Updated: Feb 2017

# Denis Sergeev

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meteodenny

#### Areas of Interest

- · Polar low 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, Spengler T, and Dorling SR. 2017. Structure of a shear-line polar low. Q.J.R. Meteorol. Soc., 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
- 3. 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
- Sergeev DE, Zamyatina MY, Stepanenko VM. 2013. Thermal regime features of Kronotsky lake (in Russian). Kronotsky State Natural Biosphere Reserve Proceedings, 329-41
- 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 papers67-69

### Awards and Scholarships

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

oog 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