

Curriculum Vitae

Tuomas Sahlsten

February 2, 2018

Personal information

Family name and first names: Sahlsten, Tuomas Valtteri Aleksis
Date and place of birth: 25 May 1987 in Vantaa, Finland
Nationality: Finnish
Homepage: <http://sahlsten.org>

Education

2009 – 2012 *PhD in Mathematics*, University of Helsinki, Finland
Supervisor: Prof Pertti Mattila. Awarded: November 2012.
2006 – 2009 *BSc and MSc in Mathematics*, University of Helsinki, Finland
Supervisor: Prof Pertti Mattila. Awarded: June 2009.

Work experience

Sep 2017 – present *Lecturer in Pure Mathematics*, School of Mathematics, University of Manchester, UK, permanent contract
Sep 2015 – Aug 2017 *Marie Curie Research Fellow*, School of Mathematics, University of Bristol, UK (funded by the EU through MSCA-IF grant, Horizon 2020)
Jan 2014 – Aug 2015 *Research Fellow*, Einstein Institute of Mathematics, The Hebrew University of Jerusalem, Israel (fellowship in an ERC starting grant, FP7)
Jan 2013 – Dec 2013 *Research Associate*, School of Mathematics, University of Bristol, UK (funded by an Emil Aaltonen foundation grant and Academy of Finland)
Sep 2012 – Dec 2012 *Project Researcher*, Department of Mathematical Sciences, University of Oulu, Finland (fellowship in an Academy of Finland grant)

Research experience

Track record

- In total 14 peer-reviewed published articles with many appeared in leading international mathematical journals such as Duke Math. J., Math. Ann., Proc. LMS, Analysis & PDE, IMRN, Adv. Math. and others.
- Research concentrated on mathematical analysis and connections to dynamical systems. Some particular highlights include the solution (Math. Ann. 2016) to Salem's long-standing problem from 1943 on Diophantine approximation with T. Jordan. Recent interests include quantum chaos and dynamics of artificial neural networks.
- More detailed review of the research experience and the list of publications can be found at <http://personalpages.manchester.ac.uk/staff/tuomas.sahlsten/research.html>

Previous grants (as a P.I.)

1.9.2015 – 31.8.2017 *Marie Skłodowska-Curie Actions*, European Union, awarded a €183,455 MSCA-IF Grant “*Large Deviations and Measure Rigidity in Dynamics*” (LDMRD), nr. 655310, under the Horizon 2020 Programme. Hosted by University of Bristol, UK.

1.1.2010 – 31.12.2013 *Emil Aaltonen Foundation*, Finland, awarded three (€22,300, €23,000 and €23,000) research grants. Hosted by the University of Helsinki, Finland (1.1.2010 - 30.8.2012), and University of Bristol, UK (1.1.2013 – 31.12.2013)

Other grants

2017 *LMS Scheme 1* conference grant (£4,000) with Davoud Cheraghi
 2017 *Finnish Academy of Science and Letters* travel grant (€1174)
 2014 *LMS Scheme 1* grant (£4,000) and *Heilbronn Institute* grant (£4,000) with Thomas Jordan
 2013 *Chancellor's travel grant* (€772), University of Helsinki, Finland

Professional and organisational activities

- Co-organised the international conference *Analysis Aspects of Dynamics*, held in 16 – 18. May 2018 at the Imperial College London, UK.
- Co-organised the international conference *Projection and Slicing Theorems in Fractal Geometry*, held in 17 – 18. July 2014 at the University of Bristol, UK.
- Local organiser in Michael Hochman's *Workshop on Fractals*, held in 8 – 12. June 2014 at the Hebrew University of Jerusalem, Israel.
- Reviewer for major international journals such as *GAFSA*, *Proc. London Math. Soc.*, *Adv. Math.*, *Trans. Amer. Math. Soc.* and various others
- Elected vice member of the Board of the Department of Mathematics and Statistics at University of Helsinki during the period Jan 2010 - Jun 2012.

Selected research visits

May 2017 *Torcuato di Tella University*, Buenos Aires, Argentina
 May 2017 *Pontifical Catholic University of Chile*, Santiago de Chile, Chile
 May 2016 *Princeton University*, New Jersey, USA
 Feb 2016 *Brown University*, Rhode Island, USA
 Apr 2015 *University of Manchester*, England
 Sep 2014 *The Chinese University of Hong Kong*, China (SAR)
 Aug 2014 *South China University of Technology*, Guangzhou, China
 Dec 2013 *University of York*, England
 Oct 2013 *University of Warwick*, England
 May 2013 *Université Paris Diderot*, France
 May 2013 *Leiden University*, Netherlands
 Apr 2013 *University of Surrey*, England
 Jan 2010 *University of St. Andrews*, Scotland

Teaching experience

Supervisions and examination

Sep 2017 – Academic advisor for undergraduate students in University of Manchester, UK

- Sep 2017 – Examiner for undergraduate projects and dissertations, University of Manchester, UK
- Sep 2017 - Sep 2021 Supervising Connor Steven’s PhD thesis on topics in additive combinatorics and dynamical systems in University of Manchester.
- Summer 2015 PhD examiner of Eino Rossi’s PhD thesis “*Local structure of fractal sets: tangents and dimension*”, University of Jyväskylä, Finland

Lecturing experience

- Spring 2018 *Mathematics OC2*, service course, University of Manchester, UK
- Spring 2016 *Additive Combinatorics and Ergodic Methods in Fractals*, graduate course, University of Bristol, UK

Teaching experience in schools

- Fall 2007 *Mathematical analysis*, course teacher, Jokela high school, Finland
- Fall 2007 *Geometry*, course teacher, Jokela high school, Finland
- Fall 2007 *A-level preparation course*, course teacher, Jokela high school, Finland
- Fall 2007 *Basic mathematics*, course teacher, Mantsälä upper secondary school, Finland.

Small group tutorials

- Sep 2017 – Leading first year supervision groups for undergraduate students, University of Manchester, UK
- Sep 2009 – Dec 2012 Leading various undergraduate supervision groups, University of Helsinki, Finland

Pedagogical studies

- Sep 2017 – May 2018 New Academics Programme training courses on University Pedagogics, University of Manchester, UK
- Fall 2011 University Pedagogics training, University of Helsinki, Finland

Outreach

Selected invited talks in international conferences

- September 2017 *Fractal Geometry and Dynamics*, Mittag-Leffler Institute, Sweden
- March 2016 *27th Nordic Congress of Mathematicians*, Stockholm University, Sweden
- January 2016 *Finnish Mathematical Days*, University of Turku, Finland
- June 2015 *Workshop on Fractals*, The Hebrew University of Jerusalem, Israel
- July 2014 *Dynamics and Numbers*, The Max Planck Institute, Bonn, Germany
- August 2013 *XXII Rolf Nevanlinna Colloquium*, University of Helsinki, Finland

Selected invited seminars/colloquia

University of Edinburgh (2018), Pontifical Catholic University of Chile (2017), Princeton University, USA (2016), Imperial College London (2016), University of St Andrews (2010, 2015), University of Helsinki (2015), South China University of Technology (2014), Chinese University of Hong Kong (2014), Technion, Israel (2014), The Hebrew University of Jerusalem (2014), University of York (2013), University of Warwick (2013), Université Paris Diderot-Paris 7 (2013), Leiden University (2013).