Ji-Woo Lee
Supported Projects: PCMDI, ESGF, CASC postdoc

Quarterly Report for October 1, 2016 – December 31, 2016

Quarter Accomplishments:

- **PMP**
  - Implemented climate variability modes diagnostics to PMP and developed new EOF analysis approach for climate variability modes using projection of observation
  - Analyzed 5 modes of variability obtained from about 200 CMIP5 simulations (all available models and ensemble members) and advanced analysis result for journal paper writing
- **UV-CDAT**
  - Developed UV-CDAT scientific examples and advanced them for their easy usage (e.g. multi-model mean, difference fields between models or observation, EOF analysis, etc.)
- **External collaboration**
  - Collaborated with Kongju National University in Korea on development of hydrological modeling component in global climate model (GCM)
  - Built collaboration with San Jose State University regarding research on climate model evaluation focusing on cloud microphysics
  - Built collaboration with Boise State University regarding using advanced statistical analysis method for climate extreme change in CMIP5 simulation
  - Revised a co-authoring paper regarding climate extreme change in regional climate modeling which is in reviewing process at Climate Dynamics
- **Awards**
  - Best Peer Reviewer, awarded by Korean Meteorological Society [October 2016]
- **Seminar**
  - Gave research seminar at San Jose State University [November 2016]
- **Conference Presentations (AGU)**
  - **Lee, J.** Y. Xue, F. De Sales, I. Diallo, L. Marx, R. Yang, J. Kinter, D. N. Williams, 2016: Impact of interactive A/O feedback on Multi-decadal Variability of East Asian and West African Summer Monsoon in the CFSv2 Simulation.
  - Xue, Y, Y. Liu, P. M. Cox, F. De Sales, **J. Lee,** M. D. Hartman, W. J. Parton and B. Qiu, 2016: Modeling biophysical/biogeochemical/ecological/ ocean/atmosphere two way interactions using SSiB4/TRIFFID/ DAYCENT: challenge and promising.

- Wang, Y., Y. Xue, B. Huang and **J. Lee**, and F. De Sales, 2016: An Assessment of the SST Simulation Using the Climate Forecast System Coupled to the SSiB Surface Model.
- Christensen, C., S. Liu, G. Scorzelli, **J.-W. Lee**, P.-T. Bremer and V. Pascucci, 2016: Embedded Domain-Specific Language and Runtime System for Progressive: Spatiotemporal Data Analysis and Visualization.
- Park, H.-H., E.-C. Chang, Y. Kim and **J. Lee,** 2016: Study on the Impact of Hydrological Components on the Atmospheric Condition over the Korean Peninsula by the WRF-hydro Coupled Model System.

Next Quarter's Roadmap

- Merge variability diagnostics to PMP official version
- Submit a paper regarding PMP work (leading)
- Advance UV-CDAT scientific examples
- Prepare presentations in upcoming AMS conferences

Resources Required to Achieve Goals

- Nothing special for now