2017 Referee MIUR, PRIN projects 2015
- 2016 Evaluator for the *Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding*, programme *Exploratory Research Projects 2016*
- 2018 Referee for *Programma per Giovani Ricercatori “Rita Levi Montalcini” 2016*
- 2017 Selection committee for PhD in Mathematics, Sapienza Università di Roma
- 2007 Committee for PhD degree, Università di Roma Tor Vergata
- 2006 INdAM Committee for 10 scholarships for master degree in Mathematics
- 2006 Selection committee for a postdoc position (24 months) at the Department of Mathematics, Sapienza Università di Roma.
- 2000 Committee for a position of Research Associate (Ricercatore) at Facoltà di Scienze MMFFNN, Sapienza Università di Roma

Awards

- 2017 Finanziamento delle Attività Base di Ricerca FFABR
- 2015 Eccellente insegnamento universitario (Acknowledgment for excellence in teaching), Facoltà di Scienze MMFFNN, Sapienza Università di Roma.

TEACHING

Courses

- 2021
 - *Calculus and Biostatistics*, degree in Biotechnology
 - *Control Theory*, master degree in Applied Mathematics
- 2020
 - *Calculus and Biostatistics*, degree in Biotechnology
- 2019
 - *Calculus and Biostatistics*, degree in Biotechnology
- 2018
 - *Calculus and Biostatistics*, degree in Biotechnology
 - *Calculus*, degree in Chemistry
- 2017
 - *Istituzioni di Analisi Superiore* (Advanced Real Analysis), master degree in Mathematics
 - *Calculus and Biostatistics*, degree in Biotechnology
- 2016
 - *Mathematical Analysis I*, degree in Mathematics
 - *Calculus and Biostatistics*, degree in Biotechnology
- 2015
 - *Calculus and Biostatistics*, degree in Biotechnology
- 2014
 - *Mathematical Analysis I*, degree in Mathematics
 - *Calculus and Biostatistics*, degree in Biotechnology
- 2013
 - *Mathematical Analysis I*, degree in Mathematics
 - *Calculus and Biostatistics*, degree in Biotechnology
- 2012
 - *Calculus and Biostatistics*, degree in Biotechnology
- 2011
 - *Nonlinear Differential Equations*, master degree in Mathematics
 - *Calculus and Biostatistics*, degree in Biotechnology
- 2010
 - *Nonlinear Differential Equations*, master degree in Mathematics
 - *Calculus and Biostatistics*, degree in Biotechnology
- 2009
 - *Differential Calculus*, degree in Informatics
- 2008
 - *Calculus*, degree in Biotechnology
 - *Statistics*, degree in Biotechnology
- 2007
 - *Calculus*, degree in Biotechnology
- 2006
 - *Calculus*, degree in Biotechnology
 - *Statistics*, degree in Biotechnology
- 2005
 - *Calculus*, degree in Biotechnology
- 2004
 - *Calculus*, degree in Biotechnology
 - *Statistics*, degree in Biotechnology
- 2003
 - *Calculus*, degree in Biotechnology
- 2002
 - *Calculus*, degree in Biotechnology
 - *Mathematical Analysis B*, degree in Mechanical Engineering
- 2001
 - *Mathematical Analysis A*, degree in Mechanical Engineering
 - *Mathematical Analysis B*, degree in Mechanical Engineering
- 2000
 - *Mathematical Analysis C*, degree in Mechanical Engineering
 - *Mathematical Analysis D*, degree in Mechanical Engineering
 - *Mathematical Analysis 3*, degree in Mechanical Engineering

- 1999 - *Mathematical Analysis I*, degree in Mechanical Engineering
- 1994 – 1998 - teaching assistant for the courses of *Mathematical Analysis I and II*, degree in Mechanical Engineering

Advanced Courses (PhD level)

- 2016 *An Introduction to the Theory of Viscosity Solutions* (PhD in Mathematics, Sapienza Università di Roma)
- 2010, 2011 *Nonlinear Differential Equations* (master degree and PhD in Mathematics, Sapienza Università di Roma)
- 2002 *Introduction to the Mathematical Theory of Control* (PhD in Mathematics, Università di Modena e Reggio E.)

