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Thomas Spengler

Professor

Personal Information

Date of Birth	September 4, 1978
Place of Birth	Munich, Germany
Nationality	German
Civil Status	Unmarried

Professional Employment

9/2014 – Today	**Professor**, *Geophysical Institute*, University of Bergen, Norway.
1/2020 – Today	**Adjunct Professor**, *Arctic Geophysics*, University Centre in Svalbard, Norway.
7/2015 – Today	**Director of Norwegian Research School on Changing Climates in the Coupled Earth System**, *Geophysical Institute*, University of Bergen, Norway.
7 – 12/2015	**Visiting Scientist**, *Environmental Sciences, University of East Anglia*, Norwich, United Kingdom.
9/2010 – 9/2014	**Associate Professor**, *Geophysical Institute*, University of Bergen, Norway.
9/2009 – 5/2011	**Postdoctoral Research Associate**, *Atmospheric and Oceanic Sciences Program, NOAA Geophysical Fluid Dynamics Laboratory*, Princeton University, New Jersey, USA.
Group of	Prof. Dr. Isaac M. Held
2/2009	**Visiting Scientist**, *Monash Atmospheric Science, Monash University*, Melbourne, Australia.
Group of	Prof. Dr. Michael J. Reeder
10/2008 – 8/2009	**Postdoctoral Research Assistant**, *Institute for Atmospheric and Climate Science, ETH Zurich*, Switzerland.
Group of	Prof. Dr. Huw C. Davies
6/2005 – 9/2008	**Doctoral Research Assistant**, *Institute for Atmospheric and Climate Science, ETH Zurich*, Switzerland.
Group of	Prof. Dr. Huw C. Davies
11/2004 – 5/2005	**Research assistant**, *Meteorological Institute Munich, University of Munich*, Germany.
Group of	Prof. Dr. Joseph Egger

11 – 12/2002 **Research assistant**, *School of Mathematical Sciences, Monash University*, Melbourne, Australia.

Group of Prof. Dr. Michael J. Reeder

9/2001 – 1/2002 **Research assistant**, *Meteorological Institute Munich, University of Munich*, Germany.

Group of Prof. Dr. Roger K. Smith

Education

6/2005 – 9/2008 **Doctorate in Atmospheric Science (Dr. sc. ETH Zurich)**, *Institute for Atmospheric and Climate Science*, ETH Zurich, Switzerland.

Doctoral Thesis *Influence of the ambient flow upon Rossby wave propagation between the tropics and extra-tropics*

Supervisor Prof. Dr. Huw C. Davies

9/2001 – 5/2005 **Diploma/Master in Meteorology (Dipl. Met)**, *Meteorological Institute Munich*, Department of Physics, University of Munich, Germany.

Diploma Thesis *The Dynamics of Heat Lows in simple background Flows*

Supervisor Prof. Dr. Roger K. Smith

2 – 10/2002 **Study of Atmospheric Sciences (supported by a DAAD scholarship)**, *School of Mathematics*, Monash University, Melbourne, Australia.

Honours Thesis *Development and Deformation of Heat Lows with Applications to Prefrontal Westerly Troughs in Australia*

Supervisor Prof. Dr. Michael J. Reeder

2/2002 **Summer School for Dynamic Meteorology**, *School of Mathematics*, Monash University, Melbourne, Australia.

9/1999 – 9/2001 **Intermediate Diploma in Meteorology**, *Meteorological Institute Munich*, University of Munich, Germany.

6/1998 **Abitur (general qualification for university entry)**, *Max Planck Gymnasium*, Munich, Germany.

Internships

10 – 12/2004 **Institute for Atmospheric and Climate Science**, *ETH Zurich*, Switzerland.

Group of Prof. Dr. Huw C. Davies

2 – 4/2004 **Alfred Wegener Institute for Polar and Marine Research**, *AWI Bremerhaven*, Germany.

Group of Dr. Ursula Schauer

Scholarships

2002 DAAD Scholarship (German Academic Exchange Service)

2001 Oskar-Karl-Forster Scholarship

Teaching

MSc Advanced Atmospheric Dynamics (University of Bergen), 2016-today

BSc Polar Meteorology and Climate (University Centre in Svalbard), 2015-today

PhD Scientific Writing Workshop (Norwegian Research School for Climate Dynamics), 2011-today

