Victoria A. Sinclair

1. Personal Details

Name:	Victoria Anne Sinclair
Date of birth:	10.10.83
Nationality:	British
Current residence:	Finland
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2. Education and degrees awarded

Ph.D. (Meteorology)	03.07.2009	University of Reading, UK. "Boundary-Layer Ventilation by Baroclinic Life Cycles"
B.Sc. (Meteorology)	08.07.2005	University of Reading, UK Meteorology with a Year in Oklahoma (1 st Hons) Grade point average (GPA) from Oklahoma: 4.0

3. Current position

January 2013 -	University Researcher (Yliopistotutkija) in dynamical meteorology
present	University of Helsinki, Finland.

My current research in primarily concerned with boundary layer and synoptic-scale meteorology. Specific interests include the interaction between boundary-layer processes and larger-scale weather phenomena such as fronts, and how boundary layer processes are represented in numerical weather prediction models. I use observations, idealised modelling, and real data case studies to gain additional insight into a range of boundary-layer and synoptic-scale topics. The specific aims of my current research include (i) What is the structure and evolution of fronts within the boundary layer and (ii) how well can numerical weather prediction models simulate the boundary-layer structure of fronts?

4. Previous professional appointments

April 2009 – December 2012	Post-Doctoral Researcher (Tutkijatohtori), University of Helsinki,
	Finland.
July 2004 – March 2007:	Assistant forecaster (part time), RaceMet Radar Systems
July 2003 – October 2003:	Assistant research scientist, Satellite Applications, UK Met Office

<u>5. List of publications</u>

Sinclair, V.A. A six-year climatology of fronts affecting Helsinki, Finland and their boundary layer structure . *Submitted to J. Appl. Meteor. Clim. November 2012.*

Sinclair, V. A., Niemelä, S. Leskinen, M. Structure of a narrow cold front in the boundary layer: Observations vs. model simulation. 2012. *Mon. Wea. Rev.* 140, 2497–2519.

Kemppi, M. L. and **Sinclair, V. A.** 2011, Structure of a Warm Front: Helsinki Testbed Observations and Model Simulation *Mon. Wea. Rev.* **139**, 2876-2900

Sinclair, V. A., Gray, S. L. & Belcher, S. E. 2010, Controls on boundary layer ventilation: boundary layer processes and large scale dynamics. *J Geophys Res.* **115** D11107, doi:10.1029/2009JD012169

Sinclair, V. A., Belcher, S. E. & Gray, S. L. 2010, Synoptic controls on boundary-layer characteristics. *Boundary-Layer Meteorol.* **134**, 387-409

Sinclair, V. A., Gray, S. L. & Belcher, S. E. 2008, Boundary-layer ventilation by baroclinic life cycles. *Q. J. R. Meteorol. Soc.*, **134**, 1409-1424.

Klingaman, N. P. and **Sinclair, V.** 2007, Weather and climate modelling. *Weather*, **62**: 257–258. doi:10.1002/wea.121

6. Teaching and student supervision

I have experience of teaching through different methods. During my PhD I demonstrated for problem classes, computer practicals and on three field trips. At the University of Helsinki, I have been solely responsibly for problems classes at Masters level and have occasionally been involved with delivering lectures.

2012:	Assistant lecturer, Atmospheric Thermodynamics, University of Helsinki
2011:	Assistant lecturer, Dynamics IV, University of Helsinki
2009:	Assistant lecturer, Boundary layer dynamics II, University of Helsinki
2006 - 2009:	Demonstrator for multiple courses, University of Reading.
2006, 2007:	Teaching Assistant on the joint NCAS / University of Leeds / University of Reading
<i>,</i>	Atmospheric Measurement field course, Isle of Arran, Scotland.

Postgraduate supervision

Mirja L. Kemppi (M.Sc.) 2009 – 2010 "A mesoscale analysis of three warm front passages over southern Finland based on the Helsinki Testbed observations" Katja Nevalainen (M.Sc) December 2010 – July 2012. "A case study of a snowstorm with multiple snowbands in southern Finland on 23rd November 2008"

Supervised (non-student)

Eveliina Tuovinen M.Sc. A climatology and classification of fronts in southern Finland based on mast measurements

7. Scientific awards and honours

2012	European Meteorological Society Young Scientist Travel Award (€300 + registration)
2011:	University of Helsinki Chancellor's Travel Grant 2011 (€1000)
2008:	Student award for best presentation at the AMS 18th Symposium on boundary layers and turbulence. Stockholm
2008:	Adrian Gill Travel Award to attend EGU
2001-2004	UK Met Office Undergraduate Scholarship