Undergraduate Students supervising

- 2019 Eleonora Longoni
- 2017 Simone Di Paolo, Chiara Avenoso
- 2016 Antonio Cristallo, Vera Del Valli, Chiara Ciccone, Sabina Angeloni
- 2015 Marco Valerio Giannone
- 2013 Emanuele Tuccinardi, Guglielmo Pelino, Fabrizio Teodonio
- 2012 Valeria Abate, Mauro Sanna
- 2011 Francesca Rasetta, Carlo Cafaro, Eleonora Mattiuzzo, Andrea Romeo

Master Students supervising

- 2021 Germano Colaci
- 2020 Claudia Bruni
- 2019 Flavio Brandolini
- 2018 Sabina Angeloni
- 2016 Paolo Di Bartolomeo, Anna Napolitano
- 2013 Stefania Vesperini, Fabiana Mancini, Valentina Chima, Alessandro Vittori
- 2012 Gianluca Rossi
- 2011 Nico Laruina, Silvia Russo
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RESEARCH

Research areas

- Qualitative Analysis of PDEs: mass transport problems and Monge–Kantorovich equations; Boundary value problems for the infinity Laplacian; Eigenvalue problems for fully nonlinear PDEs.
- Conservation laws: Uniqueness and continuous dependence of solutions to systems of conservation laws; uniqueness and structure of solutions to multidimensional scalar conservation laws with discontinuous flux.
- Calculus of variations: Existence, uniqueness and qualitative properties of minimizers to non-convex and/or non-coercive integral functionals; pairing between bounded divergence-measure vector fields and functions of bounded variation.
- Control theory and differential inclusions: existence of controls and selections for non-convex problems.

Scientific visits

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| <i>2018</i> | Universidad de Valencia, collaboration with J.M. Mazon. |
| <i>2004 – present</i> | Politecnico di Milano (several visits), collaborations with I. Fragalà and F. Gazzola |
| <i>1999</i> | École Polytechnique, Palaiseau (six months), collaboration with P.G. LeFloch. |
| <i>1997</i> | SISSA, Trieste (two weeks), collaboration with A. Bressan and B. Piccoli |
| <i>1996</i> | SISSA, Trieste (one month), collaboration with A. Bressan and B. Piccoli |

Invited speaker at congresses and invited seminars

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| <i>Sept. 2019</i> | Workshop “Dynamics, Equations and Applications – DEA 2019”, Kraków (Poland) |
| <i>July 2018</i> | Workshop “Geometric Function Theory in Fluid Mechanics”, Barcelona (Spain) |
| <i>May 2018</i> | Workshop “Analisi Matematica al Castelnuovo”, Roma |
| <i>June 2017</i> | Università di Modena e Reggio E. |
| <i>March 2017</i> | Università di Roma Tor Vergata |
| <i>Sept. 2016</i> | Workshop “Geometric properties of solutions to elliptic and parabolic problems”, Santa Margherita di Pula, Cagliari |
| <i>June 2016</i> | Workshop “Recent trends in Differential Equations”, Aveiro, Portugal |
| <i>June 2016</i> | Workshop “11th Meeting on Nonlinear Hyperbolic PDEs and Applications”, SISSA, Trieste |
| <i>March 2015</i> | Dipartimento di Matematica, Sapienza Università di Roma |
| <i>February 2015</i> | Workshop “Spectral theory and shape optimization problems for elliptic PDEs”, Milano |
| <i>May 2014</i> | Workshop “8th European Conference on Elliptic and Parabolic Problems”, Gaeta |
| <i>June 2012</i> | Workshop “12th International Conference on Free Boundary Problems”, focus session “Free Boundaries in Critical–State Problems”, Frauenchiemsee, Germany |
| <i>Sept. 2010</i> | Workshop “Viscosity, metric, and control theoretic methods for nonlinear partial differential equations”, Padova |

