

I. Curriculum Vitae

Dr Henrik Gustafsson

Postdoctoral Scholar, Stanford University
Born March 11, 1988, Sweden. Citizenship: Swedish
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Department of Mathematics
Stanford University
Stanford, CA 94305
USA

Current appointment

Oct, 2017 – **Postdoctoral Scholar**
Sep, 2019 **Stanford University**
Stanford, CA Department of Mathematics
USA Mentor: Daniel Bump

Education

Aug 25, 2017 **Doctoral degree**
2013 – 2017 **Chalmers University of Technology**
Gothenburg Degree of Doctor of Philosophy in Fundamental Physics with specialization in
Sweden Mathematical Physics
Thesis title: Automorphic forms and string theory: Small automorphic
representations and non-perturbative effects
Thesis advisor: Daniel Persson (Department of Mathematics, Chalmers)

Dec 14, 2015 **Licentiate degree**
Gothenburg **Chalmers University of Technology**
Sweden Degree of Licentiate of Engineering in Fundamental Physics with specialization
in Mathematical Physics
Thesis title: Automorphic string amplitudes
Thesis advisor: Daniel Persson (Department of Fundamental Physics, Chalmers)

Oct 19, 2012 **Degree of Master of Science in Physics**
2011 – 2012 **Perimeter Institute and University of Waterloo** (degree-granting)
Waterloo, ON Perimeter Scholars International
Canada Thesis title: Minimal Surfaces for Scattering Amplitudes and the Harmonic
Oscillator
Thesis advisor: Pedro Vieira (Perimeter Institute)

Jun 4, 2013
2010 – 2011,
2012 – 2013
Gothenburg
Sweden

Degree of Master of Science in Fundamental Physics
Chalmers University of Technology
Thesis title: Eisenstein Series and Instantons in String Theory
Thesis advisor: Daniel Persson (Fundamental Physics, Chalmers)

Jun 1, 2010
2007 – 2010
Gothenburg
Sweden

Degree of Bachelor of Science in Engineering Physics
Chalmers University of Technology
Thesis title: Geometry, Topology and Physics
Thesis advisor: Per Salomonson (Fundamental Physics, Chalmers)

Recent awards

2017

The Wallenberg Foundation Postdoctoral Scholarship at Stanford University
Awarded a two-year postdoctoral scholarship at the Department of Mathematics, Stanford University. The scholarship is awarded to outstanding young Swedish scientists in all disciplines of science.

<https://kaw.wallenberg.org/en/calls/wallenberg-foundation-postdoctoral-scholarship-program-stanford-university>

2014

John Ericsson medal
Each year Chalmers University of Technology awards six newly graduated students with the John Ericsson medal based on performance. The six recipients were chosen from 750 Master of Science students that graduated from Chalmers in 2013.

2013–2017

Travel/conference grants
I have also been awarded various travel and conference grants from the following Swedish foundations:

- Stiftelsen Wilhelm och Martina Lundgrens vetenskapsfond
- Stiftelsen Karl och Annie Leons minnesfond för vetenskaplig forskning
- Stiftelsen Lars Hiertas minne
- Stiftelsen Längmanska kulturfonden

Talks

Please see hgustafsson.se/talks for titles, abstracts, slides and more information.

