

## CURRICULUM VITAE for Gunilla Svensson

### Education:

- Oct. 2003 Associate professor ("Docent"), Stockholm University, Stockholm Sweden
- Dec. 1995 Doctor in Philosophy ("Filosofie Doktorsexamen"), Uppsala University, Uppsala, Sweden
- June 1993 Licentiate in Philosophy ("Filosofie Licentiatexamen"), Uppsala University, Uppsala, Sweden
- Jan. 1989 Bachelor in Science ("Filosofie kandidatexamen på fysikerlinjen med inriktning meteorologi"), Uppsala University, Uppsala, Sweden

### Employment record:

- Dec 2008 – Department of Meteorology, Stockholm University, Stockholm, Sweden  
Professor
- Feb 2016 – Affiliate Scientist National Center for Atmospheric Research (NCAR), Boulder Colorado, USA
- Oct 2005 – Aug 2006 CIRES Visiting Fellow, University of Colorado at Boulder, Colorado, USA
- July 2005 – Dec, 2008 Department of Meteorology, Stockholm University, Stockholm, Sweden  
Senior Lecturer ("lektor"), Faculty, 70% teaching.  
Leave of absence Oct 2005 – August 2006
- Oct. 2004 – June 2005 Department of Meteorology, Stockholm University, Stockholm, Sweden  
Temporary Senior Lecturer ("lektor"), Faculty, 70% teaching.
- April 1998 – June 2005 Department of Meteorology, Stockholm University, Stockholm, Sweden  
Assistant professor ("forskarassistent"). Faculty. 20% teaching. Leave of absence Oct 2004 – June 2005
- Nov 1997 - Dec 1997 Department of Meteorology, Uppsala University, Uppsala, Sweden  
Lecturer ("lektor"), Faculty, 100 % teaching.
- April 1997 - April 1998 Department of Meteorology, Uppsala University, Uppsala, Sweden  
Assistant professor ("forskarassistent"), (Leave of absence Nov 97 - Dec 97). Faculty and NFR.
- Jan 1997 - March 1997 Environmental Eng., California Institute of Technology, Pasadena, USA. Post-doctoral scholar. Faculty, Caltech.
- Jan 1996 - Dec 1996 Department of Meteorology, Uppsala University, Uppsala, Sweden  
Research scientist ("forskare"). Swedish Environmental Protection Agency.
- Feb 1989 - Dec 1995 Department of Meteorology, Uppsala University, Uppsala, Sweden  
Research assistant ("doktorand"). Faculty and Swedish Environmental Protection Agency. About 20% teaching.

**Parental leave:**

Aug - Oct. 2000 – 100%, Nov 2000 - Feb 2001 – 75%, March - April 2001 – 25%,  
May - June 2001 – 80%, July - Sep 2001 – 100%, Aug 2001 - Aug 2002 – 50%, Sep 2002 -  
Sep 2005 – 25% (Total: 25 months)

**Teaching, undergraduate:** Meteorology, introductory level for earth science students,  
distance learning students, civil engineers and chemistry students at  
Uppsala and Stockholm universities. Atmospheric dispersion for  
chemistry students, MISU. Courses within the meteorological  
program at MISU: Boundary-layer meteorology, Mesoscale  
meteorology, Atmospheric Chemistry, Cloud micro and  
macrophysics

**Undergraduate master thesis supervisor:**

2004	Johannes Karlsson
2004	Sebastian Böö (Together with Caroline Leck)
2007	Helena Brandt (Together with Lennart Thaning, FOI, and Jonas Lindgren, SSI)
2008	Johan Lundgren (together with Klaus Wyser, SMHI)
2008	Kristin Hallberg (together with Staffan Möller, VTI)
2009	Helena Hedblom (together with Esbjörn Olsson, SMHI)
2009	Per Axelsson
2009	Alexander Håkansson (together with Ove Gustafsson FOI, Andreas Grantinger and Thorsten Mauritsen)
2011	Karin Jonson (together with Douglas Nilsson, ITM) Ellinor Appelquist (together with Abhay Devasthale and Colin Jones, SMHI)
2013	Kristoffer Molarin (with Tomas Mårtensson, FOI)
2016	Pau Beva (with Lisa Bengtsson, SMHI)

