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Areas of Interest

- Cyclone dynamics
- Mesoscale meteorology
- Atmospheric energetics
- Boundary layer meteorology
- Extraterrestrial meteorology

Education

- 2014-Present PhD in Meteorology
Thesis title: **Dynamics and Predictability of Polar Lows**
University of East Anglia
Norwich, United Kingdom
Supervisor: Prof. Ian A. Renfrew
- 2009-2014 Specialist Diploma in Meteorology
With Honours
Thesis title: **Idealised numerical modelling of polar mesocyclone dynamics**
Lomonosov Moscow State University
Moscow, Russia
Supervisor: Dr. Victor Stepanenko

Internships

- Oct 2013 *University of Bergen*
Geophysical Institute
Bergen, Norway
Supervisor: Prof. Thomas Spengler
- Jul 2012 *A.M. Obukhov Institute of Atmospheric Physics*
Laboratory of Climate Theory
Moscow, Russia
Supervisor: Dr. Alexey Eliseev

Publications

Peer-reviewed

5. **Sergeev DE**, Renfrew IA, and Spengler T. 2018. Modification of polar low development by orography and sea ice. *about to be submitted*
4. Shestakova AA, Toropov PA, Stepanenko VM, **Sergeev DE**, and Repina IA. 2018. Observations and modelling of downslope windstorm in Novorossiysk. *Boundary-Layer Meteorology*: submitted
3. **Sergeev DE**, Renfrew IA, Spengler T, and Dorling SR. 2017. Structure of a shear-line polar low. *Quarterly Journal of the Royal Meteorological Society*, **143**(702): 12-26
2. Spengler T, Renfrew IA, Terpstra A, Tjernström M, Screen J, Brooks I, Carleton A, Chechin D, Chen L, Doyle J, Esau I, Hezel P, Jung T, Kohyama T, Lüpkes C, McCusker K, Nygård T, **Sergeev DE**, Shupe M, Sodemann H, and Vihma T. 2016. High Latitude Dynamics of Atmosphere-Ice-Ocean Interactions. *Bulletin of American Meteorological Society*, **97**(9): ES179-ES182
1. Eliseev AV, **Sergeev DE**. 2014. Impact of Subgrid Scale Vegetation Heterogeneity on the Simulation of Carbon Cycle Characteristics. *Izvestiya, Atmospheric and Oceanic Physics*, **50**(3): 259-270

Proceedings

3. **Sergeev DE**, Stepanenko VM. 2013. Numerical modelling of polar mesocyclones generation mechanisms. *International Conference "Turbulence, atmosphere and climate dynamics" dedicated to A.M. Obukhov*, **Selected papers**: 168-170
2. **Sergeev DE**, Zamyatina MY, Stepanenko VM. 2013. Thermal regime features of Kronotsky lake (in Russian). *Kronotsky State Natural Biosphere Reserve Proceedings*, **3**: 29-41
1. **Sergeev DE**, Stepanenko VM. 2012. Parameterization of mesoscale sensible heat and methane fluxes in the region of Western Siberia. *International Conference and Early Career Scientists School on Environmental Observations, modelling and Information Systems (ENVIROMIS-2012)*, **Selected papers**: 67-69

Conferences and Workshops

Oral presentations

- Oct 2017 **The influence of Svalbard orography and sea ice on polar low development**
18th Cyclone Workshop (Sainte-Adèle, Canada)
- Apr 2017 **Polar lows and how background environment can influence their development**
Cambridge Earth Systems Science EnvEast Doctoral Alliance Symposium (Cambridge, UK)
- Apr 2016 **Structure of the shear-line polar low south of Svalbard**
13th European Polar Lows Working Group (EPLWG) Workshop (Paris, France)
- May 2016 **Structure of the shear-line polar low south of Svalbard**
NORPAN kick-off meeting (Tokyo, Japan)

Poster presentations

- Jul 2015 **Structure and dynamics of a shear-line polar low during a cold-air outbreak over the Norwegian Sea**
Royal Meteorological Society Student Conference (Birmingham, UK)
- Mar 2015 **Structure and dynamics of a shear-line polar low during a cold-air outbreak over the Norwegian Sea**
Dynamics of Atmosphere-Ice-Ocean Interactions in the High Latitudes workshop (Rosendal, Norway)
- May 2014 **Numerical modelling of polar mesocyclones dynamics diagnosed by the energy budget**
European Geosciences Union (EGU) General Assembly (Vienna, Austria)
- Apr 2013 **Impact of subgrid-scale vegetation heterogeneity on results of climate model simulation of carbon cycle**
European Geosciences Union (EGU) General Assembly (Vienna, Austria)
- Apr 2013 **Numerical modelling of polar mesocyclones generation mechanisms**
European Geosciences Union (EGU) General Assembly (Vienna, Austria)

