Hui Wan

Earth Scientist

Pacific Northwest National Laboratory (Richland, WA)

Personal Background and Experience

- Meteorologist by training

- Involvement in global climate model development since grad school (2002 to date; China, Germany, US)

- Participant of DOE's Energy Exascale Earth System Model (E3SM) development since 2014

- Involvement in an E3SM software modernization project since 2016; personal focus: promoting a culture of testing/verification

- Currently PI of a DOE SciDAC project on numerical algorithms for atmospheric physics in E3SM (solution accuracy and convergence)

- Working at the interface between atmospheric physicists and computational scientists

Challenges

- Next generation (exascale) model development requires much more involved collaborations between climate scientists and computational scientists (*not* throwing problems over the fence)

- Progress: increasing emphasis on interdisciplinary collaborations in some E3SM-related projects (SciDAC and others)

- Could benefit from strategies to
  - efficiently overcome language barriers and perspective differences
  - quickly expand collaboration to cover more model components

- Another challenge observed across the E3SM project: difficulty in recruiting very good people to join the effort (competition with many much-better-paid jobs?)