Session Information

**Oral Sessions**
Sessions are being held in the *Convention Center (CC)* and *Marriott Marquis (MM)*

**Poster Sessions**
Posters are on display in the following venue throughout the week: 
*Hall A-C (Poster Hall)*

**Session & Paper Numbering**

Paper Numbers - A paper number designates the section, or other sponsoring group, and chronology of the presentation. Example: **A21A-01** = Atmospheric Sciences, Tuesday, AM, concurrent session A, first paper in that session.

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**Day**

1 = Monday
2 = Tuesday
3 = Wednesday
4 = Thursday
5 = Friday

**Time**

1 = AM 0800-1000
2 = AM 1020-1220
3 = PM 1340-1540
4 = PM 1600-1800
5 = PM 1815-1915

*The program is current as of 05 December 2018. An omitted abstract ID number in the presentation order indicates that the abstract has been withdrawn by the presenter from the session. Please refer to the online program at [https://agu.confex.com/agu/fm18/meetingapp.cgi/Home](https://agu.confex.com/agu/fm18/meetingapp.cgi/Home) for updates.*

**Tuesday A.M.**

**IN21A (CC) 209A-C**

**Tuesday 0800h**

*Integrating Data and Services in the Earth, Space, and Environmental Sciences Across Community, National, and International Boundaries I*  
(cosponsored by EGU: European Geosciences Union, JpGU: Japan GeoScience Union)

**Presiding:** Lesley Wyborn, Australian National University; Francois Robida, Bureau de recherches geologiques et minieres; Helen Glaves, British Geological Survey;  

0800h **IN21A-01** IGSN: Toward a Mature and Generic Persistent Identifier for Samples: K Lehnert, J F Klump
IN21B  (CC) eLightning Theater II

Tuesday  0800h

Free and Open-Source Technologies for Advancing Earth and Space Sciences

eLightning

Presiding: Jens Klump, CSIRO Mineral Resources; Sarva Pulla, NASA Marshall Space Flight Center; Keith Evans, University of Maryland Baltimore County; Amanda Weigel, University of Alabama in Huntsville;

0800h Introductory Remarks:

0815h IN21A-02 International collaboration for magnetotelluric data and model sharing and interoperability: A Kelbert, M Smirnov, O Ritter, J Duan, G S Heinson, N Rees

0840h IN21A-04 The Essential Role of Socioeconomic Data in Cross-Disciplinary Integration of Data, Services, and Systems: R S Chen, R R Downs, S Vinay

0850h IN21A-05 Building thematic and integrated services for European solid Earth sciences: the EPOS integrated approach: M Harrison, M Cocco

0900h IN21A-06 ENVRI FAIR - the next step towards FAIRer environmental research: A Asmi, A Petzold

0910h IN21A-07 The Joint ESA-NASA Multi-Mission Analysis Platform: helping to enable international collaboration in the terrestrial biomass scientific community: A Whitehurst, K J Murphy, R Ramachandran, K Bugbee, H Laur, L A Jewell, C Albinet, B Frommknecht, S H Lubkin

0920h IN21A-08 Underpinning the next decade of geoscience research in Australia and facilitating international geoscience data integration and collaboration through the AuScope 2.0 investment.: E Robinson, T Rawling

0930h IN21A-09 NetCDF-LD: Updates on a Linked Data profile for NetCDF files: A Leadbetter, J Yu, M Hedley, J Bird

0940h IN21A-10 OneGeology; a mechanism for collaboration on global platforms and initiatives for interoperable subsurface data: C M Kemp, M Harrison, B Brodaric, F Robida

0950h IN21A-11 Addressing the massive CMIP6 data science challenge through the ESGF global federation: B J K Evans, M Lautenschlager, L Cinquini, S Denvil, S Ames, R Ferraro, V Balaji, P Kershaw, T Landry, D N Williams

0810h IN21B-19 Transformative Tuna: How Electronic Animal Tags Improved Rosetta for Everyone.: V M Tsontos, S C Arms, J Oxelson Ganter, C Hin Lam, C K Thompson, N Quach, L J McGibney, F Platt, J T Roberts

0840h IN21B-20 YAML encoding promotes human and machine readability for satellite ASCII data: E M Armstrong, W H Li, C J Finch, D N Wiese