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| <i>May 2010</i> | Università di Roma Tor Vergata |
| <i>May 2009</i> | Workshop "6th European Conference on Elliptic and Parabolic Problems", session "Nonlinear differential equations in applied mathematics", Gaeta |
| <i>Sept. 2008</i> | Workshop SIMAI 2008, session "Nonlinear differential equations in applied mathematics", Roma |
| <i>Sept. 2008</i> | Workshop "Viscosity, metric and control theoretic methods in nonlinear PDEs: analysis, approximations, applications", Roma |
| <i>May 2008</i> | Università dell'Aquila |
| <i>March 2008</i> | Dipartimento di Matematica, Sapienza Università di Roma |
| <i>July 2006</i> | Joint meeting U.M.I.–S.M.F., special session "Qualitative Methods for Hamilton-Jacobi Equations and Applications", Torino |
| <i>June 2006</i> | "Italian-Japanese meeting on Nonlinear Partial Differential Equations and Applications", Cortona |
| <i>April 2006</i> | Università di Roma Tor Vergata |
| <i>March 2006</i> | "Workshop on Partial Differential Equations and Applications", Roma |
| <i>May 2004</i> | Università di Modena e Reggio E. |
| <i>March 2004</i> | Dipartimento di Matematica, Sapienza Università di Roma |
| <i>October 2002</i> | Dipartimento di Matematica, Sapienza Università di Roma |
| <i>June 2002</i> | Workshop "Advances on Nonlinear PDE", L'Aquila |
| <i>May 2002</i> | Politecnico di Milano |
| <i>November 1999</i> | Università di Milano Bicocca |
| <i>April 1999</i> | "Workshop on Hyperbolic Systems of Conservation Laws", Lisbon |
| <i>Sept. 1995</i> | "XV convegno U.M.I.", Padova |
| <i>May 1995</i> | "Convegno nazionale di Equazioni Differenziali Ordinarie e Applicazioni", Bressanone |
| <i>December 1994</i> | Università di Padova |
| <i>March 1994</i> | "Miniconvegno su Inclusioni Differenziali e Teoria dei Controlli", Perugia |
| <i>May 1993</i> | "Workshop on Differential Inclusions", Banach Center, Warsaw |

Organization of conferences

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| <i>2019</i> | Minisymposium "Differential models involving non-smooth vector fields" within ICIAM 2019, Valencia. |
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Grants as Principal Investigator

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| <i>2019</i> | INdAM–GNAMPA project "Questioni di autovalori e di pairing per operatori ellittici non-lineari singolari" (Grant value 3000 Eur) |
| <i>2018</i> | Sapienza research project "Problemi stazionari ed evolutivi in fisica matematica e scienza dei materiali" (Grant value 12500 Eur) |
| <i>2017</i> | Sapienza research project "Modelli differenziali della fisica matematica: leggi di conservazione ed equazioni dispersive" (Grant value 12500 Eur) |

- 2017 Finanziamento delle Attività Base di Ricerca FFABR (3000 Eur)
- 2016 INdAM–GNAMPA project “Equazioni di evoluzione non lineari” (Grant value 1500 Eur)
- 2009 Sapienza research project “Analisi, algoritmi e metodi di calcolo per una classe di equazioni alle derivate parziali nonlineari” (Grant value 4000 Eur)

