Dr. Yaxing Wei

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EDUCATION

Ph.D. in **Safety Technology and Engineering**, December 2007
University of Science and Technology of China (USTC), Hefei, Anhui, China
Cooperative Research at George Mason University (GMU), Fairfax, VA, USA
Dissertation: *Research on Data Grid-based Geospatial Information Collaborative Sharing System*
Advisors: Dr. Liping Di and Dr. Guangxuan Liao

B.S. in **Electronic Engineering and Information Science**, July 2001
Special Class for Gifted Young (SCGY), USTC, Hefei, Anhui, China

RESEARCH INTERESTS

- Geospatial information interoperability and standardization
- Advanced geospatial data management, discovery, visualization, analysis, and distribution
- Data management and geospatial information systems for environmental and climate research
- Scientific workflows and data provenance
- Cloud computing, data fusion, and machine learning

RESEARCH PROJECTS

- ORNL Climate Change Science Institute (CCSI), Call for Ideas. NG-Daymet: Next-Generation Gridded Weather Data with High-resolution and Low-Latency through Data Fusion for Broader Energy and Environmental Research. **Yaxing Wei (PI)** with Michele Thornton, Shih-Chieh Kao, and Melissa R. Allen. 2018. **$50K**.
- Multi-scale Synthesis and Terrestrial Model Intercomparison Project (MsTMIP) Phase II. **Yaxing Wei (Co-I)** with Deborah Huntzinger (PI). NASA ROSES Carbon Cycle. 2013-2018. **$1.6M**.
- Evaluation of the Large-Scale and Regional Climatic Response across North Africa to Natural Variability in Oceanic Modes and Terrestrial Vegetation among the CMIP5 Models. **Yaxing Wei (Co-I)** with Michael Notaro (PI). Department of Energy (DOE) SciDAC. 2014-2017. **$599,712**.

AWARDS

- Oak Ridge National Laboratory Significant Event Awards (SEA) for Significant Contributions to “Global Patterns of Drought Recovery” published on Nature (https://doi.org/10.1038/nature23021), 2017.
- 2015 World Data System (WDS) Data Stewardship Award for “Exceptional contributions to the improvement of

scientific data stewardship through their engagement with the community, academic achievements, and innovations". https://www.icsu-wds.org/community/data-stewardship-award/2015-award.

- Oak Ridge National Laboratory Supplemental Performance Award, 2014.
- Oak Ridge National Laboratory Significant Event Awards (SEA) for Significant Contributions to the National Hydropower Asset Assessment Program (NHAAP, https://nhaap.ornl.gov), 2013.
- Oak Ridge National Laboratory Supplemental Performance Award, 2012.
- 3rd place prize in the IEEE International Services Computing Contest, 2006.
- Winner of International Carbon Cup Open Geospatial Design Competition, 2004.
- Guanghua Educational Foundation Scholarship, 2001. USTC, China.
- Outstanding Student Scholarship, 1996, 1997, 1999, and 2000. USTC, China.

PROFESSIONAL EXPERIENCE

Lead Scientist, ORNL DAAC 1/2020 – present

- **Oak Ridge National Laboratory Distributed Active Archive Center (ORNL DAAC)**, *funded by NASA*

  Achievements:
  - Led the ORNL DAAC science team to provide guidance on the scientific direction of the ORNL DAAC.
  - Ensured that the data provider and data user perspective and needs are properly and continually represented.
  - Ensured that the dataset acquisition and ingest processes provide high quality and well-documented data to all users.
  - Served as point of contact with ORNL DAAC User Working Group (UWG) and NASA HQ Program Scientist.
  - Served as point of contact for NASA missions: ABoVE, ACT-America, and ATom.
  - Planned and organized annual UWG meetings and developed UWG recommendations together with UWG members.
  - Prepared biannual ORNL DAAC status reports for UWG and ESDIS.

Member, NASA ESDIS Standards Office 4/2018 – present

- **Earth Science Data and Information System (ESDIS) Standards Office**, *funded by NASA*

  Achievements:
  - Assist NASA ESDIS in formulating standards policy for NASA Earth Science Data Systems (ESDS).
  - Coordinate standards activities within ESDIS.
  - Provide technical expertise and assistance to standards related tasks within the NASA Earth Science Data System Working Groups (ESDSWG).

Geospatial Information Scientist, Oak Ridge National Laboratory 5/2011 – 12/2019

- **Oak Ridge National Laboratory Distributed Active Archive Center (ORNL DAAC)**, *funded by NASA*

  Achievements:
  - Designed and developed the Spatial Data Access Tool (SDAT, https://webmap.ornl.gov/ogc) to provide easier and faster on-demand visualization and download capabilities to a rich set of environmental science data products.
  - Designed and leading the team to develop MyWorkspace, the framework to support integrating and customizing data from Web-based visualization and access services (e.g. OGC WCS/WMS/WFS and

OPeNDAP) into reproducible, sharable, citable, and analysis-ready data bundles.
  - Led the project to identify a roadmap to enhance the Daymet weather data product by fusing remote sensing observations and through machine learning method.
  - Quality-check, quality-assure, and standardize environmental science data archived at the ORNL DAAC.
  - Published 12 North American Carbon Program (NACP) carbon cycle model output and benchmark datasets.
  - Deployed the ORNL DAAC THREDDS Data Server (TDS) and automated the publication of ORNL DAAC datasets through TDS.
  - Researched preservation and management of Earth science data provenance using digital content repository technology.
  - Co-organized 7 Environmental Data Management Best Practices Workshops & Webinars.

- **Multi-scale Synthesis and Terrestrial Model Intercomparison Project (MsTMIP) Phase I and Phase II**, *funded by NASA*

  Achievements:
  - Created consistent historical and future environmental driver datasets as standard inputs for terrestrial biosphere models.
  - Defined a standard data model for terrestrial biosphere model outputs.
  - Provided data management for more than 20 terrestrial biosphere modeling teams.
  - Developed MsTMIP data repository and access portal: https://nacp.ornl.gov/mstmipdata.
  - Made significant contribution to "Global Patterns of Drought Recovery" published on Nature (http://doi.org/10.1038/nature23021).
- **National Hydropower Assets & Resources Assessment Project (NHAAP)**, *funded by DOE*

  Achievements:
  - Created an advanced GIS-based method and performed the analysis to assess potentials for new small hydropower sites development and their environmental impacts in the contiguous U.S.
  - Main contributor to the research on impacts of climate change on federal hydropower generation.
  - Led the development of the Hydro Data Infrastructure (HDI) and tools to manage, present, and deliver U.S. national hydropower assets and resources for strategic planning and decision making to assess the current value of the nation's hydroelectric infrastructure, quantify the amounts of energy that could be feasibly extracted, and provide an environmental attribution resource for the DOE Water Power Program.
  - Co-authored three technical reports to DOE: 1) *Assessment of the Effects of Climate Change on Federal Hydropower*, 2) *An Assessment of Energy Potential at Non-Powered Dams in the United States*, and 3) *An assessment of energy potential from new stream-reach development in the United States: initial methodology report*.
- **Data Observation Network for Earth (DataONE)**, *funded by NSF*

  Achievements:
  - Co-authored whitepaper "ProvONE: A PROV Extension Data Model for Scientific Workflow Provenance".
  - Proposed the concept of Integrated Model Intercomparison Framework (IMIF) – a scientific workflow-based infrastructure to facilitate collaborative online TBM intercomparison and evaluation.
  - Proposed and mentored the 2013 DataONE Summer Intern Project: *Build Fundamental Components for Provenance-aware Model Exploration, Evaluation, and Benchmarking Cyber-infrastructure Prototype*.