MSc/PhD Seminar in Atmospheric Sciences (University of Bergen), 2014-today

MSc Dynamics of the Atmosphere (University of Bergen), 2011-2014

MSc Mesoscale Dynamics (University of Bergen), 2011-today

MSc/PhD	The Arctic Atmospheric Boundary Layer and Local Climate Processes (University Centre in Svalbard), 2014, 2016
PhD	Basic Meteorology (ResClim Workshop on Outreach to High-School Students), 2013
PhD	Mountain Meteorology (Advanced Climate Dynamics Courses), 2012
MSc	Methods in Weather Forecasting (University of Bergen), 2014
MSc	The General Circulation of the Atmosphere [Teaching Assistent] (Princeton University), 2010
MSc	Dynamics of large scale atmospheric flow [Teaching Assistent] (ETH Zurich), 2007-2009
MSc	Weather Discussion (ETH Zurich), 2007-2009
BSc	Mathematics, Algebra and Calculus (NJ State Prison), 2010
BSc	Environmental Fluid Dynamics Part I [Teaching Assistent] (ETH Zurich), 2006-2009
BSc	BSc Seminar: Atmosphere and Climate (ETH Zurich), 2006-2009

Supervision of students

2020 - today	Lutzmann J. (PhD Thesis, University of Bergen): Air-sea interactions and diabatic effects during storm development
2019 - today	Galmiche N. (PhD Thesis, University of Bergen): Visualisation of multimodality in ensemble forecasts
2016 - today	Haualand K. (PhD Thesis, University of Bergen): Diabatic Intensification of baroclinic Instability and the Role of Surface Fluxes
2016 - today	Tsopouridis L. (PhD Thesis, University of Bergen): Influence of the Gulf Stream and Kuroshio SST Fronts on the Atmosphere
2018 - 2019	Konstali K. (MSc Thesis, University of Bergen): Moist mixed layer model for Cold Air Outbreaks including oceanic feedbacks
2014 - 2018	Sergeev D. (PhD Thesis, University of East Anglia): Observations and Modeling of Polar Lows with Focus on Predictability and Genesis
2017 - 2018	Jenssen M. D. K. (MSc Thesis, University of Bergen): Mechanisms leading to Cold Air Outbreaks
2014 - 2016	Selberg L. A. (MSc Thesis, University of Bergen): The extreme winter storm 'Nina': Dynamics and Predictability
2014 - 2016	Haukeland M. (MSc Thesis, University of Bergen): Climatological aspect of Polar Lows and Impact on Norway
2014 - 2016	Dahl-Eriksen S. (MSc Thesis, University of Bergen): Diabatic Intensification of baroclinic Instability
2014 - 2016	Haualand K. (MSc Thesis, University of Bergen): The Influence of Surface Fluxes in Eady's Instability problem
2014 - 2016	Ssemujju M. (MSc Thesis, University of Bergen): Mechanisms of Early Monsoon Onset in North-Eastern Bangladesh
2014 - 2016	Haugland K. (MSc Thesis, University of Bergen): Detecting Atmospheric Rivers using Persistent Homology
2014	Gottschalk M. (MSc Thesis, University of Bergen): Idealized simulations of cold air outbreaks
2013 - 2015	Keiderling S. (PhD Thesis, University of Bergen): Jet Stream Dynamics, Variability and Forcing
2013 - 2015	Alsvåg K. (MSc Thesis, University of Bergen): Detecting Atmospheric Rivers using Persistent Homology
2011 - 2015	Reeve M. A. (PhD Thesis, University of Bergen): Monsoon Onset in Bangladesh: Reconciling scientific and societal perspectives
2010 - 2014	Spensberger C. (PhD Thesis, University of Bergen): Novel approaches to orographic and dynamic blocking
2011 - 2014	Terpstra A. (PhD Thesis, University of Bergen): Dynamical Perspectives on the Formation and Intensification of Polar Lows
2013 - 2014	Nordhagen R. (MSc Thesis, University of Bergen): Cold Pools in Norwegian Valleys
2013 - 2014	Green L. (MSc Thesis, University of Bergen): Influence of surface fluxes on the development of Polar Lows

2013 - 2013 Thorsteinssen T. (MSc Thesis, University of Bergen): Implementation of a slab ocean into an idealised model

2012 - 2013 Villanger C. (MSc Thesis, University of Bergen): High Impact Wind Events in Norway

2012 - 2013 Keiderling S. (MSc Thesis, University of Bergen): Ice Edge Jet Streams

2011 - 2013 Munro A. (MSc Thesis, University of Bergen): Using Deformation as a measure for Rossby Wave Breaking

2011 - 2013 Kong Q. (PhD Thesis, University of Bergen): Interaction of Cyclones with Topography

