

## CURRICULUM VITAE

GIOVANNI BELLETTINI

Date of birth: October 30, 1963

City, country of birth: Bologna, Italy.

Citizenship: Italian.

Married.

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### EDUCATION

- November 21, 1988: Degree in Mathematics (mark: 110/110 cum laude). Institution: University of Pisa, Italy. Supervisor: Prof. L. Modica.

- October 28, 1993: Ph.D. in Functional Analysis and Applications. Institution: International School for Advanced Studies SISSA/ISAS, Trieste, Italy. Title of the Ph.D. thesis: "Geometric problems involving curvatures in the Calculus of Variations". Supervisor: Prof. G. Dal Maso.

Diploma of piano at the Academy of Music L. Boccherini, Lucca Italy, 1988.

Language skills: English (fluent), French (basic).

### PRESENT POSITION

Full Professor of Mathematical Analysis, University of Roma Tor Vergata, Department of Mathematics: November 1, 2001-.

ICTP Trieste, consultant: January 1, 2012 - August 31, 2012; January 1, 2013 - August 31, 2013; January 1, 2014 - August 31, 2014, January 1, 2014 - August 31, 2015.

SISSA Trieste, member of the Faculty for Mathematical Analysis and Applications, 2013-.

INFN associate at Laboratori Nazionali di Frascati, Roma: October 1, 2004-.

### LIST OF QUALIFICATIONS

- Researcher, University of Bologna, Department of Mathematics: July 1, 1991 - October 31, 1994.

- Researcher, University of Pisa, Department of Applied Mathematics: November 1, 1994 - October 31, 1998.

- Associate Professor, University of Roma Tor Vergata, Department of Mathematics: November 1, 1998 - October 31, 2001.

## PRESENT ADDRESS

Dipartimento di Matematica, Università di Roma Tor Vergata, via della ricerca scientifica 1, 00133 Roma, Italy. Tel.: +39 06 72594612, fax: +39 06 72594699, e-mail: belletti@mat.uniroma2.it.

## 1. RESEARCH ACTIVITY

- **Geometric evolution equations.** Mean curvature flow. Barriers, fattening, minimizing movements, higher order approximations. Anisotropic and crystalline mean curvature flow. The total variation flow. Evolution of partitions. See for instance [11], [17], [19], [25], [18], [29], [21], [30], [39], [36], [31], [32], [41], [38], [40], [46], [47], [43], [45], [49], [50], [52], [54], [55], [57], [71], [65], [66], [67], [95], [76], [88], [82], [89], [96], [99], [102], [116], [126], [131], [133]. The book by G. Bellettini: *Lecture Notes on Mean Curvature flow, Barriers and Singular Perturbations*, *Scuola Normale Superiore, Pisa* 2013, pp. xviii-325 (see the list of publications), is an introduction to the evolution of a hypersurface by its mean curvature. The aim of the book is to give an introduction to mean curvature flow using, as much as possible, a parametrization free approach. Some relevant aspects of mean flow are described, such as the role of the signed distance function and the comparison principle, and their use in the theory of barriers. Some examples of singularities are discussed. In the last chapters, also making use of a formal asymptotic inner and outer expansion, the convergence of the parabolic Allen-Cahn's equation to mean curvature flow for sufficiently short times is proven, together with an error estimate.

- **Calculus of variations.** Minimal surfaces, surfaces with prescribed mean curvature and their variational and numerical approximations. Relaxation of the area functional for graphs in codimension two, and connection with the Plateau's problem. Coverings and Plateau's problem. Higher order problems, the elastica functional. Phase transitions and  $\Gamma$ -convergence. Non local functionals. Applications to Image Segmentation. See for instance [1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [13], [14], [15], [20], [12], [16], [22], [33], [24], [26], [27], [28], [34], [35], [37], [48], [44], [70], [62], [61], [64], [73], [75], [84], [79], [108], [109], [129], [128], [130], [132], [134].

- **Backward-forward parabolic equations.** Gradient flows of nonconvex functionals in dimension one. The Perona-Malik equation. Weak solutions, fourth-order approximations, discretizations. See for instance [72], [94], [68], [77], [80], [69], [98], [101], [114], [123], [122], [124].

- **Nonlinear hyperbolic equations.** Scalar conservation laws. The nonlinear wave equation of Ginzburg-Landau type. Classical relativistic strings. See for instance [106], [104], [107], [110], [121].

- **Numerical Analysis.** Finite differences and finite elements approximations of parabolic partial differential equations. Discrete  $\Gamma$ -convergence. See for instance [2], [3], [4], [9], [8], [12], [23].

- **Image Segmentation.** Reconstruction of three-dimensional shapes from apparent contours; topological and variational problems in computer vision. Apparent contours and their invariants. See for instance [56], [86], [91], [78], [97], [100], [103]. The book by B. Bellettini, V. Beorchia, M. Paolini, F. Pasquarelli, *Shape Reconstruction from Apparent Contours. Theory and Algorithms*, *Computational Imaging and Vision*, Springer 2015 (see the list of publications), is concerned with the problem of reconstructing a (not necessarily connected) shape

starting from information on its apparent contour. Starting from a variational model concerning the depth of the objects in a picture and the problem of hidden and illusory contours, we investigate one of the central problems of computer vision: the topological and algorithmic reconstruction of a smooth three dimensional scene starting from the visible part of an apparent contour. We focus our attention on the manipulation of apparent contours using a finite set of elementary moves, corresponding to diffeomorphic deformations of three dimensional scenes. The book is intended also as a user's guide to the software code `appcontour`, written for the manipulation of apparent contours and their invariants.

- **Mathematical aspects of Statistical Mechanics.** Nonlocal functionals in phase transitions, nonlocal parabolic equations. See for instance [26], [27], [51], [74], [75], [87], [90].

- **Miscellanea.** Regularization of the two-body problem, systems of PDEs, general relativity, encyclopediae. See for instance [53], [42], [60], [59], [58], [63], [81], [85], [117], [118], [125].

