Dean N. Williams
Analytics and Informatics Management Systems
Supported Projects: (ESGF, UV-CDAT, ACME, PCMDI, DREAM, other)

Quarterly Report for October 1, 2015 – December 31, 2015

Quarter Accomplishments:
- I Attended the DOE Advanced Scientific Computing Research Data (ASCR) Management, Visualization, and Analysis of Experimental and Observational Data (EOD) where I presented ACME workflow architecture, ESGF architecture, and UV-CDAT visualization capabilities **[October 2015]**
- For LLNL AIMS member visibility, I facilitated a meeting with the ACME PI Dave Bader and individual group members **[October 2015]**
- Remotely attended the 19th Session of the Working Group on Coupled Modeling (WGCM) where I presented the state of the Earth System Grid Federation and answered questions regarding the preparedness of ESGF for CMIP6. **[October 2015]**
- For LLNL diversity recruitment, I attended the Educational Opportunity Fair held at California State University, Chico. **[October 2015]**
- I attended the 2015 IEEE International Conference on Big Data, held in Santa Clara, California. At the meeting, I presented the IEEE paper titled, "Strategic Roadmap for the Earth System Grid Federation" **[October 2015]:**
  - **Williams, Dean N.;** Lautenschlager, Michael; Balaji, Venkatramani; Cinquini, Luca; DeLuca, Cecilia; Denvil, Sebastien; Duffy, Daniel; Evans, Ben; Ferraro, Robert; Juckes, Martin; Trenham, Claire; "Strategic Roadmap for the earth system grid federation", Big Data, 2015 IEEE International Conference Proceedings: pages 2182-2190, Santa Clara, CA, USA, October 29 2015 – November 1 2015, DOI: 10.1109/BigData.2015.7364005.
- As the ACME Workflow and Data Group Lead, I attended the ACME All Hands Meeting, held in Washington, D.C. **[November 2015]**
- I participated in LLNL's External Review Committee Poster Showcase that was hosted by PLS and GS on November 10. At the poster showcase, I presented and represented the LLNL Climate Programs' big data infrastructure and strategic planning **[November 2015]**
- For LLNL AIMS member visibility, I facilitated a meeting with PCMDI project leads (i.e., Karl Taylor, Peter Gleckler, and Paul Durack) and individual group members **[December 2015]**
- I facilitated meetings with the ESGF BER program manager (i.e., Jay Hnilo) members of the LLNL AIMS Group **[December 2015]**
- December 7 – 11, I hosted the 2015 5th Annual Earth System Grid Federation Face-to-Face Conference **[December 2015]**

- From December 14th through 18th, I attended the AGU Fall Meeting, held in San Francisco. At the meeting I presented three papers on ESGF, UV-CDAT, and DREAM. I also co-chair two sessions. **[December 2015]**
- I was the guest speaker for the Dougherty Valley High School underrepresented group in Science, Technology, Engineering, and Mathematics (STEM) **[December 2015]**
- As the lead (i.e., Chair, PI, or Group Lead), I managed and set the technical direction for ESGF, UV-CDAT, ACME Workflow and Data Management, and DREAM **[October - December 2015]**

Next Quarter's Roadmap
- Work on the Working Group on Virtual Data Integration Workshop Report **[January – March 2016]**
- Work on the 2015 5th Annual ESGF F2F Conference Report **[January – March 2016]**
- Work on the DOE ASCR EOD Workshop Report **[January – March 2016]**
- Work on ESGF Software Security Plan document **[January – March 2016]**
- Work on two first author papers: Eos article titled, "Better Tools to Build Better Climate Models" and BAMS article titled, "A Global Repository for Planet-Sized Experiments and Observations" **[January – March 2016]**
- I will continue to lead and manage ESGF, UV-CDAT, ACME Workflow, DREAM, and other software development efforts **[January – March 2016]**
- I will lead or participate on several upcoming proposal BER and ASCR calls **[January – March 2016]**

Resources Required to Achieve Goals
- Hardware is needed for continued support of BER and ASCR supported projects (e.g., ESGF, PCMDI, and ACME)
    - Clusters and GPUs are needed for visualization development and server-side (remote) computing.
    - Refreshing storage hardware is needed along with additional storage for CMIP6 and ACME.