AGU 2016 Fall Meeting

<table>
<thead>
<tr>
<th>Author</th>
<th>Session</th>
<th>Abstract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Habermann</td>
<td>IN004: Advancing netCDF-CF for the Geoscience Community</td>
<td>Non-Invasive Metadata Augmentation for CF-Compliant Data</td>
</tr>
<tr>
<td>Reese</td>
<td></td>
<td>Earthdata Developer Portal</td>
</tr>
<tr>
<td>Reese</td>
<td></td>
<td>UI-UX/EDSC Usability Study</td>
</tr>
<tr>
<td>Gilman</td>
<td></td>
<td>Evolutions in Metadata Quality</td>
</tr>
<tr>
<td>Shum</td>
<td>IN023: Knowledge Representation Frameworks: the Foundation for Achieving Interoperability</td>
<td>Making Interoperability Easier with the Metadata Management Tool</td>
</tr>
<tr>
<td>Pilone</td>
<td>IN017: Enabling Cloud Applications for Earth Science Data</td>
<td>Evaluating / Lessons Learned with Cloud-Native Architectures for EOSDIS Applications</td>
</tr>
<tr>
<td>Pawloski</td>
<td>IN017: Enabling Cloud Applications for Earth Science Data</td>
<td>Fast track to the cloud - design patterns to build 12 factor apps</td>
</tr>
<tr>
<td>Quinn</td>
<td>IN030: New Approaches to Data Discovery Across Geoscience Domains</td>
<td>Earthdata Search: Scaling, Assessing, and Improving Relevancy</td>
</tr>
<tr>
<td>Lynnes</td>
<td>IN030: New Approaches to Data Discovery Across Geoscience Domains</td>
<td>Heuristics for Relevancy Ranking of Earth Dataset Search Results</td>
</tr>
<tr>
<td>Lynnes</td>
<td>IN008: Big Data Analytics</td>
<td>Benchmark Comparison of Cloud Analytics Methods Applied to Earth Observations</td>
</tr>
<tr>
<td>Behnke</td>
<td>IN012: Collaborations, Partnerships and Alliances that are Building Sustainable Data Infrastructures: the whole is greater than the sum of the parts</td>
<td>Managing Sustainable Data Infrastructures: The Gestalt of EOSDIS</td>
</tr>
</tbody>
</table>

Earth and Space Science Informatics Sessions

IN11E Architecture and Integration Testbed for Earth/Space Science Cyberinfrastructures I

- **IN11E-01 ECITE: A Testbed for Assessment of Technology Interoperability and Integration with Architecture Components (Invited)** (Invited) Sara J Graves1, Ken Keiser1, Emily Law2, Chaowei Phil Yang3 and S. George Djorgovski4, (1)University of Alabama in Huntsville, Huntsville, AL, United States, (2)NASA Jet Propulsion Laboratory, Pasadena, CA, United States, (3)George Mason University Fairfax, Fairfax, VA, United States, (4)California Institute of Technology, Pasadena, CA, United States

IN11F Intelligent Systems for Geosciences: Practices, Technologies, and Applications of Advanced Reasoning that Are Defining New Frontiers and Accelerating Scientific Discovery Posters (Lightning)

- **IN13C-1668 Real-Time Mapping Spectroscopy on the Ground, in the Air, and in Space (Invited)** David R Thompson1, Abigail Allwood2, Steve Chien2, Robert O Green3 and David S Wettergreen4, (1)Jet Propulsion Laboratory, California Institute of Technology, Imaging Spectroscopy, Pasadena, CA, United States, (2)NASA Jet Propulsion Laboratory, Pasadena, CA, United States, (3)Jet Propulsion Laboratory, Pasadena, CA, United States, (4)NASA Headquarters, Washington, DC, United States

IN11A Advanced Information Systems to Support Climate Projection Data Analysis I Posters

- **IN11A-1613 Climate Data Analytics Workflow Management** Jia Zhang1, Seungwon Lee2, Lei Pan2, Chris A Mattmann3 and Tengdar J Lee4, (1)Carnegie Mellon University Silicon Valley, Moffett Field, CA, United States, (2)Jet Propulsion Laboratory, Pasadena, CA, United States, (3)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, United States, (4)NASA Headquarters, Washington, DC, United States