Grants as Investigator

- 2019 – present PRIN 2017 (P.I. G. Dal Maso)
- 2010–2017 Joint INDAM-CNRS research project GDRE CONEDP “Group de Recherche European en Control des Equations aux Derivees Partielles” (Grant Value 350000 Euro)
- 1997–2000 TMR-EU Network IV F.P. research project “Hyperbolic Systems of Conservation Laws” (1997–2000) (Grant Value 1700000 ECU)
- 2005, 2007, 2009 PRIN projects (P.I. I. Capuzzo Dolcetta)
- 1997, 2000 COFIN/PRIN projects (P.I. A. Cellina)
- 2004 – present 11 Sapienza “Ateneo” research projects, 6 Sapienza “Facoltà” research projects
- 2001 – present 10 INdAM–GNAMPA projects

Membership of editorial boards

- 2021 – *Mathematics*
- 2019 *Symmetry*, Guest editor of the Special Issue “Symmetry in Calculus of Variations and Control Theory”
- 2012 – 2017 *Abstract and Applied Analysis*
- 2010 – 2016 *ISRN Mathematical Analysis*
- 2007 – 2015 *The Open Mathematics Journal*

Referee for international journals

Archive for Rational Mechanics and Analysis,
Journal of the European Mathematical Society (JEMS),
SIAM Journal on Control and Optimization,
SIAM Journal on Applied Mathematics,
SIAM Journal on Mathematical Analysis,
Journal of Differential Equations,
Indiana University Mathematical Journal,
Advances in Differential Equations,
Proceeding of the American Mathematical Society,
Nonlinear Analysis,
ESAIM: Control, Optimisation and Calculus of Variations,

The Journal of Geometric Analysis,
Proceedings of the Royal Society of Edinburgh: Sect. A,
Discrete and Continuous Dynamical Systems,
Archiv der Mathematik,
Mathematical Methods in the Applied Sciences,
Journal of Mathematical Analysis and Applications,
Journal on Inverse Problems in Science and Engineering,
Applied Mathematics and Optimization,
The Open Mathematics Journal
AIMS Mathematics
Atti del Seminario Matematico e Fisico dell'Università di Modena,
Computational and Structural Biotechnology Journal

Complete list of publications and preprints

<http://www1.mat.uniroma1.it/people/crasta/public.php>

MONOGRAPHS

- [1] A. BRESSAN, G. CRASTA, B. PICCOLI: Well-posedness of the Cauchy problem for $n \times n$ Systems of Conservation Laws, *Mem. Amer. Math. Soc.*, **146** (2000), pp. viii+134
IF2000:1.095 – Cit.: 113 (Scopus) **133** (MSN)

JOURNAL ARTICLES

- [2] V. MASTRANTONIO, G. CRASTA, S. URBANELLI, D. PORRETTA: Cannibalism and Necrophagy Promote a Resource Loop and Benefit Larval Development in Insects of Temporary Waters, *Insects*, **12** (2021), pp. 657
IF2020:2.769 – Cit.: **0** (Scopus)
- [3] G. CRASTA, I. FRAGALÀ: Concavity properties of solutions to Robin problems, *Camb. J. Math.*, **9** (2021), pp. 177-212
IF2019:1.625
- [4] G. CRASTA, I. FRAGALÀ: On the supremal version of the Alt-Caffarelli minimization problem, *Adv. Calc. Var.*, **14** (2021), pp. 327-341
IF2019:1.275 – Cit.: **1** (Scopus) **0** (MSN)
- [5] G. CRASTA, V. DE CICCO, A. MALUSA: Pairings between bounded divergence-measure vector fields and BV functions, *Adv. Calc. Var.*, published online, DOI: 10.1515/acv-2020-0058
IF2019:1.275 – Cit.: **0** (Scopus)
- [6] G. CRASTA, A. FALOCCHI, F. GAZZOLA: A new model for suspension bridges involving the convexification of the cables, *Z. Angew. Math. Phys.*, **71** (2020), pp. 93
IF2019:1.428 – Cit.: **1** (Scopus) **0** (MSN)
- [7] G. CRASTA, I. FRAGALÀ: Bernoulli free boundary problem for the infinity Laplacian, *SIAM J. Math. Anal.*, **52** (2020), pp. 821-844
IF2019:1.392 – Cit.: **1** (Scopus) **2** (MSN)