2012 - 2013 Karlsen E. (MSc Thesis, University of Bergen): Extreme precipitation in Norway: Present and Future Changes based on Regional Climate Simulations

2011 - 2012 Tronvoll E. (MSc Thesis, University of Bergen): Climatology of Cyclones interacting with Greenland

2010 O'Rourke A. (Semester Thesis, Princeton University): Drag and the momentum flux in a randomly forced spherical barotropic model

2010 Potter S. (Semester Thesis, Princeton University): Linear Stable Reflection and the JWKB Approximation

2009 Schemm S. (MSc Thesis, ETH Zurich): Wave Activity Flux applied to baroclinic Development

2009 Kröner N. (BSc Thesis, ETH Zurich): A global Heat Low Climatology

2009 Struchen B. (BSc Thesis, ETH Zurich): Diabatically Forced Linear Quasi-Geostrophic Rossby Waves

2009 Cervenka D. (BSc Thesis, ETH Zurich): Weather conditions for severe forest fires in Australia, Spain and Greece: Analysis and Comparison

2009 Leutwyler D. (BSc Thesis, ETH Zurich): Mid-latitude Perturbations initiated by Tropical Convection

2008 Brunner N. E. (MSc Thesis, ETH Zurich): Forced stationary Rossby Waves in an Equatorial beta-plane one-layer shallow water model

2007 Tay P. (BSc Thesis, ETH Zurich): Forced Quasi-Geostrophic Rossby Waves in a stratified Fluid

2007 Čampa J. (MSc Thesis, ETH Zurich): Interactions of Forced sub-tropical Rossby Waves with extra-tropical Flow

2007 Ablinger M. (MSc Thesis, University of Munich): Data and Results from the field Campaign AllgEx in the Allgäu

Vocational Training

2014 Leadership Course (University of Bergen)

2010 Grading as a Teaching Tool (Princeton University)

2010 PROF 101: Entering the Professoriate (Princeton University)

2010 Managing Time: Making the Most of Your Summer Research and Writing (Princeton University)

2009 Writing Your Statement of Teaching Philosophy (Princeton University)

2009 Designing a course (Princeton University)

2008 Project management for supervising bachelor and master thesis (ETH Zurich)

2008 Rhetoric tools for teaching (ETH Zurich)

2008 Rhetoric for seminar and lecture (ETH Zurich)

2007 Presenting-Publishing-Communicating (ETH Zurich)

2007 Didactics workshop (Presenting-Teaching-Communicating) (ETH Zurich)

2006 How to write and publish a scientific paper (ETH Zurich)

International Conferences and Workshops

5/2020 EGU General Assembly, Vienna (Austria)

9/2019 19th Cyclone Workshop, Kloster Seeon (Germany)

7/2019 IUGG General Assembly, Montreal (Canada)

6/2019 AOFD Meeting, Portland, Maine (USA)

3/2019 DACH Conference, Garmisch-Partenkirchen (Germany)

