

# Luca Rizzi

## Curriculum Vitae

100 Rue des Mathématiques  
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Nationality: Italian  
Family status: married, 1 child



### Present and past positions

- 1/2022 – pres. **Associate Professor**, *International School for Advanced Studies (SISSA), Trieste*  
10/2016 – 12/2021 **Chargé de recherche CNRS**, *Institut Fourier, Grenoble*, (currently on leave)  
6/2014 – 9/2016 **Postdoc**, *CMAP, École Polytechnique, Paris*

### Education

- 05/2014 **Ph.D. in Geometry (cum laude)**, *International School for Advanced Studies, Trieste (Italy)*  
Advised by Prof. A. Agrachev, with a thesis entitled: *The curvature of optimal control problems and applications to sub-Riemannian geometry* (SISSA Lutman prize for the best PhD thesis in mathematics)  
04/2010 **MSc in Physics (110/110 cum laude)**, *Università degli Studi dell'Insubria, Como (Italy)*  
*Dielectric black holes and analogue Hawking radiation*, Advisers Profs. S. Cacciatori and V. Gorini

### Research interests

Sub-Riemannian geometry, curvature bounds, geometric control theory, hypoelliptic operators, optimal transport, spectral geometry, quantum control

### Habilitations

- 31 January 2022 **Italian habilitation as Full Professor**, Sector 01/A3 Analysis, Probability and Statistics  
8 July 2021 **HDR (Habilitation à diriger des recherches)**, Mémoire: Interpolation inequalities and spectral geometry on sub-Riemannian structures, Referees: D. Cordero-Erausquin, L. Rifford, A. Thalmaier – Jury: G. Besson, M. Ledoux, S. Rigot  
3 July 2020 **Italian habilitation as Full Professor**, Sector 01/A2 Algebra and Geometry

### Awards and fellowships

- 2021 – 2026 **ERC Starting Grant**, (call ERC-2020-STG)  
2016 – 2019 **Prime d'Encadrement Doctoral et de Recherche (PEDR)**, Bonus attributed by the French government for the high quality of the scientific activity  
2015 **SISSA Lutman Prize**, awarded yearly to the best Ph.D. Thesis in Mathematics defended at SISSA  
2010 – 2014 **SISSA Ph.D. fellowship**, competitive international selection process with written and oral examination (8 fellowships/yr)

### Editorial activity

- 2020 – pres. Member of the editorial board of *Journal of Dynamical and Control Systems*  
2018 – 2021 Managing editor of *Séminaire de Théorie spectrale et géométrie (Grenoble)*  
2017 – pres. Reviewer for *MathSciNet* (22 reviews to date)

### Funding\*

- 2021 – 26 ERC Starting Grant: *GEOSUB* (1.171.465 €)  
2015 – 19 PGMO project: *sub-Riemannian geometry and geometric optimal control* (10.000 €)  
2017 – 18 IRS IDEX Université Grenoble Alpes: *Spectral Geometry of Singular Structures* (12.000 €)

\*grants whose total funding is < 10.000 € are omitted

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## Membership of research networks

- 2019 – pres. National research network Calculus of Variations and Geometric Measure Theory (CALVA). Coordinator: Antoine Lemenant
- 2019 – 2023 ANR project *Real Analysis and Geometry* (RAGE). PI: El Maati Ouhabaz
- 2015 – 2021 ANR project *Sub-Riemannian Geometry and Interactions* (SRGI). PI: Emmanuel Trélat
- 2017 PEPS project *Transport optimal en géométrie sous-riemannienne*. PI: Roberta Ghezzi

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## Supervision activity

### Postdocs

- 2022-24 **Giorgio Stefani**, financed by the ERC project GEOSUB
- 2021-23 **Samuel Borza**, financed by the ERC project GEOSUB
- 2019-20 **Meng Yang**, with E. Russ, financed by the ANR project RAGE

### Ph.D. students

- 2021 – 24 (exp) **Eugenio Bellini**, co-advised with A. Agrachev (SISSA, Trieste)
- 2021 – 24 (exp) **Daniele Tiberio**, co-advised with A. Lerario (SISSA, Trieste)
- 2018 – 21 **Tommaso Rossi**, co-advised with A. Agrachev (SISSA, Trieste)  
from Nov. 2021: post-doc at HCM Bonn, in the group of K.-T. Sturm
- 2013 – 15 **Pavel Silveira**, co-advised with A. Agrachev (SISSA, Trieste), defended on the 26th Oct. 2015  
currently Senior Data Scientist at Machine Learning Reply DE München, Bayern, Deutschland

### Master students

- 2019 **Thomas Mietton**, Institut Fourier

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## Organization of conferences, meetings and seminars

### Seminar series

- Nov. 20 – pres. Co-organizer of the Sub-Riemannian Seminars (hybrid international physical/online seminar cycle, one session every 3 weeks during the academic year)
- 2018 – 2021 Organizer of the weekly seminar Spectral Theory and Geometry (Institute Fourier, Grenoble), 1 seminar/week during the academic year (with A. Seppi)
- 2014 Organizer of the geometric control theory seminars (SISSA, Trieste)

### Conferences, workshops and meetings

- 2022 Member of the scientific committee of an international conference on Sub-Riemannian Geometry and Optimal Control Theory (Florence, Villa Finaly, Italy)
- 2022 Co-organizer of a special session in Sub-Riemannian geometry within the AMS-SMF-EMS Joint International Meeting, July 18 - 22, 2022, Grenoble, France
- 2020 Member of the scientific committee of the international conference *Sub-Riemannian geometry and interactions*, 7 - 11 September 2020, Paris
- 2019 Member of the scientific and organizing committee of the international conference *Sub-Riemannian geometry and beyond II*, University of Jyväskylä. (over 70 participants)
- 2018 Organizer of the workshop *Sub-Riemannian days 2018*, Grenoble. (over 30 participants)
- 2017 Organizer of the workshop *Sub-Riemannian days 2017*, Grenoble. (over 30 participants)
- 2015 Co-organizer of the Thematic day: *Spectral properties of hypoelliptic operators* (IHP, Paris)

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## Committees and service

- 2021 - pres. External referee for the periodical evaluation of Italian research (VQR 2015-2019)
- 2021 Member of the "Conseil d'UMR" de l'Institut Fourier (appointed member)
- 2021 - 2022 Member of the selection committee for the PhD program MathInParis2020 (Cofund Marie Skłodowska-Curie). Calls 2021 and 2022
- 2018 Member of the committee for the admission to the International Master program (M2R) in Fundamental Mathematics in Grenoble

### Referee for Ph.D. theses

2021 Abdellah Laaroussi (Leibniz Universität Hannover). Thesis title: Spectral analysis of classes of subriemannian manifolds. Defended on 15 December 2021.