

STEFAN LEMURELL CURRICULUM VITAE

April 2013

Stefan Lemurell
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PERSONAL DATA

Full Name Stefan Nils Johan Lemurell
Date of Birth Jan. 4, 1968
Place of Birth Varberg, Sweden
Marital Status Married
Children Daughter, born 2003, Son, born 2005.
Citizenship Swedish
Home address Banvägen 8
435 43 Pixbo
Sweden

Note: Changed my family name from Johansson to Lemurell in December 2001.

SCIENTIFIC QUALIFICATIONS

EDUCATION

Ph. D.
June 1997
Göteborg University
Mathematics
Advisor: Professor Juliusz Brzezinski
Thesis: *Arithmetic and Geometry of Quaternion Orders and Fuchsian Groups*
(consists of papers [2]-[6] listed below)

Fil. Lic.
Dec. 1994
Göteborg University
Mathematics

Bachelor of Science
Jun. 1991
Göteborg University
Mathematics

EMPLOYMENT HISTORY

Docent, Department of Mathematics, Chalmers University of Technology, Sweden, April 2006–.

Assistant professor (Forskarassistent), Department of Mathematics, Chalmers University of Technology, Sweden, July 1999-March 2006.

Postdoctoral scholar, supported by “Stiftelsen för internationalisering av högre utbildning och forskning” (STINT), Sep. 1998-June 2000.

Lecturer, Department of Mathematics, Chalmers University of Technology, Sweden, June 1997–Aug 1998.

Research assistant, Department of Mathematics, Göteborg University, Sweden, July 1991–May 1997.

PAPERS

- [12] *Maass forms on $GL(3)$ and $GL(4)$* , (with David Farmer and Sally Koutsoliotas), arXiv:1212.4545.
- [11] *The highest lowest zero of general L -functions* (with Jonathan Bober, J. Brian Conrey, David W. Farmer, Akio Fujii, Sally Koutsoliotas, Michael Rubinstein, Hiroyuki Yoshida), arXiv:1211.5996.
- [10] *Étale Lattices over Quadratic Integers* (with Juliusz Brzeziński and Håkan Granath), Math. Z. 258 (2008), no. 1, 161–184.
- [9] *Modular Forms and L -functions with a Partial Euler Product* (with David Farmer and Sally Koutsoliotas), J. Ramanujan Math. Soc. 23 (2008), no. 2, 105–121.
- [8] *Deformations of Maaß forms* (with David Farmer), Math. Comp. 74 (2005), no. 252, 1967–1982.
- [7] *A Spectral Correspondence for Maass Waveforms* (with Jens Bolte), Geometry and Functional Analysis 9 (1999), no.6, pp. 1128–1155.
- [6] *Theta-Lifts of Maaß Waveforms* (with Jens Bolte), in ‘Emerging Applications of Number Theory’, D.A. Hejhal, F. Chung, J. Friedman, M.C. Gutzwiller and A. Odlyzko, eds., pp. 39–72, Springer Verlag, New York.
- [5] *Quaternion Orders and Ternary Quadratic Forms*, arXiv:1103.4922.
- [4] *Genera of Arithmetic Fuchsian Groups*, Acta Arith. 86 (1998), no.2, pp. 171–191.
- [3] *On Fundamental Domains of Arithmetic Fuchsian Groups*, Math. Comp. 69, pp. 339–349.
- [2] *Traces in Arithmetic Fuchsian Groups*, J. Number Theory 66 (1997), no.2, pp. 251–270.
- [1] *Genera of Riemann Surfaces Corresponding to Quaternion Orders*, Department of Mathematics, Chalmers University of Technology and Göteborg University, Preprint 37, 1994.

BOOKS

Linjär algebra - från en geometrisk utgångspunkt, Studentlitteratur, 2010.

Homepage of the book at:

<http://www.linjaralgebra.se/>

Algebra och diskret matematik (with Johan Jonasson), Studentlitteratur, 2003.

Description (in Swedish) of the book at:

<http://www.studentlitteratur.se/o.o.i.s/?id=1968&artnr=35193-01&csid=19>

OTHER PUBLICATIONS

Introduktion till den diskreta matematiken (Introduction to Discrete Mathematics), Department of Mathematics, Chalmers University of Technology, 1997, 2000, 2002.

AWARDS

Postdoctoral scholarship from STINT during two years at Rutgers University and Institute for Advanced Study, New Jersey, USA.