- **IN11A-1615 Analysis of Sea Level Rise in Action** Kevin Michael Gill1, Thomas Huang2, Nga T Quach2 and Carmen Boening2, (1)Jet Propulsion Laboratory, Pasadena, CA, United States, (2)NASA Jet Propulsion Laboratory, Pasadena, CA, United States

IN11B Achieving Deep Learning by Systemizing Machine Learning with Big Data Engines I Posters

- **IN11B-1625 The ClearEarth Project: Preliminary Findings from Experiments in Applying the CLEARTK NLP Pipeline and Annotation Tools Developed for Biomedicine to the Earth Sciences** Ruth Duer1, Anne Thessen1, Chris J Jenkins2, Martha Palmer3 and Skatje Myers4, (1)Ronin Institute for Independent Scholarship, Westminster, CO, United States, (2)Organization Not Listed, Washington, DC, United States, (3)University of Colorado at Boulder, Linguistics, Boulder, CO, United States, (4)University of Colorado at Boulder, Computer Science, Boulder, CO, United States

IN12A Big Data Analytics I
IN13A Architecture and Integration Testbed for Earth/Space Science Cyberinfrastructures II Posters

- In13A-1646 Uncoupling File System Components for Bridging Legacy and Modern Storage Architectures Navid Golpayegani, Milton Halem2, Curt Tilmes1, Smitri Prathapan2, Damon N Earp3 and Jihad S Ashkar2, (1)NASA Goddard Space Flight Center, Greenbelt, MD, United States, (2)University of Colorado Boulder, Boulder, CO, United States, (3)University of Colorado, CIERES, National Snow and Ice Data Center, Boulder, CO, United States
- In13A-1657 SAR processing in the cloud for oil detection in the Arctic Jessica Garron1, Chris Stoner1 and Franz J Meyer2, (1)Alaska Satellite Facility, Fairbanks, AK, United States, (2)University of Alaska Fairbanks, Fairbanks, AK, United States
- In13A-1658 Benchmark Comparison of Cloud Analytics Methods Applied to Earth Observations Christopher Lynes1, Michael M Little2, Thomas Huang3, Joseph Charles Jacob3, ChaoWei Phil Yang4 and Kwo-Sen Kuo5, (1)NASA Goddard Space Flight Center, Greenbelt, MD, United States, (2)NASA Headquarters, Washington, DC, United States, (3)NASA Jet Propulsion Laboratory, Pasadena, CA, United States, (4)George Mason University Fairfax, Fairfax, VA, United States, (5)Earth System Science Interdisciplinary Center, COLLEGE PARK, MD, United States
- In13A-1659 Performance Comparison of Big Data Analytics With NEXUS and Giovanni Joseph Charles Jacob1, Thomas Huang1 and Christopher Lynnes2, (1)NASA Jet Propulsion Laboratory, Pasadena, CA, United States, (2)NASA Goddard Space Flight Center, Greenbelt, MD, United States
- In13B-1660 Analytics and Visualization Pipelines for Big-Data on the NASA Earth Exchange (NEX) and OpenNEXAashish Chaudhary1, Petr Votava2, Ramakrishna R Neman1, Andrew Michaelis2 and Chris Kofalia1, (1)Kitware Inc., Clifton Park, NY, United States, (2)California State University Monterey Bay, Seaside, CA, United States, (3)NASA Ames Research Center, Moffett Field, CA, United States