- [8] G. CRASTA, I. FRAGALÀ: The Brunn-Minkowski inequality for the principal eigenvalue of fully nonlinear homogeneous elliptic operators, *Adv. Math.*, **359** (2020), pp. 106855
IF2019:1.494 – Cit.: 1 (Scopus) **2** (MSN)
- [9] G. CRASTA, I. FRAGALÀ, B. KAWOHL: On the first eigenvalue of the normalized p-Laplacian, *Proc. Amer. Math. Soc.*, **148** (2020), pp. 577-590
IF2019:0.927 – Cit.: 1 (Scopus) **2** (MSN)
- [10] G. CRASTA, A. MALUSA: Non-coercive radially symmetric variational problems: Existence, symmetry and convexity of minimizers, *Symmetry*, **11** (2019), pp. 688
IF2019:2.645 – Cit.: **0** (Scopus)
- [11] G. CRASTA, V. DE CICCIO: An extension of the pairing theory between divergence-measure fields and BV functions, *J. Funct. Anal.*, **276** (2019), pp. 2605-2635
IF2019:1.496 – Cit.: **6** (Scopus) 4 (MSN)
- [12] G. CRASTA, V. DE CICCIO: Anzellotti's pairing theory and the Gauss-Green theorem, *Adv. Math.*, **343** (2019), pp. 935-970
IF2019:1.494 – Cit.: **11** (Scopus) 8 (MSN)
- [13] G. CRASTA, I. FRAGALÀ: Rigidity results for variational infinity ground states, *Indiana Univ. Math. J.*, **68** (2019), pp. 353-367
IF2019:1.065 – Cit.: 2 (Scopus) **4** (MSN)
- [14] V. MASTRANTONIO, G. CRASTA, A. PUGGIOLI, R. BELLINI, S. URBANELLI, D. PORRETTA: Cannibalism in temporary waters: Simulations and laboratory experiments revealed the role of spatial shape in the mosquito *Aedes albopictus*, *PLoS One*, **13(5)** (2018), pp. e0198194
IF2018:2.776 – Cit.: **6** (Scopus)
- [15] G. CRASTA, V. DE CICCIO: On the chain rule formulas for divergences and applications to conservation laws, *Nonlinear Anal.*, **153** (2017), pp. 275-293
IF2017:1.291 – Cit.: **4** (Scopus) 3 (MSN)
- [16] G. CRASTA, I. FRAGALÀ: Geometric issues in PDE problems related to the infinity Laplace operator, *Radon Series on Computational and Applied Mathematics*, **17** (2017), pp. 3-19
IF: N/A – Cit.: **2** (MSN)
- [17] D. PORRETTA, V. MASTRANTONIO, G. CRASTA, R. BELLINI, F. COMANDATORE, P. ROSSI, G. FAVIA, C. BANDI, S. URBANELLI: Intra-instar larval cannibalism in *Anopheles gambiae* (s.s.) and *Anopheles stephensi* (Diptera: Culicidae), *Parasites and Vectors*, **9** (2016), pp. 566
IF2016:3.035 – Cit.: **9** (Scopus)
- [18] V. MASTRANTONIO, D. PORRETTA, S. URBANELLI, G. CRASTA, G. NASCETTI: Dynamics of mtDNA introgression during species range expansion: insights from an experimental longitudinal study, *Scientific Reports*, **6** (2016), pp. 30355
IF2016:4.259 – Cit.: **21** (Scopus)
- [19] G. CRASTA, V. DE CICCIO, G. DE PHILIPPIS, F. GHIRALDIN: Structure of solutions of multidimensional conservation laws with discontinuous flux and applications to uniqueness, *Arch. Ration. Mech. Anal.*, **221** (2016), pp. 961-985
IF2016:2.392 – Cit.: **16** (Scopus) 15 (MSN)
- [20] G. CRASTA, I. FRAGALÀ: Characterization of stadium-like domains via boundary value problems for the infinity Laplacian, *Nonlinear Anal.*, **133** (2016), pp. 228-249
IF2016:1.192 – Cit.: 7 (Scopus) **8** (MSN)
- [21] G. CRASTA, I. FRAGALÀ: A C^1 regularity result for the inhomogeneous normalized infinity Laplacian, *Proc. Amer. Math. Soc.*, **144** (2016), pp. 2547-2558
IF2016:0.679 – Cit.: **8** (Scopus) 8 (MSN)