Awards and Scholarships

- 2017 **Best Presentation Award**
Cambridge Earth Systems Science EnvEast Doctoral Alliance (CEEDA) Symposium
- 2016 **Travel Bursary**
WWRP/WCRP/Bolin Center Polar Prediction School
- 2015 **Travel Award**
Dynamics of Atmosphere-Ice-Ocean Interactions in the High Latitudes workshop
- 2014-2018 **Lord Zuckerman scholarship**
School of Environmental Sciences, University of East Anglia
- 2014 **Young Scientist's Travel Award (YSTA)**
European Geosciences Union (EGU) General Assembly
- 2014 **Russian Academy of Sciences Young Scientist Medal**
In the area of oceanology, atmospheric physics and geography
- 2009 **3rd place in the All-Russian Geography Olympiad**
- 2009 **1st place in the Lomonosov Geography Olympiad**

Grants

- 2014-2016 **Characteristics of the mesoscale atmospheric circulations in the Arctic and their influence on the atmosphere-ocean energy exchange**
Russian Foundation for Basic Research (RFBR) Grant
- 2013-2015 **Multiscale modelling of turbulent atmospheric flow above sea surface with inhomogeneous ice cover**
Russian Foundation for Basic Research (RFBR) Grant
- 2013-2015 **Developing and verification of the mesoscale sensible heat and tracers fluxes over hydrologically inhomogeneous surface**
Grant of the President of Russian Federation

Computer Skills

Operating systems	Linux , Unix, Windows
Computer Languages	Python , Fortran
Data visualisation	Python , MATLAB, NCL, Paraview
Parallel programming	MPI, OpenMP
Version control systems	Git, Subversion
Document preparation	LaTeX, Markdown
Web development	HTML, CSS

Languages

Russian	Native speaker
English	Fluent
French	Basic

Vocational training

- Apr 2016 WWRP/WCRP/Bolin Center Polar Prediction School
- Dec 2014 UK Met Office Unified Model Training
- Sep-Dec 2011 Global Climate Change course

EnvEast DTP

- Jun 2017 Weather presenting course
- Jan 2017 Raspberry Pi course

Safety training

- Feb 2017 Level 1 First Aid for Field Work course
- Dec 2017 Sea Survival course

Fieldwork Experience

- Aug 2012 **Field practice in meteorology**
Study of prevailing mesoscale processes via wind characteristic measurements and lake hydrothermodynamical modelling (Kronotsky National Reservation, Kamchatka pen., Russia)
- Jan-Feb 2012 **Field practice in meteorology**
Measurements of the convective boundary layer over the polynya (White Sea Biological Station, Karel Republic, Russia)
- Jun-Jul 2011 **Field practice in meteorology**
Basic field techniques in atmospheric sciences (atmosphere vertical structure, turbulence and radiative measurements) (Khibiny mountains, Murmansk region, Russia)
- Jan-Feb 2011 **Field practice in meteorology**
Micrometeorological measurements, ice-breeze modelling (White Sea Biological Station, Karel Republic, Russia)
- Jun-Jul 2010 **Field practice in geographical studies**
Basic training in meteorology, hydrology, geomorphology, soil science, biogeography, topography (Kaluga region, Russia)

Teaching Experience

- 2015-2017 **Teaching assistance**
University of East Anglia (Norwich, UK)
Modelling Environmental Processes, Meteorology, Numerical Skills for Scientists, Physical and Chemical Processes in Earth's System
- Apr 2017 **Field course teaching assistance**
University of East Anglia (Norwich, UK)

Membership in Professional Associations

- 2014-Present Royal Meteorological Society (RMetS)

Editorial Service

- Acted as reviewer for Quarterly Journal of the Royal Meteorological Society

Vocational Experience

- Jan 2018 **Training course "Introduction to Python in Environmental Sciences"**
Course instructor
University of East Anglia (Norwich, UK)
- Nov 2016 **Training course "Introduction to Python in Environmental Sciences"**
Course leader
University of East Anglia (Norwich, UK)
- 2015-Present **Python group leader**
Founder and leader of the Python programming language users group
University of East Anglia (Norwich, UK)
- Mar 2015 **Rapporteur**
Dynamics of Atmosphere-Ice-Ocean Interactions in the High-Latitudes workshop
Rosendal, Norway
- Jun-Jul 2014 **Professional translator**
Translation of documentation of meteorological equipment (En-Ru)
Retail and Consumer Merchandise "Meteomaster" (Moscow, Russia)
- Aug-Sep 2013 **Weather Forecaster**
Forecast and Briefing Service
Main Aviation Meteorological Centre, Vnukovo Airport (Moscow, Russia)

Outreach

- 2015-Present **Contributor to SciSnack blogging platform**
- [Polar Lows: What Fuels Arctic Hurricanes?](#)
 - [Disastrous Disaster Movies](#)
 - [Worldwide Weird Weather Words](#)

References

Prof. Ian Renfrew
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Prof. Thomas Spengler
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