CURRICULUM VITAE

Personal Details

- Name: Jääsaari, Jesse
- Born in May 1992 in Helsinki, Finland.
- Finnish citizen
- E-mail: jesse.jaasaari@gmail.com
- Home page: https://www.jessejaasaari.com
- Date of CV: December 18, 2020

Education and Degrees Completed

- September 2018: Doctor of Philosophy, Department of Mathematics and Statistics, University of Helsinki, Finland. Doctoral thesis "*Exponential Sums Related to Maass Cusp Forms*" was approved with the grade **passed with distinction**.
- December 2013: Master of Science, Department of Mathematics and Statistics, University of Helsinki, Finland. Master's thesis "*A Pretentious Approach to Estimating Character Sums*" was approved with the grade **Eximia cum laude approbatur**.
- December 2013: Bachelor of Science, Department of Mathematics and Statistics, University of Helsinki, Finland. Bachelor's Thesis "*Hölderin Lause*" (in Finnish for "*Hölder's Theorem*") was approved with the grade **5/5**.

Current Position

- 2020 - present: Postdoctoral research assistant, School of Mathematical Sciences, Queen Mary University of London, UK. Mentored by Dr. Abhishek Saha and Dr. Steve Lester.

Previous Work Experience

- 2019-2020: Postdoctoral researcher, Department of Mathematics and Statistics, University of Turku, Finland. Mentored by Prof. Kaisa Matomäki.
- 2014-2018: Doctoral student, Department of Mathematics and Statistics, University of Helsinki, Finland. Supervised by Prof. Anne-Maria Ernvall-Hytönen.
- 2013-2014: Research assistant, Number Theory Finland-project. Funded by the Academy of Finland (co-ordinated by the University of Oulu).

Research Interests

My research interests lie in analytic number theory with a focus on automorphic forms, automorphic representations and L-functions related to those objects. I am also interested in representation theory and spectral theory in connection to analytic number theory and the Langlands programme.

Selected List of Publications

1. (with E. V. Vesalainen) *Ω-Results For Exponential Sums Related To Maass Forms for* $\mathrm{SL}(3,\mathbb{Z})$. In preparation.
2. (with S. Lester and A. Saha) *On Fundamental Fourier Coefficients of Siegel Cusp Forms of Degree 2*, preprint available at arXiv:2012.09563.
3. *On Short Sums Involving Fourier Coefficients of Maass Forms.* 29 pages. To appear in J. Théor. Nombres Bordeaux.
4. (with E. V. Vesalainen) *On Sums Involving Fourier Coefficients of Maass Forms for* $\mathrm{SL}(3,\mathbb{Z})$. Functiones & Approximatio Commentarii Mathematici, vol. 57, No 2 (2017), pp. $255-275$.
5. (with E. V. Vesalainen) *Exponential Sums Related to Maass Forms.* Acta Arithmetica, 190 (2019), pp. $1-48$.
6. (with A.-M. Ernvall-Hytönen and E. V. Vesalainen) *Resonances and Ω-Results for Exponential Sums Related to Maass Forms for* $\mathrm{SL}(n,\mathbb{Z})$. Journal of Number Theory, 153 (2015), pp. $135-157$.

Selected Personal Research Funding and Grants

- Scholarship of the Finnish Cultural Foundation. Granted in January 2020, 30,000 EUR.
- Scholarship of the Finnish Cultural Foundation. Granted in January 2019, 30,000 EUR.
- Travel scholarship of the Magnus Ehrnrooth Foundation for a research visit to Kungliga Tekniska Högskolan (KTH). Granted in March 2017, 3,000 EUR.
- Funded position in Doctoral Programme in Mathematics and Statistics at the University of Helsinki starting in January 2017. Granted in November 2016.
- Scholarship of the Finnish Cultural Foundation for doctoral studies. Granted in February 2015, 24,000 EUR.
- Funded position in Doctoral Programme in Mathematics and Statistics at the University of Helsinki starting in January 2015. Granted in November 2014.

Teaching Experience

I have been a teaching assistant for several undergraduate and graduate courses in mathematics at the University of Helsinki: Elements of Cryptography (Spring 2014), Complex Analysis I (Fall 2014), Introduction to Analytic Number Theory (Fall 2014), Advanced Course in Complex Analysis (Spring 2015) and Introduction to Number Theory (Fall 2015).

Selected Awards and Honours

- Outstanding Doctoral Dissertation Award, Doctoral School of Natural Sciences, University of Helsinki, November 2018.
- Special award for an exceptional fast and successful completion of Master's degree, Awarded by the Faculty of Science, University of Helsinki, December 2013.
- Represented Finland at the 52^{nd} International Mathematical Olympiad (IMO) in Amsterdam, the Netherlands, July 2011.

Selected Academic Presentations

- Finnish Mathematical Days 2020, *Sign changes of Hecke eigenvalues in* GL(3), Oulu, Finland, January 3, 2020.
- University of Oxford, *Exponential sums involving Fourier coefficients of higher rank automorphic forms*, Oxford, UK, April 30, 2019.
- London Number Theory Seminar, *Exponential sums involving Fourier coefficients of higher rank automorphic forms*, King's College London, UK, April 24, 2019.
- Finnish Mathematical Days 2018, *On short sums involving Fourier coefficients of cusp forms*, Joensuu, Finland, January 5, 2018.
- Journées Arithmétiques 2017, *On the distribution of exponential sums related to automorphic forms*, Caen, France, July 4, 2017.
- KTH Number Theory Seminar, *On the distribution of exponential sums related to automorphic forms*, Stockholm, Sweden, April 26, 2017.
- University of Copenhagen Number Theory Seminar, *On exponential sums involving Fourier coefficients of automorphic forms*, Copenhagen, Denmark, October 14, 2016.
- Analytic Number Theory Workshop, *A resonance estimate and related* Ω*-result*, Turku, Finland, May 27, 2014.

Research Visits

- April-May 2019: Visit to University of Oxford, UK (1 week).
- April 2019: Visit to Queen Mary University of London, UK (1 week).
- February-April 2017: Visiting graduate student at Kungliga Tekniska Högskolan (KTH), Stockholm, Sweden (3 months).
- October 2016: Visit to University of Copenhagen, Denmark (1 week).

Participation in Conferences and Similar Events

See https://www.jessejaasaari.com/conferences

Language Skills

- Finnish (Native Language), English, German, Swedish.