

Gianmarco BROCCHI

Curriculum Vitæ atque Studiorum

Updated: October, 2018

PERSONAL DETAILS

Born on 9th October, 1990 in Taranto, Italy

ADDRESS:

School of Mathematics
University of Birmingham
Edgbaston, B15 2TT,
Birmingham

CITIZENSHIP: Italian

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RESEARCH INTERESTS: Real and Harmonic Analysis

CURRENT POSITION: **PhD** student in PURE MATHEMATICS at University of Birmingham, UK

Supervisors: Dr. Maria Carmen Reguera and Prof. Jonathan Bennett

MAIN EDUCATION

SEPT 2017 M.Sc. in MATHEMATICS, **University of Bonn**, Germany
Thesis: “Sharp Fourier restriction theory and Strichartz estimates”
Advisor: Dr. Diogo OLIVEIRA E SILVA

2016–2017 Studies in MATHEMATICS, **University of Bonn**, Germany

2015–16 ERASMUS+ at **Friedrich-Wilhelms-Universität Bonn**, Germany

2014–15 Studies in MATHEMATICS, **University of Pisa**, Italy

OCT 2014 B.Sc. in MATHEMATICS, **University of Pisa**, Italy
Thesis: “Condizioni Tauberiane e Spazi di Hardy”
Advisor: Prof. Vladimir GEORGIEV

JUL 2009 High School Diploma
science liceum Ulisse Dini, Pisa, Italy

TALKS

- Sept 2018 | **A Nonlinear Plancherel theorem with applications to global well-posedness for the defocusing Davey-Stewartson equation and to the Inverse boundary value problem of Calderón**, with Xian Liao and Pavel Zorin-Kranich
after A. Nachman, I. Regev, and D. Tataru
Summer School on Unique Continuation and Inverse Problems, Kopp, Germany
- July 2018 | **Existence of extremizers for a Strichartz estimate for the 4th order Schrödinger equation**,
Mini-courses in Mathematical Analysis, Padova, Italy
Feb 2018 | *Workshop on Harmonic analysis and Nonlinear Evolution Equations*, Pisa, Italy
- Oct 2017 | **Behaviour of the Schrödinger evolution for initial data near $H^{\frac{1}{4}}$** ,
after L. Carleson, and B. Dahlberg, & C. Kenig
Summer School on Decoupling and Polynomial Methods in Analysis, Kopp, Germany
- Jul 2017 | **Modulation spaces and Brownian motion**, after Árpád Bényi and Tadahiro Oh
Summer School on Harmonic Analysis and Partial Differential Equations
BCAM, Bilbao, Spain
- Extremizers for a 4th order Schrödinger equation**,
Master Thesis seminar
Universität Bonn, Germany
- Modulation spaces, Wiener Amalgam spaces, and Brownian motions**,
after Árpád Bényi and Tadahiro Oh
Graduate seminar on Time-Frequency Analysis and Its Applications,
Universität Bonn, Germany
- Mar 2017 | **Extremizers for Strichartz estimates for perturbed Schrödinger equations**,
after Oliveira e Silva and Quilodrán
Atelier d'Analyse Harmonique, University of Nantes, France
- Feb 2017 | **Endpoint Strichartz Estimates**, after Keel and Tao
Course "Geometric Aspects of Harmonic Analysis", University of Bonn, Germany
- Sept 2016 | **Controlling rough paths**, after Massimiliano Gubinelli
Summer School on Paraproducts and Analysis of Rough Paths, Kopp, Germany
- Dec 2015 | **Asymptotics, frequency modulation, and low regularity ill-posedness for canonical defocusing equations**, after Christ, Colliander and Tao
Graduate seminar on Nonlinear Fourier Transform, University of Bonn, Germany
- Sept 2015 | **Minimax methods and geodesics**, after Michael Struwe
Course in Calculus of Variations, University of Pisa, Italy

TEACHING EXPERIENCE

University of Birmingham, UK

Spring Term 2018 | **Teaching assistant** in *Methods in Partial Differential Equations*
Teaching assistant in *Mathematics in Industry*

Winter Term 2017 | **Teaching assistant** in *Continuum Mechanics*
Teaching assistant in *Mathematical Modelling and Problem Solving*

University of Pisa, Italy

May - Jul 2015 | **Tutor** in *Complementi di Analisi Matematica*
Istitution | Department of Energy, Systems, Territory and Construction Engineering,

Feb 2015 | **Tutor** at *XI Settimana Matematica*

Feb 2012 | **Tutor** at *VIII Settimana Matematica*

Istitution | Department of Mathematics, University of Pisa, Italy

CONFERENCES, SCHOOLS AND WORKSHOPS

A list with recent events can be found online here.

