

Prof. David B. Haviland

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1. **B.S. in Physics from Union College, 1983**
Fulbright scholarship, studies in Physics, University of Göttingen, 1984
2. **Ph.D. in Condensed Matter Physics, University of Minnesota, 1989**
Thesis title: The Onset of Superconductivity in the Two Dimensional Limit
3. **Post Doctor: Chalmers, 1989-1992**
4. **Docent, Chalmers, 1996**
5. **Current position: Professor of Nanostructure Physics, KTH, 1997 – present, 85% reserach**
6. **Previous positions: Forskarassistent and Lektor, Chalmers and Göteborgs Univ., 1992 – 1997**
7. **no interruption of research**
8. **Scientific advisor to PhD students**

1. Riccardo Borgani – PhD expected, fall 2018
2. Per Anders Thorén – PhD expected, spring 2018
3. Danel Forchheimer – PhD. Feb. 2015
4. Daniel Platz – PhD. June. 2013
5. Adem Ergul – Licenciante June 2009, PhD Dec.. 2013
6. Erik Tholén – PhD. Dec. 2009
7. Jochen Walter – Licenciante Nov. 2004, Ph.D. Nov. 2006
8. Silvia Corlevi – Licenciante Oct. 2004, Ph.D. June 2006
9. Jonas Rundqvist – Licenciante Feb. 2003, Ph.D. Dec. 2005
10. Mattias Urech – (w/ Vlad Korenivski) Lic. Feb. 2001, Ph.D. March 2006
11. Jan Johansson – (w/ Vlad Korenivski) Lic. Dec. 2000, PhD. Jan 2004
12. Peter Ågren – Lic. June 2000, Ph.D. Oct. 2002
13. Karin Andersson – Lic. Jan. 2000, Ph.D. Sept. 2002
14. Chi Dong Chen – (w/ Per Delsing, CTH) Ph.D. 1994

Scientific Advisor to Post Docs

1. Volker Schollman – 1997 - 1999
2. Michio Watahabe - 1998-2000
3. Wiebke Guichard -
4. David Schäffer -
5. Thomas Weissl - Feb. 2015 – present)

15. Additional Information

Birth date: July 22, 1961

Citizenship: Dual citizen - United States of America and Sweden.

Family: Wife, Elisabeth Almgren (Swedish Citizen), and two daughters (Dual Citizens)

Linnea Haviland (Born 7/90) Vendela Haviland (Born 12/91).

Scientific Interests:

My interests lie in the basic physics and applied physics of mesoscopic condensed matter. Presently we are developing experimental and theoretical methods to probe nonlinear dynamical systems by measurement and analysis of intermodulation (frequency mixing). This work has emerged from fundamental studies of quantum limited amplification and vacuum noise squeezing at microwave frequencies, and evolved in to a commercial development project for Atomic Force Microscopy (AFM). I am currently most active in the use of this technique to study surface forces with AFM, but continue to work in the field of circuit quantum electrodynamics on Josephson junction chains. I have recently worked with the adaptation of nanofabrication technology for applications in cell biology.

Publications and Patents:

Over 120 publications in refereed scientific journals
4 patents

Prizes, Honors, Societies:

Wallmarkska prize 2008 – for contributions to Mesoscopic Physics.
Member Swedish Royal Academy of Sciences, class for Physics, 2011-present
Fulbright Scholar, 1983-9184
Phi Beta Kappa society – dedicated to liberal learning, member since 1983
American Physical Society, 1985 - present

Courses taught:

Thermal, Statistical and Modern Physics, 2nd year Computer Science Students.
Modern Physics, 2nd year Physics students.
Microcosmic Physics, 2nd year Computer Science Students.
Mesoscopic Physics, advanced undergraduate course
Quantum Fluctuations and Dissipation, (team teaching) graduate course.
Nanofabrication with focused ion and electron beams, graduate course.
Introduction to Scanning Probe Microscopy, graduate course.
Advisor for numerous undergraduates in their degree project.

Director and Scientist, Albanova Nano-Fabrication Laboratory:

I have coordinated three large grant proposals involving several faculty members, which were funded by the Wallenberg Foundation. With this money we have built up a first class, Nanofabrication facility at KTH which presently serves about 50 graduate students from Physics, Microelectronics, Chemistry and Biotechnology. I have invested a great deal time and energy in to the management, graduate student training, and technical workings of this laboratory.

Reviews and academic evaluations:

Review work for scientific journals, PRL, PRB, APL, JAP, Nature Phys, Nature Comm, New Jour Phys, etc.
Opponent or member of thesis committee, typically 1-3 times per year.
Review for academic positions, typically 1-3 times per year.
Review of proposals and committee work, EU, Finish Academy, Israeli Sci. Found. VR, etc.
Review for prestigious prizes, occasionally.