2/2019 NORPAN closing workshop, Hakone (Japan)
1/2019 YOPP Arctic Science Workshop, Helsinki (Finland)
4/2018 EGU General Assembly, Vienna (Austria)
8/2017 IAPSO-IAMAS-IAGA Assembly, Cape Town (South Africa)
6/2017 NORPAN Air-Sea Interaction Workshop, Bergen (Norway)
4/2017 MOSAiC Science Implementation Workshop, Prague (Czech Republic)
4/2017 Arctic Science Summit Week, Prague (Czech Republic)
10/2016 Arctic Circle, Reykjavik (Iceland)
7/2016 Dynamics and interactions of the Ocean and Atmosphere, Sendai (Japan)
6/2016 Japan-Norway Arctic Science and Innovation Week, Tokyo (Japan)
5/2016 NORPAN kick-off meeting, Tokyo (Japan)
4/2016 Polar Low Workshop, Paris (France)
4/2016 EGU General Assembly, Vienna (Austria)
3/2016 Arctic Science Summit Week, Fairbanks (USA)
8/2015 Workshop on Storm Tracks, Grindelwald (Switzerland)
8/2015 Year of Polar Prediction Summit, Geneva (Switzerland)
7/2015 IUGG, Prague (Czech Republic)
4/2015 Arctic Science Summit Week, Toyama (Japan)
4/2015 Polar Low Workshop, Tokyo (Japan)
3/2015 Workshop on the Dynamics of Atmosphere-Ice-Ocean Interactions in the High-Latitudes, Rosendal (Norway)
12/2014 International workshop on polar-lower latitude linkages and their role in weather and climate prediction, Barcelona (Spain)
11/2014 jetSREAM kick-off Meeting, Bergen (Norway)
9/2014 TRACKS kick-off Meeting, Dhaka (Bangladesh)
8/2014 World Weather Open Science Conference, Montreal (Canada)
6/2014 LATSIS Symposium, Zurich (Switzerland)
4/2014 EGU General Assembly, Vienna, (Austria)
4/2014 Arctic Science Summit Week, Helsinki, (Finland)
10/2013 Norwegian Research Council Climate Conference, Oslo, (Norway)
10/2013 Nansen-Zhu 10 year anniversary Conference, Beijing, (China)
9/2013 16th Cyclone Workshop, Montreal, (Canada)
7/2013 DACA-2013 IAMAS and IACS Conference, Davos, (Switzerland)
6/2013 ECMWF-WWRP/THORPEX Polar Prediction Workshop, Reading, (United Kingdom)
6/2013 ECRA Meeting, Bergen, (Norway)
8/2012 ICDM International Workshop, Kunming, (China)
5/2012 Polar Low Workshop, Oslo, (Norway)
4/2012 EGU General Assembly, Vienna, (Austria)
7/2011 IUGG, Melbourne, (Australia)
5/2011 AMS Polar Meteorology Conference, Boston, MA (USA)
10/2010 WWRP THORPEX Polar Project Meeting, Oslo (Norway)
9/2010 10th EMS Annual Meeting, Zurich (Switzerland)
8/2010 AMS Mountain Meteorology Conference, Lake T, CA (USA)
2/2010 Imagine, Sustainability Conference, Princeton, NJ (USA)
4/2009 EGU General Assembly, Vienna (Austria)
2/2009 International Conference on Southern Hemisphere Meteorology and Oceanography, Melbourne (Australia)
1/2009 IPY-Thorpex-Norway annual meeting, Rømskog (Norway)
11/2008 Conference on Teleconnection in Atmosphere and Oceans, ICTP Trieste (Italy)
11/2007 AMMA Conference, Karlsruhe (Germany)

10/2007 7th EMS / 8th ECAM Meeting, San Lorenzo de El Escorial (Spain)
9/2007 LATSIS Symposium, Zurich (Switzerland)
9/2007 DACH, Hamburg (Germany)
7/2007 IUGG, Perugia, (Italy)
12/2006 THORPEX STISS Meeting, Landshut (Germany)
10/2006 13th Cyclone Workshop, Monterey, California (USA)
4/2006 EGU General Assembly, Vienna (Austria)
7/2004 11th national AMOS Conference, Brisbane, (Australia)
2/2002 9th national AMOS Conference, Melbourne, (Australia)

Invited Talks

9/2019 100th anniversary of seminal Bergen School of Meteorology Paper, Cyclone Workshop, Kloster Seeon, Germany
3/2019 Maintenance of Baroclinicity by Extratropical Cyclones, DACH Conference, Garmisch-Partenkirchen, Germany
2/2019 Maintenance of Baroclinicity by Extratropical Cyclones, Melbourne University, Melbourne, Australia
1/2019 Maintenance of Baroclinicity by Extratropical Cyclones, Monash University, Melbourne, Australia
11/2018 Maintenance of Baroclinicity by Extratropical Cyclones, University of Vienna, Vienna, Austia
10/2018 Maintenance of Baroclinicity by Extratropical Cyclones, University of Oslo, Oslo, Norway
6/2018 Dynamics and Climatological Implications of Cold Air Outbreaks and Polar Lows, Alfred Wegener Institute, Bremerhaven, Germany
7/2017 Maintenance of Baroclinicity and Storm Tracks in the North Atlantic, Wegener Center for Climate and Global Change, University of Graz, Graz, Austria
6/2017 Maintenance of Baroclinicity and Storm Tracks in the North Atlantic, IPA, DLR, Oberpfaffenhofen, Germany
5/2017 The Physics behind Weather Forecasting, Physics Department, University of Bergen, Bergen, Norway
4/2017 Air-Sea Flux Characteristics close to the Sea-Ice Edge during Cold Air Outbreaks, Arctic Science Summit Week, Prague (Czech Republic)
3/2017 Weather and Climate, a Playground for Big Data and Visualization, Visual Computing Forum, University of Bergen, Bergen, Norway
1/2017 Maintenance of Baroclinicity and Storm Tracks in the North Atlantic, Meteorological Institute, Stockholm University, Stockholm, Sweden
10/2016 Let's talk about the Weather, PechaKucha, Bergen, Norway
10/2016 The Arctic's Role in Changing Global Weather and Climate, Arctic Circle, Reykjavik, Iceland
7/2016 Maintenance of Baroclinicity in the Atlantic Storm Track and its Relation to the Sea Surface Temperature Gradients and Cold Air Outbreaks, Dynamics and interactions of the Ocean and Atmosphere, Sendai, Japan
7/2016 Maintenance of Baroclinicity in the Atlantic Storm Track and its Relation to the Sea Surface Temperature Gradients and Cold Air Outbreaks, National Institute for Polar Research, Tokyo, Japan
7/2016 Upper Tropospheric Jet Axis Detection: Winter 2013/2014 and Northern Hemispheric Variability, AORI University of Tokyo, Tokyo, Japan
7/2016 Upper Tropospheric Jet Axis Detection: Winter 2013/2014 and Northern Hemispheric Variability, RCAST University of Tokyo, Tokyo, Japan
6/2016 Dynamics and Predictability of Arctic Extremes and the Influence of Air-Sea Interactions on their Evolution, Arctic Science and Innovation Week, Tokyo, Japan
4/2016 Maintenance of Baroclinicity in the Atlantic Storm Track and its Relation to the Sea Surface Temperature Gradient along the Gulf Stream, EGU General Assembly, Vienna, Austria
3/2016 Do we speak the same Language of Science?, Arctic Science Summit Week, Fairbanks, USA