**Teaching, graduate:**

2002-2003	Boundary-layer meteorology, 5p, together with Michael Tjernström
2006	A few lectures and an exercise in a Cloud Physics course organized by Annica Ekman, 5p
2007	Boundary-layer meteorology, 5p, together with M. Tjernström and B. Holtslag
2008	A few lectures in a Climate Processes and Modeling and course within the Bert Bolin Centre for Climate research school, 15 hp
2009	A few lectures in Historical Perspectives on Climate Change, 7.5hp
2011	Boundary-layer meteorology, 7.5 hp, together with M. Tjernström

- 2013 Three double lectures on Extratropical and Polar Cloud Systems at the EUCLIPSE international summer school on Clouds and Climate, Les Houches, France ([www.euclipse.eu/summerschool](http://www.euclipse.eu/summerschool))
- 2014 Boundary-layer meteorology, 7.5 hp
- 2014 Introduction to Climate Modeling Module I, 5hp  
Responsible for course development, coordinating teachers, a few lectures and examination
- 2014 Introduction to Climate Modeling Module II, 5hp  
Responsible for course development, coordinating teachers, lectures and examination
- 2015 Introduction to Climate Modeling Module I, 5hp  
Coordinating teachers, a few lectures and examination
- 2016 Responsible, together with Dr. Jonny Day, for course development, coordinating teachers and practical exercises for a 10 day international spring school held in Abisko, Sweden, on the topic Arctic processes and predictability
- 2016 Boundary-layer meteorology, 7.5 hp, together with M. Tjernström

**PhD advisor, graduated:**

- 2000 Robert Sigg, *Studies of stratocumulus-topped boundary layers using a numerical weather prediction model.*
- 2007 Thorsten Mauritsen, *On the Arctic boundary layer – from turbulence to climate.*
- 2009 Johannes Karlsson, *The influence of clouds on Earth's radiation budget in global climate models.*
- 2010 Jenny Lundén, *Atmospheric DMS in the High Arctic*
- 2012 Lisa Bengtsson, *On the convective-scale predictability of the atmosphere*
- 2013 John Hanley, *Extreme storms in the North Atlantic and Europe* (co-advisor)
- 2013 Raza Ranjha, *Global Climatology and Regional Modeling of Coastal Low-Level Jets*
- 2014 Jonas Mortin, *On the Arctic Seasonal Cycle*
- 2014 Jenny Lindvall, *The representation of atmospheric boundary layer processes in global climate models*
- 2015 Jacob Svensson, *Boundary-layer parametrization in numerical weather prediction models* (licentiate thesis, 2-year graduate education)
- 2016 Cian Woods, *The role of high-latitude circulation and moisture transport in Arctic climate variability and change during winter* (co-advisor)

**Main PhD advisor, ongoing:**

David Lindskog  
Eva Nygren

Kerstin Hartung

Xiang-Yu Li

**PhD co-advisor, ongoing:**

Lena Frey

**Postdoc-advisor**

Anders Engström

Johannes Lindvall

Bishma Tyagi

Matthias Karl

Jonas Mortin

**Postdoc-advisor, ongoing**

Jenny Lindvall

**Serving on PhD committees:**

June 2003	Matthias Mohr, Uppsala University
September 2003	Sofia Thorsson, Göteborg University
December 2006	Karl-Göran Karlsson, Stockholm University
October 2007	Gert-Jan Steeneveld, Wageningen University
January 2008	Magnus Lindskog, Stockholm University
May 2008	Mattias de Woul, Stockholm University
January 2009	Ashley Jones, Chalmers, Göteborg
December 2010	Susanna Hagelin, Uppsala University
March 2011	Erik Fors, Lund University
October 2012	Morten Køltzow, Oslo U.
January 2013	Julia Zábori, Stockholm U.
November 2013	Kari Alteskjær, Oslo U.
October 2014	Carlo Lacagnina, Tech Univ Delft
January 2015	Johan Arnqvist, Uppsala University
November 2015	Shannon Leigh Mason, Monash University

**Principal investigator:**

Jan 1994 – Dec 1995	Gunilla <u>Svensson</u> : MEDCAPHOT-TRACE - Mediterranean Campaign of Photochemical Tracers - Transport and Chemical Evolution. <i>Environment Program, European Union (Swedish Environmental Protection Agency) 800kKr</i>
July 1995 – Dec 1996	Gunilla <u>Svensson</u> : Modeling of aerosols in a three-dimensional mesoscale model for chemical and meteorological processes. <i>Swedish Environmental Protection Agency, 400kKr</i>
Jan 1998 – July 2003	Gunilla <u>Svensson</u> : Modeling of boundary layer clouds with explicit microphysics, <i>NFR</i> , 300kKr.

