

Personal data

Place and date of birth : Rome, June 15 1977
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Current position

Postdoc : at I3S, Morpheme project ; *March 2010-March 2012*
supported by : CNRS/I3S under the Project "Gyrovision"
Topic : "Variational methods to restore aerial images"
Supervisor : Gilles Aubert Full Professor at "Laboratoire J.A Dieudonné",
Laure Blanc-Féraud CNRS research director

Former position

Postdoc : at INRIA, Ariana project and "Laboratoire J.A Dieudonné",
Nice University ; *January 2008-Janvier 2010*
supported by : ANR/INRIA/UNSA under the Project "Detectfine"
Topic : "Variational Methods to detect fine structures in biological images"
Supervisor : Gilles Aubert Full Professor at "Laboratoire J.A Dieudonné",
Laure Blanc-Feraud research Director CNRS

Education

Degree in Mathematics at "La Sapienza" University of Rome, *Mars 2002*
Topic : "Stationary solutions for hyperbolic conservation laws
on bounded domains"
Advisor : Prof. Alberto Tesei
Mark : 110/110

Phd : in mathematics "La Sapienza" University
of Rome, *January 2007*
Topic : "On the L^1 - lower semicontinuity and relaxation in $BV(\Omega; \mathbb{R}^M)$
for integral functionals with discontinuous integrand"
Advisor : Prof. Micol Amar
Committee : Prof. G. Buttazzo, Prof. G. Dal Maso, Prof. G. Bellettini
Mark : no mark are given in Italy

Phd Exams

-Evolution equations .	Prof. Corrado Mascia	<i>Mark :A</i>
-Calculus of variations.	Prof. Luigi Orsina	<i>Mark :A</i>
-Semilinear elliptics equations.	Prof. Massimo Grossi	<i>Mark :A</i>
-Random Walks.	Prof. Carlo Boldigrini	<i>Mark :A</i>
-Semicontinuity and relaxation.	Prof. Micol Amar	<i>Mark :A</i>
-Hamilton-Jacobi's.	Prof. Antonio Siconolfi	<i>Mark :B</i>

Habilitation

2009 Qualification Maître de conférence. section 26 Mathématiques Appliqués.

2011 3th ranked to the competition for one permanent research position (Maître de conférences section 26 poste 109), Insa Université de Lyon.

2011 4h ranked to the competition for one permanent research position (Maître de conférences section 26 poste 140), Université René Descartes Paris 5

Journal reviewing

-"Journal of Mathematical Imaging and Vision"

-"Siam Journal of Imaging Science".

Research interests

Image Analysis by variational methods : restoration, segmentation, object detection, biological imaging, relaxation algorithm. Calculus of variations. Gamma-convergence and free discontinuity problems. Non smooth convex optimization. Relaxation of integral functionals.

Teaching activity

2008 – 2010

Department : Nice University , Sophia-Antipolis

Activity : Recitations for the courses of Mathematical analysis and linear algebra

2004 – 2007

Department : Engineering Faculty and Physics Faculty,
"La Sapienza" University of Rome

Activity : Recitations for the courses of Differential and Integral Calculus

Research publications

Referred Journal papers

-D.Graziani *A new L^1 -lower semicontinuity result*, Boll. U.M.I. (8)10-B(2007), 797-818

-D. Graziani *On the L^1 -lower semicontinuity of certain convex functionals defined on BV-vector valued functions*, Annali dell'Università di Ferrara, Sez VII, Sc. Mat, Volume 55, Number 1 (2009), Pages 111-128

-D.Graziani,L.Blanc-Féraud,G.Aubert *A formal Γ -convergence approach for the detection of points in 2-D images*, Siam Journal of Imaging Science Vol. 3, No. 3 (2010), pp. 578-594

-G.Aubert,D.Graziani *Variational approximation for detecting-point like target problems in 2-D images* ESAIM : Control, Optimisation and Calculus of Variations ESAIM : Control, Optimisation and Calculus of Variations Volume 17 / Issue 04, October 2011

-D.Graziani *Existence result for a free-discontinuity energy governing the detection of spots in image processing* D. Graziani to appear on Applicable Analysis

Preprints submitted to referred journal papers

-D.Graziani,L.Blanc-Féraud,G.Aubert *Analysis of a variational model to restore point-like and curve-like singularities in imaging*, submitted

-G.Aubert D.Graziani *A relaxation result for an anisotropic functional preserving point-like and curve-like singularities in image processing* submitted

Referred conference papers

-D.Graziani,L.Blanc-Féraud,G.Aubert *A new variational method to detect points in biological images* ISBI'09, IEEE International Symposium on Biomedical Imaging, Boston, USA, June 2009

-D.Graziani,L.Blanc-Féraud,G.Aubert *A new variational method for preserving point-like and curve-like singularities in 2-D imaging* ICASSP conference 2011

Preprints submitted to referred conference

-D.Graziani,L.Blanc-Féraud,G.Aubert *Overlapping domain decomposition method for microscanning framework* submitted

Dissertations

-D.Graziani *On the L^1 -lower semicontinuity and relaxation in $BV(\Omega; \mathbb{R}^M)$ for integral functionals with discontinuous integrand* Phd Thesis (2007).

Recent invited seminars at universities and research institutions

-2009

"Detecting points in 2-D biological images", Ricam Institute, Linz, Austria

-2010

"Variational approximation for detecting point-like target", Laboratoire J. Kuntzmann, Grenoble, France.

-2011

"Detection-Restauration de points et filaments dans une image par approches variationnelles", Laboratoire de Mathématiques, Image et Applications, La Rochelle, France.

Invited talks at conferences and workshops

-2009

"Detecting points in 2-D biological images", Int. Conf. "Sixth European Conference on Elliptic and Parabolic Problems.", Gaeta, Italy, 25-29 May.

-2009

"A new variational model for the detection of points in in 2-D biological images", Int. Conf. 'International Symposium Biomedical Images 2009, BOSTON, USA.

-2011

"A new variational method for preserving point-like and curve-like singularities in 2-D imaging", Int. Conf. on Acoustics, Speech and Signal Processing Conference, Praga, 22-27 May 2011.

-2011

"Detection-Restauration de points et filaments dans une image par approches variationnelles" Contrôle, Imagerie et Probabilités en Méditerranée Université de Nice Sophia Antipolis, 24-28 October 2011

Language

french : fluent

english : fluent