

# Multi–Scales and –Processes Integrated Modelling, Observations and Assessment for Environmental Applications

## Young Scientist Summer School (YSSS)

Moscow State University, Moscow, Russia  
27 July – 7 August 2020



## PRE-ANNOUNCEMENT

AoF ClimEco & RSF MegaCity projects



### Aim

This YSSS will introduce young generation of researchers to special topics in atmospheric and environmental sciences, Earth system modelling approaches and applications. During the school, participants will learn about the current progress and challenges in Earth system research; meteorological, hydrological and atmospheric composition modelling and observations (including ground-based and remote-sensing); and modern technologies for environmental studies and assessments (including health impacts). The programme will consist of theoretical lectures and practical exercises (to be accomplished by students as small-scale research projects ending with presentation of the project results).

# YSSS Programme

- **Block 1** – Current progress and challenges in Earth system research (atmosphere-hydrosphere- biosphere);
  - **Block 2** – Modelling (Earth system, numerical weather prediction, atmospheric chemical transport, seamless online integrated, atmospheric boundary layer) and specific challenges;
  - **Block 3** – Chemistry (gas, liquid) and aerosols (properties, dynamics, chemistry, micro-physics, interactions);
  - **Block 4** – Emissions, data assimilation, models evaluation;
  - **Block 5** – Ground-based and remote sensing observations; EU and Russian strategies for hydro-meteorological, ecosystems and atmospheric composition monitoring; SMEAR stations; measurements for atmospheric composition, ecosystems, meteorological, hydrological, urban scale;
  - **Block 6** - GIS technologies in environmental sciences; Environmental (land, water, terrestrial ecosystems) and human health assessments.
- & **Practical Exercises as Small-Scale Research Projects (SSRP)** on selected research topics to be accomplished by groups of students led by teachers

## Organizing Committee

Nikolay Kasimov, Sergey Chalov, Pavel Konstantinov, Natalia Frolova  
*Faculty of Geography, Moscow State University, Russia*

Markku Kulmala, Jaana Bäck, Sergej Zilitinkevich, Hanna Lappalainen, Alexander Mahura  
*Institute for Atmospheric and Earth System Research, University of Helsinki, Finland*

## Local Organizers (secretariat)

Sergey Chalov, Pavel Konstantinov, Anatoly Tsyplenkov, Daria Litovchenko

## Organizers

Pan-Eurasian Experiment (PEEX), AoF “ClimEco” & RSF “MegaCity” projects,  
Russian Geographical Society (RGS), Russian Hydrometeorological Society (RHMS),  
World Meteorological Organization (WMO)

## Target audience

Young Researchers (Post Docs, PhDs, MSc, advanced BSc)

## Selection criteria

Based on motivation letter, other skills (e.g. programming, etc.), CV & publication list

**Registration deadline** **31 March 2020**

**Language** English

**Costs** no fee

Please, send your application package (*i.e. completed application form, motivation letter, CV & publication list*) to secretariat: [wlr2020@geogr.msu.ru](mailto:wlr2020@geogr.msu.ru)