

## Preliminary Program

### **Earth-System Modelling Workshop**

University of Helsinki and Finnish Meteorological Institute (FMI)  
Brainstorm, Dynamicum, Helsinki, Finland on 7-9.10.2013

Co-sponsored by the Finnish Cultural Foundation and three Nordic Centres of Excellence CRAICC, DEFROST and SVALI

#### **Monday 7.10.2013**

13:30 Opening of workshop in Dynamicum, FMI – Prof. Markku Kulmala

Introduction to present state of ESM in Finland – Chair Ari Asmi

13:40 Introduction to ESM activities in Finland (Heikki Järvinen)

14:00 Aerosols in global models (Risto Makkonen)

14:20 Interactions between aerosols, clouds and radiation (Petri Räisänen)

14:40 Biosphere and greenhouse gases (Tuula Aalto)

15:00 Atmospheric dynamics (<noname>, Heikki Järvinen)

15:20 Data assimilation and optimisation of models (<noname>, Heikki Järvinen)

15.40 Coffee break

Introduction of ESM in abroad – Chair Risto Makkonen

16:00 EC-Earth – consortia (Bart van der Hurk, Tanja Suni)

16:35 Unified Model - Hadley Centre (Martin Best)

16:55 MPI-ESM (ICON-models; MPI-M) (Christian Reick)

17:15 NorESM - atmospheric component and aerosols development (Trond Iversen)

17:35 Overview of the ocean/land biogeochemistry in NorESM (Jerry Tjiputra)

17:55 Biosphere-atmosphere feedbacks in regional and global ESMs - MERGE  
(Ben Smith)

18:15 Discussion

18:30-19:45 Dinner in Dynamicum

#### **Tuesday 8.10.2013**

08:50 Start of day

Introduction of ESM in abroad (continue) – Chair Heikki Järvinen

09:00 Challenges in modelling terrestrial biosphere - climate interaction (Martin Claussen)

09:20 ESM activities at Stockholm University - EC-Earth and NorESM (Annica Ekman)

09:40 Towards regional projection of further climate: An Improved dynamical downscaling method with GCM bias corrections (Xu Zhongfeng)

10:00 Beijing Climate Center Climate System Model (BCC\_CSM) development and application  
(Wu Tongwen)

10:20 MIROC-ESM (Japan) (Hisashi Sato)

10:40 Arctic climate response to soot emissions at different latitudes (Jon Egill Kristjánsson)

11:00 Global co-variation of climate with turnover times of ecosystem carbon - contrasts between data and models (Nuno Carvalhais)

11:20 Estimating future anthropogenic aerosol emissions with GAINS model - IIASA (Pauli Paasonen)

11:40 Multi-scale Modeling of Aerosols, Clouds, and Precipitation - Super-parameterized NCAR CAM5 (Wang Minghuai)  
12:00 GFDL ESM and historical warming reduced due to enhanced land carbon uptake (Elena Shevliakova)

12:20 Lunch

Work group discussions

13:00 Afternoon session introduction

13:10 Discussion in work groups

15:00 Coffee break

15:20 Discussion continue

17:45 End of day

18:30-19:30 Dinner in Park Hotel Käpylä

### **Wednesday 9.10.2013**

09:00 Start of day

09:10 Work group presentations

11:00 Discussion and conclusion

12:30 End of workshop and lunch