## 2. SEMINAR ACTIVITY

**Invited speaker at meetings abroad.** Pont à Mousson, Metz (1991, 1994), Oberwolfach (1994, 1998, 2000, 2001, 2004(2), 2006, 2007(2), 2008, 2010, 2011 (2), 2013), (2014), (2015), Berlin (1996), Freiburg (1998), Barcellona (2000), Paris (2000), Debrecen (2003), Edinburgh (2005), Lyon (2005), Roscoff (2007), Bedlewo (2007), Zürich (2007), Hausdorff Center, Bonn (2008), Max Planck Institute, Leipzig (2008), Carnegie Mellon Univ., Pittsburgh PA, USA (2009), Poros, Greece (2009), Max Planck Institute Golm, Germany (2009), Paris XI (2010), Dortmund, Germany (2011), Tuebingen, Germany (2011), Banach Center, Warsaw, Poland (2012), Chiemsee, Germany (2012), Athens, Greece (2012), ICTP (2013), Madrid (2013), Paris (IHP, 2014), Frankfurt (2015).

**Invited speaker at meetings in Italy.** Trento (1990, 1991, 1992, 1993, 1994, 1996, 1999), Catania (1991), Padova (1992, 1995), Perugia (1993), Bologna (1994), Firenze (1994), Montecatini Terme (1995), Pavia (1996), Pisa (1996, 2002), Cortona (1997, 1998, 2000), Capri (1997), Scuola Normale Superiore, Pisa (1997, 2001, 2003, 2006(2), 2008, 2009, 2010, 2012), Isola d'Elba (1997), Roma (1999, 2000, 2003, 2006, 2010 (Indam)), Levico Terme (2000, 2003, 2004, 2006, 2008, 2009, 2011, 2013), Ischia (2000), L'Aquila (2002), Lecce (2003, 2004), SISSA, Trieste (2008), Vulcano (2012).

**Seminars held at universities and research centers abroad.** Newton Institute, Cambridge (1995), University of Montpellier II (1996), University of Basel (1997), Institute Henry Poincaré, Centre Emile Borel, Paris (1998), Ecole Polytechnique Federale de Lausanne (2003), Max Planck Institute in the Sciences, ETH Zürich (2004), Leipzig (2005), University of Pisa (2006), Max Planck Institute for Gravitational Physics, Golm (2006), University of Zürich (2007), University of Freiburg (2008), Hausdorff Center, University of Bonn (2008), Max Planck Institute in the Sciences, Leipzig (2010), Ecole Polytechnique, Paris (2012), Dortmund TU (2014).

**Seminars held at universities and research centers in Italy.** University of Trento (1989, 1995, 2002, 2006), University of Milano (1993, 1997), University of Roma "Tor Vergata" (1994, 1997, 1999), University of Roma "La Sapienza" (1994, 1999, 2002, 2005), University of Firenze (1996), University of l'Aquila (1996, 1997, 2004, 2007), Istituto per le Applicazioni del Calcolo, Roma (1999), University of Napoli (2000), University of Padova (2002), University of Bologna (2003), University of Trieste (2009), University of Pavia (2009), University of Udine (2009), University of Brescia (2010), ICTP (2011), SISSA (2014), University of Bologna (2015).

**Visiting Professor.** University of Maryland (United States), University of Montpellier II (France), Newton Institute (University of Cambridge, United Kingdom), University of Basel (Switzerland), University of Ciudad Real (Spain), University of Toulon-Du Var (France), Max Planck Institute in the Sciences (Leipzig, Germany), Max Planck Institute for Gravitational Physics (Golm, Germany), Hausdorff Center (University of Bonn, Germany), University Pompeu Fabra (Barcelona, Spain), Stockholm, KTH (Sweden). Newton Institute (Cambridge, UK).

## 3. EDITORIAL AND REFEREE ACTIVITY

**Associate Editor:**

Interfaces and Free Boundaries (European Mathematical Society), 2013-;  
 Geometric Flows (De Gruyter), 2014-;  
 Scientific Secretary for Ann. Sc. Norm. Super. Pisa Cl. Scienze, 1999-.

**Referee for the following journals:** Adv. Calc. Var., Ann. Inst. H. Poincaré Anal. Non Lin., Annali Mat. Pura Appl., Annali Sc. Norm. Sup. Pisa, Arch. Ration. Mech. Anal., Atti Accad. dei Lincei, Bull. London Math. Soc., Calc. Var. Partial Differential Equations, Comm. Cont. Math., Comm. Math. Phys., Comm. Partial Differential Equations, Comm. Pure Appl. Anal., Discrete Cont. Dyn. Systems, Electronic J. Differential Equations, Esaim: Control, Opt. and Calc. Var., Interfaces Free Bound., J. Comp. Phys., J. Control, Opt. Calculus of Variations, J. Convex Anal., J. Differential Equations, J. Differential Geom., J. Evolution Equations, J. Geom. Anal., J. Reine Angew. Math., Manuscripta Math., Math. Ann., Math. Meth. Appl. Sci., Meth. Appl. Anal., Pacific J. Math., Phys. A, Rendiconti Mat. Appl., Rendiconti Univ. Padova, Revista Mat. Iberoamericana, Siam J. Imaging Sci., Siam J. Math. Anal., Transactions Amer. Math. Soc.

**Other referee activities:** 2003: referee for the Swedish Research Council.

2004: referee for the award of a Senior Fellowship of the Croucher Foundation (Hong Kong).

2007: member of a Committee for a full professorship position in Italy.

2008: referee for a Ph.D. thesis at the Univ. de Bretagne Occidentale (France).

2009: member of the Committee for the evaluation of a Ph.D. Thesis at the Lab. J. Kuntzmann, Mathématiques Appliquées-Informatique, Univ. de Grenoble (France).

2010: member of a Committee for a full professorship position in Italy.

2011: member of a Committee for an associate professorship at Georgetown University (Usa).

2011: member of a Committee for confirmation of associate professorships in Italy.

2011: member of the Committee for assigning the positions for the Laurea Magistrale at SISSA/ISAS (Trieste).

2011: referee for a Ph.D. Thesis at the Université Pierre et Marie Curie, Paris.

2012 Peer referee VQR for the evaluation of research programs 2004-2010.

2014: member of a Committee for confirmation of associate professorships in Italy.

2014 External member of the Committee for the Doctoral School in Applied Mathematics at the International School for Advanced Studies SISSA-ISAS, Trieste.

2014: member of the Committee for the positions for the Laurea Magistrale at SISSA/ISAS (Trieste).

2014: referee for a Ph.D. thesis at the Univ. de la Lorraine (France).

2015: referee for a professorship position W2 at the University of Hamburg (Germany).

## 4. TEACHING ACTIVITY

**Advanced teaching activity:** *Some aspects of motion by mean curvature I, II, III, IV*, Crete (Greece), 1998.

*Geometric Evolution Problems*, Minicorsi di Analisi Matematica, Padova 2003.