- Developed new visualization techniques and tools to explore similarity/difference of multi-dimensional data for climate research.
- Co-authored a DataONE report: *Value Proposition for Provenance in DataONE*.
- Actively participated the DataONE Exploration, Visualization and Analysis (EVA) and Provenance working groups.

Post-doctoral Research Associate, Oak Ridge Associated Universities 7/2008 – 5/2011

- **The Oak Ridge National Laboratory Distributed Active Archive Center (ORNL DAAC)**, *funded by NASA*

  Achievements:
  - Created the Spatial Data Access Tool (SDAT, https://webmap.ornl.gov/ogc) to provide an interoperable mechanism for effective visualization and on-demand distribution of diverse Earth science geospatial data, including land cover, biogeochemistry, elevation, ecosystem, climate, soil, climate model outputs, etc. SDAT is a Web-based application that leverages OGC standards, Web 2.0, and digital Earth (e.g. Google Earth) technologies.
  - Was invited by Google and presented the *Spatial Data Access Tool: Enable Visualization and Access of Geospatial Data Using OGC services and Google Earth* as an official Google Tech Talk, part of the AtGoogleTalks series. Link to talk: http://www.youtube.com/watch?v=GxhcX7-vcy8.
  - Developed the ORNL DAAC Web Map Service (WMS) and Web Coverage Service (WCS) based on OGC standards.
  - Developed WebGIS systems for geospatial data visualization, analysis, and distribution based on ESRI GIS software, including ArcSDE and ArcIMS.
- **Modeling and Synthesis Thematic Data Center (MAST-DC)**, *funded by NASA*

  Achievements:
  - Created a dataset that estimates the current rate of atmospheric carbon dioxide sequestration over North America at sub-national scales and across different sectors, such as forest, crop, and other lands.
  - Provided data management support to NACP investigators and agencies performing modeling and synthesis activities.
  - Performed geospatial data analysis, including pixel-based spatial/temporal statistics, regional analysis, and conservative remapping, to support NACP interim synthesis activities.
- **National Hydropower Assets & Resources Assessment Project (NHAAP)**, funded by DOE

  Achievements:
  - Developed Web-based HydroGIS system to provide visualization, analysis, and access capabilities to the NHAAP geospatial database, which contains the current hydro infrastructure in the U.S., National Hydrography Dataset (NHD), Watershed Boundary Dataset (WBD), USGS Stream gauge observations, environmental data, etc.
  - Developed a method and performed the analysis to synthesize monthly mean stream flow time-series for ungauged streams with hydropower interest in the contiguous U.S. Based on the synthesized stream flows, estimated the potential added hydropower capacity by turning existing non-powered dams into hydropower facilities.
  - Proposed a technical solution and drafted the work plan for research on increasing the hydraulic head of non-powered dams through pipe flow diversion.
- **Wind ENergy Data & Information (WENDI) Gateway**, funded by DOE

  Achievements:

- Developed the Web-based WindGIS and contributed to the Wind Energy Metadata Clearinghouse. These two major components of the WENDI Gateway provided an easy one-stop shop for users, from experts to the general public, to find authoritative answers to wind energy-related questions.

Research Assistant, Center for Spatial Information Science and Systems (CSISS), GMU 2/2004 – 7/2008

- **Integration of OGC and Grid Technologies for Earth Science Modeling and Applications**, *funded by NASA*
  Achievements:
  - Designed and developed the Grid-enabled OGC Catalog Service for Web (CSW) that supported 3 different metadata information models: ebRIM, ISO 19115/19119, and FGDC.
  - Developed the Grid-enabled OGC Web Coverage Service (WCS) and Web Map Service (WMS).
  - Created an effective geospatial data access mechanism based on the concept of virtual geospatial data, Grid-enable OGC services, and data replication.
  - Main contributor for the building of a Globus Toolkit-based Data Grid system across 4 geographically dispersed sites (GMU, NASA GSFC, NASA Ames, LLNL) via Giga network. The Grid system contains 11 servers and shares more than 10TB of geospatial data.
  - Main contributor for the development of Grid-enabled Business Process Execution Language (BPEL) workflow system to automate and facilitate geospatial data processing through Grid services orchestration.
- **GeoBrain (Mobilization of NASA EOS Data and Information through Web Services and Knowledge Management Technologies for Higher-education Teaching and Research)**, *funded by NASA*
  Achievements:
  - Designed and developed the GeoDataDownload Web application, which provided geospatial data search from both local and EOS Clearinghouse (ECHO) catalogs and customized geospatial data download through OGC WCS.
  - Designed and developed the Virtual Data Product designer, an online tool for users to build recipes to create high-level geospatial data using certain types of processing services.
  - Main contributor for the Web-based virtual geospatial data product system, which automated and facilitated geospatial data processing through Web services orchestration.
  - Main contributor for the GeoBrain Online Analysis System (GeOnAS), which provides an online workspace for users to search, visualize, and analyze geospatial data.
- **Maintenance and Enhancement of the GEOSS Registry for Earth Observation**, *funded by GEO*
  Achievements:
  - Designed and developed the first version of GEOSS Component & Service Registry (CSR) system.

2006 IEEE International Services Computing Contest, Chicago, IL, 2006

- Team leader, cooperated with 5 collaborators.
- Designed and developed a Grid-based SOA system for effective and customized acquisition of geospatial data products.
- Led the development for the technical report and the peer-reviewed paper: *Effective Acquisition of Geospatial Data Products in a Collaborative Grid Environment*.

SOFTWARE DEVELOPED

- Spatial Data Access Tool (SDAT): https://webmap.ornl.gov/ogc
- Hydro WebGIS: https://hydro.ornl.gov/webgis/hydro
- GeoBrain Online Analysis System (GeOnAS): https://geobrain.laits.gmu.edu/OnAS/

- GeoDataDownload: https://geobrain.laits.gmu.edu/GeoDataDownload/
- GEOSS Component and Service Registry (CSR): http://geossregistries.info/geosspub/