- [22] G. CRASTA, I. FRAGALÀ: On the characterization of some classes of proximally smooth sets, *ESAIM Control Optim. Calc. Var.*, **22** (2016), pp. 710-727
IF2016:1.540 – Cit.: 8 (Scopus) **10** (MSN)
- [23] G. CRASTA, I. FRAGALÀ: On the Dirichlet and Serrin problems for the inhomogeneous infinity Laplacian in convex domains: Regularity and geometric results, *Arch. Ration. Mech. Anal.*, **218** (2015), pp. 1577-1607
IF2015:2.321 – Cit.: **17** (Scopus) 17 (MSN)
- [24] G. CRASTA, A. MALUSA: Existence and uniqueness of solutions for a boundary value problem arising from granular matter theory, *J. Differential Equations*, **259** (2015), pp. 3656-3682
IF2015:1.821 – Cit.: 0 (Scopus) **1** (MSN)
- [25] G. CRASTA, V. DE CICCIO, G. DE PHILIPPIS: Kinetic formulation and uniqueness for scalar conservation laws with discontinuous flux, *Comm. Partial Differential Equations*, **40** (2015), pp. 694-726
IF2015:1.444 – Cit.: **14** (Scopus) 13 (MSN)
- [26] G. CRASTA, I. FRAGALÀ: A symmetry problem for the infinity Laplacian, *Int. Math. Res. Not. IMRN*, **2015** (2015), pp. 8411-8436
IF2015:1.031 – Cit.: **9** (Scopus) 8 (MSN)
- [27] S. URBANELLI, D. PORRETTA, V. MASTRANTONIO, R. BELLINI, G. PIERACCINI, R. ROMOLI, G. CRASTA, G. NASCETTI: Hybridization, natural selection and evolution of reproductive isolation: a 25-years survey of an artificial sympatric area between two mosquito sibling species of the *Aedes mariae* complex, *Evolution*, **68** (2014), pp. 3030-3038
IF2014:4.612 – Cit.: **14** (Scopus)
- [28] G. CRASTA, I. FRAGALÀ: A new symmetry criterion based on the distance function and applications to PDE's, *J. Differential Equations*, **255** (2013), pp. 2082-2099
IF2013:1.570 – Cit.: **3** (Scopus) 1 (MSN)
- [29] L. AMBROSIO, G. CRASTA, V. DE CICCIO, G. DE PHILIPPIS: A nonautonomous chain rule in $W^{1,p}$ and in BV, *Manuscripta Math.*, **140** (2013), pp. 461-480
IF2013:0.497 – Cit.: **8** (Scopus) 8 (MSN)
- [30] G. CRASTA, A. MALUSA: A nonhomogeneous boundary value problem in mass transfer theory, *Calc. Var. Partial Differential Equations*, **44** (2012), pp. 61-80
IF2012:1.236 – Cit.: **5** (Scopus) 5 (MSN)
- [31] G. CRASTA, V. DE CICCIO: A chain rule formula in the space BV and applications to conservation laws, *SIAM J. Math. Anal.*, **43** (2011), pp. 430-456
IF2011:1.316 – Cit.: **9** (Scopus) 8 (MSN)
- [32] M. AMAR, G. CRASTA, A. MALUSA: On the Finsler metrics obtained as limits of chessboard structures, *Adv. Calc. Var.*, **2** (2009), pp. 321-360
IF2010:0.581 – Cit.: 3 (Scopus) **4** (MSN)
- [33] G. CRASTA, A. MALUSA: A variational approach to the macroscopic electrodynamics of anisotropic hard superconductors, *Arch. Ration. Mech. Anal.*, **192** (2009), pp. 87-115
IF2009:2.331 – Cit.: 4 (Scopus) **5** (MSN)
- [34] G. CRASTA, S. FINZI VITA: An existence result for the sandpile problem on flat tables with walls, *Netw. Heterog. Media*, **3** (2008), pp. 815-830
IF2008:1.548 – Cit.: **11** (Scopus) 9 (MSN)
- [35] G. CRASTA, A. MALUSA: A sharp uniqueness result for a class of variational problems solved by a distance function, *J. Differential Equations*, **243** (2007), pp. 427-447
IF2007:1.097 – Cit.: **6** (Scopus) 5 (MSN)