*Anisotropic and crystalline mean curvature flow*, Rome 2004.

*Variational principles for geometric evolutions I, II*, KTH, Stockholm (Sweden), 2007.

*An introduction to mean curvature flow I, II, III, IV*, University of Castilla La Mancha (Spain), 2008.

*An introduction to mean curvature flow*, University of Trieste (Italy), 2009.

*Soluzioni deboli del flusso per curvatura media: barriere minime*, SISSA (Trieste), Italy, 2009.

*An introduction to mean curvature flow I, II, III, IV*, Centro De Giorgi, Scuola Normale Superiore di Pisa, Pisa 2009.

*An introduction to anisotropic and crystalline mean curvature flow I, II, III, IV: tutorial course*, Hokkaido University, Hokkaido, Sapporo (Japan), 2010.

*Mean curvature flow and singular perturbations I, II, III*, in Winter School on “Geometric Evolution Equations and Related Topics”, Regensburg, October 8-10, 2012.

**Ph.D. Courses:** *Geometric evolutions of manifolds, motion by mean curvature*, Pisa 1998.

*Partial Differential Equations*, Rome 1999.

*Calculus of Variation in one dimension: classical theory*, Rome 2000.

*Motion by mean curvature*, Rome 2000.

*Geometric Measure Theory*, Rome 2001.

*Calculus of Variations*, Rome 2002.

*Minimizing Movements*, Rome 2003.

*Una introduzione alle equazioni differenziali*, INDAM, Rome 2005.

*Anisotropic evolution problems*, Rome 2006.

*Mean curvature flow and singular perturbations*, SISSA (Trieste), 2012.

*Variational models depending on curvatures in image reconstruction*, SISSA (Trieste), 2013.

*Anisotropic and crystalline mean curvature flow*, SISSA (Trieste), 2014.

*The Plateau problem and related questions*, SISSA (Trieste), 2015.

Functional Analysis and Partial Differential Equations, ICTP Trieste, 2011, 2012, 2013, 2014.

Teaching activity on Mathematical Analysis, Differential Equations and Functional Analysis.

## 5. ADVISING ACTIVITY

**Degree students.** Masala M.: *Sulla funzione distanza al quadrato da una varietà*, Rome 2004.

Rossi R.: *A variational model for cracking in one-dimensional elasticity*, Rome 2004.

Doronzo M.: *Applications of Feynman-Kac formulas*, Rome 2005.

Bosco A.: *Simulation and experimental tests of the thermo-optical and mechanical properties of the LARES satellite for a precise measurement of the Lense-Thirring effect in General Relativity*, Rome 2005.

Palandra A.: *Probability and Finance*, Rome 2006.

Senatore M.: *Theoretical study and analysis of the thermal perturbations for the measurement of the Lense-Thirring effect with Lageos satellites*, Rome 2007.

Paoli D.: *Theoretical study and analysis of the thermal perturbations for the measurement of the Lense-Thirring effect with Lares satellites*, Rome 2007.

Biasutto S.A.: *Some economics applications of Calculus of Variations in one dimension*, Rome 2007.

Caselli F.:  *$\Gamma$ -convergence and the least squares method: applications to differential equations*, Rome 2008.

Gentile, S.: *Optical characterization of the NASA LAGEOS "sector" and the relationships with the de Sitter effect in General Relativity*, Rome 2008.

Gagliardi, D.: *Equazioni di Hamilton-Jacobi e applicazioni*, Rome 2008.

Palandra, L.: *Accurate software modeling of the GNSS laser retroreflector array characterized at the SCF-LAB for the Etrusco-2 ASI-INFN project*, Degree in Engineering, Univ. Rome Tor Vergata, 2013.

Piergentili, F.: *Positioning metrology, thermal control and analysis of GNSS laser retroreflector array characterized at the SCF-Lab*, Degree in Engineering, Univ. Rome Tor Vergata, 2013.

Marra, M.: *Thermal-vacuum-optical characterization of the GNSS laser retroreflector array (GRA) at the SCF-Lab*, Degree in Engineering, Univ. Rome Tor Vergata, 2013.

Capotorto, G.: *Thermal-orbital modeling of the GNS laser retroreflector array (GRA) and its validation with SCF-Lab test data*, Degree in Engineering, Univ. Rome Tor Vergata, 2013.

**ICTP Diploma students.** Nguyen Thuong Ngoc Quoc: *Reaction-diffusion approximations of mean curvature flow*, ICTP Trieste, 2011.

Yaptieu Djengue Odette Sylvia: *On some properties of mean curvature flow with forcing and a pressure term*, ICTP Trieste, 2011.

Ngouanfo Fopa Edith Laure: *Introduction to mathematical optimal control theory*, ICTP Trieste, 2012.

Abdoul Aziz Gueye Dabakh: *Some topics on ordinary differential equations in mechanics and geometry*, ICTP Trieste, 2012.

Mohammad Khosravi: *Minimizing movements for differential equations*, ICTP Trieste, 2012.

Issa Tahir Bachar: *A recent variational approach to semilinear wave equations*, ICTP Trieste, 2012.

Undrakh Batzorig: *Spectrum of bounded linear operators*, ICTP Trieste, 2013.

Guerngar Ngartelbaye: *Elliptic-type regularization for semilinear wave equations*, ICTP Trieste, 2013.

Ikromova Dildora: *The Dirichlet problem for Laplace and second elliptic operators: existence*, ICTP Trieste, 2014.

Alsammani Abdallah Alhadi Mahadi: *The Alexander polynomial of a knot*, ICTP Trieste, 2014.

Aryam Fatima: *Some notes on the Navier-Stokes equations*, ICTP Trieste, 2014.

Khachatryan Mariam: *The Brownian motion*, ICTP Trieste, 2015.

Abdulrashid Ismail: *The GN Theorem*, ICTP Trieste, 2015.

**Ph.D. students.** L. Mugnai: *Relaxation and variational approximation of curvature-dependent functionals in two dimensions*, Pisa 2003.

G. Riey: *Partition energies: approximation and first variation*, Rome 2004.

M. Chermisi: *Crystalline flows of planar networks and a geometric approach for systems of PDEs*, Rome 2006.

C. Tornese: *Convergence of discrete schemes for the Perona-Malik equation*, Rome 2008.

L. Tealdi (SISSA, Trieste): *The relaxed area of maps from the plane to the plane with a line discontinuity, and the role of semicartesian surface*, Trieste 2015.