MEETINGS ATTENDED

- Jan. 13 *Online databases: from L-functions to combinatorics*, Edinburgh, UK.
- Mar. 12 *Workshop on L-functions and Modular Forms 6*, Bristol, UK.
- Sep. 11 *Workshop on L-functions and Modular Forms 5*, Bristol, UK.
- Oct. 10 *Workshop on L-functions and Modular Forms 4*, Paris, France.
- Mar. 10 *Computer Methods for L-functions and Modular Forms*, Montreal, Canada.
- Jul. 09 *Workshop on higher rank L-functions: Theory and Computations*, Benasque, Spain.
- Mar. 09 *The 23rd Annual Workshop on Automorphic Forms and Related Topics*, Lewisburg, Pennsylvania, USA.
- Feb. 09 *Workshop on L-functions and Modular Forms 3*, Key West, USA.
- Jun. 08 *Workshop on L-functions and Modular Forms 2*, Seattle, USA.
- Mar. 08 *2008 spring AMS sectional meeting*, New York City, USA.
- Mar. 08 *AIM workshop on Computing arithmetic spectra*, Palo Alto, USA.
- April.05 *AIM workshop on Hecke's Converse Theorem*, Bristol, England.
- Oct. 02 *MAQC Network Midterm Workshop*, IHP, Paris, France.
- Dec. 00 *2000 Western Number Theory Conference*, San Diego, California, USA.
- Mar. 00 *The 14th Annual Workshop on Automorphic Forms and Related Topics*, Boulder, Colorado, USA.
- Mar. 99 *The 13th Annual Workshop on Automorphic Forms and Related Topics*, Santa Barbara, California, USA.
- Jan. 99 *André Weil, 1906-1998, A Conference On His Work And Its Influence*, IAS, Princeton, NJ, USA.
- Aug. 96 *The Fifth Conference of the Canadian Number Theory Association*, Ottawa, Canada.
- May 96 *Algorithmic Number Theory Symposium II*, Bordeaux, France.
- Jul. 95 *Journées Arithmétiques*, Barcelona, Spain.
- Jan. 94 *Winter School on Real Geometry*, Madrid, Spain.

MEETINGS ORGANIZED

- Mar. 08 *AIM workshop on Computing arithmetic spectra*, Palo Alto, USA.

INVITED TALKS

- Oct. 10 *Workshop on L-functions and Modular Forms 4*, Paris, France.
- Mar. 09 *Five College Number Theory Seminar*, Amherst College, Massachusetts, USA.

- Dec. 08 Workshop in honour of Dennis Hejhal, Uppsala University, Sweden.
- Mar. 05 DNA Seminar, Uppsala University, Sweden.
- Nov. 00 Number Theory Seminar, Bucknell University, Pennsylvania, USA.
- Nov. 00 Mathematics Colloquium, Bucknell University, Pennsylvania, USA.
- Mar. 00 Automorphic Forms and L-functions Seminar, IAS, Princeton, NJ, USA.
- Dec. 98 Number Theory Seminar, Rutgers University, NJ, USA.
- May. 96 Theoretische Physik Kolloquium, Universität Ulm, Germany.
- Nov. 95 Seminar in Zahlentheorie, TU Clausthal, Germany.
- Mar. 95 Seminar in Analysis, Uppsala University, Sweden.

CONTRIBUTED TALKS

- May. 10 Finnish-Swedish Number Theory Conference, Stockholm.
- Mar. 09 The 23rd Annual Workshop on Automorphic Forms and Related Topics, Lewisburg, Pennsylvania, USA.
- Mar. 08 AIM workshop on Computing arithmetic spectra, Palo Alto, USA.
- Oct. 02 MAQC Network Midterm Workshop, IHP, Paris, France.
- Mar. 00 The 14th Annual Workshop on Automorphic Forms and Related Topics, Boulder, Colorado, USA.
- Mar. 99 The 13th Annual Workshop on Automorphic Forms and Related Topics, Santa Barbara, California, USA.
- Aug. 96 The Fifth Conference of the Canadian Number Theory Association, Ottawa, Canada.

EXTENDED RESEARCH VISITS

- Apr. 11 MSRI, Berkely, USA.
Program on Arithmetic Statistics
- Sep.–Jun. 99-00 Institute for Advanced Study, New Jersey, USA.
· Supported by STINT.
- Sep.–Aug. 98-99 Rutgers University, New Jersey, USA.
· Supported by STINT.
- Nov.–Dec. 97 Department of Theoretical Physics, Universität Ulm, Germany.
· Supported by Svenska Institutet.
- Oct.–Nov. 95 Department of Theoretical Physics, TU Clausthal, Germany.
· Supported by Svenska Institutet.

CURRENT FIELDS OF INTEREST

Number theory, in particular L-functions, Automorphic forms, both arithmetical and spectral aspects, arithmetic theory of quadratic forms, quaternion algebras, Fuchsian groups.

