

Eero Hakavuori

CV

✉ eero.hakavuori@gmail.com

📄 hakavuori.fi

Date of birth: 09.06.1991

Education

- Aug 2019 **PhD, Mathematics**, *University of Jyväskylä*, Advisor: Enrico Le Donne, Topic: Sub-Riemannian geodesics.
- Mar 2015 **Master of Science, Mathematics**, *University of Jyväskylä*.
- Jun 2013 **Bachelor of Science, Mathematics**, *University of Jyväskylä*.

Publications and preprints

- [1] Eero Hakavuori and Enrico Le Donne, *Non-minimality of corners in subriemannian geometry*, *Invent. Math.* **206** (2016), no. 3, 693–704. MR 3573971
- [2] Eero Hakavuori and Enrico Le Donne, *Blowups and blowdowns of geodesics in Carnot groups*, arXiv e-prints (2018), arXiv:1806.09375.
- [3] Eero Hakavuori, *Infinite geodesics and isometric embeddings in Carnot groups of step 2*, arXiv e-prints (2019), arXiv:1905.03214.

Talks

Conference talks

- 22.02.2018 **Tangent and asymptotic cones of geodesics in Carnot groups**, *SubRiemannian Geometry and Beyond*, Jyväskylä, Finland.
- 12.05.2016 **Non-minimality of corners in subriemannian geometry**, *Geometric Analysis in Control and Vision Theory*, Voss, Norway.

Department seminars

- 13.05.2019 **Isometric embeddings in Carnot groups of step 2**, *Jyväskylä Geometry Seminar*, Jyväskylä, Finland.
- 06.02.2019 **Necessary conditions for length-minimality in sub-Riemannian geometry**, *Jyväskylä Geometry Seminar*, Jyväskylä, Finland.
- 18.10.2018 **A metric tangent approach to regularity of geodesics in sub-Riemannian manifolds**, *Séminaire Théorie Spectrale et Géométrie*, Grenoble, France.
- 24.04.2018 **Non-minimality of corners in subriemannian geometry**, *Padova Differential Equations and Applications seminar*, Padova, Italy.
- 03.05.2016 **Non-minimality of corners in subriemannian geometry**, *Jyväskylä Geometry Seminar*, Jyväskylä, Finland.

Other talks

- 09.11.2018 **Regularity from quantified flatness**, *Graduate student seminar*, Jyväskylä, Finland.
- 23.10.2017 **Quasiregular ellipticity**, *Seminar on Analysis in Metric Spaces*, Jyväskylä, Finland.
- 17.02.2017 **Fiber bundles**, *Graduate student seminar*, Jyväskylä, Finland.
- 18.11.2016 **Milnor's exotic structures**, *Graduate student seminar course*, Jyväskylä, Finland.
- 26.02.2016 **The search for non-smooth geodesics in subriemannian geometry**, *Graduate student seminar*, Jyväskylä, Finland.

Teaching

Courses

2018 **MATS132 Linear Lie groups**, *University of Jyväskylä*.

Teaching assistant

2019 **MATS199 Advanced differential geometry**, *University of Jyväskylä*.

2016 **MATA114 Differential equations**, *University of Jyväskylä*.

2014 **MATP170 Approbatur 3**, *University of Jyväskylä*.

2013 **MATP121 Linear algebra 1**, *University of Jyväskylä*.

2013 **MATY010 Preliminary mathematics course**, *University of Jyväskylä*.

Other

2015 – 2016 **Pedagogical studies 60 ECTS (Mathematics subject teacher)**, *University of Jyväskylä*.
Teaching mathematics in elementary school, high school and JAMK university of applied sciences.

Grants

2017 **The Vilho, Yrjö and Kalle Väisälä Foundation of the Finnish Academy of Science and Letters**.
Grant to fund one year (Aug 2018 – Jul 2019) of full-time work towards completing a PhD.

2016 **The Vilho, Yrjö and Kalle Väisälä Foundation of the Finnish Academy of Science and Letters**.
Grant to fund one year (Aug 2017 – Jul 2018) of full-time work towards completing a PhD.

2015 **The Vilho, Yrjö and Kalle Väisälä Foundation of the Finnish Academy of Science and Letters**.
Grant to fund one year (Aug 2016 – Jul 2017) of full-time work towards completing a PhD.

Academic activities

Attended conferences and workshops

24.–28.06.2019 **11th School on Analysis and Geometry in Metric Spaces**, *Levico Terme, Italy*.

18.–22.02.2019 **SubRiemannian Geometry and Beyond.II**, *Jyväskylä, Finland*.

16.–17.10.2018 **Journées sous-Riemanniennes 2018**, *Grenoble, France*.

12.–15.09.2018 **Dynamics, Control, and Geometry**, *Warsaw, Poland*.

04.–08.06.2018 **Geometric measure theory and its connections**, *Helsinki, Finland*.

11.–15.06.2018 **Geometric Measure Theory in Verona**, *Verona, Italy*.

19.–23.02.2018 **SubRiemannian Geometry and Beyond**, *Jyväskylä, Finland*.

20.–24.11.2017 **Géométrie et Topologie**, *Bordeaux, France*.

03.–14.07.2017 **Cortona School in Neurogeometry**, *Cortona, Italy*.

26.–30.06.2017 **10th School on Analysis and Geometry in Metric Spaces**, *Levico Terme, Italy*.

15.–17.12.2016 **Around Analysis, Domains and Mappings**, *Jyväskylä, Finland*.

09.–13.05.2016 **Geometric Analysis in Control and Vision Theory**, *Voss, Norway*.

10.–13.12.2015 **Quasiweekend II - Ten years after**, *Helsinki, Finland*.

06.–10.07.2015 **9th School on Analysis and Geometry in Metric Spaces**, *Levico Terme, Italy*.

Research visits

09.–27.04.2018 **Università degli Studi di Padova**, *Padova, Italy*.

06.11.–15.12.2017 **Université Nice Sophia Antipolis**, *Nice, France*.

Miscellaneous

2018– **SageMath developer**.

Contributed to implement nilpotent Lie algebras, ideals and quotients of finite dimensional Lie algebras, and nilpotent Lie groups to the SageMath computer algebra system