S. Amato (SISSA, Trieste): *Some results on anisotropic mean curvature and other phase transition problems for Plateau's type problem*, Trieste 2015.

S. Holmatov (SISSA, Trieste): work in progress.

## 6. ORGANIZING ACTIVITY

### Research projects:

- Italian coordinator of the bilateral project "Calculus of Variations: semicontinuity, relaxation, optimal design and approximation", Italia-Spagna.
- Coordinator of the Gnampa project entitled "Energie anisotrope, policristalline e di partizioni, e loro evoluzione secondo la massima discesa", Rome 2003.
- Coordinator of the Gnampa project entitled "Evoluzioni di interfacce e loro regolarizzazione mediante equazioni del quarto ordine", Rome 2004.
- Coordinator of a research group (2004 -) at the Centro De Giorgi (Scuola Normale Superiore, Pisa) on the subject "Interface Evolutions". Other components: V. Caselles (Barcellona) (up to 2013), A. Chambolle (Ecole Polytechnique, Paris), and M. Novaga (Pisa).



## Conferences and workshops:

- Organizer of the workshop "Variational Problems with Free Interfaces", Pisa, 1997.
- Organizer of the workshop "Interface Evolutions and Applications", Centro De Giorgi, Scuola Normale Superiore, Pisa, 2004.
- Organizer of the workshop "Gradient flows of nonconvex functionals and related topics", Centro De Giorgi, Scuola Normale Superiore, Pisa, 2005.
- Organizer of the "Second School on Analysis and Applied Mathematics", Univ. Roma La Sapienza, 2005.
- Organizer of the "One day workshop on geometric evolution problems", Centro De Giorgi, Scuola Normale Superiore, Pisa, 2005.
- Organizer of the workshop "Recent advances on the Perona-Malik equation", Centro De Giorgi, Scuola Normale Superiore, Pisa, 2006.
- Organizer of the workshop "Geometric Evolutions and Applications", Centro De Giorgi, Scuola Normale Superiore, Pisa, 2006.
- Member of the Organizing Committee of the workshop on "Nonlocal and abstract parabolic equations and their applications" Bedlewo (Poland), Banach Center, Polish Academy of Science, 2007.
- Organizer of the workshop "Geometric Evolutions and Minimal Surfaces in Lorentzian Manifolds", Centro De Giorgi, Scuola Normale Superiore, Pisa, 2010. September 7-10, 2010.
- Co-organizer of the focus session "Singular Geometric Evolutions of Free Boundaries", at the Free Boundary Problem 2012 Conference, June 11-15 Chiemsee, Germany.

## PUBLICATIONS

## BOOKS

1. G. Bellettini: Lecture Notes on Mean Curvature flow, Barriers and Singular Perturbations, *Scuola Normale Superiore, Pisa* (Nuova Serie) 12. Pisa: Edizioni della Normale. pp. xviii-325, (2013). ISBN 978-88-7642-428-1/pbk; ISBN 978-88-7642-429-8/ebook
2. G. Bellettini, V. Beorchia, M. Paolini, F. Pasquarelli: Shape Reconstruction from Apparent Contours. Theory and Algorithms, *Computational Imaging and Vision*, Springer-Verlag, pp. iii-333, 2015. ISBN 978-3-662-45190-8.

## REFERENCES

- [1] G. Bellettini: An almost everywhere regularity result for minimal partitions, *Boll. Un. Mat. Ital. B* (7), **4A** (1990), 57–63.
- [2] G. Bellettini: A numerical approach to a minimum problem with applications in image segmentations, *Ann. Univ. Ferrara* **XXXVI** (1990), 99–111.
- [3] G. Bellettini, M. Paolini, C. Verdi:  $\Gamma$ -convergence of discrete approximations to interfaces with prescribed mean curvature, *Atti Accad. Naz. Lincei Cl. Sci. Fis. Mat. Natur. Rend. (9) Mat. Appl.* **1** (1990), 317–328.
- [4] G. Bellettini, M. Paolini, C. Verdi: Numerical minimization of geometrical type problems related to calculus of variations, *Calcolo* **27** (1990), 251–278.
- [5] S. Baldo, G. Bellettini:  $\Gamma$ -convergence and numerical analysis: an application to the minimal partitions problem, *Ricerche Mat.* **XL** (1991), 33–64.
- [6] G. Bellettini, M. Paolini, C. Verdi: Convex approximations of functionals with curvature, *Atti Accad. Naz. Lincei Cl. Sci. Fis. Mat. Natur. Rend. (9) Mat. Appl.* **2** (1991), 297–306.
- [7] G. Bellettini, M. Paolini, C. Verdi: Front-tracking and variational methods to approximate interfaces with prescribed mean curvature, *Proc. Numerical Methods for Free Boundary Problems* (Jyväskylä, 1990, P. Neittaanmäki ed.), Birkhäuser, Basel (1991), 83–92.
- [8] G. Bellettini, M. Paolini, C. Verdi: Numerical minimization of functionals with curvature by convex approximations, *Progress in partial differential equations: calculus of variations, applications*, Pitman Research Notes in Mathematics Series (C. Bandle, J. Bemelmans, M. Chipot, M. Grüter and J. Saint Jean Paulin, eds.) Longman Scientific & Technical Harlow **267** (1992), 124–138.
- [9] G. Bellettini, M. Paolini, C. Verdi: Convergence of discrete approximations to sets of prescribed mean curvature, *Free boundary problems involving solids*, Pitman Research Notes in Mathematics Series (J.M. Chadam and H. Rasmussen, eds.) Longman Scientific & Technical Harlow, **281** (1993), 164–169.
- [10] G. Bellettini, G. Dal Maso, M. Paolini: Semicontinuity and relaxation properties of a curvature depending functional in 2D, *Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* **20** (1993), 247–297.
- [11] G. Bellettini, M. Paolini: Two examples of fattening for the curvature flow with a driving force, *Atti Accad. Naz. Lincei Cl. Sci. Fis. Mat. Natur. Rend. (9) Mat. Appl.* **5** (1994), 229–236.
- [12] G. Bellettini, A. Coscia: Discrete approximation of a free discontinuity problem, *Num. Funct. An. Opt* **3,4** (1994), 202–224.

