GMOS-Train winter school on modelling

6th – 8th February, 2023

&

modelling workshop/hackathon

9th February – 3rd March, 2023

Day 1, Monday, 6th February 2023 – Part I: Introduction and state of PhD projects

9:00 – 9:30	*Introduction: Lecture and workshop aims, plan for the upcoming weeks, organization*
	(J. Bieser & M. Ramacher, hereon)
9:30 – 10:30	*ESR presentations, á 20min: what can your PhD project gain from modelling?*
10:30 – 11:00	*Coffee break*
11:00 – 12:00	*ESR presentations, á 20min: what can your PhD project gain from modelling?*
12:00 – 13:00	*Discussion*
13:00 – 14:30	*Lunch break*
14:30 – 15:30	*ESR presentations, á 20min: what can your PhD project gain from modelling?*
15:30 – 16:00	*Coffee break*
16:00 – 17:00	*ESR presentations, á 20min: what can your PhD project gain from modelling?*
17:00 – 18:00	*Discussion*

Day 2, Tuesday, 7th February 2023 – Part II: Introduction to numerical modelling

09:00 – 10:30   *Introduction to Informatics & programming I*

(J. Bieser, hereon)

10:30 – 11:00   *Coffee break*

11:00 – 12:30   *Introduction to Informatics & programming II*

(J. Bieser, hereon)

12:30 – 14:00   *Lunch break*

Excursion to the DKRZ German Climate Computing Centre (Room 034 + Supercomputer visit)

14:00 – 15:00   *DKRZ lecture 1: High performance computing*

(A. Fuchs, DKRZ)

15:00 – 16:00   *Visiting DKRZ supercomputer levante*

(M. Böttinger, DKRZ)

16:00 – 17:00   *DKRZ lecture 2: Visualization & outreach*

(M. Böttinger, DKRZ)

Day 3, Wednesday, 8th February, 2023 – Part III: Introduction to numerical modelling

9:00 – 10:00   *Development and limitations of weather forecasting - A modelling perspective*

(M. Quante, hereon)

10:00 – 11:00   *Introduction to hydrodynamic and physical ocean modelling*

(K. Logemann, hereon)

11:00 – 11:30   *Coffee break*

11:30 – 12:30   *Chemistry in numerical models*

(V. Matthias, hereon)

12.30 – 13.30   *State of the art and applications of contemporary mercury models*

(O. Travnikov, JSI)

13:30 – 14:30   *Lunch break*

14:30 – 15:30   *Ernst Hasselmann lecture*

(Hans v. Storch, Hamburg University)

15:30 – 16:00   *Coffee break*

16:00 – 17:00   *How to interpret model output (impulse + discussion)*

(Hans v. Storch, Hamburg University)

Day 4, Thursday, 9th February, 2023 - PhD project workshops to prep. modelling workshop

09:00 – 10:30	*Workshop: Hackathon preparation*
11:00 – 11:30	*Coffee break*
11:30 – 12:30	*Workshop: Hackathon preparation*
12:30 – 14:00	*Lunch break*
14:00 – 15:30	*Workshop: Hackathon preparation*
15:30 – 16:00	*Coffee break*
16:00 – 17:30	*Workshop: Hackathon preparation*

Day 5, Friday, 10th February, 2023 - PhD project workshops to prep. modelling workshop

09:00 – 10:30	*Workshop: Hackathon preparation*
11:00 – 11:30	*Coffee break*
11:30 – 12:30	*Workshop: Hackathon preparation*
12:30 – 14:00	*Lunch break*
14:00 – 15:30	*Workshop: Hackathon preparation*
15:30 – 16:00	*Coffee break*
16:00 – 17:30	*Workshop: Hackathon preparation*

The lecture week will be followed by a 3-week hackathon where ESRs will get hands on lessons and practical knowledge in various modelling techniques. Based on their previous work in GMOS-Train and preparations during earlier secondments at Hereon selected ESRs will work on combining observational results with model studies.

During the hackathon, there are several soft skill workshops planned (but still have to be confirmed):

How to give a bad presentation	(M. Reckermann, tbc)
Writing publications	(N.N., tbc)
Ethics in science	(M. Ramacher, tbc)
Code and Context	(K. von Roth, tbc)

<u>Locations:</u>

   <u>Modelling winter school:</u>
      Mon 6th Feb - 10th Feb: ZMAW room 133, Centre for Atmospheric and Marine Sciences, Bundesstraße 53, 20146 Hamburg 1st floor

   <u>Hackaton / modelling workshops:</u>
      Mon 13th Feb - 4th Mar: 4Walls, Deichstraße 47, 3rd floor, 20459 Hamburg

   <u>GMOS-Train annual meeting:</u>
      Mon 6th Mar - 8th Mar: ZMAW room 022/023, Centre for Atmospheric and Marine Sciences Bundesstraße 53, 20146 Hamburg 1st floor