0807h IN21B-21 Skip the Parsing Blues: Interoperable Data Delivery from Observing Platforms: E F Burger, S Stalin, M Casari, K O’Brien, R Simons, W Zhu

0810h IN21B-22 Tuning HDF5 (and NetCDF-4) Applications to Overcome and Avoid Compression Pitfalls: L Knox, E Pourmal

0813h IN21B-23 A Reusability Assessment of Recommended Software Solutions for Improving the Quality of Earth Science Data Products and Services: R R. Downs, H Ramapriyan, Y Wei

0816h IN21B-24 Democratizing Geospatial Image Processing with Open Source: A Bollinger

0819h IN21B-25 Using Open Source Tools for Change Detection and Feature Extraction of Urban Infrastructure and Landscape from Mobile LiDAR Sensor Data to Manage Geospatial Features: B A Alonzo

0822h IN21B-26 Open Numerical Simulation Data of Planetary Magnetosphere: K Fukazawa, T Kimura, F Tsuchiya, G Murakami, H Kita, C Tao, T Tokunaga, K T Murata


0831h IN21B-29 Open source web technology for disseminating drought information: K Shakya


Artificial Intelligence Applications in the Geosciences: Promises and Challenges for the Future II Posters (joint with GC, H, NH, SI)

Presiding: Suzanne Pierce, University of Texas at Austin; Renzhi Cao, Pacific Lutheran University; Tarka Wilcox, Pacific Lutheran University; Imme Ebert-Uphoff, Colorado State University;


IN21B-33 Rapid Web App Development to Enable Earth Science Data Visualization and Analysis Using Python and Tethys Platform: D P Ames, N Jones, J Nelson

IN21B-34 Using NASA's Worldview to Convey Scientific Findings: Z Rice, R A Boller, K Baynes, M M Wong, B A King, M McGann, E Plato

IN21B-35 The Advantages of Synergy – Quantitative Earth Science Data Visualization and Analysis with Giovanni, Panoply, and Excel: J G Acker, G T Alcott, M Ventura, J C Wei, D J Meyer

IN21D (CC) Hall A-C (Poster Hall)

Tuesday 0800h

Deep Learning for Geoscience Posters

Presiding: Youzuo Lin, Los Alamos National Laboratory; Emily Schultz-Fellenz, Los Alamos National Laboratory; David Coblentz, Los Alamos National Laboratory;

IN21C-0719 POSTER Convolutional Neural Network Based Auto Encoder for Feature Construction of Satellite Observations: K Zhang, X Xu, H Xia, C Lin

IN21C-0720 POSTER Deep Learning-based Tropical Cyclone Intensity Estimation System: M Maskey, R Ramachandran, J J Miller, I Gurung, B Freitag, R Mestre, A Bollinger, D Silva, A Molthan, D Cecil, C Hain, M Ramaubara


IN21C-0722 POSTER Physics-Informed Generative Learning to Emulate Unresolved Physics in Climate Models: J Wu, K Kashinath, A Albert, M Prabhat, H Xiao


IN21C-0724 POSTER Artificial Intelligence driven situation-aware uncertainty modeling and prediction of air quality from satellite asynchronous time series data: A K Singh, D Toshniwal


IN21C-0726 POSTER IS-GEO 2018 Summer Workshop: Bringing Scientists to the Sensors and Back Again, across 8 of the world’s 11 ecosystems: D R Fukua, G Jacobs, S S M Rahman, B W Mathews, A Ameko, Z M Easton
### New and Emerging Technologies for Earth and Space Science II Posters

**Presiding:** Kirk Martinez, University of Southampton; Michael Seablom, NASA; Jane Hart, University of Southampton; Lindsay Barbieri, University of Vermont;

