

Personal information

Name: Rami Luisto **e-mail:** rami.luisto@gmail.com
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Current employment

2017-2018: Postdoctoral researcher at the Charles University in Prague.

Previous employments

Jan–Oct 2017: Postdoctoral researcher at University of Jyväskylä.

Sep–Dec 2016: Visiting assistant professor at the UCLA.

Education and theses

Summer 2016: Doctor of Philosophy. The title of the thesis was “*Interactions between quasiregular- and BLD-mappings*”.

Spring 2014: Licentiate of Philosophy. The title of the thesis was “*BLD-kuvausten rajakäyttäytymisestä ja haarajoukoista*” (*On the boundary behaviour and branch sets of BLD mappings*).

Winter 2011: Master of Science. (Mathematics) The title of the thesis was “*On the non-existence of BLD mappings between manifolds*”. Minor subjects in theoretical physics and methodological sciences.

Grants

2017 & 2018: Postdoc pool grant from the Finnish Academy of Science and Letters for a one year postdoc position at the Charles University in Prague.

2014 & 2015: Väisälä foundation scholarship from the Finnish Academy of Sciences for two years starting from September of 2014. The scholarship was for full-time work on my PhD thesis.

2015: University of Helsinki Chancellor’s travel grant for a five week research visit to the ICMAT *Research Term on Analysis and Geometry in Metric Spaces* in Madrid.

Professional activities (at the University of Helsinki)

2013-2015: PhD student representative of the executive board of the Doctoral Programme of Mathematics and Statistics (DoMaSt).

2012-2013: PhD student member of the departmental council.

2011-2013: Co-organiser of the students’ seminar with Jan Christina and Elefterios Soultanis.

2007-2008: Treasurer of the mathematics student union Matrix ry.

Selected scientific presentations

- 7.3.2018: Charles University in Prague Function Spaces Seminar.
- 18.&11.10.2017: Charles University in Prague Function Spaces Seminar.
- 13.10.2017: Leipzig-Prague weekend meeting.
- 8.2.2017: University of Jyväskylä Analysis Seminar.
- 18.1.2017: Aalto University Analysis and Geometry seminar.
- 8.12.2017: Analysis seminar at UIUC, USA.
- 8.&15.11.2016: UCLA participating analysis seminar.
- 11.7.2016: Geometric analysis on Riemannian and singular metric spaces, Como, Italy
- 27.4.2016: École Polytechnique Fédérale de Lausanne, Seminar.
- 24.2.2016: Aalto University Analysis and Geometry seminar.
- 11.2.2016: Analysis & PDE seminar at Pittsburgh University, USA.
- 4.2.2016: Analysis seminar at UIUC, USA.
- 2.11.2015: University of Jyväskylä Geometry Seminar.
- 15.10.2015: IMPAN, Warsaw, GFT meets GGT -conference.
- 6.5.2015: ICMAT, Madrid, Research Term on Analysis and Geometry in Metric Spaces.
- 30.9.2014: Helsinki University seminar of geometric analysis.
- 25.11.2013: University of Jyväskylä Geometry Seminar.
- 17.9.2013: Aalto University Analysis and Geometry seminar.

Selected public lectures¹

- 13.3.2018: SIAM SC seminar at the Charles University. *A gentle introduction to (persistent) homology.*
- 1.4.2016: HIIT Kumpula Seminar. *Making things the hard way – Turing complete interior design.*
- 17.9.2015: StS. *Probability theory is nothing but common sense reduced to calculus.*
- 4.12.2014: StS. *Detecting forged data with mathematics.*
- 12.12.2013: Askola high school science days. *Sharing passwords and Mathematical robotics.*
- 28.9.2013: Lecture in the Night of Mathematics in the Heureka science center. *Joukkoäily (The wisdom of crowds)*
- 25.4.2013: StS. *Why is it hard to define a good product in the euclidean space?*
- 15.11.2012: Askola high school science days. *Mathematical cryptography and Tic-Tac-Toe on a torus.*
- 22.9.2012: A short appearance in a Finnish TV show called Puoli Seitsemän where I calculated some probabilities connected to sports.
- 13.10.2011: StS. *Monistojen perusrühmistä (On the fundamental groups of manifolds).*
- 19.10.2010: Summammutikka-club. *Alkuluvut ja salaus (Prime numbers and cryptography).*
- 21.10.2009: StS. *Quasihyperbolic metric.*

¹StS. := Student seminar of the department of mathematics and statistics at Helsinki University.

Teaching

- Spring 2017:** Lectured *MATA128 – Euclidean Geometry* at University of Jyväskylä.
- Fall 2016:** Lectured *Math 131B – Analysis II* at UCLA.
- Summer 2016:** Co-lectured the course *Matematiikka tutuksi (Getting familiar with mathematics)* at the Open University of the University of Helsinki.
- Fall 2015:** Co-lectured the (renewed) course *Matematiikka tutuksi (Getting familiar with mathematics)* at the University of Helsinki.
- Fall 2012:** Lectured an introductory topology course *Opettajalinjan työpaja (Topologia I)* at the University of Helsinki.
- Summer 2010:** Lectured the course *Matematiikka tutuksi (Getting familiar with mathematics)* at the Helsinki open university.
- 2008-2016:** Course assistant at the department since the fall of 2008. The courses are manifold, most of them basic courses aimed for students in their first, second or third year of studies. All together they amount to 400 hours of contact teaching during these years.
- 2008-2011:** Almost constantly involved with the Summammutikka-center of the Finnish LUMA-center during undergraduate studies. Main assignment was the organisation of the Summammutikka-club, in which the more beautiful aspects of mathematics were presented to high school level students.

