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# Denis Sergeev

School of Environmental Sciences
University of East Anglia
Norwich
NR47TJ
UK

d.sergeev@uea.ac.uk
dennissergeev.github.io
dennissergeev
meteodenny

Areas of Interest

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

## Education

2014-Present PhD in Meteorology
Thesis title: **Dynamics and Predictability of Polar Lows**
*School of Environmental Sciences*
*University of East Anglia*
Supervisor: Ian A. Renfrew

2009-2014 Specialist Diploma in Meteorology
With Honours
Thesis title: **Idealised numerical modelling of polar mesocyclone dynamics**
*Faculty of Geography*
*Lomonosov Moscow State University*
Supervisor: Victor Stepanenko

## Publications

### Peer-reviewed

1. Sergeev DE, Renfrew IA, and Spengler T. 2018. Modification of polar low development by orography and sea ice. *about to be submitted*
2. Sergeev DE, Renfrew IA, Spengler T, and Dorling SR. 2017. Structure of a shear-line polar low. *Quaterly Journal of the Royal Meteorological Society*, **143**(702): 12-26
3. 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
4. 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

1. 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
3. 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

## 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

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| 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

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|---|---|
| Russian | Native speaker |
| English | Fluent |
| French | Basic |