12/2015 Polar Lows: impact, current understanding, and challenges ahead, Laboratoire de Météorologie Dynamique, Paris, France

12/2015 Polar Lows: impact, current understanding, and challenges ahead, University of Potsdam and Alfred Wegener Institute, Potsdam, Germany

11/2015 Maintenance of storm tracks and baroclinicity, University of East Anglia, Norwich, United Kingdom

11/2015 Maintenance of storm tracks and baroclinicity, University of Manchester, Manchester, United Kingdom

11/2015 Maintenance of storm tracks and baroclinicity, University of Leeds, Leeds, United Kingdom

11/2015 Maintenance of storm tracks and baroclinicity, Imperial College, London, United Kingdom

11/2015 Maintenance of storm tracks and baroclinicity, Oxford University, Oxford, United Kingdom

11/2015 Polar Lows, University of Reading, Reading, United Kingdom

10/2015 Polar Lows: Recent research on the dynamics of intense high-latitude cyclones, British Antarctic Survey, Cambridge, United Kingdom

9/2015 Maintenance of storm tracks and baroclinicity, Met Office, Exeter, United Kingdom

9/2015 Maintenance of storm tracks and baroclinicity, University of Edinburgh, Edinburgh, United Kingdom

6/2015 Atmospheric conditions associated with polar low genesis in the North-East Atlantic, IUGG, Prague, Czech Republic

4/2015 Climatological analysis of the slope of isentropic surfaces and its tendencies over the North Atlantic, University of Tokyo, Tokyo, Japan

4/2015 Polar Lows in the Nordic Seas: Dynamical and Climatological Aspects, Polar Low Workshop, University of Tokyo, Tokyo, Japan

3/2015 Polar Low Development in forward and reverse shear Arctic moist-baroclinic environments, High Latitude Workshop, Rosendal, Norway

12/2014 Polar Low Dynamics, University of Munich, Munich, Germany

10/2014 How do I teach Dynamic Meteorology, University of Bergen, Bergen, Norway

12/2013 A new look at deformation as a diagnostic for large-scale flow, Meteorological Institute, Mainz, Germany

7/2013 High impact weather in the Arctic, DACA-2013, Davos, Switzerland

12/2012 Connections between Severe Weather, Breaking Rossby Waves and Flow Deformation, Meteorological Institute, Munich, Germany

12/2012 Synoptic Evolution and Dynamic Characteristics of the Extreme Norwegian Winter Storm Dagmar, German Aerospace Center, Munich, Germany

6/2012 Connections between Severe Weather, Breaking Rossby Waves and Flow Deformation, Free University Berlin, Berlin, Germany

4/2012 Potential Vorticity Attribution and Causality, University of Oslo, Oslo, Norway

7/2011 How does rain affect surface pressure, Monash University, Melbourne, Australia

7/2011 The Dynamics of Heat Lows, IUGG, Melbourne, Australia

3/2011 The Dynamics of Heat Lows, Environment Canada, Montreal, Canada

3/2011 How does rain affect surface pressure, Yale University, New Haven, USA

1/2010 The Dynamics of Heat Lows, Geophysical Institute, University of Bergen, Norway

9/2009 The Dynamics of Heat Lows, Institute for Atmospheric and Climate Science, ETH Zurich, Switzerland

