Norsk institutt for luftforskning
Norwegian Institute for Air Research

CURRICULUM VITAE

PRESENT POSITION:	SCIENTIST NORWEGIAN INSTITUTE FOR AIR RESEARCH Kjeller, Norway
NAME:	KRISTIANSEN, NINA IREN
YEAR OF BIRTH:	17.04.1982
NATIONALITY:	NORWEGIAN
SEX:	FEMALE
CIVIL STATUS:	
EDUCATION:	PhD, GEOSCIENCES, METEOROLOGY TIME PERIOD: 2009-2012 DATE OF PHD DEFENCE: 21. September 2012 UNIVERSITY OF OSLO/ NORWEGIAN INSTITUTE FOR AIR RESEARCH, NORWAY THESIS TITLE: Quantifying emission sources, transport and removal time scales of atmospheric pollutants COURSES: Statistical methods and applications, Science Ethics and Society, European Research Course on Atmospheres - ERCA, Turbulence in the atmosphere and ocean. MASTER OF GEOSCIENCES, METEOROLOGY TIME PERIOD: 2007-2009 UNIVERSITY OF OSLO, NORWAY THESIS TITLE: Determination of the emission height profile of volcanic emissions using inverse modelling. COURSES: Dispersion of air pollutions, dynamic meteorology, radiation and remote sensing, cloud physics, numerical models of the atmosphere, Fortran and C/C++ programming

	BACHELOR DEGREE IN NATURAL SCIENCES - METEOROLOGY AND OCEANOGRAPHY UNIVERSITY OF BERGEN/UNIVERSITY OF OSLO, NORWAY TIME PERIOD: 2002-2006 SPECIALISED COURSES: Meteorology, Applied micro-and local meteorology, Climatology and climate change, Global and regional air pollutions, vegetation climate and marine geography, physical oceanography, several courses in Mechanics, Physics and Mathematics. RÆLINGEN COLLEGE, NORWAY TIME PERIOD: 1998-2001 SPECIALISED SUBJECTS: Mathematics, Physics, Biology, French
OTHER TRAINING:	
LANGUAGES:	NORWEGIAN (native speaker), ENGLISH (fluent), FRENCH (basic)
COUNTRIES WORKED IN:	NORWAY
PROFESSIONAL SOCIETIES:	
PUBLICATIONS:	13 PEER-REVIEWED PUBLICATIONS
KEY QUALIFICATIONS:	Experience of research in atmospheric dispersion modelling including advanced Lagrangian models (FLEXPART and NAME) and inversion techniques. Good computer skills both on Windows and Linux/Unix systems. Programming languages: Fortran, MATLAB, (C/C++, Java)
EXPERIENCE:	(2012-present): Scientist at NILU- Norwegian Institute for Air Research, Kjeller, Norway. Deparment: Atmospheric and climate research (ATMOS). Presently working on two projects related to volcanic ash and aviation focussing on observations and modelling of volcanic ash clounds. (2009-2012): PhD scholar at NILU – Norwegian Institute for Air Research, Kjeller, Norway. The doctoral research was connected to the project "Support to Aviation for Volcanic Ash Avoidance" (SAVAA) financed by the European Space Agency (ESA). The project aimed to develop a system to

warn the airline traffic about volcanic plumes in the atmosphere, relying on observations and modelling. Responsibilities: Independently conduct case studies of volcanic eruptions using dispersion modelling, satellite observations and inversion techniques. Assess the quality of the modelling using independent observations.

(2007-2008): Weather forecast presenter at The Norwegian Meteorological Institute, Oslo, Norway. Responsibilities: adapting weather forecasts to newspaper format, both in print and electronic.

(2007-2009): Receptionist, evening-duty at ABG Sundal Collier, Vika, Oslo, Norway. Nordic investment banking powerhouse . Responsibility for the switchboard, welcome guests and prepare meetings with notes and refreshments.

SOME ASSIGNMENTS:

SELECTED PUBLICATIONS:

1. Kristiansen et al. (2012) Atmospheric removal times of the aerosol-bound radionuclides ^{137}Cs and ^{131}I measured after the Fukushima Dai-ichi nuclear accident – a constraint for air quality and climate models

2.Kristiansen et al., (2012) Performance assessment of a volcanic ash transport model mini-ensemble used for inverse modelling of the 2010 Eyjafjallajökull eruption

3. Kristiansen et al., (2010) Remote sensing and inverse transport modelling of the Kasatochi eruption sulphur dioxide cloud

Publications

2012:

1. **Kristiansen, N. I.**, A. Stohl, and G. Wotawa (2012), Atmospheric removal times of the aerosol-bound radionuclides ^{137}Cs and ^{131}I measured after the Fukushima Dai-ichi nuclear accident – a constraint for air quality and climate models, *Atmospheric Chemistry and Physics.*, 12, 10759-10769, doi:10.5194/acp-12-10759-2012.

2. **Kristiansen, N. I.**, A. Stohl, F. Prata, N. Bukowiecki, H. Dacre, S. Eckhardt, S. Henne, M. Hort, B. Johnson, F. Marenco, B. Neininger, O. Reitebuch, P. Seibert, D. Thomson, H. Webster, B. Weinzierl (2012), Performance assessment of a volcanic ash transport model mini-ensemble used for inverse modelling of the 2010 Eyjafjallajökull eruption, *Journal of Geophysical Research*, 117, D00U11, doi:10.1029/2011JD016844.