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<td><strong>IN21D-0730 POSTER</strong> Self-Supervised Feature Learning with CRF Embedding for Hyperspectral Image Classification: Y Wang, J Mei, L Zhang</td>
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<td>0800h</td>
<td><strong>IN21D-0731 POSTER</strong> Farm Land Assessment Using Deep Fully Convolutional Neural Networks: J Wang, X Li, S Zhou</td>
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<td>0800h</td>
<td><strong>IN21D-0732 POSTER</strong> Can we rely on machine learning to reveal short term precursors of volcanic activity on Mt. Etna?: F Cannavo, A Cannata</td>
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<td>0800h</td>
<td><strong>IN21D-0733 POSTER</strong> Deep Learning for Transverse Cirrus Band Detection and Analysis: J Miller, U S Nair, R Ramachandran, M Maskey</td>
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<td>0800h</td>
<td><strong>IN21D-0734 POSTER</strong> A Deep Learning Architecture for Long-Range Forecasting of Sea Surface Temperature Anomalies: T Wilson, X Liu, P N Tan, P Hatami, L Luo</td>
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<td><strong>IN21D-0735 POSTER</strong> A Deep Neural Network Model for Improving Hourly Precipitation Estimates from Numerical Models: B Pan, K L Hsu, A AghaKouchak, S Sorooshian</td>
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<td>0800h</td>
<td><strong>IN21D-0736 POSTER</strong> Deep learning based global Arctic sea ice concentration retrieval algorithm: J Chi, H C Kim, S J Lee</td>
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<td><strong>IN21D-0737 POSTER</strong> Deep Graph Convolution for Weather Prediction: T Wilson, X Liu, P N Tan, P Hatami, L Luo</td>
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<td><strong>IN21D-0738 POSTER</strong> Climate Science, Deep Learning, and Pattern Discovery: The Madden-Julian Oscillation as a Test Case: B A Toms, K Kashinath, M Prabhat, M Mudigonda, D Yang</td>
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<td><strong>IN21D-0740 POSTER</strong> Deep Cloud Classification Method based on Multi-Channel Satellite Images: X Su, T Li</td>
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<td><strong>IN21D-0741 POSTER</strong> A Deep Learning Parameterization for Ozone Dry Deposition Velocities: S J Silva, C L Heald, S Ravela</td>
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<td><strong>IN21D-0742 POSTER</strong> Cloud characterization with deep learning: R Barros Lourenco, C Neo, E J Moyer, I T Foster</td>
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<td>0800h</td>
<td><strong>IN21D-0744 POSTER</strong> Hierarchical Scale Dependence and Co-existence of Chaotic and Non-Chaotic Processes within a Generalized Lorenz Model: A Study using Kernel PCA and SVM Methods: J Cui, B W Shen</td>
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<td>0800h</td>
<td><strong>IN21D-0745 POSTER</strong> Estimating the Maximum Magnitude of Induced Earthquakes with Machine Learning: E Gilmour, E G Daub, L Smith</td>
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### Data Science and Geochemistry: Applying a Data-Driven Approach in Geochemistry-Centric Studies I (joint with B, EP, H, IN)

**Presiding:** Tao Wen, Pennsylvania State University; Fang Huang, Rensselaer Polytechnic Institute; Chao Liu, Carnegie Institution for Science Washington; Lisa Warden, Carnegie Institution for Science Washington;
0800h **V21A-01** Frontiers in data-driven solid-earth geochemistry in the Precambrian: B Keller

0815h **V21A-02** Investigating the Emergence and Geochemical Evolution of Enriched Basaltic Magmas: A Data-Driven Approach: M J Williams, J F Klump, S J Barnes

0830h **V21A-03** Natural Kind Cluster Analysis of Mineral Chemistry Data: A New Approach to Mineral Classification: R M Hazen

0845h **V21A-04** Biological Utilization of Cobalt from the Geosphere, and the expanding network of microbial metabolisms in the Archean eon: E K Moore, J Hao, A Prabhu, H Zhong, B J Jelen, M Meyer, R M Hazen, P G Falkowski

0900h **V21A-05** Using Big Data (and Little Data) to Understand the Effects of Shale Gas Development on Water Quality: S L Brantley, T Wen, Z Li, M Liu, G Zheng, A Herman, M S Gonzales, J Woda, X Niu

0915h **V21A-06** Finding locations of good water candidates through statistical analysis of groundwater quality and hydrogeological data: H E Yu, K K Lee, D Kaown

0930h **V21A-07** Multivariate and Network Analysis of Microbe-Environment Interactions Across a Geochemically Active Subduction Zone in Northern Costa Rica: K M Fullerton, D Giovannelli, M Nakagawa, M O Schrenk, K G Lloyd

0945h **V21A-08** Boosting Data Science in Geochemistry: We Need Global Geochemical Data Standards and Networking!: K Lehnert, L A Wyborn, S J D Cox, J F Klump, B McInnes