5/2009 The Greenland Tip Jet, GFDL, Princeton University, Princeton, NJ, USA

2/2009 Mid-latitude response to stationary and non-stationary tropical forcing, Monash University, Melbourne, Australia

2/2008 Mid-latitude response to stationary and non-stationary tropical forcing, Geophysical Institute, University of Bergen, Norway

2/2008 Mid-latitude response to stationary and non-stationary tropical forcing, Meteorological Institute, University of Oslo, Norway

11/2006 Subtropical Forcing of Extra-tropical Flow, Meteorological Institute Munich, Germany

7/2006 Heat Lows revisited, Meteorological Institute Munich, Germany

Field Experiments

3/2018 Iceland Greenland Sea Project (IGP), Iceland

10/2016 North Atlantic Waveguide and Downstream Impact Experiment (NAWDEX, NEAREX, EPATAN), Iceland

3/2013 Aerosol Cloud Coupling And Climate Interactions in the Arctic (ACCACIA), Sweden

10/2008 Irminger Sea Cruise Kn194 with the Research Vessel Knorr, Irminger Sea

3/2008 IPY-Thorpex Andøya-campaign, Norway

8/2007 Flow over and around Hofjökull Experiment (FLOHOF), Iceland

7 – 8/2005 Allgäu Experiment (AllgEx), Germany

9/2004 Arctic Cruise ARK XX/3 with the Research Vessel Polarstern, Polar Sea

10/2002 Gulf Line Experiment (GLEX), Australia

Funding

2011-today **Overall external funding sum: 42 Mio NOK (4.4 Mio EUR)**

2017-2020 UNifying Perspectives on Atmosphere-Ocean Interactions during CyClone Development (UNPACC), Norwegian Research Council: 9.4 Mio NOK

2016 NEAREX, in partnership with NAWDEX (North Atlantic Waveguide and Downstream Impact Experiment), EUFAR: 10 flight hours with French Safire Falcon including 20 dropsondes

2015-2018 Partnership between Norway and Japan for excellent Education and Research in Weather and Climate Dynamics, Norwegian Research Council: 3.5 Mio. NOK

2015-2023 Norwegian Research School on Changing Climates in the Coupled Earth System, Norwegian Research Council: 19.5 Mio. NOK

2015 Scientific Writing Workshop, Norwegian Research School in Climate Dynamics: 150 kNOK

2015 Workshop on the Dynamics of Atmosphere-Ice-Ocean Interactions in High Latitudes, University of Bergen, Norwegian Research Council, Norwegian Research School in Climate Dynamics, International Arctic Science Committee, Polar Prediction Project, International Association of Meteorology and Atmospheric Science, MET Norway: total 450 kNOK

2014 Scientific Writing Workshop, Norwegian Research School in Climate Dynamics: 150 kNOK

2013 Scientific Writing Workshop, Norwegian Research School in Climate Dynamics: 150 kNOK

2012-2016 High Impact Weather in the Arctic (HIMWARC), Marie Curie - Career Integration, European Commission: 100 kEUR

2012 Scientific Writing Workshop, Norwegian Research School in Climate Dynamics: 150 kNOK

2011 Scientific Writing Workshop, Norwegian Research School in Climate Dynamics: 120.6 kNOK

2011-2014 Personal overseas research grant for the NORKLIMA funded project HIMWARC, Norwegian Research Council: 49 kNOK

2011 Ice edge front, University of Bergen: 63.6 kNOK

2011 IT infrastructure for Centre for Climate Dynamics, Centre for Climate Dynamics: 570 kNOK

2011-2016 High Impact Weather in the Arctic (HIMWARC), Norwegian Research Council: 7 Mio NOK

Publications

Total peer reviewed publications (including 2 book chapters): 57; Citations: 797; h-index: 17, i10-index: 21 *(based on Google Scholar)*

Haualand, K., and T. Spengler, 2021: Relative importance of tropopause structure and diabatic heating for baroclinic instability. *Weather Clim. Dynam. Discuss*, [preprint], https://doi.org/10.5194/wcd-2021-13, in review

Bui, H., and T. Spengler, 2021: On the Influence of Sea Surface Temperature distributions on the Development of Extratropical Cyclones. *J. Atmos. Sci.*, https://doi.org/10.1175/JAS-D-20-0137.1

Tsopouridis, C. Spensberger, and T. Spengler, 2021: Cyclone Intensification in the Kuroshio Region and its relation to the Sea Surface Temperature Front and Upper-Level Forcing. *Quart. J. Roy. Meteor. Soc.*, **147**, 485-500, https://doi.org/10.1002/qj.3929