WORKSHOPS/MEETINGS ORGANIZED

- Session: "Citizen Science Data and Information Quality". 2020 ESIP Summer Meeting. Online, mid-July, 2020. (***Chair***)
- Workshop: “Developing Community Guidelines for Consistently Curating and Representing Dataset Quality Information”. 2020 ESIP Summer Meeting. Online, mid-July, 2020. (***Co-organizer***)
- Session: "Exploring New Perspectives and Formulating Best Practices for Data Uncertainty Information". 2020 ESIP Summer Meeting. Online, mid-July, 2020. (***Co-chair***)
- Session: "Standardizing the Representation of Uncertainty Information in NetCDF - Status and Next Steps on the NetCDF/CF UQ Proposal". 2020 ESIP Summer Meeting. Online, mid-July, 2020. (***Co-chair***)
- Session: "Challenges of Consistently Curating and Representing FAIR Dataset Quality Information - IQC/BSC Pre-ESIP Workshop Report Out". 2020 ESIP Summer Meeting. Online, mid-July, 2020. (***Co-chair***)
- Session: “Citizen Science Data and Information Quality”. 2020 ESIP Winter Meeting. Bethesda, MD. Jan. 7-9, 2020. (***Chair***)
- Session: “Improving Error Assessment and Ensuring FAIR Uncertainty Information for Earth Science Observations” at AGU Fall Meeting 2019. San Francisco, CA. Dec. 9, 2019. (***Co-chair***)
- Session “Quality and Trustworthiness of Earth Science Data” at AGU Fall Meeting 2017, New Orleans, 15 December, 2017. https://agu.confex.com/agu/fm17/meetingapp.cgi/Session/26458. (***Chair***)
- Data Management Best Practices Workshop 2017 Joint NACP / Ameriflux Meeting Bethesda, MD March 26, 2017. https://daac.ornl.gov/workshops/DataMngmnt_03262017.html. (***Co-organizer***)
- Climate Change Science Institute (CCSI) Data Management Best Practices Webinar. August 18, 2016. (***Co-organizer***)
- Data Management Practices for Early Career Scientists Workshop. NASA Carbon Cycle and Ecosystems Joint Science Workshop College Park, MD April 19, 2015. https://daac.ornl.gov/workshops/NASACCEJSW2015.shtml. (***Co-organizer***)
- Data Management Practices for Early Career Scientists Workshop. Fifth North American Carbon Program Principal Investigator Meeting, Washington, DC, January 25, 2015. https://daac.ornl.gov/workshops/NACP2015.shtml. (***Co-organizer***)
- Environmental Data Management Best Practices Webinar. NASA EarthData Webinar Series. September 10, 11, and 12, 2013. https://daac.ornl.gov/workshops/data_management_webinars_sept2013.shtml. (***Co-organizer***)
- Data Management Practices for Early Career Scientists Workshop. NASA Terrestrial Ecology Science Team Meeting. Scripps Seaside Forum, La Jolla, CA, May 2, 2013. https://daac.ornl.gov/workshops/NASATE2013.shtml. (***Co-organizer***)
- Data Management Practices for Early Career Scientists Workshop. NACP All Investigators Meeting. February 3, 2013. https://daac.ornl.gov/workshops/NACP_AIMeetings.shtml. (***Co-organizer***)

PROFESSIONAL MEMBERSHIP AND SERVICE

- **Chair**, Earth Science Information Partners (ESIP) Information Quality Cluster, 2020 – present
- **Chair**, NASA Earth Science Data System Working Groups (ESDSWG) Data Quality Working Group, 2017-2019
- **Guest Editor**, International Journal of Geo-Information, special issue "GIS Software and Engineering for Big

Data", 2019 – present

- **Editorial Board Member**, The Scientific World Journal – Computer Science, 2012 – 2016
- **Member**, American Geophysical Union, 2009 – present
- **Member**, Chinese Professionals in Geographic Information Sciences (CPGIS), 2008 – 2009
- **Chair**, Chinese Professionals in Geographic Information Sciences (CPGIS) Website Committee, 2009 – 2010
- **Panel Reviewer**
  - DOE Office of Science Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR)
  - NASA Release of Research Opportunities in Space and Earth Science (ROSES) Biodiversity Program
  - Triennial (Red & Pink) review team for the DOE Atmospheric Radiation Measurement (ARM) user facility
- **Journal Reviewer**
  - Computers & Geosciences
  - International Journal of Digital Earth
  - Journal of Climate
  - Annals of GIS
  - Computers and Electronics in Agriculture
  - Transactions in GIS
  - Transactions of the American Society of Agricultural and Biological Engineers
  - Future Internet
  - IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing
  - IEEE Transactions on Geoscience and Remote Sensing
  - International Journal of Geo-Information
  - The Scientific World Journal
  - The 1st and 2nd International Conference on Agro-Geoinformatics (in 2012 and 2013)
  - Earth Science Informatics

PUBLICATIONS

Scientific Datasets

1. Huntzinger, D.N., C.R. Schwalm, Y. Wei, R. Shrestha, R.B. Cook, A.M. Michalak, K. Schaefer, A.R. Jacobson, M.A. Arain, P. Ciais, J.B. Fisher, H. Kolus, M. Sikka, Y. Elshorbany, D.J. Hayes, M. Huang, S. Huang, A. Ito, A.K. Jain, H. Lei, C. Lu, F. Maignan, J. Mao, N.C. Parazoo, C. Peng, S. Peng, B. Poulter, D.M. Ricciuto, H. Tian, X. Shi, W. Wang, N. Zeng, F. Zhao, Q. Zhu, Yang, and B. Tao. In publication. NACP MsTMIP: Global 0.5-degree Model Outputs in Standard Format, Version 2.0. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1599. [*to be published in September. 2020*]
2. Zhou, Yu, C.A. Williams, T. Lauvaux, S. Feng, I.T. Baker, **Y. Wei**, A.S. Denning, K. Keller, and K.J. Davis. 2019. ACT-America: Gridded Ensembles of Surface Biogenic Carbon Fluxes, 2003-2017. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1675.
3. Huntzinger, D.N., C.R. Schwalm, **Y. Wei**, R.B. Cook, A.M. Michalak, K. Schaefer, A.R. Jacobson, M.A. Arain, P. Ciais, J.B. Fisher, D.J. Hayes, M. Huang, S. Huang, A. Ito, A.K. Jain, H. Lei, C. Lu, F. Maignan, J. Mao, N.C. Parazoo, C. Peng, S. Peng, B. Poulter, D.M. Ricciuto, H. Tian, X. Shi, W. Wang, N. Zeng, F. Zhao, Q. Zhu, J. Yang, and B. Tao. 2018. NACP MsTMIP: Global 0.5-degree Model Outputs in Standard Format, Version 1.0. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1225.