Feb 2018 | *Workshop on Harmonic analysis and Nonlinear Evolution Equations*

Istitution | Università di Pisa, Italy

Organizers | Jacopo Bellazzini (University of Sassari), Kazumasa Fujiwara (SNS), Vladimir Georgiev (Università di Pisa)

Dec 2017 | *LMS Network on Harmonic Analysis and PDEs*

Istitution | University of Warwick, UK

Organizer | Jose Rodrigo

Sept 2017 | *Summer School in Harmonic Analysis, PDE and Spectral theory*

Istitution | Università La Sapienza, Roma, Italy

Minicourses by | Jim Wright (University of Edinburgh), Carlos Kenig (University of Chicago), Ari Laptev (Imperial College)

Jul 2017 | *Harmonic analysis and its interactions: in honour of Tony Carbery*

Istitution | University of Edinburgh, UK

Organizers | Juan Antonio Barcelo, Jonathan Bennett, Philip Gressman, Marina Iliopoulou, Jim Wright

Jul 2017 | *Third Summer School on Harmonic Analysis and Partial Differential Equations*

Istitution | BCAM, Bilbao, Spain

Speakers | L. Fanelli, M. Mourgoglou, L. Pick, S. Thangavelu

Mar 2017 | *Atelier d'Analyse Harmonique*

Istitution | University of Nantes, France

Organizers | Cristina Benea (Université de Nantes), Frédéric Bernicot (CNRS - Université de Nantes) and Teresa Luque (Universidad Complutense - Madrid)

Dic 2016 | *Workshop "Young Women in Harmonic Analysis and PDE"*

Istitution | Universität Bonn, Germany

Lecturers | Stefanie Petermichl (Université Paul Sabatier, Toulouse) and Gigliola Staffilani (MIT)

Nov 2016 | *Fall School on "PDEs and Probability"*

Istitution | AIMS, Mbour, Senegal

Organizers | Mouhamed M. Fall (AIMS Senegal) and Tobias Weth (University of Frankfurt)

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| <i>Oct 2016</i> | Workshop: New trends in Partial Differential Equations |
| Istitution | Centro di Ricerca Ennio De Giorgi, Pisa, Italy |
| Organizers | Luigi Berselli, Ferruccio Colombini, Marco Ghimenti, Marina Ghisi, Nicola Visciglia (Università di Pisa), Carlo Romano Grisanti (Dipartimento di Matematica Applicata, Pisa) |
| <i>Sept 2016</i> | PISA-HOKKAIDO Summer School: Mathematics and Its Applications |
| Istitution | University of Pisa and Scuola Normale Superiore, Pisa, Italy |
| Lecturers | Hideo Kubo (Hokkaido University), Tommaso Pacini (Scuola Normale Superiore, Pisa) |
| <i>Sept 2016</i> | Summer School on Paraproducts and Analysis of Rough Paths |
| Istitution | Universität Bonn, Kopp, Germany |
| Organizers | Prof. Dr. Massimiliano Gubinelli (University of Bonn), Prof. Dr. Christoph Thiele (University of Bonn) |
| <i>Jul 2016</i> | Summer School on Spectral theory and applications |
| Istitution | Université Laval, Québec City, Canada |
| Organizers | C. Bénéteau, D. Khavinson (University of South Florida), A. Girouard, J. Mashreghi, T.J. Ransford (Université Laval) |
| <i>Oct 2015</i> | Conference “Panorama of Mathematics” |
| Istitution | Hausdorff Center, Bonn, Germany |
| Speakers | Cedric Villani (Institut Henri Poincare, Paris), Laure Saint-Raymont (Harvard University), Jörgen W. Weibull (Stockholm School of Economics), Richard D. James (University of Minnesota), Darrell Duffie (Stanford University) |
| <i>Aug 2015</i> | Summer School on Differential Equations and Differential Geometry |
| Istitution | Hokkaido University, Sapporo, Japan |
| Speakers | S. Galatolo (University of Pisa), V. Georgiev (University of Pisa), T. Pacini (Scuola Normale Superiore) |
| <i>Jul 2015</i> | Summer School on Mathematical and Statistical Models of Economic Growth |
| Istitution | Hokkaido University, Sapporo, Japan |
| Speakers | G. Bottazzi, F. Tamagni, A. Martinelli (Scuola Sant’Anna), M. Nishibe (Hokkaido University) |

LANGUAGES

ITALIAN (reading, listening, speaking, writing): mother-tongue.

ENGLISH (reading, listening, speaking, writing): fluent.

2015: B2 certificate issued by C.L.I - Centro Linguistico Interdipartimentale, University of Pisa, Italy.

GERMAN (reading, listening, speaking, writing): basic.

2016: A2 certificate issued by International Office, Universität Bonn, Germany.

COMPUTER SKILLS

Advanced Knowledge: GNU/LINUX, Bash, \LaTeX , HTML, CSS
Intermediate Knowledge: C, Python, FORTRAN, git, \LaTeX BEAMER, OCTAVE
Basic Knowledge: OCAML, C++, Vala

OTHER INTERESTS AND ACTIVITIES

Aug 2016 | Participation in **GUADEC**, the GNOME Conference
Istitution | Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany

Workshop: Packaging your application using Flatpak
Tutors: *Alexander Larson* (Red Hat) and *David King* (Red Hat)

Oct 2012 | Speaker at **LinuxDay**,
Italian event to promote GNU/Linux and Free Software
Istitution | University of Pisa, Italy

Oct 2010 | Participation in **GUITmeeting**,
the T_EX and L_AT_EX Italian users meeting
Istitution | Scuola Superiore Sant'Anna, Pisa, Italy

Volunteer in the Math Support Center.
Member of PHC.