Tsopouridis, C. Spensberger, and T. Spengler, 2021: Characteristics of cyclones following different pathways in the Gulf Stream region. *Quart. J. Roy. Meteor. Soc.*, **147**, 392-407, https://doi.org/10.1002/qj.3924

Palenik, J., T. Spengler, and H. Hauser, 2021: IsoTrotter: Visually Guided Empirical Modelling of Atmospheric Convection. *IEEE Transactions on Visualization and Computer Graphics*, **27**, 2, 775-784, doi: 10.1109/TVCG.2020.3030389

Spensberger, C., and T. Spengler, 2021: Sensitivity of air-sea heat exchange in cold-air outbreaks to model resolution and sea-ice distribution. *JGR Atmospheres*, **126**, 1-13, e2020JD033610, https://doi.org/10.1029/2020JD033610

Stoll P. J., T. Spengler, A. Terpstra, and R. G. Graversen, 2021: Polar Lows - Moist Baroclinic Cyclones in Four Different Vertical Wind Shear Environments. *Weather Clim. Dynam.*, **2**, 19?36, https://doi.org/10.5194/wcd-2-19-2021

Tsopouridis, T. Spengler, and C. Spensberger, 2020: SST fronts along the Gulf Stream and Kuroshio affect the winter climatology primarily in the absence of cyclones. *Weather Clim. Dynam. Discuss.*, [preprint], https://doi.org/10.5194/wcd-2020-50, in review

Haualand, K., and T. Spengler, 2020: Direct and Indirect Effects of Surface Fluxes on Moist Baroclinic Development. *J. Atmos. Sci.*, **77**, 3211-3225, https://doi.org/10.1175/JAS-D-19-0328.1

Spensberger, C., and T. Spengler, 2020: Feature-Based Jet Variability in the Upper Troposphere. *J. Clim.*, **33**, 6849-6871, https://doi.org/10.1175/JCLI-D-19-0715.1

Pariyar, S. K., N. Keenlyside, A. Sorteberg, T. Spengler, B. C. Bhatt, and F. Ogawa, 2020: Factors affecting extreme rainfall events in the South Pacific. *Weather and Climate Extremes*, **29**, 100262, https://doi.org/10.1016/j.wace.2020.100262

Weijenborg, C., and T. Spengler, 2020: Diabatic Heating as a Pathway for Cyclone Clustering Encompassing the Extreme Storm Dagmar *GRL*, **47**, (8), e2019GL085777, https://doi.org/10.1029/2019GL085777

Spensberger, C., M. J. Reeder, T. Spengler, and M. Patterson, 2020: The connection between the Southern Annular Mode and a feature-based perspective on Southern Hemisphere midlatitude winter variability *J. Clim.*, **33**, (1), 115-129, https://doi.org/10.1175/JCLI-D-19-0224.1

Renfrew, I. A., R. S. Pickart, K. Våge, G. W. K. Moore, T. J. Bracegirdle, A. D. Elvidge, E. Jeansson, T. Lachlan-Cope, L.T. McRaven, L. Papritz, J. Reuder, H. Sodemann, A. Terpstra, S. Waterman, H. Valdimarsson, A. Weiss, M. Almansi, F. Bahr, A. Brakstad, C. Barrell, J. K. Brooke, B.J. Brooks, I. M. Brooks, M. E. Brooks, E. M. Bruvik, C. Duscha, I. Fer, H. M. Golid, M. Hallerstig, I. Hessevik, J. Huang, L. Houghton, S. Jónsson, M. Jonassen, K. Jackson, K. Kvalsund, E. W. Kolstad, K. Konstali, J. Kristiansen, R. Ladkin, P. Lin, A. Macrander, A. Mitchell, H. Olafsson, A. Pacini, C. Payne, B. Palmason, M. D. Pérez-Hernández, A. K. Peterson, G. N. Petersen, M. N. Pisareva, J. O. Pope, A. Seidl, S. Semper, D. Sergeev, S. Skjelsvik, H. Søiland, D. Smith, M. A. Spall, T. Spengler, A. Touzeau, G. Tupper, Y. Weng, K. D. Williams, X. Yang, and S. Zhou, 2019: The Iceland Greenland Seas Project. *Bull. Amer. Meteor. Soc.*, **100**, (9), 1795-1817, https://doi.org/10.1175/BAMS-D-18-0217.1

