Models
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Statistics
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Predicting Performance
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SCIL
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Representative Selection
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ESDM
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Challenges in the Domain of climate/weather

University of Reading

- High data volume and velocity
- Data management practice does not scale
  - e.g., hierarchical namespaces does not reflect use cases
  - Scientists spend quite some time to define the namespace
- Suboptimal performance (& performance portability) of data formats
  - Tuning for NetCDF, HDF5 and GRIB necessary
  - Scientists worry about interoperability
- Data conversion is often needed
  - Between formats such as NetCDF and GRIB
  - To combine data from multiple experiments, time steps, ...
- External data services to share data in the community
  - (Scientific) metadata is provided by databases