- [13] G. Bellettini, M. Paolini: Convex approximations of an inhomogeneous anisotropic functional. *Atti Accad. Naz. Lincei Cl. Sci. Fis. Mat. Natur. Rend. (9) Mat. Appl.*, **5** (1994), 177–188.
- [14] G. Bellettini, A. Coscia: Approximation of a functional depending on jumps and corners, *Boll. Un. Mat. Ital. (7) B*, **(7)** (1994), 151–181.
- [15] M. Amar, G. Bellettini: A notion of total variation depending on a metric with discontinuous coefficients, *Ann. Inst. H. Poincaré Anal. Non Linéaire* **11** (1994), 91–133.
- [16] G. Bellettini, M. Paolini: Variational properties of an image segmentation functional depending on contours curvature, *Adv. Math. Sci. Appl.* **5** (1995), 681–715.
- [17] G. Bellettini, M. Paolini: Teoremi di confronto tra diverse nozioni di movimento secondo la curvatura media, *Atti Accad. Naz. Lincei Cl. Sci. Fis. Mat. Natur. Rend. (9) Mat. Appl.*, **6** (1995), 45–54.
- [18] G. Bellettini, M. Paolini: Some results on minimal barriers in the sense of De Giorgi applied to driven motion by mean curvature. *Rend. Acc. Naz. Sci. XL Mem. Mat.*, **XIX** (1995), 43–67.
- [19] G. Bellettini, M. Paolini: Quasi-optimal error estimates for the mean curvature flow with a forcing term, *Differential Integral Equations* **8** (1995), 735–752.
- [20] M. Amar, G. Bellettini: Approximation by  $\Gamma$ -convergence of a total variation with discontinuous coefficients, *Asymptotic Anal.* **10** (1995), 225–243.
- [21] G. Bellettini, G. Fusco: The dynamic of  $V = H - \bar{H}$ : motion of a small drop on a fixed surface, *Proc. of the Conference on Differential Equations, Lisboa*, (Eds: L. Magalhaes, C. Rocha, S. Sanchez) World Scientific, Singapore (1995), 26–38.
- [22] M. Amar, G. Bellettini: A total variation with discontinuous coefficients: variational properties and approximation by  $\Gamma$ -convergence, *Atti Sem. Mat. Fis. Univ. Modena* **XLIII** (1995), 431–435.
- [23] G. Bellettini, M. Paolini: Numerical simulations of measurements of capillary contact angles. *IMA J. Numer. Anal.* **16** (1996), 165–178.
- [24] G. Bellettini, M. Paolini, S. Venturini: Some results on surface measures in Calculus of Variations, *Ann. Mat. Pura Appl.* **CLXX** (1996), 329–359.
- [25] G. Bellettini, M. Paolini: Anisotropic motion by mean curvature in the context of Finsler geometry, *Hokkaido Math. J.* **25** (1996), 537–566.
- [26] G. Alberti, G. Bellettini, M. Cassandro, E. Presutti: Surface tension in Ising systems with Kac potentials. *J. Stat. Phys.* **82** (1996), 743–796.
- [27] G. Bellettini, M. Cassandro, E. Presutti: Constrained minima for non local functionals, *J. Stat. Phys.* **84** (1996), 1337–1349.
- [28] G. Bellettini: Variational approximation of functionals with curvatures and related properties. *J. Convex Anal.* **4** (1997), 91–108.
- [29] G. Bellettini: Alcuni risultati sulle minime barriere per movimenti geometrici di insiemi. *Boll. Un. Mat. Ital.* **7** (1997), 485–512.
- [30] G. Bellettini, P. Colli Franzone, M. Paolini: Convergence of front propagation for anisotropic bistable reaction-diffusion equations, *Asympt. Anal.* **15** (1997), 325–358.
- [31] G. Bellettini, M. Novaga: Barriers for a class of geometric evolution problems, *Atti Acc. Naz. Lincei Cl. Sc. Mat. Fis. Natur. (9) Mat. Appl.*, **8** (1997), 119–128.
- [32] G. Bellettini, M. Novaga: Minimal barriers for geometric evolutions, *J. Differential Equations* **139** (1997), 76–103.
- [33] M. Amar, G. Bellettini, S. Venturini: Integral representation of functionals defined on curves of  $W^{1,p}$ , *Proc. Roy. Soc. Edinburgh Sect. A*, **128** (1998), 193–217.
- [34] G. Bellettini, A. Coscia, G. Dal Maso: Compactness and lower semicontinuity properties in  $SBD(\Omega)$ , *Math. Z.* **228** (1998), 337–351.