Pedagogical training and expertise

- Fall 2016:** Pedagogical peer-reviewed article, joint with Juulia Lahdenperä, *Popularising mathematics with dialogue teaching at tertiary level. In preparation*
- Fall 2016:** Pedagogical article in a magazine for STEM teachers, joint with Juulia Lahdenperä, based on the experiences gained in the experimental co-lectured course "Getting familiar with mathematics". *Dimensio 4/2016, p.53.*
- 8.6.2016:** Conference presentation on Mathematical pedagogics at ISSE and LUMA days 2016, Lahti.
- Fall 2012:** University pedagogics II: Planning, execution and assessment in constructively aligned teaching - 5 cr.
- Fall 2012:** University pedagogics I: Teaching and learning in the university - 5 cr.
- Spring 2012:** Effective teaching in small groups - 2 cr.

Books

- 2017:** *MAB4 Matemaattisia Malleja* (An e-book for high school mathematical models, in finnish.) Joint with Hanna Hellsten, Lauri Hellsten and Kai Nurmi.
- 2016:** *MAB3 Geometria* (An e-book for high school geometry, in finnish.) Joint with Hanna Hellsten, Lauri Hellsten and Pia Vikberg.

Academical excursions

- 26.-28.4.2016: Research visit to École Polytechnique Fédérale de Lausanne, Switzerland
- 29.1.-15.2.2016: Research visit to UIUC, Illinois and Pittsburgh University, Pennsylvania
- 3.5.-5.6. 2015: Research term on Analysis and Geometry in Metric Spaces, ICMAT, Madrid
- 13.-30.5.2013: Interactions Between Analysis and Geometry -program. IPAM, Los Angeles
- 18.3.-1.6.2012: Research visit in Ann Arbor, Urbana and Purdue

Attended conferences

- 13.10.2017: Leipzig-Prague weekend meeting, Labská Stráň, Czech Republic.
- 26.-29.6.2017: 10:th School on Analysis and Geometry in Metric Spaces, Trento, Italia
- 12.-16.6.2017: Rolf Nevanlinna Colloquium, Zürich
- 11.7.-15.7.2016: Geometric analysis on Riemannian and singular metric spaces, Como, Italy
- 15.-18.3.2016: 27:th Nordic Congress of Mathematicians
- 10.-13.12.2015: Quasiweekend II - Ten years after, Helsinki (Technical assistant)
- 14.-17.10.2015: GFT meets GGT, IMPAN, Warsaw
- 17.-21.8.2015: 25:th Jyväskylä summer school
- 21.-31.5.2015: Summer school on Normal Families in Complex Analysis and Conference on Modern Trends in Complex Analysis, Würzburg, Germany
- 11.-17.1.2015: Young Geometric Group Theory IV, Spa, Belgium
- 11.-22.8.2014: 24:th Jyväskylä summer school
- 16.-20.6.2014: Eighth School on Analysis and Geometry in Metric Spaces, Trento, Italia
- 24.-28.3.2014: Asymptotic Properties of Infinite Groups, IHP Paris
- 27.-31.1.2014: Random walks on groups, IHP, Paris
- 9.-10.1.2014: FinEst Math 2014, Helsinki
- 30.9.-4.10.2013: School in Geometric Analysis, Geometric analysis on Riemannian and singular metric spaces, Como, Italy
- 11.-12.8.2013: Fred Gehring Memorial Conference, Helsinki (Technical assistant)
- 5.-9.8.2013: Rolf Nevanlinna Colloquium, Helsinki (Technical assistant)
- 13.-24.8.2012: 22:nd Jyväskylä summer school
- 2.-7.7.2012: 6th European Congress of Mathematics, Krakow
- 11.-15.6.2012: Pisa summer school, Pisa
- 5.-9.3.2012: Harmonic and Complex Analysis and its Applications, Tenerife.
- 4.-5.1.2012: Finnish mathematical days, Lappeenranta, Finland
- 20.-24.6.2011: Seventh School on Analysis and Geometry in Metric Spaces, Trento, Italia
- 15.-17.12.2010: Finnish inverse days, Oulu

Miscellaneous skills

Using Ubuntu, \LaTeX and emacs on a daily basis, with pictures prepared with Metapost, TikZ or Gimp. Most programming needs are satisfied with Python, experience also with Java and Matlab/Octave. Rudimentary knowledge of HTML, CSS and PHP. Geogebra and Desmos are used in almost all teaching, with familiarity with the STACK system in Moodle. Native in Finnish, fluent in English, basic conversational skills in Swedish and German, and basics of Czech.