8. Other scientific or academic merits and activities

2009 – 2011: 2005 – present: 2007 – present: 2006 – 2008:	Associate Editor for Monthly Weather Review Associate fellow of the Royal Meteorological Society Member of the American Meteorological Society Member, and then chair, of the Royal Meteorology Society student conference organizing committee.
Ongoing:	Reviewer of manuscripts for Monthly Weather Review, Quarterly Journal of the Royal Meteorological Society, Journal of Geophysical Research and Geophysical Research Letters.
Invited talks	
September 2011:	Department of Atmospheric and Environmental Sciences, University of Albany, New York, USA
July 2011:	Department of Meteorology, University of Reading, UK
June 2010:	Centre for Atmospheric Science, University of Manchester, UK,
June 2010:	Department of Meteorology, University of Reading, UK
November 2009:	School of Mathematical Sciences, University of Monash, Australia
March 2008:	Scottish Centre of Royal Meteorological Society, Edinburgh, UK

Conference presentations

September 2012. European Meteorological Society Annual Meeting and 9th European Conference on Applied Climatology. **V. Sinclair.** *A Climatology of fronts and their boundary layer structure in Helsinki, Finland.*

July 2012, AMS 18th Symposium on Boundary layers and turbulence, V. Sinclair & L. Järvi. *Boundary layer structure of fronts observed in Helsinki, Finland.*

July 2012, AMS 18th Symposium on Boundary layers and turbulence, **V. Sinclair** & D. Keyser, *The effect of boundary layer parameterization schemes on the structure and dynamics of an idealised cold front simulated with WRF*

October 2011, Joint NCAR-NCAS Weather Research Forecasting Users Workshop, Edinburgh. V. Sinclair & D. Keyser, *Structure and force balance of idealised cold fronts simulated with WRF*

September 2011, European Meteorological Society Conference / European Conference on Applications of Meteorology, **V. Sinclair** *Similarities and differences between cold fronts and density currents*

June 2011, Royal Meteorological Society Conference, V. Sinclair, *The effect of boundary-layer* processes on the structure of idealised cold fronts

March 2011, 15th Cyclone Workshop, V. Sinclair_& D. Schultz, *Similarities and differences between cold fronts and density currents*

March 2011, 15th Cyclone Workshop, E. Tuovinen, V. Sinclair & D. Schultz, A Climatology and classification of fronts in southern Finland based on mast measurements

March 2011, 15th Cyclone Workshop, D. Schultz, G. Vaughan, V. Sinclair, D. Keyser, C. Mass, Strategies for Revising Conventional Wisdom on Cyclones and Fronts: Improving our Ability to Communicate to the Public, our Students, and to Each Other

June 2010, Nordic Meteorologist Meeting, V. Sinclair_& D. Schultz, *Halloween 2007 cold front over southern Finland: Non-classical structures*

June 2008, AMS 18th Symposium on Boundary layers and turbulence, **V. Sinclair,** S. Belcher & S. Gray, *Boundary layer ventilation by baroclinic systems*

April 2008, European Geoscience Union, V. Sinclair, S. Gray & S. Belcher, *Boundary layer* ventilation by baroclinic systems

September 2007, Royal Meteorological Society Conference, V. Sinclair, S. Gray & S. Belcher, *Boundary layer ventilation by idealised systems*

September 2007, Royal Meteorological Society Student Conference, V. Sinclair, S. Gray & S. Belcher, *Pollution transport by weather systems*

August 2006, Royal Meteorological Society Student Conference, V. Sinclair, S. Gray & S. Belcher, Boundary layer ventilation by idealised weather systems

9. Other training, qualifications and skills

9.1 Summer schools and workshops attended

October 2012:	Bridging the Gap workshop, Wageningen University, The Netherlands
October 2011:	NCAR-NCAS WRF Users Tutorial, Edinburgh, Scotland
June 2008:	Boundary layer summer school, Les Houches, France
September 2006:	NERC Environment Young Entrepreneur Scheme (YES)
June 2006:	Mediterranean Mesoscale Meteorology Summer School

9.2 Computing experience

Large numerical	Applications of Research at Mesoscale (AROME)	
models:	Reading Intermediate Global Circulation Model (IGCM)	
	U.K Met Office Unified Model (MetUM)	
	Weather and Forecasting Model (WRF)	
Operating systems:	Unix /Linux, Windows	
Software /	Fortran, IDL, Matlab, latex, RIP, html, shell scripts	
programming:		

9.3 Linguistic skills

English:	Mother tongue
Finnish:	Common European Framework (CEF) skill level A2.
	University of Helsinki, Language Centre, Finnish level 3 certificate. 09.12.2010