IN13B Big Data Analytics II Posters

- In13B-1655 Demonstrating Condensed Massive Satellite Datasets for Rapid Data Exploration: The MODIS Land Surface Temperatures of Antarctica Glenn Grant1, Dave Gallaher1, Qin Lv2, Qi LIU2, Rudolf Klucik2 and Cathy Fowler3, (1)National Snow and Ice Data Center, Boulder, CO, United States, (2)University of Colorado Boulder, Boulder, CO, United States, (3)University of Colorado, CIERES, National Snow and Ice Data Center, Boulder, CO, United States
- In13B-1659 SAR processing in the cloud for oil detection in the Arctic Jessica Garron1, Chris Stoner1 and Franz J Meyer2, (1)Alaska Satellite Facility, Fairbanks, AK, United States, (2)University of Alaska Fairbanks, Fairbanks, AK, United States
- In13B-1658 Benchmark Comparison of Cloud Analytics Methods Applied to Earth Observations Christopher Lynes1, Michael M Little2, Thomas Huang3, Joseph Charles Jacob3, ChaoWei Phil Yang4 and Kwo-Sen Kuo5, (1)NASA Goddard Space Flight Center, Greenbelt, MD, United States, (2)NASA Headquarters, Washington, DC, United States, (3)NASA Jet Propulsion Laboratory, Pasadena, CA, United States, (4)George Mason University Fairfax, Fairfax, VA, United States, (5)Earth System Science Interdisciplinary Center, COLLEGE PARK, MD, United States
- In13B-1659 Performance Comparison of Big Data Analytics With NEXUS and Giovanni Joseph Charles Jacob1, Thomas Huang1 and Christopher Lynnes2, (1)NASA Jet Propulsion Laboratory, Pasadena, CA, United States, (2)NASA Goddard Space Flight Center, Greenbelt, MD, United States

IN13C Intelligent Systems for Geosciences: Practices, Technologies, and Applications of Advanced Reasoning that Are Defining New Frontiers and Accelerating Scientific Discovery Posters


IN14A Achieving Deep Learning by Systemizing Machine Learning with Big Data Engines II

- In14A-07 DeepSAT: A Deep Learning Approach to Tree-cover Delineation in 1-m NAIP Imagery for the Continental United States Sangram Ganguly1, SaiKas Basu2, Ramakrishna R Neman1, Supratik Mukhopadhyay2, Andrew Michaelis3 and Petr Votava3, (1)NASA Ames Research Center, Moffett Field, CA, United States, (2)Louisiana State University, Computer Science, Baton Rouge, LA, United States, (3)California State University Monterey Bay, Seaside, CA, United States
- In14A-08 Building Knowledge Graphs for NASA’s Earth Science Enterprise Tsengdar J Lee1, Jia Zhang2, Rahul Ramachandran3, Runyu Shi2, Qihao Bao2, Patrick N Gatlin3, Amanda Marie Weigle4, Manil Maskey4 and J.J. Miller4, (1)NASA Headquarters, Washington, DC, United States, (2)NASA Marshall Space Flight Center, Huntsville, AL, United States, (3)NASA Ames Research Center, Moffett Field, CA, United States

IN14B Advancing netCDF-CF for the Geoscience Community Posters (Lightning)

- In14B-1728 Using Cloud-based Storage Technologies for Earth Science Data Andrew Michaelis1, John Readey2 and Petr Votava1, (1)California State University Monterey Bay, Seaside, CA, United States, (2)HDF Group, Champaign, IL, United States
IN24A Enabling Cloud Applications for Earth Science Data II

IN24A-01 On the Large-Scale Issues of Cloud-based Applications for Earth Science Dat (Invited) Hook Hua, Jet Propulsion Laboratory, Pasadena, CA, United States
IN24A-06 Lessons Learned while Exploring Cloud-Native Architectures for NASA EOSDIS Applications and Systems Daniel Plone, Element 84, Inc., Alexandria, VA, United States

IN31D Collaborations, Partnerships, and Alliances that Are Building, Sustaining, and Stewarding Data and Research Infrastructures in Support of the New Era of the Big Data Transdisciplinary World I Posters

IN31D-1787 Data and Metadata Brokering – Lessons Learned from the BCube Project Siri-Jodha S Khalsa, University of Colorado at Boulder, Boulder, CO, United States
IN31D-1790 Managing Sustainable Data Infrastructures: The Gestalt of EOSDIS Jeanne Behnke1, Francis E Lindsay2, Dawn R Lowe1, Andrew E Mitchell1 and Christopher Lynnes1, (1)NASA Goddard Space Flight Center, Greenbelt, MD, United States, (2)NASA Headquarters, Washington, DC, United States