- [35] G. Alberti, G. Bellettini: A non local anisotropic model for phase transitions. Part 1: the optimal profile problem, *Math. Ann.* **310** (1998), 527–560.
- [36] G. Bellettini, M. Novaga: Comparison results between minimal barriers and viscosity solutions for geometric evolutions, *Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* **XXVI** (1998), 97–131.
- [37] G. Alberti, G. Bellettini: A nonlocal anisotropic model for phase transitions, part II. Asymptotic behaviour of rescaled energies, *European J. Appl. Math.* **9** (1998), 285–304.
- [38] G. Bellettini, M. Novaga, M. Paolini: An example of three-dimensional fattening for linked space curves evolving by curvature, *Comm. Partial Differential Equations* **23** (1998), 1475–1492.
- [39] G. Bellettini, G. Fusco: Some aspects of the dynamic of  $V = H - \overline{H}$ , *J. Differential Equations* **157** (1999), 106–146.
- [40] G. Bellettini, M. Novaga: Some aspects of De Giorgi’s barriers for geometric evolutions. *Calculus of Variations and Partial Differential Equations*, Springer-Verlag (1999), 115–151.
- [41] G. Bellettini, M. Novaga: A result on motion by mean curvature in arbitrary codimension, *Diff. Geom. Appl.* **11** (1999), 205–220.
- [42] L. Ambrosio, G. Bellettini: Movimento secondo la curvatura media. *Enciclopedia Treccani*, Geometria, 751–753.
- [43] G. Bellettini, M. Novaga, M. Paolini: Facet-breaking for three-dimensional crystals evolving by mean curvature, *Interfaces Free Bound.* **1** (1999), 39–55.
- [44] G. Bellettini, G. Bouchitté, I. Fragalà: BV functions with respect to a measure and relaxation of metric integral functionals, *J. Convex Anal.* **6** (1999), 349–366.
- [45] G. Bellettini, G. Fusco: Stable dynamics of spikes in solutions to a system of activator-inhibitor type. *Proc. of the workshop "New trends in nonlinear partial differential equations"*, (Y. Morita, H. Ninomiya, E. Yanagida and S. Yotsutani eds.) Ryukoku Extension Center, June 7–10 (1999), 1–11.
- [46] G. Bellettini, R. Gagliione, M. Novaga: Approximation to driven motion by crystalline curvature in two dimensions, *Adv. Math. Sci. Appl.* **10** (2000), 467–493.
- [47] G. Bellettini, M. Novaga: Approximation and comparison for non-smooth anisotropic motion by mean curvature in  $R^N$ , *Math. Models Methods Appl. Sci.* **10** (2000), 1–10.
- [48] G. Bellettini, I. Fragalà: Elliptic approximations to prescribed mean curvature surfaces in Finsler geometry, *Asymp. Anal.* **22** (2000), 87–111.
- [49] G. Bellettini, M. Novaga, M. Paolini: On a crystalline variational problem, part I: first variation and global  $L^\infty$ -regularity, *Arch. Ration. Mech. Anal.* **157** (2001), 165–191.
- [50] G. Bellettini, M. Novaga, M. Paolini: On a crystalline variational problem, part II: BV-regularity and structure of minimizers on facets, *Arch. Ration. Mech. Anal.* **157** (2001), 193–217.
- [51] G. Bellettini, P. Buttà, E. Presutti: Sharp interface limits of non local anisotropic interactions, *Arch. Ration. Mech. Anal.* **159** (2001), 109–135.
- [52] G. Bellettini: Some aspect of motion by mean curvature in presence of nonsmooth anisotropies, *Proc. of the 3th European Conference on Mathematics, Barcellona 2000*, Birkhäuser (2001), 245–253.
- [53] G. Bellettini, G. Fusco: Stable dynamics of spikes in solutions to a system of reaction-diffusion equations, *Asymp. Anal.* **26** (2001), 307–357.
- [54] G. Bellettini, M. Novaga, M. Paolini: Characterization of facet-breaking for nonsmooth mean curvature flow in the convex case, *Interfaces Free Bound.* **3** (2001), 415–446.
- [55] G. Bellettini, V. Caselles, M. Novaga: The total variation flow in  $\mathbb{R}^n$ , *J. Differential Equations*, **184** (2002), 475–525.

- [56] G. Bellettini, R. March: Variational properties of a model for image segmentation with overlapping regions, Variational Methods in Discontinuous Structures, Como 2001, in *Progress in Nonlinear Differential Equations and Their Applications*, **51**, 9–17 (2002), Birkhäuser, Boston.
- [57] G. Bellettini, M. Paolini: Errata corrige to the paper: Some results on minimal barriers in the sense of De Giorgi applied to driven motion by mean curvature, *Rend. Acc. Naz. Sci. XL Mem. Mat.*, **XXVI** (2002), 161–165.
- [58] G. Bellettini, G.F. Gronchi: Barriers for systems of ODEs: an application to the two-body problem, *Rend. Atti Acc. Naz. Sci. XL Mem. Mat.* **XXVI** (2002), 145–160.
- [59] G. Bellettini, G. Fusco: Stable dynamics of spikes in solutions to a system of reaction-diffusion equations, II, *Asymp. Anal.* **33** (2003), 9–50.
- [60] G. Bellettini, G. Fusco, G.F. Gronchi: Regularization of the two-body problem via smoothing the potential, *Commun. Pure Appl. Anal.* **2** (2003), 323–353.
- [61] G. Bellettini, M. Novaga, G. Riey: First variation of anisotropic energies and crystalline mean curvature for partitions, *Interfaces Free Bound.* **5** (2003), 331–356.
- [62] G. Bellettini, R. March: An image segmentation variational model with free discontinuities and contour curvature, *Math. Models Methods Appl. Sci.* **14** (2004), 1–45.
- [63] G. Bellettini: Nuova voce sul Dizionario Bompiani delle Opere e dei Personaggi: il teorema di De Giorgi.
- [64] G. Bellettini, L. Mugnai: Characterization and representation of the lower semicontinuous envelope of the elastica functional, *Ann. Inst. H. Poincaré Anal. Non Linéaire* **21** (2004), 839–880.
- [65] G. Bellettini: Barriers, fattening and mean curvature flow, *Int. J. Math. Game Theory and Algebra* **14** (2004), 57–71.
- [66] G. Bellettini: Anisotropic and crystalline mean curvature flow, A Sampler of Riemann-Finsler Geometry (D. Bao, R. L. Bryant, S.-S. Chern, Z. Shen eds.), *Mathematical Sciences Research Institute Publications*, 50 2004, Cambridge Univ. Press, 49–83.
- [67] G. Bellettini: On facets-breaking for crystalline mean curvature in 3D, *Periodica Mathematica Hungarica* **48** (2004), 185–206.
- [68] G. Bellettini: On gradient flows of some non-convex functionals of Perona-Malik type, Workshop on “Phasenubergänge”, *Oberwolfach Report 26/2004*.
- [69] G. Bellettini, G. Fusco, N. Guglielmi: A possible approach to the dynamic of forward-backward parabolic equations, *Proc. of the Ryukoku Workshop on Mathematical Aspects of Pattern Formation and Dynamics in Dissipative Systems*, 2004.
- [70] G. Bellettini, A. Braides, G. Riey: Variational approximation of anisotropic functionals on partitions, *Ann. Mat. Pura Appl.* **184** (2005), 75–93.
- [71] G. Bellettini, V. Caselles, M. Novaga: Explicit solutions of the eigenvalue problem  $-\operatorname{div}(Du/|Du|) = u$ , *SIAM J. Math. Anal.* **36** (2005), 1095–1129.
- [72] G. Bellettini, G. Fusco: A regularized Perona-Malik functional: some aspects of the gradient dynamics, *EQUADIFF 2003 Proceedings of the International Conference on Differential Equations*, Hasselt, Belgium 22 - 26 July 2003 (Freddy Dumortier, Henk Broer, Jean Mawhin, Andre Vanderbauwhede and Sjoerd Verduyn Lunel eds.), 639–644. World Scientific, 2005.
- [73] G. Bellettini, L. Mugnai: On the approximation of the elastica functional in radial symmetry, *Calc. Var. Partial Differential Equations*, **24**, (2005), 1–20.
- [74] G. Bellettini, A. De Masi, E. Presutti: Tunnelling for non local evolution equations, *J. Nonlinear Math. Phys.* **12** (2005), 50–63.
- [75] G. Bellettini, A. De Masi, E. Presutti: Energy levels of a non local evolution equations, *J. Math. Phys.* **46** (2005), 1–31.