2019-03	Simons Center, Stony Brook	<i>Automorphic Structures in String Theory (planned)</i>
2018-12-18	Chalmers, Gothenburg	<i>Algebraic Geometry and Number Theory Seminar (planned)</i>
2018-12-07	Rutgers, New Brunswick	<i>Lie Group/Quantum Mathematics Seminar (planned)</i>
2018-11-28	Stanford	<i>Quantum Groups Learning Seminar</i>
2017-12-20	Chalmers, Gothenburg	<i>Algebraic Geometry and Number Theory Seminar</i>
2017-07-18	KIAS, Seoul	<i>Four lectures during the program Arithmetic Geometry and Quantum Field Theory</i>
2017-01-30	Oxford	<i>String theory seminar</i>
2016-12-06	AEI, Potsdam	<i>Seminar</i>
2016-11-15	ULB, Brussels	<i>HEP seminar</i>
2016-11-03	DAMTP, Cambridge	<i>String theory seminar</i>
2016-10-11	IPhT Saclay, Paris	<i>Séminaire de matrices, cordes et géométries aléatoires</i>
2016-10-05	Stanford (SITP)	<i>SITP seminar</i>
2016-10-04	Stanford (math dep.)	<i>Representation theory seminar</i>
2016-09-30	Rutgers, New Brunswick	<i>Lie Group/Quantum Mathematics Seminar</i>
2016-09-14	Simons Center, Stony Brook	<i>Program: Automorphic forms, mock modular forms and string theory</i>
2016-01-26	Rutgers, New Brunswick	<i>Number Theory Seminar</i>
2015-06-22	Strings 2015, Bangalore	<i>Poster session</i>
2015-06-11	Advanced Strings School, Bangalore	<i>Gong-show</i>
2015-03-17	AEI, Potsdam	<i>Seminar</i>
2015-03-10	Chalmers, Gothenburg	<i>Fundamental physics group seminar</i>

Recent workshops, conferences and doctoral schools

- 2018-06 **Automorphic forms on reductive groups and their covers:
A conference in honour of Solomon Friedberg**
ETH, Zürich
- 2017-10 **Automorphic forms, mock modular forms and string theory**
BIRS, Banff
- 2017-07 **Arithmetic Geometry and Quantum Field Theory**
KIAS, Seoul
- 2016-08 – 2016-10 **Automorphic forms, mock modular forms and string theory**
Simons Center, Stony Brook
- 2016-06 **String-Math 2016**
Collège de France, Paris
- 2016-05 **Number theory and physics workshop**
Institut Henri Poincaré, Paris
- 2016-05 – 2016-06 **Program on the mathematics of string theory**
Institut Henri Poincaré, Paris
- 2015-06 **Strings 2015**
International Centre for Theoretical Physics, Bangalore
- 2015-06 **Advanced Strings School 2015**
Indian Institute of Science, Bangalore
- 2014-09 **Journées de Physique Mathématique Lyon**
BPS States, Hitchin Systems, and Quivers
University of Lyon
- 2014-06 **Strings 2014**
Princeton University and the Institute for Advanced Study, Princeton
- 2014-06 **Prospects of Theoretical Physics**
Institute for Advanced Study, Princeton
- 2013-09 – 2013-12 **Amsterdam-Brussels-Paris Doctoral School**
*Solvay Institutes (Brussels), École Normale Supérieure (Paris),
University of Amsterdam*
- 2013-06 **Strings 2013**
Sogang University, Seoul
- 2013-06 **String-Math Conference**
Simons Center, Stony Brook

- 2013-03 **Spring School on Superstring Theory and Related Topics**
ICTP, Trieste
- 2013-02 **CERN Winter School on Supergravity, Strings and Gauge Theory**
CERN, Geneva

Teaching

- 2017-07 **Lecture series**
KIAS Invited for four blackboard lectures titled Automorphic Forms and String
Seoul Theory for the CMC Thematic Program on Arithmetic Geometry and
 Quantum Field Theory.
- 2017 **Development of web-based platform for E-learning**
Chalmers I was part of a team that is developing an e-learning platform used in classical
Gothenburg mechanics courses at the Department of Physics.
- Work tasks included planning and development of the web-based system as well as designing exercises with a lot of interaction with the students.*
- 2013 – 2017 **Courses taught during PhD - TA**
Chalmers Special relativity, Quantum mechanics (master's students), Classical
Gothenburg mechanics, Calculus and Advanced calculus.
- Work tasks included careful preparations of mostly my own material and solutions, demonstrations of exercises and theorems on the blackboard, answering questions, and constructing and grading assignments and exams.*
- 2009-09 – 2011-06 **Amanuensis - TA**
Chalmers Teaching assistant while continuing own studies.
Gothenburg Department of Mathematical Sciences.
 20 percent part time employment.
 Calculus and Linear Algebra, undergraduate level.
- Work tasks included careful preparations of mostly my own material and solutions, demonstrations of exercises and theorems on the blackboard, answering questions, providing personal support, supervising and grading mid-term tests and giving general math support at the university library.*