IN32A Near Real-Time Data for Earth Science and Space Weather Applications II

IN32A-01 Outcomes of a NASA Workshop to Develop a Portfolio of Low Latency Datasets for Time-Sensitive Applications Diane Davies1,2, Molly Elizabeth Brown3, David S Green4, Karen Michael5, Amber Jeanine Soja6, John J Murray6 and Christopher Owen Justice7, (1)Tigg-Davies Consulting Ltd, Malvern, Worcs, United Kingdom, (2)Science Systems and Applications, Inc., Lanham, MD, United States, (3)University of Maryland College Park, Department of Geographical Sciences, College Park, MD, United States, (4)NASA Headquarters, Washington, DC, United States, (5)NASA Goddard Space Flight Center, Greenbelt, MD, United States, (6)NASA Langley Research Center, Hampton, VA, United States, (7)University of Maryland College Park, College Park, MD, United States
IN32A-07 Rapid SAR and GPS Measurements and Models for Hazard Science and Situational Awareness Susan E Owen1, Sang-Ho Yun2, Hook Hua1, Piyush S Agrawal3, Zhen Liu2, Angelyn W Moore1, Paul Alan Rosen1, Mark Simons4, Frank Webb5, Justin Linick1, Eric Jameson Fielding6, Paul Lundgren1, Gian Franco Saccone2, Jasha Polat1 and Gerald Manypoon1, (1)NASA Jet Propulsion Laboratory, Pasadena, CA, United States, (2)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, United States, (3)California Institute of Technology, Pasadena, CA, United States, (4)California Institute of Technology, Pasadena, CA, United States, (5)JPL/NASA/Caltech, Pasadena, CA, United States, (6)Jet Propulsion Lab Caltech, Pasadena, CA, United States, (7)California State Polytechnic University Pomona, Pomona, CA, United States

IN33B Near Real-Time Data for Earth Science and Space Weather Applications II Posters

IN33B-1811 Let our powers combine! Harnessing NASA’s Earth Observatory Natural Event Tracker (EONET) in Worldview Mininnie Wong1, Kevin Ward2, Ryan A Roller2, Taylor Gnoo1, Kathleen Baynese2 and Benjamin A King1, (1)Science Systems and Applications, Inc., Lanham, MD, United States, (2)NASA Goddard Space Flight Center, Greenbelt, MD, United States
IN33B-1814 Improvements and Additions to NASA Near Real-Time Earth Imagery Matthew F Cechini1, Ryan A Roller2, Kathleen Baynese3, Jeffrey E Schmalz2, Alexander P De Luca1, Jerome King1, Charles K Thompson4, Joe T Roberts4, Joshua Rodriguez5, Joshua Rodriguez5, Taylor Gnoo1, Mininnie Wong1, Christian Alarcon4, Cristina De cesare4 and Natalie N Pressley1, (1)Science Systems and Applications, Inc., Lanham, MD, United States, (2)NASA Goddard Space Flight Center, Greenbelt, MD, United States, (3)Raytheon Company Rivardale, Rivardale, MD, United States, (4)NASA Jet Propulsion Laboratory, Pasadena, CA, United States, (5)Jet Propulsion Laboratory, Pasadena, CA, United States
IN33B-1822 The EOSDIS Products Usability for Disaster Response. Durga N Kafle1,2, Lalit Wachan1,2, Young-In Won1,3 and Karen Michael1, (1)NASA Goddard Space Flight Center, Greenbelt, MD, United States, (2)ADNET Systems Inc., Lanham, MD, United States, (3)California Institute of Technology, Pasadena, CA, United States

IN41D Persistent Identification, Publication, and Trustworthy Management of Research Resources I

IN41D-03 Repository Services and the Challenge of Trustworthiness 131836 (Invited) Ruth Duerer, Ronin Institute for Independent Scholarship, Westminster, CO, United States
IN41D-05 The IceBridge Portal - Automated Metadata Generation for Enhanced Data Access Steve Tanner1, Mark Schwab2, Kevin Beam3, Jeffrey S Deems1 and Amy Fitzgerald1, (1)National Snow and Ice Data Center, Boulder, CO, United States, (2)Raytheon Company Boulder, Boulder, CO, United States, (3)CIRES, Boulder, CO, United States

