

# PHY-EPS hectometric Workshop

5-7 February 2024

Deutscher Wetterdienst, Offenbach am Main, Germany - Room Blau

## Monday, 5th of February

### 13:00 Opening

Greetings (DWD)

Aim of the workshop (Chiara)

13:30 - 13:50 Review of last 100m workshop (Natalie, Humphrey)

13:50 - 14:30 Ice breaking activity:

- round table introduction
- what do you plan to do with these models? (come prepared! collection of 1-slide from each institution/group)

*Session: observations (chairperson: Chiara)*

14:30 - 15:00 Cathy Hohenegger: "FESSTVaL: The Field Experiment on Submesoscale Spatio-Temporal Variability in Lindenberg" (invited)

### 15:00 - 15:30 coffee break

15:30 - 15:55 Maike Ahlgrimm: "Evaluating ICON-LEM simulations with observations from the FESSTVaL campaign"

15:55 - 16:20 Russell Glazer: "High resolution observations and modelling during a heatwave: urbisphere-Berlin"

16:20 - 16:45 Natalie Theuwees: "Using doppler lidar measurements to evaluate the representation of the boundary layer in high-resolution numerical models"

16:45 - 16:50 Humphrey Lean and Kirsty Hanley: "A short summary of the WesCon campaign"

16:50 - 17:20 Dev Niyogi: "Building scale digital twins and approaches related to hectometer modeling" (online)

17:20 - 17:45 - Discussion time: observations (chairpersons: Cathy, Alison)

**17:45 end of the day**

## **Tuesday, 6th of February**

*Session: ensemble (chairperson: Alfons Callado)*

9:00 - 9:25 Yujue Liu: "Evaluation and analysis of Meteorological Service for Beijing Winter Olympic Games supported by RMAPS-LES Prediction System"

9:25 - 9:50 Kirsty Hanley: "An urban-scale ensemble for WesCon"

9:50 - 10:15 Aristofanis Tsiringakis: "Impact of horizontal resolution and model uncertainty scheme in ensemble prediction of extreme weather events"

### **10:15 - 10:45 coffee break**

10:45 - 11:10 Francois Bouttier: "Predictability limits of short-range high precipitation events"

11:10 - 11:35 Martina Tudor: "Predictability and hectometric scale activities in RC LACE: A-LAEF and TOUCANS"

11:35 - 12:00 Zahra Parsakhoo: "Studies of Convection-Permitting Ensemble Forecasting for ICON-D2 with a 1km Nest over the Alps"

12:00 - 12:30 - Discussion time: ensemble (chairpersons: Inger-Lise, Anne)

### **12:30 - 13:30 lunch**

*Session: turbulence (chairperson: Wim de Rooij)*

13:30 - 14:00 George Efstathiou: "High-fidelity weather forecasts in the grey-zone of convective turbulence" (invited)

14:00 - 14:25 Humphrey Lean: "Boundary Layer and Convection issues with the 100m scale UM"

14:25 - 14:50 Ivan Bastak Duran: "Prognostic TKE scheme in the IFS model"

14:50 - 15:15 Eric Bazile: "Still uncertainties in the physics at very high resolutions?"

### **15:15 - 15:45 coffee break**

15:45 - 16:10 Günther Zängl: "ICON at high resolution"

16:10 - 16:35 Brigitta Goger: "Modelling the mountain boundary layer: Does higher resolution improve model performance?"

16:35 - 17:00 Daniela Littmann: "High-Resolution Modelling of Storm Events over the complex Alpine Terrain"

17:00 - 17:40 - Discussion time: turbulence (chairpersons: Eric, Natalie)

**17:40 end of the day**

## **Typical dinner in Frankfurt (self-paid)**

### **Wednesday, 7th of February**

*Session: surface (chairperson: Jan-Peter)*

9:00 - 9:30 Anurag Dipankar: "Facing heterogeneities with increasing resolution" (invited)

9:30 - 9:55 Jacopo Canton: "Resolving cities in a global model"

9:55 - 10:20 Birgit Sützl: "Optimising orography for global high-resolution simulations"

10:20 - 10:45 - Discussion time: surface (chairpersons: Anurag, Jan-Peter)

#### **10:45 - 11:15 coffee break**

*Session: convection (chairperson: Maike Ahlgrimm)*

11:15 - 11:45 Alison Stirling: "The ParaChute programme: overview and focus on the development of a scale-aware convection scheme" (invited)

11:45 - 12:10 Wim de Rooy: "Convection parameterization at high resolution"

12:10 - 12:35 Martin Köhler: "Using ICON-LES to understand convective anvil processes"

#### **12:35 - 13:30 lunch**

13:30 - 13:55 Yann Seity: "Towards AROME-500m operational configurations at Météo-France in 2024: strengths and weaknesses"

13:55 - 14:20 Alberto de Lozar: "Added Value of higher resolution for forecasts of severe convection?"

14:20 - 14:45 Andrzej Mazur: "Ensemble forecasts in hectometric scale – comparison of results for 7, 2.8 and 0.7 km resolution model runs – case study"

14:45 - 15:15 - Discussion time: convection (chairpersons: Humphrey, Martin)

#### **15:15 - 15:45 coffee break**

15:45 - 17:15 Summarising activity:

- summarise key points (round table of key points)
- discussion; identify follow up and collaborations
- next steps (review the status; next meetings)

#### **17:30 end of the workshop**

**Closing dinner in Offenbach (self-paid)**