

Curriculum Vitae

Massimiliano Bianchini

Date and place of birth : October 05, 1984; Florence, Italy.

Nationality : Italian citizen.

Position : PhD student at the *Università degli Studi di Firenze*.

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Education

September 2003 - September 2006 : Bachelor’s degree in Mathematics at *Università degli Studi di Firenze*, final grade: summa cum laude. Advisor Prof. Graziano Gentili, thesis title “*Pontryagin’s cobordism and Hopf’s Theorem*” (original: “Cobordismo alla Pontryagin ed il Teorema di Hopf”), defended on September 27, 2006.

September 2006 - October 2008 : Master’s degree in Applied Mathematics at *Università degli Studi di Firenze*, final grade: summa cum laude. Advisor Prof. Giovanni Cupini, thesis title “*Existence and relaxation results for autonomous variational problems*” (original: “Risultati di esistenza e di rilassamento per problemi variazionali autonomi”), defended on October 10, 2008.

Expertise

During my Bachelor and Master degree I mainly attended courses of Functional Analysis, Calculus of Variations and Differential Geometry, but also of Numerical Analysis. During the PhD I studied in more depth the theory of Partial Differential Equations of elliptic type under the direction of Dr. P. Salani, and the theory of the Convex Geometry, with particular interest in the Steiner-type formulas, under the direction of the Dr. D. Hug.

Publication

M. Bianchini, G. Cupini: *A relaxation result for non-convex and non-coercive simple integrals*, Journal of convex analysis (to appear)

Schools and workshops

Workshop on “Calculus of Variations and PDEs”, Firenze, January 23-24, 2009. Lecturers: A. Cellina (Università di Milano-Bicocca), B. Dacorogna (EPFL Lausanne), C. Sbordone (Università di Napoli “Federico II”).

INdAM school on “Symmetry for elliptic PDEs”, Roma, May 25-29, 2009. Lecturers: X. Cabré (CREA and Universitat Politècnica de Catalunya), M. Del Pino (Universidad de Chile), E. Lanconelli (Università di Bologna), O. Savin (Columbia University).

C.I.M.E. course on “Regularity estimates for nonlinear elliptic and parabolic problems”, Cetraro (CS), June 22-27, 2009. Lecturers: E. Dibenedetto (Vanderbilt University), J. Lewis (University of Kentucky), P. Lindqvist (Norwegian University of Science and Technology), J. J. Manfredi (University of Pittsburgh), S. Salsa (Politecnico di Milano).

Workshop on “Aspects of Convexity, on the occasion of the 60th birthday of Stefano Campi and Richard J. Gardner”, Firenze, November 27-28, 2009. Lecturers: P. Grizmann (Technische Universität München), P. Gruber (University of Technology), C. Peri (Università Cattolica, Milano), R. Schneider (Albert-Ludwigs-Universität), G. Talenti (Università degli Studi di Firenze), A. Volčič (Università della Calabria), W. Weil (Karlsruhe Institut für Technologie).

Workshop on “Convex and Stochastic Geometry”, Bad Herrenalb, May 30 - June 4, 2010. Lecturers: Imre Brny (Budapest), Andreas Bernig (Frankfurt), Béla Bollobás (Cambridge), Richard J. Gardner (Bellingham, WA), Paul Goodey (Norman, OK), Alexander Holroyd (Vancouver), Markus Kiderlen (Aarhus), Erwin Lutwak (New York), Vitali Milman (Tel Aviv), Werner Nagel (Jena), Jan Rataj (Praha) Joseph Yukich (Bethlehem, PA).

“GNAMPA-ERC Summer School”, Ischia, June 13-18, 2010. Lecturers: Luis Caffarelli (University of Texas at Austin), Vicent Caselles (Univer-

sitat Pompeu Fabra), Neil Trudinger (Australian National University), Cedric Villani (Ecole Normale Supérieure de Lyon).

Summer school “Optimal mass transport and geometric inequalities”, Riez, Kleinwalsertal, September 20-24, 2010. Lecturers: Andrea Cianchi (Università degli studi di Firenze), Alessio Figalli (University of Texas at Austin), Michel Ledoux (Université de Toulouse), Robert McCann (University of Toronto).

ERC School on “Analysis in Metric Spaces and Geometric Measure Theory”, Pisa, January 10-14, 2011. Lecturers: Dimitri Burago (Pennsylvania State University), Robert Hardt (Rice University), Emanuele Spadaro (Hausdorff Center for Mathematics, Bonn), Robert Young (IHES, Paris).

ERC-Summer School on “Calculus of Variations, Continuum Mechanics and Geometric Inequalities”, Ischia, June 5-10, 2011. Lectures: Eric A. Carlen (Rutgers University), Alessio Figalli (University of Texas at Austin), Stanislav Hencl (Charles University).

Fifth International Workshop on “Convex Geometry, Analytic Aspects”, Cortona, June 12-18, 2011. Lectures: S. Arstein-Avidan (Tel Aviv University), Imre Barany (University College London), R. J. Gardner (Western Washington University), P. Gruber (Technische Universität Wien), M. Meyer (Université de Marne-La-Vallée), V. Milman (Tel Aviv University), W. Weil (Universität Karlsruhe), V. Yaskin (University of Alberta).

Positions

KIT-Karlsruher Institut für Technologie, Karlsruhe (GE), May 3 - October 31, 2010, research grant within the project “*DFG-Project: Curvature Measures and Integral Geometry*”, under the direction of Prof D. Hug.

Research Interests

My research interests lie in the areas of PDEs, in particular in the study of geometric properties of the solutions of elliptic PDEs, in the areas of the Convex Geometry, in particular in the study of the Steiner-type formulas for convex sets and functions, and in the areas of Calculus of Variations, in

particular in the study of autonomous simple integrals with non-coercive and non-convex at zero lagrangians.