

# Curriculum Vitae

EMILIA L.K. BLÅSTEN

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## Personal information

Name	<b>Blåsten</b> , Emilia Lavie Kyllikki
Date of birth	June 23, 1987 (age: 37)
Place of birth	Helsinki, Finland
Nationality	Finnish
Mother tongue	Finnish
Other languages	English (C2 proficient user, self-assessed) French (C1 proficient user, self-assessed) Spanish (A2 basic user, self-assessed) Mandarin Chinese (HSK level 3)

## Titles

Docent	(Topic: Inverse Problems in Partial Differential Equations), LUT University, School of Engineering Science, 1 March 2024 – 28 February 2029
Doctor of Philosophy	University of Helsinki, Applied Mathematics, Helsinki, Finland, 19 June 2013, verification contact: <a href="mailto:registrar@helsinki.fi">registrar@helsinki.fi</a>
Licentiate of Philosophy	University of Helsinki, Applied Mathematics, Helsinki, Finland, 24 June 2010
Master of Science	University of Helsinki, Applied Mathematics, Helsinki, Finland, 17 October 2008
Bachelor of Science	University of Helsinki, Mathematics, Helsinki, Finland, 17 October 2008
Highschool	Helsingin Matematiikkalukio, Helsinki, Finland, 3 June 2006
Primary School	Helsingin ranskalais-suomalainen koulu, Helsinki, Finland, 2003

## Working experience

- Faculty 2022 onwards. Research in partial differential equations and teaching large scale introductory mathematics courses.
  - Associate professor (tutkijaopettaja) under Tapio Helin, Computational Engineering, LUT School of Engineering Sciences, LUT University, 2.5.2022 – (current)
- Postdoctoral research 2013–2022. Topics in partial differential equations and applications:
  - Post-doctoral researcher under Prof. Nuutti Hyvönen, Department of Mathematics and Systems Analysis, Aalto University, 1.1.2021 – 30.4.2022
  - Part-time researcher under Prof. Lassi Päivärinta, Division of Mathematics, Department of Cybernetics, Tallinn University of Technology, 1.7.2020 – (ongoing)
  - Post-doctoral researcher under Prof. Matti Lassas, Department of Mathematics and Statistics, University of Helsinki, 28.3.2019 – 31.12.2020

- Break for health reasons (7 months): 1.9.2018 – 27.3.2019
- Working on the *Smart Urban Water Supply Systems* project with Prof. Mohamed Ghidaoui, HKUST Department of Civil and Environmental Engineering, 15.5.2016 – 31.8.2018
- IAS Postdoctoral Fellow under Prof. Gunther Uhlmann, HKUST Jockey Club Institute for Advanced Study, 1.9.2015 – 31.8.2018
- Research scientist under Prof. Lassi Päivärinta, Department of Mathematics, Tallinn University of Technology, 5.1.2015 – 31.7.2015
- Post-doctoral researcher under Profs. Lassi Päivärinta and Gunther Uhlmann, Department of Mathematics and Statistics, University of Helsinki, 1.9.2013 – 31.12.2014
- Pre-PhD research 2007–2013:
  - Doctoral student under Prof. Lassi Päivärinta, Department of Mathematics and Statistics, University of Helsinki, 1.1.2009 – 31.8.2013
  - Research assistant under Prof. Lassi Päivärinta, Department of Mathematics and Statistics, University of Helsinki, 1.9.2007 – 31.12.2008
- Work in industry 2006–2007:
  - Assistant in a EU-wide research project about insurance companies’ solvency and developing computer software, working under Pasi Laaksonen, Pohjola Insurance Company, 1.6.2007 – 31.8.2007
  - Assistant in a EU-wide research project about insurance companies’ solvency, working under Pasi Laaksonen, Pohjola Insurance Company, 1.6.2006 – 31.7.2006
  - Part-time assistant in writing MS Excel code related to measuring productivity, working under Olli Haltia, Savcor Indufor Oy, 1.11.2005 – 28.2.2006
- Interim work:
  - TET student, Stockmann One Way, 2 weeks in May 2003
  - Assistant supervisor at the Bengtsår summer camp, City of Helsinki, 1 week in August 2003

## Awards

- China Top Cited Paper Award 2023 in Mathematical Sciences, IOP Publishing, fall 2023.
- Aalto University Department of Mathematics and Systems Analysis biannual teaching prize, fall 2021
- Rolf Nevanlinna Research Foundation’s award for the best thesis in mathematics in Finland in 2013
- Doctoral thesis approved with distinction
- Full score in the mathematics exam at matriculation, stipend by The Federation of Finnish Technology Industries

## Selected conference talks

10. *Scattering from corners and other singularities*, Finnish Mathematical Days 2024; Aalto University, Espoo, Finland, 5 January 2024.
9. *Scattering from corners and other singularities and Imaging water supply pipes using pressure waves*, Applied Inverse Problems Conference 2023; University of Göttingen, Göttingen, Germany, 4 and 7 September 2023.
8. *Imaging water supply networks and vocal tracts*, Inverse Days 2022; University of Eastern Finland, Tahko, Kuopio, Finland, 14 December 2022.

7. *Inverse spectral problem on discrete graphs*, SIAM 2022 Conference on Imaging Science; Virtual Conference (remote talk), 25 March 2022.
6. *Inverse spectral problem on discrete graphs*, Congreso Bienal de la Real Sociedad Matemática Española 2022; Ciudad Real, Spain (remote talk), 17 January 2022.
5. *Inverse problems with one measurement*, 9th International Conference on Inverse Problems and Related Topics; National University of Singapore, Singapore, 15 August 2018.
4. *Inverse backscattering with point-source waves*, 3<sup>rd</sup> East Asia Section of IPIA, Young Scholars Symposium; Hong Kong Baptist University, Hong Kong, 17 March 2018.
3. *Corners always scatter — quantitative results*, Applied Inverse Problems Conference 2017; Zhejiang University, Hangzhou, China, 31 May 2017.
2. *Topics in Corner Scattering: Non-Scattering Waves, Potential Probing with a Single Incident Wave, and the Interior Transmission Problem*, NCTS PDE and Analysis Seminar; National Center for Theoretical Sciences, National Taiwan University, Taipei, Taiwan, 9 March 2017.
1. *A new viewpoint to scattering theory à la Hörmander*, Spectral and Analytic Inverse Problems, Thematic Programme on Inverse Problems; Institut Henri Poincaré, Paris, France, 4 May 2015.

### Awards in mathematical competitions

- **Honourable mention**, International Mathematical Olympiad 2006, Slovenia
- **Meritorious Winner**, Mathematical Contest in Modeling MCM 2006, COMAP
- International Mathematical Olympiad 2005, Mexico
- **2<sup>nd</sup> place, finals, 9<sup>th</sup> grade series**, Eesti matemaatikaolümpiaad 2002–2003, Estonia
- **1<sup>st</sup> place, finals**, Finnish national primary school mathematics competition 2002–2003, MAOL