4. Thornton, M.M., P.E. Thornton, **Y. Wei**, R.S. Vose, and A.G. Boyer. 2017. Daymet: Station-Level Inputs and Model Predicted Values for North America, Version 3. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1391.
5. Thornton, M.M., P.E. Thornton, **Y. Wei**, B.W. Mayer, R.B. Cook, and R.S. Vose. 2017. Daymet: Annual Climate Summaries on a 1-km Grid for North America, Version 3. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1343.
6. Thornton, P.E., M.M. Thornton, B.W. Mayer, **Y. Wei**, R. Devarakonda, R.S. Vose, and R.B. Cook. 2017. Daymet: Daily Surface Weather Data on a 1-km Grid for North America, Version 3. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1328.
7. Thornton, P.E., M.M. Thornton, B.W. Mayer, N. Wilhelmi, **Y. Wei**, R. Devarakonda, and R.B. Cook. 2015. Daymet: Annual Climate Summaries on a 1-km Grid for North America, Version 2. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1277.
8. Liu, Shishi, **Y. Wei**, W.M. Post, R.B. Cook, K. Schaefer, and M.M. Thornton. 2014. NACP MsTMIP: Unified North American Soil Map. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1242.
9. Huntzinger, D.N., C.R. Schwalm, A.M. Michalak, K. Schaefer, **Y. Wei**, R.B. Cook, and A.R. Jacobson. 2014. NACP MsTMIP Summary of Model Structure and Characteristics. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1228.
10. **Wei, Y.**, Shishi Liu, D.N. Huntzinger, A.M. Michalak, N. Viovy, W.M. Post, C.R. Schwalm, K. Schaefer, A.R. Jacobson, C. Lu, H. Tian, D.M. Ricciuto, R.B. Cook, J. Mao, and X. Shi. 2014. NACP MsTMIP: Global and North American Driver Data for Multi-Model Intercomparison. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1220.
11. Thornton, P.E., M.M. Thornton, B.W. Mayer, N. Wilhelmi, **Y. Wei**, R. Devarakonda, and R.B. Cook. 2014. Daymet: Daily Surface Weather Data on a 1-km Grid for North America, Version 2. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1219.
12. Cook, R.B., W.M. Post, P.E. Thornton, A.R. Jacobson, D.N. Huntzinger, **Y. Wei**, I.T. Baker, J.M. Chen, F. Chevallier, F.M. Hoffman, A.K. Jain, Shuguang Liu, R. Lokupitiya, D.A. McGuire, A.M. Michalak, G.G. Moisen, R.P. Neilson, P. Peylin, C.S. Potter, B. Poulter, D. Price, J.T. Randerson, C. Rodenbeck, A.E. Schuh, C.R. Schwalm, H. Tian, E. Tomelleri, D.P. Turner, G.R. van der Werf, N. Viovy, T.O. West, J. Xiao, N. Zeng, and M. Zhao. 2013. NACP Regional: Original Observation Data and Biosphere and Inverse Model Outputs. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1193.
13. **Wei, Y.**, D.J. Hayes, M.M. Thornton, W.M. Post, R.B. Cook, P.E. Thornton, A.R. Jacobson, D.N. Huntzinger, T.O. West, L.S. Heath, K. McKain, G. Stinson, W. Kurz, B. de Jong, I.T. Baker, J.M. Chen, F. Chevallier, F.M. Hoffman, A.K. Jain, R. Lokupitiya, D.A. McGuire, A.M. Michalak, G.G. Moisen, R.P. Neilson, P. Peylin, C.S. Potter, B. Poulter, D. Price, J.T. Randerson, C. Rodenbeck, H. Tian, E. Tomelleri, G.R. van der Werf, N. Viovy, J. Xiao, N. Zeng, and M. Zhao. 2013. NACP Regional: National Greenhouse Gas Inventories and Aggregated Gridded Model Data. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1179.
14. **Wei, Y.**, W.M. Post, R.B. Cook, P.E. Thornton, A.R. Jacobson, D.N. Huntzinger, F.M. Hoffman, G.G. Moisen, A.E. Schuh, C.R. Schwalm, and N. Viovy. 2013. NACP Regional: Supplemental Gridded Observations, Biosphere and Inverse Model Outputs. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1158.
15. **Wei, Y.**, W.M. Post, R.B. Cook, D.N. Huntzinger, P.E. Thornton, A.R. Jacobson, I.T. Baker, J.M. Chen, F. Chevallier, F.M. Hoffman, A.K. Jain, Shuguang Liu, R. Lokupitiya, D.A. McGuire, A.M. Michalak, G.G. Moisen, R.P. Neilson, P. Peylin, C.S. Potter, B. Poulter, D. Price, J.T. Randerson, C. Rodenbeck, H. Tian, E. Tomelleri, G.R.

van der Werf, N. Viovy, T.O. West, J. Xiao, N. Zeng, and M. Zhao. 2013. NACP Regional: Gridded 1-deg Observation Data and Biosphere and Inverse Model Outputs. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1157.

Peer-reviewed Journal Paper

1. **Yaxing Wei**, et al., The ACT-America Datasets: Description, Management and Delivery, Earth and Space Science (Special Issue for ACT-America). [*to be submitted by November. 2020*]
2. Christopher R. Schwalm, Deborah N. Huntinzger, Anna M. Michalak, Kevin Schaefer, Joshua B. Fisher, Yuanyuan Fang, and **Yaxing Wei** (2020). Modeling suggests fossil fuel emissions have been driving increased land carbon uptake since the turn of the 20th Century. Sci Rep 10, 9059. https://doi.org/10.1038/s41598-020-66103-9.
3. Wood-Charlson, E.M., Anubhav, Auberry, D., ..., **Wei, Y.** et al. (2020). The National Microbiome Data Collaborative: enabling microbiome science. Nat Rev Microbiol 18, 313–314. https://doi.org/10.1038/s41579-020-0377-0.
4. Jia, B., Luo, X., Cai, X., Jain, A., Huntzinger, D. N., Xie, Z., Zeng, N., Mao, J., Shi, X., Ito, A., **Wei, Y.**, Tian, H., Poulter, B., Hayes, D., and Schaefer, K. (2020). Impacts of land use change and elevated CO2 on the interannual variations and seasonal cycles of gross primary productivity in China, Earth Syst. Dynam., 11, 235–249, https://doi.org/10.5194/esd-11-235-2020.
5. D.N. Huntzinger, K. Schaefer, C. Schwalm, J.B. Fisher, D. Hayes, E. Stofferahn, J. Carey, A.M. Michalak, **Y. Wei**, et al. (2020). Evaluation of simulated soil carbon dynamics in Arctic-Boreal ecosystems. Environmental Research Letters, Volume 15, Number 2. https://doi.org/10.1088/1748-9326/ab6784.
6. Yu Zhou, Christopher A. Williams, Thomas Lauvaux, Kenneth J. Davis, Sha Feng, Ian Baker, Scott Denning, and **Yaxing Wei** (2020). A multiyear gridded data ensemble of surface biogenic carbon fluxes for North America: Evaluation and analysis of results. Journal of Geophysical Research: Biogeosciences, 125, e2019JG005314. https://doi.org/10.1029/2019JG005314.
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Peer-reviewed Conference Paper

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2. Yang Cao, Christopher Jones, Víctor Cuevas-Vicenttín, Matthew B. Jones, Bertram Ludäscher, Timothy McPhillips, Paolo Missier, Christopher Schwalm, Peter Slaughter, Dave Vieglais, Lauren Walker, and **Yaxing Wei**. 2016. DataONE: A Data Federation with Provenance Support. Provenance and Annotation of Data and Processes. 6th International Provenance and Annotation Workshop, IPAW 2016, McLean, VA, USA, June 7-8, 2016, Proceedings. DOI: https://doi.org/10.1007/978-3-319-40593-3_28.
3. Víctor Cuevas-Vicenttín , Parisa Kianmajd , Bertram Ludäscher , Paolo Missier , Fernando Chirigati , **Yaxing Wei**, David Koop , Saumen Dey, Provenance Storage, Querying, and Visualization in PBase, Revised Selected Papers of the 5th International Provenance and Annotation Workshop on Provenance and Annotation of Data and Processes, June 09-13, 2014, Cologne, Germany. DOI: https://doi.org/10.1007/978-3-319-16462-5_24.
4. Poco, J., Dasgupta, A., **Wei, Y.**, Hargrove, W., Schwalm, C., Cook, R., Bertini, E. and Silva, C. (2014), SimilarityExplorer: A Visual Inter‐Comparison Tool for Multifaceted Climate Data. Computer Graphics Forum, 33: 341-350. doi: https://doi.org/10.1111/cgf.12390.
5. D. Wang, Z. Zhao, S. Shaw, G. Ragghianti, and **Y. Wei**. 2013. Building a High Performance ArcGIS Cluster and its Application to Climate Data Processing. *Proceedings of the 12th International Conference on GeoComputation*, May 2013. Wuhan, China.
6. P. Yue, L. Di, **Y. Wei**, and W. Han. 2012. Semantic Feature Catalogue Service. *IEEE International Geoscience and Remote Sensing Symposium* (*IGARSS*) *2012*, pages: 2914-2917, doi: https://doi.org/10.1109/IGARSS.2012.6350716.
7. M.J. Sale, S. Kao, R. Martinez, and **Y. Wei**. 2011. Estimating the Effects of Climate Change on Federal Hydropower and Power Marketing. *HydroVision International 2011*, Jul. 17-20, 2011, Sacramento, CA.
8. P. Yue, J. Gong, L. Di, L. He, and **Y. Wei**. 2010. Semantic Provenance Registration and Discovery Using

Geospatial Catalogue Service. *Proceedings of 2nd International Workshop on the Role of Semantic Web in Provenance Management*, Nov. 7, 2010, Shanghai, China.

