



**Barcelona
Supercomputing
Center**

Centro Nacional de Supercomputación



Strategies to reduce the initial shock



Chairs: Noel Keenlyside and Masahide Kimoto



Identifying and reducing model systematic errors

- Systematic model errors lead to initial forecast shock
 - When does this effect forecast skill?
- What errors are the most detrimental to forecast skill?
 - SST errors, wind errors, tropics versus extra-tropics?
 - Also, errors in thermocline, ocean convection etc.
 - How to objectively address this question?
- Determine the most problematic processes for targeted research
 - Analysis of initialised predictions
 - Full and partial coupled configurations
 - Transpose AMIP

Statistical and dynamical approaches to reduce model error

- Anomaly initialisation
- Anomaly coupled and flux correction approaches
- Super-model approaches

Approaches to reduce initial state imbalances

- Data assimilation
- Weakly versus strongly coupled data assimilation
- Filtering approaches
- How to initialise high-resolution models

Prepare session summary for the wrap up presentation