3. Webster, H. N., D. J. Thomson, B. T. Johnson, I. P. C. Heard, K. Turnbull, F. Marenco, **N. I. Kristiansen**, J. Dorsey, A. Minikin, B. Weinzierl, U. Schumann, R. S. J. Sparks, S.C. Loughlin, M. C. Hort, S. J. Leadbetter, B. J. Devenish, A. J. Manning, C. S. Witham, J. M. Haywood,and B. W. Golding (2012), Operational prediction of ash concentrations in the distal volcanic cloud from the 2010 Eyjafjallajökull eruption*, Journal of Geophysical Research*, 117, D00U08, doi:10.1029/2011JD016790.

4. Thorsteinsson, T., T. Johannsson, A. Stohl, and **N. I. Kristiansen** (2012), High levels of particulate matter in Iceland due to direct ash emissions by the Eyjafjallajökull eruption and resuspension of deposited ash*, Journal of Geophysical Research*, 117, B00C05, doi:10.1029/2011JB008756.

5. Hervo, M., B. Quennehen, **N. I. Kristiansen**, J. Boulon, A. Stohl, P. Freville, J.-M. Pichon, D. Picard, P. Labazuy, M. Gouhier, J.-C. Roger, A. Colomb, A. Schwarzenboeck, and K. Sellegri (2012), Physical and optical properties of 2010 Eyjafjallajökull volcanic eruption aerosol: ground-based, Lidar and airborne measurements in France*, Atmospheric Chemistry and Physics*, 12, 1721-1736, doi:10.5194/acp-12-1721-2012.

6. Miffre, A., G. David, B. Thomas, P. Rairoux, A.M. Fjaeraa, **N. I. Kristiansen**, A. Stohl (2012) Volcanic aerosol optical properties and phase partitioning behavior after long range advection characterized by UV-Lidar measurements, *Atmospheric Environment,* Volume 48, March 2012, Pages 76-84, doi:10.1016/j.atmosenv.2011.03.057

7. Papayannis, A., R.E. Mamouri, V. Amiridis, E. Giannakaki, I. Veselovskii, P. Kokkalis, G. Tsaknakis, D. Balis, **N. I. Kristiansen,** A. Stohl, M. Korenskiy, K. Allakhverdiev, M.F. Huseyinoglu, T. Baykara (2012) Optical properties and vertical extension of aged ash layers over the Eastern Mediterranean as observed by Raman lidars during the Eyjafjallajökull eruption in May 2010, *Atmospheric Environment*, Volume 48, March 2012, Pages 56-65, doi:10.1016/j.atmosenv.2011.08.037

8. Toledano, C., Y. Bennouna, V. Cachorro, J.P. Ortiz de Galisteo, A. Stohl, K. Stebel, **N. I. Kristiansen**, F.J. Olmo, H. Lyamani, M.A. Obregon, V. Estelles, F. Wagner, J.M. Baldasano, Y. Gonzalez-Castanedo, L. Clarisse, A.M. de Frutos (2012) Aerosol properties of the Eyjafjallajökull ash derived from sun photometer and satellite observations over the Iberian Peninsula, *Atmospheric Environment,* Volume 48, March 2012, Pages 22-32, doi:10.1016/j.atmosenv.2011.09.072

9. Perrone, M. R., F. De Tomasi, A. Stohl, and **N. I. Kristiansen** (2012), Integration of measurements and model simulations to characterize Eyjafjallajökull volcanic aerosols over south-eastern Italy, *Atmospheric Chemistry and Physics*, 12, 10001-10013, doi:10.5194/acp-12-10001-2012

2011:

10. Stohl, A., A. J. Prata, S. Eckhardt, L. Clarisse, A. Durant, S. Henne, **N. I. Kristiansen**, A. Minikin, U. Schumann, P. Seibert, K. Stebel, H. E. Thomas, T. Thorsteinsson, K. Torseth, and B. Weinzierl (2011) Determination of time- and height-resolved volcanic ash emissions for quantitative ash dispersion modeling: The 2010 Eyjafjallajokull eruption (2011), *Atmospheric Chemistry and Physics*, 11, 4333-4351, doi:10.5194/acp-11-4333-2011.

11. Seibert, P., **N. I. Kristiansen**, A. Richter, S. Eckhardt, A. J. Prata and A. Stohl (2011) Uncertainties in the inverse modelling of sulphur dioxide eruption profiles, Geomatics, *Natural Hazards and Risk*, 2:3, 201-216, http://dx.doi.org/10.1080/19475705.2011.590533

2010:

12. **Kristiansen, N. I.**, A. Stohl, A. J. Prata, A. Richter, S. Eckhardt, P. Seibert, A. Hoffmann, C. Ritter, L. Bitar, T. J. Duck, and K. Stebel (2010), Remote sensing and inverse transport modelling of the Kasatochi eruption sulphur dioxide cloud, *Journal of Geophysical Research*, 115, D00L16, doi:10.1029/2009JD013286.

13. Bitar, L., T. J. Duck, **N. I. Kristiansen**, A. Stohl, and S. Beauchamp (2010) Lidar observations of Kasatochi volcano aerosols in the troposphere and stratosphere, *Journal of Geophysical Research*, 115, D00L13, doi:10.1029/2009JD013650