# Concept for metadata organization and management in automated data analyzation workflows in earth system science

M. Stockhause (1), S. Kindermann (2)

(1) Max Planck Institute for Meteorology (MPI-M), Germany, (2) German Climate Computing Center (DKRZ), Germany

In earth system science the amount of data as well as the diversity and number of data users are growing, rapidly. To find appropriate data a uniform data exchange description is established by the large international data centers using the ISO guidelines 19115/19139 with CF (Climate and Forecast) standard names convention. Apart from a uniform description an intelligent metadata organization is essential for effective data search and reuse. ISO 19139 provides different possibilities to describe data interdependencies: hierarchy (parent-child relation), provenance (lineage), and aggregation.

The poster illustrates the concept to use these metadata grouping techniques for scientific workflows within a Grid (C3Grid: Collaborate Climate Community Data and Processing Grid). The metadata lifecycle is presented with special emphasis on the interdependencies between original (meta)data and its derived products as well as the design of a metadata service which hides the complexity of the ISO 19139 metadata scheme.