9. **Y. Wei**, S.K. Santhana-Vannan, and R.B. Cook. 2009. Discover, Visualize, and Deliver Geospatial Data through OGC Standards-based WebGIS System*, 2009 17th International Conference on Geoinformatics*, Aug. 12-14, 2009, Fairfax, VA. Pages: 1-6, doi: https://doi.org/10.1109/GEOINFORMATICS.2009.5293520.
10. C. Hu, L. Di, W. Yang, **Y. Wei**, Y. Bai, C. Lynnes, Y. Enloe, B. Domenico, and G. Rutledge. 2008. Interoperability Middleware between Geoscience and Geospatial Catalog Protocols. *IEEE International Geoscience and Remote Sensing Symposium* (*IGARSS*)*2008.* Jul. 7-11, 2008, Boston, MA. 5, pages: 89-92, doi: https://doi.org/10.1109/IGARSS.2008.4780034.
11. W. Han, L. Di, P. Zhao, **Y. Wei**, and X. Li. 2008. Design and Implementation of GeoBrain Online Analysis System (GeOnAS). *W2GIS 2008*, 5373, pages 27-36, doi: https://doi.org/10.1007/978-3-540-89903-7_4.
12. D.G. Goodenough, H. Chen, L. Di, A. Guan, **Y. Wei**, A. Dyk, and G. Hobart. 2007. Grid-enabled OGC Environment for EO Data and Services in Support of Canada's Forest Applications. *IEEE International Geoscience and Remote Sensing Symposium* (*IGARSS*) *2007*. Jul. 23-28, 2007, Barcelona, Spain. Pages: 4773-4776. doi: https://doi.org/10.1109/IGARSS.2007.4423927.
13. L. Di, P. Zhao, W. Han, **Y. Wei**, X. Li. 2007. Web service-based GeoBrain online analysis system (GeOnAS). *NASA Science Technology Conference*, June 19-21, 2007, Adelphi, USA
14. L. Di, P. Yue, W. Yang, G. Yu, P. Zhao, and **Y. Wei**. 2007. Ontology-supported Automatic Service Chaining for Geospatial Knowledge Discovery. *Proceedings of American Society of Photogrammetry and Remote Sensing*, May 7-11, 2007, Tampa, FL.
15. **Y. Wei**, P. Yue, U. Dadi, M. Min, C. Hu, and L. Di. 2006. Effective Acquisition of Geospatial Data Products in a Collaborative Grid Environment. *2006 IEEE International Conference on Services Computing (SCC2006)*, Sep. 18-22, 2006, Chicago, IL. Pages 455-462, doi: 10.1109/SCC.2006.46.
16. A. Chen, L. Di, **Y. Wei**, Y. Bai, and Y. Liu. 2006. Grid-enabled Standard-compliant Open Computing Environment for Earth Science Exploration and Applications. *IEEE International Geoscience and Remote Sensing Symposium* (*IGARSS*) *2006*. Jul. 31- Aug. 4, 2006, Denver, CO. Pages: 237-240, doi: https://doi.org/10.1109/IGARSS.2006.65.
17. P. Yue, L. Di, P. Zhao, W. Yang, G. Yu, and **Y. Wei**. 2006. Semantic Augmentations for Geospatial Catalogue Service. *IEEE International Geoscience and Remote Sensing Symposium* (*IGARSS*) *2006*. Jul. 31-Aug. 4, 2006, Denver, CO. Pages: 3486-3489, doi: https://doi.org/10.1109/IGARSS.2006.894.
18. L. Di, A. Chen, Y. Bai, and **Y. Wei**. 2006. Implementation of Geospatial Product Virtualization in Grid Environment. *Proceedings of the Sixth Annual NASA Earth Science Technology Conference – ESTC2006*. Jun. 27-29, 2006. College Park, MD.
19. A. Chen, L. Di, **Y. Wei**, Y. Bai, and Y. Liu. 2006. An Optimized Grid-based, OGC Standards-compliant Collaborative Software System for Serving NASA Geospatial Data. *Proceeding of 30th Annual IEEE/NASA Software Engineering Workshop, 2006. SEW'06*. Apr. 25-28, 2006, Columbia, MD. Pages: 159-166, doi: https://doi.org/10.1109/SEW.2006.11.
20. **Y. Wei**, L. Di, B. Zhao, G. Liao, A. Chen, Y. Bai, and Y. Liu. 2005. The Design and Implementation of a Grid-enabled Catalogue Service. *IEEE International Geoscience and Remote Sensing Symposium* (*IGARSS*) *2005*, Jul. 25-29, 2005, Seoul, Korea. Pages: 4224-4227, doi: https://doi.org/10.1109/IGARSS.2005.1525850.
21. A. Chen, L. Di, **Y. Wei**, Y. Liu, Y. Bai, C. Hu, and P. Mehrotra. 2005. Grid Computing Enabled Geospatial Catalogue Web Service. *Proceeding of American Society for Photogrammetry and Remote Sensing*, Mar. 7-11,

2005, Baltimore, MD.

Peer-reviewed Book Chapters

1. Cook R.B., **Wei Y.**, Hook L.A., Vannan S.K.S., McNelis J.J. (2018) Preserve: Protecting Data for Long-Term Use. In: Recknagel F., Michener W. (eds) Ecological Informatics. Online ISBN: 978-3-319-59928-1. Springer, Cham. Doi: https://doi.org/10.1007/978-3-319-59928-1_6.
2. P. Yue, L. Di, P. Zhao, W. Yang, G. Yu, and **Y. Wei**. 2010. Semantic Augmentations to an EbRIM Profile of Catalogue Service for the Web. In *Standard-Based Data and Information Systems for Earth Observation (Liping Di and H. K. Ramapriyan eds.)*, pp.189-208, ISBN: 978-3-540-88263-3, Springer-Verlag, Berlin, Heidelberg, 2009. doi: https://doi.org/10.1007/978-3-540-88264-0_11.
3. **Y. Wei**, L. Di, G. Liao, B. Zhao, A. Chen, and Y. Bai. 2009. Sharing of Distributed Geospatial Data through Grid Technology. In *Handbook of Research on Geoinformatics (Hassan A. Karimi eds.)*, IGI Global, 2009, pp. 222-228. doi: https://doi.org/10.4018/978-1-59140-995-3.ch028.
4. Y. Bai, L. Di, A. Chen, Y. Liu, and **Y. Wei**. 2009. Geospatial Image Metadata Catalog Services. In *Handbook of Research on Geoinformatics (Hassan A. Karimi eds.)*, IGI Global, 2009, pp. 171-177. doi: https://doi.org/10.4018/978-1-59140-995-3.ch022.
5. A. Chen, L. Di, Y. Bai, and **Y. Wei**. 2009. Grid Computing and its Application to Geoinformatics. In *Handbook of Research on Geoinformatics (Hassan A. Karimi eds.)*, IGI Global, 2009, pp. 213-221. doi: https://doi.org/10.4018/978-1-59140-995-3.ch027.
6. A. Chen, L. Di, **Y. Wei**, and Y. Bai. 2008. GeoSpatial Grid. In *Encyclopedia of GIS (Shekhar, Shashi; Xiong, Hui eds.)*, Springer-Verlag, Berlin, 2008, pp. 419-424. doi: https://doi.org/10.1007/978-0-387-35973-1_552.

