CURRICULUM VITAE
SEBASTIANO NICOLUSSI GOLO

Name: Sebastiano, Nicolussi Golo

Date of birth: March 17, 1986

Citizenship: Italian

Address: Frazione Campo Lomaso 61A
               Comano Terme
               IT-38077 Italy

Email: sebastiano@nicolussigolo.eu

Web page: www.sebastiano272.eu

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*
    Grade: *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 AND FELLOWSHIPS

Postdoctoral Researcher (Tutkijatohtori) at the University of Jyväskylä
    September 2022 – August 2023
    Mentor: Enrico Le Donne

Postdoctoral Researcher (Tutkijatohtori) at the University of Jyväskylä
    October 2020 – August 2022
    Mentor: Katrin Fässler

Postdoctoral Researcher at the University of Padova
    December 2018 – June 2020
    Mentor: Davide Vittone

Postdoctoral Researcher at the University of Birmingham
    December 2017 – November 2018
    Mentor: Alessio Martini

Visiting Student at the University of Granada
    November 2017
    Mentor: Manuel Ritoré

Postgraduate Student within the project Marie Curie ITN MAnET
January 2015 – October 2017

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 101025614, *MICA: Minimal Submanifolds in Carnot Groups*, Submitted under the Horizon 2020 Marie Skłodowska-Curie actions call H2020-MSCA-IF-2020 of 9 September 2020 by Sebastiano Nicolussi Golo and Jyvaskylan Yliopisto was scored as a high-quality project proposal in a highly competitive evaluation process, with a total score of 92.20%. 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.

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] F. Bigolin and S. Nicolussi Golo. A historical account on characterizations of C^1-manifolds in Euclidean spaces by tangent cones. *J. Math. Anal. Appl.*, 412(1):63–76, 2014.

[2] E. Le Donne, S. Nicolussi Golo, and A. Sambusetti. Asymptotic behavior of the Riemannian Heisenberg group and its horoboundary. *Ann. Mat. Pura Appl. (4)*, 196(4):1251–1272, 2017.

[3] S. Nicolussi Golo. Topics in the geometry of non-Riemannian Lie groups. PhD thesis, *Report*, Department of Mathematics and Statistics, University of Jyväskylä, 163 (2017).

[4] E. Le Donne and S. Nicolussi Golo. Regularity properties of spheres in homogeneous groups. *Trans. Amer. Math. Soc.*, 370(3):2057–2084, 2018.

[5] S. Golo. Some remarks on contact variations in the first Heisenberg group. *Ann. Acad. Sci. Fenn. Math.*, 43(1):311–335, 2018.

[6] S. Golo and S. Rigot. The Besicovitch covering property in the Heisenberg group revisited. *J. Geom. Anal.*, 29(4):3345–3383, 2019.

[7] S. Nicolussi and F.Serra Cassano. The Bernstein problem for Lipschitz intrinsic graphs in the Heisenberg group. *Calc. Var. Partial Differential Equations*, 58(4):Art. 141, 28, 2019.

[8] E. Le Donne and S. Nicolussi Golo. Metric Lie groups admitting dilations. *Ark. Mat.*, 59(1) (2021).

[9] S. Nicolussi Golo and M. Ritoré. Area-minimizing cones in the Heisenberg group H. *Ann. Fenn. Math.*, 46(2):945–956, 2021.

[10] N. Fisher and S. Nicolussi Golo. Sub-Finsler horofunction boundaries of the Heisenberg group. *Anal. Geom. Metr. Spaces*, 9(1):19–52, 2021.

[11] A. Julia and S. Nicolussi Golo. Intrinsic rectifiability via flat cones in the Heisenberg group. *Ann. Sc. Norm. Super. Pisa Cl. Sci.*, Vol. XXIII, Issue 2 (2022).

[12] A. Julia, S. Nicolussi Golo, and D. Vittone. Nowhere differentiable intrinsic Lipschitz graphs. *Bull. Lond. Math. Soc.*, 53(6) (2021).

[13] A. Martini, D. Müller, and S. Nicolussi Golo. Spectral multipliers and wave equation for sub-Laplacians: lower bounds of Euclidean type. *J. Eur. Math. Soc. (JEMS)* (2021).

[14] A. Julia, S. Nicolussi Golo, and D. Vittone. Area of intrinsic graphs and coarea formula in Carnot groups. *Math. Z.* 301, 1369–1406 (2022).

[15] E. Le Donne, V. Kivioja, and S. Nicolussi Golo. Metric equivalences of Heintze groups and applications to classifications in low dimension. *Illinois J. Math.* 66 (1) 91 - 121, April 2022.

[16] A. Julia, S. Nicolussi Golo, and D. Vittone. Lipschitz functions on submanifolds in Heisenberg groups. *International Mathematics Research Notices, Volume 2023, Issue 9, May 2023, Pages 7399–7422.*

[17] G. Antonelli, E. Le Donne, and S. Nicolussi Golo. Lipschitz Carnot-Carathéodory structures and their limits. *J. Dyn. Control. Syst. 29, 805–854* (2023).