- [76] G. Bellettini, V. Caselles, A. Chambolle, M. Novaga: Crystalline mean curvature flow of convex sets, *Arch. Ration. Mech. Anal.* **179** (2006), 109–152.
- [77] G. Bellettini, M. Novaga, E. Paolini: Global solutions to the gradient flow equation of a nonconvex functional, *SIAM J. Math. Anal.* **37** (2006), 1657–1687.
- [78] G. Bellettini, R. March: Variational problems in image segmentation and  $\Gamma$ -convergence methods, in *Advance in Image and Video Segmentation* (Y.-J. Zhang ed.), IRM Press (2006), 46–71.
- [79] G. Bellettini, M.S. Gelli, S. Luckhaus, M. Novaga: Deterministic equivalent for the Allen-Cahn energy of a scaling law in the Ising model, *Calc. Var. Partial Differential Equations* **26** (2006), 429–445.
- [80] G. Bellettini, G. Fusco, N. Guglielmi: A concept of solution for forward-backward equations of the form  $u_t = \frac{1}{2}(\phi'(u_x))_x$  and numerical experiments for the singular perturbation  $u_t = -\epsilon^2 u_{xxxx} + \frac{1}{2}(\phi'(u_x))_x$ , *Discrete Contin. Dyn. Syst. Ser. A* **16** (2006), 783–842.
- [81] G. Bellettini, B. Dacorogna, G. Fusco, F. Leonetti: Qualitative properties of Lipschitz solutions of eikonal type systems, *Adv. Math. Sci. Appl.* **16** (2006), 259–274.
- [82] G. Bellettini, M. Chermisi, M. Novaga: Crystalline curvature flow of networks, *Interfaces Free Bound.* **8** (2006), 481–521.
- [83] G. Bellettini: On singular perturbations of some partial differential equations, in *Oberwolfach Reports*, Report No. 38, (2006), 2283–2284.
- [84] G. Bellettini, L. Mugnai: A varifolds representation result of the relaxed elastica functional, *J. Convex Anal.* **14** (2007), 543–564.
- [85] G. Bellettini, M. Masala, M. Novaga: On a conjecture of De Giorgi on the squared distance function, *J. Convex Anal.* **14** (2007), 353–359.
- [86] G. Bellettini, R. March: Asymptotic properties of the Nitzberg-Mumford variational model for segmentation with depth, Proc. of the conference on Free Boundary Problems, Coimbra (Portugal) 2005, *International Series of Numerical Mathematics*, Birkhäuser Verlag, Basel, **154** (2007), 75–84.
- [87] G. Bellettini, A. De Masi, N. Dirr, E. Presutti: Tunnelling in two dimensions, *Comm. Math. Phys.* **269** (2007), 715–763.
- [88] G. Bellettini, C. Mantegazza, M. Novaga: Singular perturbations of mean curvature flow, *J. Differential Geom.* **57** (2007), 403–431.
- [89] G. Bellettini, M. Chermisi, M. Novaga: The level set method for systems of PDEs, *Comm. Partial Differential Equations* **32** (2007), 1043–1064.
- [90] G. Bellettini, A. De Masi, N. Dirr, E. Presutti: Stability of invariant manifolds in one and two dimensions, *Nonlinearity* **20** (2007), 537–582.
- [91] G. Bellettini: Topological and variational properties of a model for reconstructing three-dimensional images, in *Oberwolfach Reports*, Report No. 3, (2007), 147–148.
- [92] G. Bellettini:  $\Gamma$ -convergence and one-dimensional scalar hyperbolic conservation laws, in *Oberwolfach Reports*, report No. 28/2007, 1579–1580.
- [93] G. Bellettini: On facet breaking for crystalline mean curvature flow in 3D, On the convergence of discrete schemes for the Perona-Malik equation, On some topological and variational properties of a model for reconstructing transparent images with self-occlusions. *Proc. International Conference in Mathematics*, Zürich 2007. PAMM Proc. Appl. Math. Mech. **7**, 1041901–1041902, 1023401–1023402, 1041909–1041910 (2007)
- [94] G. Bellettini, G. Fusco: The  $\Gamma$ -limit and the related gradient flow for singular perturbation functionals of Perona-Malik type, *Trans. Amer. Math. Soc.* **360** (2008), 4929–4987.