Heinemann, G., C. Claud, and T. Spengler, 2019: Summary of the 14th Polar Low Workshop. *Bull. Amer. Meteor. Soc.*, **98**, (6), ES139-ES142, https://doi.org/10.1175/BAMS-D-16-0207.1

Haualand, K. F., and T. Spengler, 2019: How does latent cooling affect baroclinic development in an idealized framework? *J. Atmos. Sci.*, **76**, (9), 2701-2714, https://doi.org/10.1175/JAS-D-18-0372.1

Ogawa F., and T. Spengler, 2019: Prevailing Surface Wind Direction during Air-Sea Heat Exchange. *J. Clim.*, **32**, (17), 5601-5617, https://doi.org/10.1175/JCLI-D-18-0752.1

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Other Publications

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Book Chapter — Cornforth R., Z. Mumba, D. J. Parker, G. Berry, N. Chapelon, K. Diakaria, M. Diop-Kane, V. Ermert, A. H. Fink, P. Knippertz, J. P. Lafore, A. Laing, S. Lepape, R. Maidment, J. Methven, B. Orji, D. Osika, E. Poan, R. Roca, S. Rowell, R. K. Smith, T. Spengler, C. M. Taylor, C. Thorncroft, J. C. Vincendon, C. Yorke, 2017: Synoptic systems, In: Parker D. J., M. Diop-Kane (Ed) Meteorology of Tropical West Africa: The Forecasters' Handbook, *John Wiley & Sons, Ltd*, pp 40-89, doi:10.1002/9781118391297.ch2

Doctoral Thesis — *Influence of the ambient flow upon Rossby wave propagation between the tropics and extra-tropics*, Thomas Spengler, Doctoral Thesis, July 2009. Copy available at http://e-collection.ethbib.ethz.ch/eserv/eth:31159/eth-31159-02.pdf

Diploma Thesis	*The Dynamics of Heat Lows in simple background Flows*, Thomas Spengler, Diploma Thesis, May 2005.
Honours Thesis	*Development and Deformation of Heat Lows with Applications to Prefrontal Westerly Troughs in Australia*, Thomas Spengler, Honours Thesis, Sep 2002.

Awards

2013	Best Lecturer at the Faculty for Mathematics and Natural Sciences (University of Bergen)
2013	Nominee for the Early Career Science Medal of the International Association for Meteorology and Atmospheric Science (IAMAS)

Membership in Professional Associations

2016 – 2018	American Geophysical Union (AGU)
2009 – 2019	American Meteorological Society (AMS)
2003 – Today	German Meteorological Society (DMG)
2011 – 2018	Bergen Geophysical Society (BGF)
2006 – Today	European Geophysical Union (EGU)
2001 – 2008	Australian Meteorological and Oceanographic Society (AMOS)

Membership in Professional Commissions

2014 – Today	Atmospheric Working Group (AWG) of the International Arctic Science Committee (IASC), 2015-2019 elected chair of the AWG
2012 – Today	International Commission for Dynamic Meteorology (ICDM) of the International Association of Meteorology and Atmospheric Sciences (IAMAS), 2017-2019 elected vice president and since 2019 elected president of the ICDM
2011 – 2015	Bergen Geophysical Society (BGF), secretary

Skills

Languages

German	Fluent (mother tongue)
English	Fluent
Norwegian	Fluent

Computing experiences

Programming:	FORTRAN, Python, Matlab, Maple, Linux shell scripts
Visualization:	NCAR Graphics, NCL, Python, GrADS Matlab
System:	UNIX, Linux, Windows, Mac

Administrative and other qualifications

Research Group	Head of group for Dynamic Meteorology at the Geophysical Institute, University of Bergen.
Research Projects	Leader of project: UNifying Perspectives on Atmosphere-Ocean Interactions during CyClone Development (UNPACC).
Research Projects	Leader of project: High Impact Weather in the Arctic (HIMWARC).
Research Projects	Leader of collaboration project: Partnership between Norway and Japan for excellent Education and Research in Weather and Climate Dynamics (NORPAN)
Research School	Director of the Research School for Changing Climates in the Coupled Earth System (CHESS).
Field Experiments	Leadership and participation in several field experiments. Furthermore, flight planning experience from IGP, IPY-THORPEX, ACCACIA, and NEAREX/NAWDEX
Administrative Training	Attendance of several project management courses.

Acted as reviewer for

Journal Reviews Tellus A, Quarterly Journal of the Royal Meteorological Society, Journal of the Atmospheric Sciences, Monthly Weather Review, International Journal of Climatology, Journal of Climate, Climate Dynamics, Geophysical Research Letters

Updated

4 March, 2021