- [36] G. CRASTA, A. MALUSA: The distance function from the boundary in a Minkowski space, *Trans. Amer. Math. Soc.*, **359** (2007), pp. 5725-5759
IF2007:0.824 – Cit.: **37** (Scopus) 33 (MSN)
- [37] G. CRASTA, A. MALUSA: On a system of partial differential equations of Monge-Kantorovich type, *J. Differential Equations*, **235** (2007), pp. 484-509
IF2007:1.097 – Cit.: **7** (Scopus) 7 (MSN)
- [38] G. CRASTA, I. FRAGALÀ, F. GAZZOLA: Some estimates for the torsional rigidity of composite rods, *Math. Nachr.*, **280** (2007), pp. 242-255
IF2007:0.415 – Cit.: **7** (Scopus) 5 (MSN)
- [39] G. CRASTA: A symmetry problem in the calculus of variations, *J. Eur. Math. Soc. (JEMS)*, **8** (2006), pp. 139-154
IF2006:1.486 – Cit.: **4** (Scopus) 3 (MSN)
- [40] G. CRASTA, I. FRAGALÀ, F. GAZZOLA: On a long-standing conjecture by Pólya-Szegö and related topics, *Z. Angew. Math. Phys.*, **56** (2005), pp. 763-782
IF2005:0.455 – Cit.: **23** (Scopus) 18 (MSN)
- [41] G. CRASTA, A. MALUSA: On the existence and uniqueness of minimizers for a class of integral functionals, *NoDEA Nonlinear Differential Equations Appl.*, **12** (2005), pp. 129-150
IF2005:0.255 – Cit.: **2** (Scopus) 1 (MSN)
- [42] P. CANNARSA, P. CARDALIAGUET, G. CRASTA, E. GIORGIERI: A boundary value problem for a PDE model in mass transfer theory: representation of solutions and applications, *Calc. Var. Partial Differential Equations*, **24** (2005), pp. 431-457
IF2005:0.861 – Cit.: **22** (Scopus) 20 (MSN)
- [43] G. CRASTA, I. FRAGALÀ, F. GAZZOLA: On the role of energy convexity in the web function approximation, *NoDEA Nonlinear Differential Equations Appl.*, **12** (2005), pp. 93-109
IF2005:0.255 – Cit.: **9** (Scopus) 6 (MSN)
- [44] G. CRASTA: Estimates for the energy of the solutions to elliptic Dirichlet problems on convex domains, *Proc. Roy. Soc. Edinburgh Sect. A*, **134** (2004), pp. 89-107
IF2004:0.487 – Cit.: **8** (Scopus) 6 (MSN)
- [45] G. CRASTA: On a class of nonconvex noncoercive Bolza problems with constraints on the derivatives, *J. Optim. Theory Appl.*, **118** (2003), pp. 295-325
IF2003:0.583 – Cit.: **1** (Scopus) 2 (MSN)
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