- [95] G. Bellettini: An introduction to mean curvature flow, in *"Topics in Mathematical Analysis"*, ISAAC Series on Analysis, Applications and Computation, vol. 3, (P. Ciatti, E. Gonzalez, M. Lanza de Cristoforis, G.P. Leonardi eds.), 63–102, World Scientific Publishing, 2008.
- [96] G. Bellettini, L. Mugnai: Some aspect of the variational nature of mean curvature flow, *J. Eur. Math. Soc.* **10** (2008), 1013–1036.
- [97] G. Bellettini, V. Beorchia, M. Paolini: Topological and variational properties of a model for the reconstruction of three-dimensional transparent images with self-occlusions, *J. Math. Imaging Vision* **32** (2008), 265–291.
- [98] G. Bellettini, M. Novaga, M. Paolini, C. Tornese: Convergence of discrete schemes for the Perona-Malik equation, *J. Differential Equations* **245** (2008), 892–924.
- [99] G. Bellettini, V. Caselles, A. Chambolle, M. Novaga: The volume preserving crystalline mean curvature flow of convex sets in  $\mathbb{R}^N$ , *J. Math. Pures Appliquée* **92**(5) (2009), 499–527.
- [100] G. Bellettini, V. Beorchia, M. Paolini: An explicit formula for a Bennequin-type invariant for apparent contours, *Topology Appl.* **156** (2009), 747–760.
- [101] G. Bellettini, M. Novaga, M. Paolini, C. Tornese: Classification of the equilibria and  $\Gamma$ -convergence for the semi-discrete Perona-Malik functional, *Calcolo* **46** (2009), 221–243.
- [102] G. Bellettini, L. Mugnai: Anisotropic geometric functionals and gradient flows, *Banach Cent. Publ.* **86** (2009), 21–43.
- [103] G. Bellettini, V. Beorchia, M. Paolini: Completion of visible contours, *SIAM J. Imaging Sci.* **2** (2009), 777–799.
- [104] G. Bellettini, F. Caselli, M. Mariani: Some applications of the least squares method to differential equations and related problems, *Singularities in Nonlinear Evolution Phenomena and Applications, Proceedings*, M. Novaga, G. Orlandi Eds. Edizioni della Normale, Pisa, 59–87, 2009.
- [105] G. Bellettini, L. Bertini, M. Mariani, M. Novaga:  $\Gamma$ -entropy cost for conservation laws, *Arch. Ration. Mech. Anal.* **195** (2010), 261–309.
- [106] G. Bellettini, M. Novaga, G. Orlandi: Time-like lorentzian minimal submanifolds as singular limits of nonlinear wave equations, *Physica D* **239** (2010), 335–339.
- [107] G. Bellettini, F. Caselli, M. Mariani: Quasi-potentials of the entropy functionals for scalar conservation laws, *J. Funct. Anal.* **258** (2010), 534–558.
- [108] G. Bellettini, L. Mugnai: Approximation of the Helfrich's functional via diffuse Interfaces, *SIAM J. Math. Anal.* **42** (2010), 2402–2433.
- [109] G. Bellettini, M. Paolini: On the area of the graph of a singular map from the plane to the plane taking three values, *Adv. Calc. Var.* **3** (2010), 371–386.
- [110] G. Bellettini, J. Hoppe, M. Novaga, G. Orlandi: Closure and convexity properties of closed relativistic strings, *Complex Anal. Oper. Theory* **4** (2010), 473–496.
- [111] G. Bellettini: Minimal timelike lorentzian submanifolds as limits of singularly perturbed wave equations, in *Oberwolfach Reports* **7**, Issue 1 (2010), 265–266.
- [112] G. Bellettini, M. Mariani: Variational convergence of multidimensional conservation laws, *Bull. Greek Math. Soc.* **57** (2010), 31–45.
- [113] G. Bellettini: An introduction to anisotropic and crystalline mean curvature flow, *Sapporo University, Internal reports*, August 2010.
- [114] G. Bellettini, M. Novaga, M. Paolini: Convergence for long-times of a semidiscrete Perona-Malik equation in one dimension, *Math. Models Meth. Appl. Sci.* **21** (2) (2011), 1–25.
- [115] G. Bellettini, V. Beorchia, M. Paolini: Completeness of Reidemeister-type moves for surfaces embedded in three-dimensional space, *Atti Accad. Naz. Lincei Cl. Sci. Fis. Mat. Natur. Rend. Lincei (9) Mat. Appl.* **22** (2011), 1–19.

- [116] G. Bellettini, M. Novaga: Curvature evolution of nonconvex lens-shaped domains, *J. Reine Angew. Math.* **656** (2011), 17–46.
- [117] R. March, G. Bellettini, R. Tauraso, S. Dell’Agnello: Constraining spacetime torsion with the Moon and Mercury, *Phys. Rev. D* **83** (2011), 104008-18.
- [118] R. March, G. Bellettini, R. Tauraso, S. Dell’Agnello: Constraining spacetime torsion with lageos, *Gen. Rel. Gravitation* **43** (2011), 3099-3126.
- [119] G. Bellettini: Reconstruction of a 3D shape from its apparent contour, in *Oberwolfach Reports*, Report No. 07/2011, (2011), 304–305.
- [120] G. Bellettini: Remarks on the limit of the Cahn-Hilliard equation in 1D, in *Oberwolfach Reports*, Report N. 55/2011, (2011), 3209-2010.
- [121] G. Bellettini, M. Novaga, G. Orlandi: Lorentzian varifolds and applications to closed relativistic string, *Indiana Univ. Math. J.* **6** (2012), 2251–2310.
- [122] G. Bellettini, L. Bertini, M. Mariani, M. Novaga: Convergence of the one-dimensional Cahn-Hilliard equation, *SIAM J. Math. Anal.* **44** (2012), 3458–3480.
- [123] G. Bellettini, M. Paolini, F. Pasquarelli: Nonconvex mean curvature flow as a formal singular limit of the nonlinear bidomain model, *Advances in Differential Equations* **18** (2013), 895–934.
- [124] G. Bellettini, C. Geldhauser, M. Novaga, Convergence of a semidiscrete scheme for a forward-backward parabolic equation, *Advances in Differential Equations* **18** (2013), 495-522.
- [125] R. March, G. Bellettini, R. Tauraso, S. Dell’Agnello, Constraining spacetime torsion with the Moon, Mercury and LAGEOS, *Acta Polytechnica* **53** (Supplement) (2013), 817–820.
- [126] S. Amato, G. Bellettini, M. Paolini: The nonlinear multidomain model: a new formal asymptotic analysis, *Geometric Partial Differential Equations, Proceedings*, M. Novaga, G. Orlandi Eds. Pubbl. Cent. Ric. Mat. Ennio De Giorgi, (2013), 33-72.
- [127] G. Bellettini: On the area of the graph of a map from the plane to the plane with a line discontinuity, in *Oberwolfach Reports*, **10**, Issue 1, (2013), 878-879.
- [128] G. Bellettini, A. Chambolle, M. Goldman: The  $\Gamma$ -limit for singularly perturbed functionals of Perona-Malik type in arbitrary dimension, *Math. Mod. Meth. Appl. Sc.* **24** (2014), 1091–1113.
- [129] G. Bellettini, A-h. Nayam, M. Novaga:  $\Gamma$ -type estimates for the one-dimensional Allen-Cahn’s action, *Asympt. Anal.*, to appear.
- [130] G. Bellettini, M. Paolini, L. Tealdi: On the area of the graph of a piecewise smooth map from the plane to the plane with a curve discontinuity, *ESAIM: Control, Optimization and Calculus of Variations*, published online, DOI: 10.1051/cocv/2014065.
- [131] G. Bellettini, M. Novaga, G. Orlandi: Eventual regularity for the parabolic minimal surface equation, *Discrete Contin. Dyn. Syst.* **35**, 5711-5723 (2015).
- [132] S. Amato, G. Bellettini, M. Paolini: Constrained  $BV$  functions on covering spaces for minimal networks and Plateau’s type problems, *Adv. Calc. Var.*, to appear.
- [133] S. Amato, G. Bellettini, L. Tealdi: Anisotropic mean curvature on facets and relations with capillarity, *Geometric Flows*, to appear.
- [134] Semicartesian surfaces and the relaxed area of maps from the plane to the plane with a line discontinuity, G. Bellettini, M. Paolini, L. Tealdi: submitted.

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