IN41B Bridging the Gap between Earth Science Open Data Producers and Consumers: Success Stories and New Challenges Posters

IN41B-1660 An Innovative Open Data-driven Approach for Improved Interpretation of Coverage Data at NASA JPL’s PO.DAAC Lewis John McGibney and Edward M Armstrong, NASA Jet Propulsion Laboratory, Pasadena, CA, United States
IN41B-1662 Earthdata Search Client Usage Study: Improving Client Usability to Increase Data Discoverability and Accessibility Mark Rees1, Jeff Siarto2, Stephen W Berrick3, Kathleen Baynes4, Dana Shum4 and Peter Plofchan4, (1)Element 84, Inc., Alexandria, VA, United States, (2)NASA Goddard Space Flight Center, Greenbelt, MD, United States, (3)NASA Goddard Space Flight Center, ESDIS Project Office, Greenbelt, MD, United States, (4)Raytheon Company Rivardale, Rivardale, MD, United States
IN41B-1663 Introducing a Web API for Dataset Submission into a NASA Earth Science Data Center David F Moroni, NASA Jet Propulsion Laboratory, Pasadena, CA, United States, Nga Quach, Jet Propulsion Laboratory, Pasadena, CA, United States and Westcott Francis-Curley, Columbia Technologies and Services, Inc., Jet Propulsion Laboratory, Pasadena, CA, United States

IN41C Managing Earth Science Data Quality Information for the Benefit of Users I Posters
IN43D Managing Earth Science Data Quality Information for the Benefit of Users II

IN43A Reproducible Research in Geosciences with Emphasis on Provenance of Information as an Essential Component II Posters

IN43B Persistent Identification, Publication, and Trustworthy Management of Research Resources II Posters

IN43C Knowledge Representation Frameworks: The Foundation for Achieving Interoperability Posters

PA43A Making an Impact: Stories, Tips, and Lessons Learned from Collaborating with Communities III Posters

IN51D Innovative Tools and Services to Enable Data Use across Broad User Communities I

IN51B Working toward a Living Dashboard of the Planet I Posters
IN53C-1914 Tools and Services for Working with Multiple Land Remote Sensing Data Products  Cole Krehbiel1, Aaron Friesz1, Lindsey Harriman2, Rob Quenzer2, Kevin Impecoven2 and Thomas Maiersperger3, (1)Innovate!, contractor to USGS Earth Resources Observation and Science (EROS) Center, Sioux Falls, SD, United States, (2)SGT, contractor to USGS Earth Resources Observation and Science (EROS) Center, Sioux Falls, SD, United States, (3)USGS Earth Resources Observation and Science (EROS) Center Sioux Falls, Sioux Falls, SD, United States

IN53C-1915 Advancing User Supports with Structured How-To Knowledge Base for Earth Science Data  Suhung Shen1, James G Acker2, Chris Lynnes2, Luther Lighty2, Tammy Beaty3 and Steve Kempler2, (1)George Mason University Fairfax, Fairfax, VA, United States, (2)NASA Goddard Space Flight Center, Greenbelt, MD, United States, (3)ORNL, Oak Ridge, TN, United States

IN53C-1917 NASA EOSDIS Enabling Science by Improving User Knowledge  Francis E Lindsay1, Jennifer Brennan2 and Josh Blumenfeld2, (1)NASA Goddard Space Flight Center, ESDIS, Greenbelt, MD, United States, (2)NASA Goddard Space Flight Center, Greenbelt, MD, United States

IN54A Working Toward a Living Dashboard of the Planet II

IN54A-02 Building a Dashboard for Natural Event Monitoring: NASA’s Global Imagery Browse Services + Earth Observatory Natural Event Tracker + Worldview (Invited)  Kevin Ward1,2 and Ryan A Boller1, (1)NASA Goddard Space Flight Center, Greenbelt, MD, United States, (2)Science Systems and Applications, Inc., Lanham, MD, United States