Jan 2002 – July 2005 Gunilla Svensson and Henning Rodhe: Transport and mixing in the Arctic planetary boundary layer, VR, 1170 kKr.

Aug 2004 – March 2011 GABLS (GEWEX Atmospheric Boundary Layer Study) Second intercomparison study (No external funding)

Oct 2005 – July 2006 Gunilla Svensson: CIRES Visiting Fellow, ca 500kKr

Sep 2006 – Dec 2007 Gunilla Svensson: Funds for female Associate Professors, Vice Chancellor of Stockholm University, 410kKr

Jan 2007 – Dec 2009 Gunilla Svensson and Peter Kuhry, Funds for a postdoctoral position in Arctic atmospheric boundary layer and exchange processes at the surface, SUCLIM, ca 1000kKr.

Jan 2008 – Dec 2010 Gunilla Svensson: Global climate modeling, Vinnova, 3000kKr.

Jan 2008 – Dec 2010 Gunilla Svensson: Clouds and boundary-layer processes in climate models, VR, 1800kKr.

Jan 2008 – Dec 2008 Gunilla Svensson: Clouds in global climate models. Rymdstyrelsen, ca 300kKr.

Jan 2010 – Dec 2012 Gunilla Svensson: Clouds in global climate models. Rymdstyrelsen, ca 1000kKr.

Feb 2010 – Jan 2014 Gunilla Svensson: EUCLIPSE - EU Cloud Intercomparison, Process Study & Evaluation Project. Environment, 7<sup>th</sup> framework program, European Union 123kEuro (1100kKr).

Jan 2013 - Dec 2015 Gunilla Svensson: Clouds in global climate models. Rymdstyrelsen, 1240kKr.

Jan 2015 - Gunilla Svensson: The role of surface friction for midlatitude storm climate. VR, 3200 kKr, four years.

Nov 2016 - Gunilla Svensson: Advanced Prediction in Polar regions and beyond: Modelling, observing system design and Linkages associated with a Changing Arctic climate (APPLICATE), Work package leader, Horizon 2020, European Union, 521.125 kEuro (SU part, total consortium 8.715 mEuro)

#### **Co-principal investigator:**

July 1992 – June 1994 “Kemiska processer i vattenfasen i atmosfärkemisk spridningsmodell för mesoskalan” Swedish Environmental Protection Agency

Feb 2000 – Jan 2003 MEAD - Marine Effects of Atmospheric Deposition Environment Program, European Union

June 2003 – June 2004 Arctic modelling within ARCMIP. MISTRA

April 2003 – July 2004 GABLS (GEWEX Atmospheric Boundary Layer Study) First intercomparison study (no external funding)

Oct 2006 – Aug 2009 Ben Balsley (PI), Gunilla Svensson and Michael Tjernström: Developing improved models of the stable boundary layer incorporating the residual layer region, National Science Foundation, USA, \$450 000 (3200 kKr)

March 2011 – Sep 2014 Michael Tjernström (PI) and Gunilla Svensson, Improved atmospheric stable boundary layer formulations for Navy Seasonal Forecasting, *Office of Naval Research*, about \$415 (2900 kKr)

Jan 2015 - Rodrigo Caballero (PI) and Gunilla Svensson: The role of atmospheric moist intrusions in Arctic climate. *VR*, 3400 kKr

Dec 2016 - Stein Sandvein (PI) INTAROS - Integrated Arctic Observing System. *Horizon 2020, European Union*. 15.5 mEuro.

July 2017 – Michael Tjernström (PI) Arctic Climate Across Scales (ACAS), Work package leader, *K&A Wallenberg Foundation*. 29900 kKr.

May 2017 – Tino Weinkauff (PI) In-Situ Big Data Analysis for Flow and Climate Simulations, *Swedish Foundation for Strategic Research*, 26000 kKr.

**Extended visits:**

Aug 1991 - July 1992 Desert Research Institute, Reno, Nevada, USA Visiting Scientist

Jan 1996 - March 1997 California Institute of Technology (Caltech), Pasadena, California, USA

Jan 1998 - March 1998 Visiting Associate in Environmental Engineering, Caltech

Jan 1999 - Feb 1999 Visiting Associate in Environmental Engineering, Caltech

Jan 2000 - April 2000 Visiting Scientist at Naval Research Laboratory, NRL, Monterey, USA

Feb 2003 - May 2003 Visiting Scientist at Naval Research Laboratory, NRL, Monterey, USA

Oct 2005 - Aug 2006 Visiting Fellow at Cooperative Institute for Research in Environmental Sciences (CIRES), University of Colorado, Boulder, USA