Technical Reports and Whitepapers

1. Ge Peng, Carlo Lacagnina, Robert Downs, Hampapuram Ramapriyan, Ivana Ivánová, David Moroni, Gilles Larnicol, **Yaxing Wei**, et al., Towards Developing Community Guidelines for Sharing and Reuse of Digital Data Quality Information. [*In preparation*]
2. NASA ESIDS Standards Office (ESO), Data Product Development Guide for Data Producers, Version 1.0, July 9, 2020. https://cdn.earthdata.nasa.gov/conduit/upload/14909/ESDS-RFC-041.pdf.
3. NASA ESDS Citizen Science Data Working Group White Paper, Version 1.0. 24 April 2020. https://cdn.earthdata.nasa.gov/conduit/upload/14273/CSDWG-White-Paper.pdf.
4. USFS – NASA Joint Applications Workshop Proceedings: Satellite Data to Support Natural Resource Management. [*in preparation*]
5. Robert R. Downs, H. K. Ramapriyan, and **Yaxing Wei**. 2019. ESDS-RFC-039: Reuse Readiness Assessment of Data Quality Software Products, https://earthdata.nasa.gov/files/ESDS-RFC-039.pdf.
6. **Yaxing Wei**, H. K. Ramapriyan, Robert R. Downs, Chung-Lin Shie, Zhong Liu, David Moroni, Ted Habermann, Siri Jodha Khalsa, and Byron Peters. 2019. ESDS-RFC-033: Comprehensive Data Quality Recommendations for Data Producers and Distributors, https://earthdata.nasa.gov/files/ESDS-RFC-033.pdf.
7. Zhong Liu, H. K. Ramapriyan, **Yaxing Wei**, Chung-lin Shie, David Moroni, Robert Downs, Ted Habermann, Donna Scott, George Huffman, and Deborah Smith. 2019. ESDS-RFC-034: High-Priority Data Quality Recommendations for Data Producers and Distributors. https://earthdata.nasa.gov/files/ESDS-RFC-034.pdf.
8. H. K. Ramapriyan, Donna Scott, Ed Armstrong, Charlene DiMiceli, Robert Downs, Carolyn Gacke, Scott Gluck, George Huffman, Zhong Liu, David Moroni, Chung-lin Shie, Deborah Smith, and **Yaxing Wei**. ESDS-RFC-032:

Data Quality Working Group Recommendations for the Data Management Plan Template for Data Producers. https://earthdata.nasa.gov/files/ESDS-RFC-032v1.pdf.

9. H. K. Ramapriyan, Donna Scott, Ed Armstrong, Charlene DiMiceli, Robert Downs, Carolyn Gacke, Scott Gluck, George Huffman, Zhong Liu, David Moroni, Chung-lin Shie, and **Yaxing Wei**. ESDS-RFC-031: Data Management Plan Template for DAACs. https://earthdata.nasa.gov/files/ESDS-RFC-031v1.pdf.
10. Víctor Cuevas-Vicenttín, Bertram Ludäscher, Paolo Missier, Khalid Belhajjame, Fernando Chirigati, **Yaxing Wei**, Saumen Dey, Parisa Kianmajd, David Koop, Shawn Bowers, Ilkay Altintas, Christopher Jones, Matthew B. Jones, Lauren Walker, Peter Slaughter, Ben Leinfelder, Yang Cao. 2016. ProvONE: A PROV Extension Data Model for Scientific Workflow Provenance. https://purl.dataone.org/provone-v1-dev.
11. S. Kao, B. Hadjerioua, R. McManamay, F.K. Pasha, D. Yeasmin, A. Oubeidillah, N. Samu, K. Stewart, M.S. Bevelhimer, S.L. Hetrick, **Y. Wei**, and B.T. Smith. 2013. An Assessment of Energy Potential from New Stream-reach Development in the United States: Initial Methodology Report. ORNL/TM-2012/298. Oak Ridge National Laboratory, Oak Ridge, TN. http://nhaap.ornl.gov/sites/default/files/NSD_Methodology_Report.pdf.
12. B. Hadjerioua, **Y. Wei**, and S. Kao. 2012. An Assessment of Energy Potential at Non-Powered Dams in the United States. U.S. Department of Energy, Energy Efficiency & Renewable Energy Reports. http://www1.eere.energy.gov/water/pdfs/npd_report.pdf.
13. M.J. Sale, S. Kao, M. Ashfaq, D.P. Kaiser, R. Martinez, C. Webb, and **Y. Wei**. 2011. Assessment of the Effects of Climate Change on Federal Hydropower. ORNL/TM-2011/251, Oak Ridge National Laboratory, Oak Ridge, TN. http://nhaap.ornl.gov/sites/default/files/9505_FY12_Assessment_Report.pdf.

Presentations

1. **Yaxing Wei**. NASA ESDSWG Data Quality Working Group. 2020 ESIP Summer Meeting. Online, mid-July, 2020.
2. **Yaxing Wei**. NASA Carbon Cycle Science Data Discovery. NASA Booth. San Francisco, CA. 2019 AGU Fall Meeting.
3. **Yaxing Wei**, Kimberly K Broughton, Daine Wright, Alison Boyer, Bruce E Wilson. MyWorkspace: a framework to integrate geospatial data into reproducible, shareable, citable, and analysis-ready bundles. IN53B-0741. San Francisco, CA. 2019 AGU Fall Meeting.
4. D Singh, A Boyer, M Donovan, L Hook, JJ McNelis Jr, M Thornton, **Y Wei**, C Sanderson, JN Welch, BE Wilson. Enhancing the FAIRness of Carbon Monitoring System Data. B13F-2445. San Francisco, CA. 2019 AGU Fall Meeting.
5. Bruce E Wilson, Michele Thornton, Rupesh Shrestha, **Yaxing Wei**, Peter E Thornton, Theodore Papamarkau. Developments in Daymet Continental-Scale Gridded Daily Precipitation and Temperature Estimates Evaluating Data Fusion Techniques to Improve Precipitation Occurrence and Amount. H31P-1985. San Francisco, CA. 2019 AGU Fall Meeting.
6. JJ McNelis Jr, Alison Boyer, Bruce E Wilson, Zoey Werbin, Daine Wright, **Yaxing Wei**, Rupesh Shrestha. Airborne Data Visualizer: A Generalizable Web Application for Visual Exploration of Greenhouse and Trace Gas Concentrations Observed from Aircraft. IN43C-14. San Francisco, CA. 2019 AGU Fall Meeting.
7. Kenneth J Davis, David Baker, Bianca Baier, Zachary Barkley, Alison Boyer, Edward V Browell, Gao Chen, A Scott Denning, Joshua P DiGangi, Jeremy Todd Dobler, Sha Feng, Alan Fried, Tobias Gerken, Andrew R Jacobson, Klaus Keller, Thomas Lauvaux, Bing Lin, Amin R Nehrir, Michael D Obland, Christopher O'Dell, Sandip Pal, Anke Roiger, Andrew E Schuh, Colm Sweeney, **Yaxing Wei**, Christopher A Williams. Taking

regional atmospheric inversions to the next level: Lessons from the ACT-America mission. San Francisco, CA. 2019 AGU Fall Meeting.

