CURRICULUM VITAE SEBASTIANO NICOLUSSI GOLO

Name: Sebastiano, Nicolussi Golo

Date of birth: March 17, 1986

Gender: Male Citizenship: Italian

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Università di Padova

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EDUCATION

Doctor of Philosophy in Mathematics: 25 October 2017

Double degree based on a cotutelle agreement:

University of Jyväskylä, Finland Advisor: Enrico Le Donne

University of Trento, Italy

Advisor: Francesco Serra Cassano

Thesis: Topics in the geometry of non-Riemannian Lie groups

 ${\bf Grade:}\ {\it Pass\ with\ distinction}$

Master degree in mathematics: March 2012

Università degli Studi di Trento, Italia Supervisor: Francesco Serra Cassano

Thesis: The tangent space in subRiemannian geometry

Grade: 110/110 cum laude

Bachelor degree in mathematics: July 2009 Università degli Studi di Trento, Italia

> Thesis: Symplectic geometry Supervisor: Roberto Pignatelli

Grade: 108/110

EMPLOYMENTS, FELLOWSHIPS AND GRANTS

Postdoctoral Fellowship at the University of Padova

December 2018 – Now Mentor: Davide Vittone

Postdoctoral Fellowship at the University of Birmingham

December 2017 - November 2018

Mentor: Alessio Martini

Visiting student at the University of Granada

November 2017

Mentor: Manuel Ritoré

Research Fellowship within the project Marie Curie ITN MAnET January 2015 – October 2017

The legal framework of my research contract with the University of Trento was "assegno di ricerca di cui all'art. 22 della Legge 240/2010". As a student, I was enrolled in both the University of Trento (Italy) and the University of Jyväskylä (Finland) under a cotutelle agreement between the two departments of Mathematics.

Postgraduate Student at the University of Jyväskylä, Finland October 2012 – December 2014

Erasmus at Eberhard Karls Universität Tübingen, Deutschland September 2007 – July 2008

Kitchen Hand at Restaurant "Rifugio Agostini" July 2004 – August 2004

Grants and Awards

Seal of Excellence from Marie Skłodowska-Curie actions:

"The project proposal 888619, MICA: Minimal Submanifolds in Carnot Groups, Submitted under the Horizon 2020 Marie Skłodowska-Curie actions call H2020-MSCA-IF-2019 of 11 September 2019 by Sebastiano Nicolussi Golo and Universidad de Granada was scored as a high-quality project proposal in a highly competitive evaluation process, with a total score of 87.40%. This proposal is recommended for funding by other sources, since Horizon 2020 resources available for this specific Call were already allocated following a competitive ranking."

INdAM-GNAMPA Project 2019 "Rectifiability in Carnot Groups" (as Principal Investigator)
March 2019 - February 2020

PUBLICATIONS

- [1] "A historical account on characterizations of C^1 Manifolds in Euclidean spaces by tangent cones" (with F. Bigolin), Journal of Mathematical Analysis and Applications 142 (2014), no. 1, 63-76.
- [2] "Asymptotic behavior of the Riemannian Heisenberg group and its horoboundary" (with E. Le Donne and A. Sambusetti), *Annali di Matematica Pura ed Applicata*, August (2017), Volume 196, Issue 4, pp 1251–1272.
- [3] "Regularity properties of spheres in homogeneous groups" (with E. Le Donne), Transactions of the AMS, 370 (2018), 2057-2084.
- [4] "Some remarks on contact variations in the first Heisenberg group and Bernstein's Problem", Annales Academiæ Scientiarum Fennicæ, 43 (2018), 311-335.
- [5] "Topics in the geometry of non-Riemannian Lie groups", PhD thesis, *Report*, Department of Mathematics and Statistics, University of Jyväskylä, 163 (2017)
- [6] "The Besicovitch covering property in the Heisenberg group revisited", (with S. Rigot), accepted in *The Journal of Geometric Analysis* (2018).
- [7] "The Bernstein problem for Lipschitz intrinsic graphs in the Heisenberg group" (with F. Serra Cassano), Calculus of Variations and Partial Differential Equations 58 141 (2019)
- [8] "From homogeneous metric spaces to Lie groups", (with M. G. Cowling, V. Kivioja, E. Le Donne and A. Ottazzi), submitted.

- [9] "Polarised Lie groups contactomorphic to stratified groups" (with A. Ottazzi), submitted.
- [10] "Spectral multipliers and wave equation for sub-Laplacians: lower bounds of Euclidean type" (with A. Martini and D. Müller), submitted.
- [11] "Metric Lie groups admitting dilations" (with E. Le Donne), submitted.
- [12] "Intrinsic rectifiability via flat cones in the Heisenberg group" (with A. Julia), submitted.
- [13] "Area of intrinsic graphs and coarea formula in Carnot Groups" (with A. Julia and D. Vittone), submitted.

Research Stays

- Visiting Student at "Laboratoire J.A. Dieudonné", Nice, France (November–December 2016)
- Visiting Graduate Student at the Department of Mathematics of Tufts University, Medford, USA (January–February 2017)
- Visiting Graduate Student at the Simons Semester "Symmetry and Geometric Structures", Warsaw, Poland (August-October 2017)
- Junior Leader of Simons Semester at IMPAN in Warsaw (September–October 2019)

ACTIVITIES

- Teaching assistant ("Geometry of surfaces in 3D space"): University of Jyväskylä, Finland (Fall 2012)
- Organizer of the seminar for doctoral students at the University of Jyväskylä, Finland (Spring 2014)
- Organizer of the seminar for doctoral students at Institute Henri Poincaré, Paris (October 2014)
- Co-organizer of the conference "Subriemannian Geometry and Beyond", Jyväskylä, Finland (February 2018)
- Co-organizer of the conference "Harmonic Analysis and PDE Day", Birmingham, UK (September 2018)
- Organizer of seminars "GeA (Geometria e Analisi)" at the Department of Mathematics, University of Padova (Fall 2019)
- Teaching assistant ("Analysis 1"): University of Padova, Faculty of Engineering (Fall 2019)
- Organizer of the workshop "Geometric Measure Theory in Padova", Padova, Italy (January 2020)

Talks from 2018 to present

- Talk "Minimal surfaces in the Heisenberg group", MAnET final meeting, Bologna, Italy (January 2018)
- Talk "Spectral multipliers and wave equation for sub-Laplacians", Analysis Seminar, Birmingham, UK (November 2018)
- Talk "Metric Lie groups and their dilations", Geometry Seminar, Bristol, UK (November 2018)
- Talk "Spectral multipliers and wave equation for sub-Laplacians", Analysis Seminar, Padova, Italy (January 2019)
- Talk "Spectral multipliers and wave equation for sub-Laplacians", Subriemannian Geometry and Beyond II, Jyväskylä, Finland (February 2019)
- Talk "Metric Lie groups and their dilations", Some topics of Geometric Analysis and Geometric Measure Theory, Pisa, Italy (April 2019)
- Talk "Spectral multipliers and wave equation for sub-Laplacians", Analysis Seminar, IMPAN, Warsaw (May 2019)
- Talk "Tangent spaces", IMPAN, Warsaw (October 2019)
- Talk "From metric spaces to Lie groups", IMPAN, Warsaw (October 2019)
- Talk "Minimal surfaces in the Heisenberg group", IMPAN, Warsaw (October 2019)

Talk "Spectral multipliers and wave equation for sub-Laplacians", Latest in Geometric Analysis; Celebration of Pekka Koskela's 59th birthday, Będlewo, Poland (November 2019)

Last update: April 10, 2020