July 2007 - Aug 2007 National Center of Atmospheric Research, Boulder, Colorado, USA

July 2008 - Aug 2008 National Center of Atmospheric Research, Boulder, Colorado, USA

July 2009 - Aug 2009 National Center of Atmospheric Research, Boulder, Colorado, USA

Oct 2009 - Dec 2009 National Center of Atmospheric Research, Boulder, Colorado, USA

June 2012 - July 2012 National Center of Atmospheric Research, Boulder, Colorado, USA

August 2016 - July 2017 National Center of Atmospheric Research, Boulder, Colorado, USA

**Shorter visits:**

Jan 1994, 2 weeks Laboratory of Physics, Aristotle University of Thessaloniki, Greece.

June-July 1995, 4 weeks Scripps Institution of Oceanography, La Jolla, California, USA.

Aug 1995, 1 week Fraunhofer Institute for Atmospheric Research, Garmisch-Partenkirchen, Germany

Feb 1999, 1 week Desert Research Institute, Reno, Nevada, USA

Jan 2000, 1 week California Institute of Technology (Caltech), Pasadena, California, US

March 2006, 2 weeks	National Center of Atmospheric Research, Boulder, Colorado, USA
Feb 2008, 3 weeks	National Center of Atmospheric Research, Boulder, Colorado, USA
Nov 2008, 2 weeks	National Center of Atmospheric Research, Boulder, Colorado, USA
August 2010, 2 weeks	National Center of Atmospheric Research, Boulder, Colorado, USA

**Invited seminars and conference keynotes:**

Nov 1994	NOAA, Oak Ridge, Tennessee, USA
Dec 1994	University of California at Berkeley, California, USA
April 1996	California State University at San Jose, California, USA
May 1996	California Institute of Technology, Pasadena, California, USA
May 1996	Stockholm University, Sweden
October 1996	University of California at Irvine, California, USA
October 1996	University of California at Davis, California, USA
April 1997	“Älvsborgs luftvårdsförbunds årsmöte”
October 1997	Stockholm University, Sweden
February 1999	Desert Research Institute, Reno, Nevada, USA
April 2000	NOAA/ETL, Boulder, USA
January 2006	PAOS, Department of Atmospheric and Oceanic Sciences, University of Colorado, Boulder, USA.
April 2006	National Center of Atmospheric Research, Boulder, Colorado, USA
May 2007	SUCLIM (Stockholm University Climate Research Environment)
October 2007	Wageningen University, Wageningen, the Netherlands
January 2008	FLOW annual meeting, Royal Technological Institute
November 2008	National Center of Atmospheric Research, Boulder, Colorado, USA
September 2009	Royal Academy of Sciences, Stockholm, Sweden
November 2011	ECMWF/GABLS workshop, ECMWF, Reading, UK
October 2012	Oslo University
August 2014	World Weather Open Science conference, Montreal, UK
October 2014	Technical University of Delft, Delft, the Netherlands
September 2015	Annual Seminar, ECMWF, Reading, UK

**Stipends and awards:**

July 1991	94 000 Skr for expenses during the year at DRI, <i>Swedish Institute</i>
Jan 1993	180 000 Skr for a workstation, “OK’s miljöstiftelse”
Jan 1996	30 000 Skr for expenses during the year at Caltech, “OK’s <i>miljöstiftelse</i> ”
Jan 1997	200000 Skr Stipend for younger women in science

*Knut och Alice Wallenberg Foundation*

- Sep 2009 Carl Gustaf Bernhard medal from the Swedish Royal Academy of Sciences
- Feb 2016 240000 Skr stipend for support during sabbatical year at NCAR  
*Wenner-Gren Foundations*

**Major Administration**

October 2004 – August 2005, August 2006 – Dec 2006, March 2009, Jan – April 2011, Jan - Dec, 2015: Director of studies (Bachelor and Master), Department of Meteorology, Stockholm University.  
Climate model coordinator of the Bolin Centre for Climate Research, Stockholm University, 2009 –2014