8. **Yaxing Wei**, Michele M. Thornton, Rupesh Shrestha, Theodore Papamarkou, and Bruce E. Wilson. Towards Enhanced Gridded Surface Precipitation Estimates through Artificial Intelligence. AI Expo. ORNL. August 2019.
9. **Yaxing Wei**, H. K. “Rama” Ramapriyan, David Moroni, Robert R. Downs, Zhong Liu, Donna J. Scott, et al., Earth Science Information Partners (ESIP) Summer Meeting. Tacoma WA. July 2019.
10. **Yaxing Wei**. Analysis of Soil Moisture at USFS Rangeland Monitoring Sites with Python (hands-on tutorial). USFS – NASA Joint Applications Workshop: Satellite Data to Support Natural Resource Management. Salt Lake City, Utah. April 2019.
11. **Yaxing Wei**. Access data through ORNL DAAC Web services: Exploring Forest Disturbance Caused by Bark Beetles at Fairview Curve, Rocky Mountain National Park (hands-on tutorial). USFS – NASA Joint Applications Workshop: Satellite Data to Support Natural Resource Management. Salt Lake City, Utah. April 2019.
12. **Yaxing Wei**. ORNL DAAC’s Soil Moisture Visualizer (SMV) (hands-on tutorial). USFS – NASA Joint Applications Workshop: Satellite Data to Support Natural Resource Management. Salt Lake City, Utah. April 2019.
13. **Yaxing Wei**, H. K. “Rama” Ramapriyan, David Moroni, Robert R. Downs, Zhong Liu, Donna J. Scott, et al., Data Quality Working Group Summary Report (2018-2019). NASA Earth Science Data System Working Groups (ESDSWG) Annual Meeting. Annapolis, MD. April 2019.
14. H. K. “Rama” Ramapriyan, Ge Peng, David Moroni, and **Yaxing Wei (*presenter*)**. ESIP Information Quality Cluster – Vision, Objectives, Accomplishments and Status. Joint Webinar/TechTalk of the Earth Science Information Partners, Australia National Computational Infrastructure, and the Australian Research Data Center. March 2019. [***Invited***]
15. **Yaxing Wei**, David Moroni, H. K. “Rama” Ramapriyan, Donna Scott, Robert Downs, and Zhong Liu. Data Quality Recommendations for Data Producers and Distributors: Outcomes from the NASA ESDSWG Data Quality Working Group. IN43C-0922. Washington DC. 2018 AGU Fall Meeting.
16. **Yaxing Wei**, H. K. Ramapriyan, Ge Peng, and David Moroni. Four Years of Progress within NASA and ESIP on Earth Science Data and Information Quality - Challenges, Solutions, and Best Practices. Open Geospatial Consortium (OGC) Technical Committee (TC) Meeting. Charlotte, NC. December 2018. [***Invited***]
17. **Yaxing Wei**, Suresh Vannan, Alison G. Boyer, Tammy Walker, Debjani Deb, and Leslie A. Hook. Building a Trustworthy Environmental Science Data Repository: Lessons Learned from the ORNL DAAC. AGU Fall Meeting 2017. New Orleans, LA. 11-15, Dec. 2017. [***Invited***]
18. **Yaxing Wei**, Zhaoying (Angie) Wei, and Suresh Vannan. 2017. Facilitate Visualization and Distribution of NASA Environmental Science Data through Open Standards and Open Source Software for Geospatial. International Conference on Free and Open Source Software for Geospatial (FOSS4G) 2017. Boston, MA. August 14-19, 2017.
19. **Yaxing Wei**, Rupesh Shrestha, Deborah N. Huntzinger, Christopher R. Schwalm, Andrew R. Jacobson, Kevin M. Schaefer, Anna M. Michalak, and Alison G. Boyer. 2017. Multi-Scale Synthesis and Terrestrial Model Intercomparison Project Phase II (MsTMIP II): Environmental Driver Data. 2017 Joint NACP and AmeriFlux Principal Investigators Meeting. Mar 27-30, 2017. Bethesda, MD.
20. **Yaxing Wei**, Kyle Landolt, Alison Boyer, Suresh Vannan, Zhaoying Wei, and Eric Wang. 2016. Earth Adventure: Virtual Globe-based Arctic Carbon Reservoirs Vulnerability Exploration. AGU Fall Meeting 2016. San Francisco, CA. 12-16 December, 2016.

21. **Yaxing Wei**. 2016. Discover and Access NASA AirMOSS and NASA CARVE Data. NASA Booth Flash Talk. AGU Fall Meeting 2016. San Francisco, CA. 12-16 December, 2016.
22. **Yaxing Wei**. My Journey with Data. SciDataCon 2016. Denver, Co, 11-13 September, 2016. [***Invited***]
23. **Yaxing Wei**, Suresh SanthanaVannan, Robert B. Cook, Tammy Beaty, Makhan L. Virdi, Leslie A. Hook, and Alison Boyer. 2016. Standardization Promotes Biogeochemical Data Management and Usage in Multi-disciplinary Environmental Research. SciDataCon 2016. Denver, Co, 11-13 September, 2016.
24. **Yaxing Wei**, David F. Moroni, Hampapuram K. (Rama) Ramapriyan, Robert R. Downs, Siri Jodha Khalsa, and Donna J. Scott. 2016. Data quality standards and practices across agencies – An update from NASA ESDSWG DQWG. SciDataCon 2016. Denver, Co, 11-13 September, 2016.
25. Suresh Vannan, Alison Boyer, and **Yaxing Wei**. Arctic Boreal Vulnerability Experiment (ABoVE) Data Management Best Practices. NASA EarthData Webinar, August 29, 2016.
26. **Yaxing Wei**, Robert B Cook, Lianhong Gu, Suresh Kumar Santhana Vannan, and Tammy Beaty. 2015. Challenges for Data Archival Centers in Evolving Environmental Sciences. AGU Fall Meeting 2015. San Francisco, CA. 14-18 December, 2015.
27. **Yaxing Wei,** Aaron Friesz, and Matthew Tisdale. Simplified Access to NASA Earth Science Data through OPeNDAP. NASA EarthData Webinar, September 29, 2015.
28. **Yaxing Wei**, Suresh Vannan, Bob Cook, Tammy Beaty, Leslie Hook, Michele Thornton, Makhan L. Virdi, and Paul A. Lemieux III. Continuous Improvement of the Quality and Accessibility of Data at the ORNL DAAC. 2015 ESIP Summer Meeting. Pacific Grove, CA. July 14-17, 2015.
29. **Yaxing Wei**, Suresh K. S. Vannan, Robert B. Cook, Tammy W. Beaty, Michele M. Thornton. On-demand Delivery and Visualization of Environmental Science Data through THREDDS. 2015 ESIP Summer Meeting. Pacific Grove, CA. July 14-17, 2015.
30. **Yaxing Wei**. Preparing Spatial Data to Archive. Data Management Practices for Early Career Scientists Workshop. NASA Carbon Cycle and Ecosystems Joint Science Workshop. College Park, MD. April 19, 2015
31. **Yaxing Wei**, Shishi Liu, Deborah Nicole Huntzinger, Anna M Michalak, Nicolas Viovy, Wilfred M. Post, Christopher R Schwalm, Kevin M Schaefer, Andrew R Jacobson, Chaoqun Lu, Hanqin Tian, Daniel Ricciuto, Robert B. Cook, Jiafu Mao, Xiaoying Shi. Multi-Scale Synthesis and Terrestrial Model Intercomparison Project (MsTMIP): Environmental Driver Data. NASA Carbon Cycle & Ecosystem Joint Science Workshop. College Park, MD. April 20-24, 2015.
32. **Yaxing Wei**. Best Practices for Environmental Data Management. Lecture presented as part of the monthly Webinar Series for the Map & Geospatial Information Round Table (MAGIRT) of the American Library Association. March 5, 2015.
33. **Yaxing Wei**. Preparing Spatial Data to Archive. Data Management Practices for Early Career Scientists Workshop. Fifth North American Carbon Program Principal Investigator Meeting. Washington, DC. January 25, 2015
34. **Yaxing Wei**, Shishi Liu, Deborah Nicole Huntzinger, Anna M Michalak, Nicolas Viovy, Wilfred M. Post, Christopher R Schwalm, Kevin M Schaefer, Andrew R Jacobson, Chaoqun Lu, Hanqin Tian, Daniel Ricciuto, Robert B. Cook, Jiafu Mao, Xiaoying Shi. Multi-Scale Synthesis and Terrestrial Model Intercomparison Project (MsTMIP): Environmental Driver Data. 5th NACP Principal Investigators Meeting & AmeriFlux Principal Investigators Meeting, Washington D.C., January 26-30, 2015.