REFERENCES

- Professor Dennis A. Hejhal, Uppsala University, Sweden.
E-mail: hejhal@math.uu.se
Tel: +46 18-471 3274
- Professor Juliusz Brzezinski, Göteborg University, Sweden.
E-mail: jub@math.chalmers.se
Tel: +46 31-772 3540

TEACHING QUALIFICATIONS

TEACHING EXPERIENCE

Chalmers University of Technology and Göteborg University, Sep. 00–: Half time lecturer; teaching linear algebra, discrete mathematics and calculus.

Chalmers University of Technology and Göteborg University, Jun. 97–Aug. 98 : Full time lecturer; teaching algebra, discrete mathematics and calculus.

Chalmers University of Technology and Göteborg University, Jul. 91–May 97: Part time teaching assistant for algebra, discrete mathematics and calculus.

COURSES TAUGHT AND DEVELOPPED

PhD courses Chalmers and GU

Modular forms, 2013.

Chalmers University:

MVE275 – *Linear algebra*. Examiner and lecturer 2008-2009. Development of this new course in 2008.

TMV200 – *Discrete mathematics*. Examiner and lecturer 2008, 2012. Author of the literature used.

TMV206 – *Linear algebra*. Examiner and lecturer 2001, 2002, 2005-2012. Development of this new course in 2001. (Code was TMA245B until 2002, TMV205 until 2007.)

INTRO – *Introductory course in mathematics, D*. Examiner and lecturer 1997-1998, 2001-2012. Responsible for the reformation of the course in 1997. Author of the literature used.

TMA552A – *D1, Mathematics part A. Discrete mathematics* Examiner and lecturer 1997, 2000, 2001, 2002, assistant 1995, 1996. Part of the course development team in 1994. Author of the literature used. (Code was TMA551A until 2000.)

TMA245A – *Mathematics IT, part A. Discrete Mathematics*. Assistant 2002. Author of the literature used.

TMA151D – *Mathematics K part D. Multivariable calculus* Examiner and lecturer 1997.

TMA552B – *D1, Mathematics part B. Linear algebra* Assistant 1995, 1996. Part of the course development team in 1994.

Göteborg University:

MMG200 – *Basic course, algebra and discrete mathematics*. Examiner and lecturer 2004, 2005, 2010-2012. (Code MAM100 2004-2005)

MAL100 – *Mathematics for teachers, algebra*. Examiner and lecturer 2005.

MAN100 – *Mathematics for applications, part 1*. Examiner and lecturer 2001 (1 of 3).

MAN290 – *Algebraic structures*. Examiner and lecturer 1998.

MAN060 – *Elementary number theory, summer course*. Examiner and lecturer 1995. Development of this new course in 1995.

SUPERVISOR

PhD thesis:

2011 – Terrence Blackman, CUNY, New York, USA: “On the Arithmetic and Geometry of Quaternion Algebras: A spectral correspondence for Maass waveforms”.

Master’s thesis:

2009 – Joakim Ström, “Factoring and Primality Proving Using Elliptic Curves”.

2007 – Alfred Lundberg, “Measure and Independence - the reach of independence results of Set Theory into mathematics.”.

2002 – Chaddad Mohamad Taleb, “Representation av heltal som summan av kvadrater”.

REFERENCES

Samuel Bengmark, Department of Mathematics, Chalmers, Sweden.

E-mail: samuel@math.chalmers.se

Tel: +46 31-772 5302

Tommy Gustafsson, Department of Mathematics, Chalmers, Sweden.

E-mail: tommy.gustafsson@chalmers.se

Tel: +46 31-772 3561

Wolfgang Ahrendt, program director IT program at Chalmers, Sweden.

E-mail: ahrendt@chalmers.se

OTHER QUALIFICATIONS

LANGUAGES

Swedish Mother tongue
English Fluent
German Good

COMPUTER SKILLS

Operating systems:	Linux	Intermediate
	Windows	Intermediate
Programming:	Mathematica	Advanced
	Matlab	Advanced
	Maple	Intermediate
	Visual Basic .NET	Intermediate
	ASP.NET	Advanced
	LaTeX	Expert
	SQL	Intermediate
	HTML	Advanced
	XML	Basic
Applications:	Excel	Advanced
	Photoshop	Intermediate

LEADERSHIP AND ABILITY TO COOPERATE

I have since 1985 been active in several sports clubs, both as an athlete and as a volunteer. My work there includes being treasurer, organizing trips, organizing competitions, writing and editing newsletters and developing a web-site.

Reference:

Gunnar Olsson, Solvikingarna, Göteborg.
E-mail: gunnar.olsson@papyrus.com
Tel: +46 31-670500

I have the ability to cooperate with most people and pride myself of always trying to see other peoples merits instead of their faults.

References:

Samuel Bengmark, Department of Mathematics, Chalmers, Sweden.
E-mail: samuel@math.chalmers.se
Tel: +46 31-772 5302