**Management experience**

- 1994 – Project manager of scientific projects financed by the European Union, the Swedish Environmental Protection Agency, the National Research Council, Framework programs within European Union, the Swedish National Space Board and Vinnova.
- 2003 – 2006 Member of the National Research Council committee SNAC (Swedish National Allocations Committee)
- 2004 – 2007 Member of the GABLS (GEWEX Atmospheric Boundary Layer Study) Science Panel
- 2004 – 2008 Member of the AMS (American Meteorological Society) Boundary Layer Committee
- 2006 – 2008 Program Chair for the AMS 18<sup>th</sup> Symposium on Boundary Layers and Turbulence, Stockholm, Sweden, 2008
- 2007 – Co-Chair of GABLS (GEWEX Atmospheric Boundary Layer Study)
- 2009 – 2011 Member of the gender equality board at Stockholm University
- 2009 – 2016 Board member of the Flow, Linnaeus centre, KTH
- 2010 – 2014 Core-theme leader of the Bert Bolin Centre for Climate Research, Stockholm University
- 2010 – Multidisciplinary advisory group to MSB (Myndigheten för samhällsskydd och beredskap)
- 2010 – 2011 Member of the Faculty committee on mathematics and science, the Research Council of Norway
- 2010 – Member of the Steering group of the Swedish e-Science Research Centre
- 2011 – 2016 Board member of the ICOS (Integrated Carbon Observation System)-Sweden
- 2011 – 2013 Member of the gender and equality board at Stockholm University
- 2011 – Member of the SSC for the Global Atmospheric System Studies (GASS) GEWEX Panel
- 2011 – Member of the SSG for the WWRP Polar Prediction Project
- 2012 – Member of the SSG for the WCRP Polar Climate Predictability Initiative
- 2017 – Member of the SAC for the ECMWF



**Reviewer for:** *Journal of Climate, Atmospheric Environment, Journal of Applied Meteorology and Climatology, Journal of Atmospheric Sciences, Boundary-Layer Meteorology, Quarterly Journal of the Royal Meteorological Society, Journal of Geophysical Research, Tellus, Water Resources, Philosophical transactions, Geophysical Research Letters, Nature and national and international research agencies, IPCC 2013, Physical Science Basis, Chapter 10.*

**Popular press and presentations:**

1. Svensson, G. and T. Mauritsen, 2004: Väderprognoser som stöd för forskare i fält. (*Weather-forecasts as support for scientists in the field.* In Swedish). NSC Nytt.
2. "Klimatforum" Speaker at a conference arranged by the Swedish Environmental Protection Agency about the climate and climate change in Arctic. 2004
3. "SVT Debatt" Participating in a debate on National Television arranged by the Swedish Public Broadcasting Company. 2004
4. Participated in a National Radio show answering questions about weather and climate from the public making phone-calls. 2005
5. Svensson, G. and A.A.M. Holtslag, 2007: The diurnal cycle – GABLS second intercomparison experiment. *GEWEX newsletter*, **17**, (1), 1 and 9-10.
6. Invited to TV4 (Swedish commercial TV channel) morning program to discuss extreme weather events and climate change. 2007
7. "Klimatforum" Invited discussion partner on IPCC 2007 synthesis report, organized by the Swedish Environmental Protection Agency. 2007
8. Invited presentation at a seminar and press-seminar arranged by Stockholm University on the theme "Seminarium om ledande forskningsmiljöer inom integration och klimat" (Seminar on leading research on integration and climate), Linné-seminar. 2008
9. Invited to TV4 (Swedish commercial TV channel) science program to discuss climate and climate change, 2012
10. Participating in two popular science radio programs "Vetenskapsradion" informing about climate research, 2013
11. Inspire gymnasium students with talent and special interest in math at Sonja Kovalevskydagarna, 2013
12. Further education of teachers for grades 9-gymnasium at Vetenskapens hus, Stockholm University and KTH, 2013
13. Tv interview about consequences of climate change at the SVT news program "ABC-nytt", 2013
14. Public internet chat arranged by Naturvårdsverket and SMHI about climate change, 2013
15. Invited lecture at a symposium to inform medical doctors about the IPCC report at the Swedish Medical doctors annual conference, 2013
16. TV interview about climate models in connection to the IPCC report release by Al Jazeera, 2013
17. Newspaper interview by Helsingfors dagblad, 2013
18. Expert answer in *Forskning and Framsteg*, 2014
19. TV interview about precipitation and flooding in England for the TV4 main news program, 2014
20. Lecture at Sollentuna gymnasium, 2014

21. Lecture at Uppsala Musikklasser for 8-grade students, 2014
22. TV interview, Expressen web news, about hurricanes and climate change on the anniversary of Katrina, 2015
23. Dagens nyheter interview on how to discuss climate change with children, 2015
24. TV interview, SVT Kulturnytt, on how realistic climate change and weather hazards are presented in movies, 2015
25. Lecture and debate, SU @ Stockholm City Library, February 2016.