35. **Yaxing Wei**, Shishi Liu, Deborah Huntzinger, Anna Michalak, Wilfred M. Post, Robert B. Cook, Kevin Schaefer, and Michele M. Thornton. The Unified North American Soil Map and its Implication on the Soil Organic Carbon Stock in North America. AGU Fall Meeting. San Francisco, December 12-19, 2014.
36. **Yaxing Wei**. THREDDS Usage Scenarios – NASA ORNL DAAC Example. NASA Booth at AGU Fall Meeting. San Francisco, December 12-19, 2014.
37. **Yaxing Wei**, Suresh K. S. Vannan, Robert B. Cook, Tammy W. Beaty, Michele M. Thornton. On-demand Delivery and Visualization of Environmental Science Data through THREDDS. 2014 ESIP Summer Meeting. Copper Mountain, CO. July, 2014.
38. **Yaxing Wei**, Shishi Liu, Wilfred M. Post, Deborah Huntzinger, Robert B. Cook, Kevin Schaefer, and Michele M. Thornton. The Unified North American Soil Map and Its Implication on the Soil Organic Carbon Stock in North America. NSF Research Coordination Network (RCN) Workshop: Soil Carbon Modeling. Breckenridge, CO. June, 2014.
39. **Yaxing Wei**, Suresh K. S. Vannan, Robert B. Cook, Tammy W. Beaty, Michele M. Thornton. On-demand Delivery and Visualization of Environmental Science Data through THREDDS. NASA Earth Science Data System Working Groups (ESDSWG) Annual Meeting. Greenbelt, MD. Apr. 2014.
40. **Yaxing Wei**, Bob Cook, Jorge Poco, Aritra Dasgupta, Bill Hargrove, Christopher Schwalm, Enrico Bertini, and Claudio Silva. 2014. SimilarityExplorer: A Visual Inter-comparison Tool for Multifaceted Climate Data. CCSI SAB Meeting 2014.
41. **Y. Wei**, R. B. Cook, F. Du, A. Dasgupta, J. Poco, D. N. Huntzinger, C. R. Schwalm, E. Boldrini, M. Santoro, J. Pearlman, F. Pearlman, S. Nativi, and S. J. Singh Khalsa. 2013. Integrate Data into Scientific Workflows for Terrestrial Biosphere Model Evaluation through Brokers. *American Geophysical Union (AGU) Fall Meeting*, Dec. 9-13, 2013, San Francisco, CA.
42. **Y. Wei**, 2013. Part 2 – Geospatial data. Environmental Data Management Best Practices Webinar. *NASA EarthData Webinar Series*. Sep. 11-12, 2013.
43. **Y. Wei**, 2013. Preparing Spatial Data to Archive. Data Management Practices for Early Career Scientists Workshop. *NASA Terrestrial Ecology Science Team Meeting*. *Scripps Seaside Forum*. La Jolla, CA, May 2, 2013.
44. **Y. Wei** and S.K. Santhana-Vannan, 2013. Preparing Spatial Data to Archive. *Data Management Practices for Early Career Scientists Workshop*. *NACP All Investigators Meeting*. Feb. 3, 2013.
45. M. Santoro, **Y. Wei**, E. Boldrini, J. Pearlman, R.B. Cook, and S. Nativi, 2013. Brokering Services to Evaluate, Visualize, and Analyze Terrestrial Biosphere Model Output and Observations. *EGU General Assembly 2013*, Apr. 7-12, 2013, Vienna, Austria, id. EGU2013-7679.
46. **Y. Wei**, R.B. Cook, W. Post, P. Thornton, D. Huntzinger, D. Ricciuto, D. Hayes, M. Thornton, S. Liu, A. Jacobson, K. Schaefer, and K. Davis. 2013. A Modeling and Synthesis Thematic Data Center for the North American Carbon Program. *2013 NASA Terrestrial Ecology Science Team Meeting*, Apr. 30-May 2, 2013, La Jolla, CA.
47. D. Huntzinger, C. Schwalm, A. Michalak, M. Post, K. Schaefer, A. Jacobson, **Y. Wei**, R.B. Cook. 2013. Multi-Scale Synthesis and Terrestrial Model Intercomparison Project – A Systematic Approach for Evaluating Land-Atmosphere Flux Estimates. *2013 NASA Terrestrial Ecology Science Team Meeting*, Apr. 30-May 2, 2013, La Jolla, CA.
48. **Y. Wei**, R. Cook, W. Post, P. Thornton, D. Huntzinger, D. Ricciuto, D. Hayes, M. Thornton, S. Liu, A. Jacobson, K. Schaefer, and K. Davis. 2013. A Modeling and Synthesis Thematic Data Center for the North American Carbon Program. *4th NACP All-Investigators Meeting*, Feb. 4-7, 2013, Albuquerque, NM.
49. S. Liu, **Y. Wei**, W. Post, R.B. Cook, K. Schaefer. 2013. The Unified North American Soil Map and its Implication

on the Soil Organic Carbon Stock in North America. *4th NACP All-Investigators Meeting*, Feb. 4-7, 2013, Albuquerque, NM.

50. **Y. Wei,** S. Liu, R.B. Cook, W. Post, D. Huntzinger, C. Schwalm, K. Schaefer, A. Jacobson, and A. Michalak, 2012. Data Standardization for Carbon Cycle Modeling: Lessons Learned. *American Geophysical Union (AGU) Fall Meeting*, Dec. 3-7, 2012, San Francisco, CA.
51. **Y. Wei**. 2012. Mercury: Metadata Management and Search System. *NASA Booth Presentation. American Geophysical Union (AGU) Fall Meeting*, Dec. 3-7, 2012, San Francisco, CA.
52. **Y. Wei**. 2012. Spatial Data Access Tool: On-demand Geospatial Data Visualization and Download. *NASA Booth Presentation. American Geophysical Union (AGU) Fall Meeting*, Dec. 3-7, 2012, San Francisco, CA.
53. **Y. Wei**, S.K. Santhana-Vannan, R.B. Cook, C.W. Lenhardt, and T.W. Beaty. 2011. Spatial Data Access Tool (SDAT): Enabling Visualization of and Access to Geospatial Data using OGC Standards and Open Source Software. *Free and Open Source Software for Geospatial (FOSS4G) 2011*. Sep. 12-16, 2011, Denver, CO.
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