[18] S. Eriksson-Bique, C. Gartland, E. Le Donne, L. Naples, and S. Nicolussi Golo. Nilpotent groups and biLipschitz embeddings into L1. *International Mathematics Research Notices, Volume 2023, Issue 12, June 2023, Pages 10759–10797.*

[19] S. Nicolussi Golo, and B. Warhurst. Jet spaces on Carnot groups. *Rev. Mat. Iberoam. 39 (2023), no. 6, pp. 2289–2330.*

[20] L. Ambrosio, S. Nicolussi Golo, and F. Serra Cassano. Optimal C^∞-approximation of functions with exponentially or sub-exponentially integrable derivative. *Calc. Var. Partial Differ. Equ. 62 21* (2023).

[21] L. Ambrosio, S. Nicolussi Golo, and F. Serra Cassano. Classical flows of vector fields with exponential or sub-exponential summability. *J. Differ. Equations 372 458–504* (2023).

[22*] M. G. Cowling, V. Kivioja, E. Le Donne, S. Nicolussi Golo, and A. Ottazzi. From homogeneous metric spaces to Lie groups. *arXiv e-prints.*

[23*] A. Ottazzi, and S. Nicolussi Golo. Polarised Lie groups contactomorphic to stratified groups. *arXiv e-prints.*

[24*] C. Y. Guo, S. Nicolussi Golo, and M. Williams. Quasiregular mappings between subRiemannian manifolds. *arXiv e-prints.*

[25*] S. Nicolussi Golo and Y. Zhang. Curvature Exponent and Geodesic Dimension on Sard-regular Carnot groups. *arXiv e-prints.*

[26*] S. Nicolussi Golo and B. Warhurst. Moduli of Sub-Laplacians on the second Heisenberg group. *arXiv e-prints.*

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 the Simons Semester at IMPAN in Warsaw (September–October 2019)
- Theoretical Sciences Visiting Program (TSVP) visitor to OIST, *Okinawa Institute of Science and Technology*, in Japan, from 5th of August 2022 to 28th of October 2022.

Activities

- Teaching assistant ("Geometry of surfaces in 3D space"): University of Jyväskylä, Finland (Fall 2012)
- Organizer of the "Kindergarten 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)
- Co-organizer of the workshop "Geometric Measure Theory in Padova", Padova, Italy (January 2020)
- Co-organizer in the conference "Sub-Riemannian Geometry and Beyond, III", Pisa (June 2023)
- Representative of postdocs in the department council of the Department of Mathematics at the University of Padova (January–June 2020)
- Master thesis supervisor; University of Jyväskylä (2021–2022)
- Teacher of the course "Riemannian Geometry"; University of Jyväskylä, (2021–2022)

Talks from 2018 to present

- "Minimal surfaces in the Heisenberg group", MAnET final meeting, Bologna, Italy (January 2018)
- "Spectral multipliers and wave equation for sub-Laplacians", Analysis Seminar, Birmingham, UK (November 2018)
- "Metric Lie groups and their dilations", Geometry Seminar, Bristol, UK (November 2018)
- "Spectral multipliers and wave equation for sub-Laplacians", Analysis Seminar, Padova, Italy (January 2019)
- "Spectral multipliers and wave equation for sub-Laplacians", Subriemannian Geometry and Beyond II, Jyväskylä, Finland (February 2019)
- "Metric Lie groups and their dilations", Some topics of Geometric Analysis and Geometric Measure Theory, Pisa, Italy (April 2019)
- "Spectral multipliers and wave equation for sub-Laplacians", Analysis Seminar, IMPAN, Warsaw (May 2019)
- "Tangent spaces", IMPAN, Warsaw (October 2019)
- "From metric spaces to Lie groups", IMPAN, Warsaw (October 2019)
- "Minimal surfaces in the Heisenberg group", IMPAN, Warsaw (October 2019)
- "Spectral multipliers and wave equation for sub-Laplacians", Latest in Geometric Analysis; Celebration of Pekka Koskela's 59th birthday, Będlewo, Poland (November 2019)
- "From Peano to Bernstein in one seminar", Geometry Seminar, University of Jyväskylä, Finland (November 2020)

– "Horizontal jet spaces on Carnot groups", 2021 AGENT–Forum, Aalto University, Finland (October 2021)
– "Horizontal jet spaces on Carnot groups", Geometry and Differential Equations Seminar, Impan, Warsaw, Poland (November 2021)
– "Uniform measures", Analysis Seminar, University of Jyväskylä, Finland (April 2022)
– "Uniform measures", Geometry and Differential Equations Seminar, Impan, Warsaw, Poland (June 2022)
– "Sub-Riemannian geometry is everywhere!", TVSP seminar, OIST, Okinawa, Japan (September 2022)
– "Horizontal jet spaces on Carnot groups", Geometry Seminar, University of Fribourg, Switzerland (December 2022)
– "Embeddings of Nilpotent groups into L1", Geometry and analysis of groups and manifolds, Centro De Giorgi, Pisa, Italy (June 2023)

<div align="center">Last update: February 1, 2024</div>