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**IN22A (CC) 209A-C**

**Tuesday 1020h**

**Changing Culture Through Credit in Support of Enabling FAIR Data I**

Presiding: Denise Hills, Geological Survey of Alabama; Shelley Stall, American Geophysical Union; Rowena Davis, Arizona Geological Survey; Catriona Maccallum, Hindawi Limited;

1020h Welcoming Remarks: C Mentzel

1040h **IN22A-02** Cultural Considerations and FAIR: S Allard

1050h **IN22A-03** International Cooperation Toward FAIR Principles and Open Data in Transdisciplinary Research: E Key, R Davis, T Lee, R J Samors

1100h **IN22A-04** Credit and Advancing Open Science at PLOS: J Heber

1110h **IN22A-05** ORCID Infrastructure for Facilitating Data Sharing Attribution: E Olson

1120h **IN22A-06** FAIR Data: DataCite’s approach to credit and attribution: J Chodacki, D Lowenberg

1130h Panel Discussion: C Mentzel, S Allard, J Chodacki, J Heber, E Key, E Olson, E Schultes, PhD

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**IN22B (MM) Liberty I-K**

**Tuesday 1020h**

**Citizen Science: Engaging a Wider Community to Better Understand Our Planet I**

Presiding: Amanda Whitehurst, ASRC Federal Holding Company; Lin Chambers, NASA Langley Research Center; Michael Jabot, State University of New York at Fredonia; Peder Nelson, Oregon State University;

1020h **IN22B-01** Community Snow Observations (CSO): A Citizen Science Campaign to Validate Snow Remote Sensing Products and Hydrological Models: K Wikstrom Jones, G J Wolken, D Hill, R L Crumley, A A Arendt, J Joughin, L Setiawan

1035h **IN22B-02** Developing a Citizen Science Network to Validate Lake Water Storage Measurements from the SWOT Satellite Mission: T Pavelsky, G Parks, S Yelton, F Hossain, S K Ghafoor, C Hein

1050h **IN22B-03** Citizen Scientists as Community Agents of Change: GLOBE Observer Mosquito Habitat Mapper: R Low

1105h **IN22B-04** Design and Implementation of a Citizen-based Regional Land-Use Mapping Strategy Linking Forest Management to Surrounding Lands: D Yang, C S Fu, M Binford

1120h **IN22B-05** Community Engagement through Citizen Science Projects for Canadian Cordillera Array and EON-ROSE: K J E Boggs, K O’Connor, D W S Eaton, H J Gilbert, J Zens

1135h **IN22B-06** Citizen-Enabled Aerosol Measurements for Satellites (CEAMS): A Network for High-Resolution Measurements of PM2.5 and Aerosol Optical Depth: M Cheeseman, J Volckens, B Ford, S Jathar, J Tryner, M Long, J Mehaffy, J R Pierce, N Good, E Wendt, C L’Orange

1150h **IN22B-07** Citizen science cloud observations compared to near ground cloud observations from CALIPSO and MODIS satellite data over the Drake Passage: M Colon-Robles, L Farmer, J B Dodson, J L Tackett, C Cruikshank DeFontes, K Ivey, T’M Rogerson, J Taylor

1205h **IN22B-08** Validation of GLOBE Citizen Science Observations Using Data from the Great American Solar Eclipse.: M I U Rahman, K Czajkowski, Y Jiang
ED23D (CC) Hall A-C (Poster Hall)

Tuesday 1340h

Diversity, Inclusion, and Equality in Geosciences III Posters (cosponsored by EGU: European Geosciences Union, JPGU: Japan GeoScience Union) (joint with H, IN, PA)

*Presiding:* Tim van Emmerik, The Ocean Cleanup; Lesley Wyborn, Australian National University; Jill Karsten, AGU Diversity & Inclusion Task Force; Claudia Jesus-Rydin, European Research Council;

1340h **ED23D-0930 POSTER** Gender and the geosciences: An investigation of bachelor’s degree graduation rates in the U.S.: *A A Mitchell, H Macdonald, R Lockwood*

1340h **ED23D-0931 POSTER** Who has benefitted from outreach in the geosciences?: *E H G Cooperdock, R E Bernard*

1340h **ED23D-0932 POSTER** Do the ends justify the means? The complex politics of research on equity and diversity in the geosciences: *S Cannon, L King, L MacKenzie, M Tadaki, K Mcfarlane, D A Reid, M N Koppes*

1340h **ED23D-0933 POSTER** Examining Representation in the Fourth National Climate Assessment: *A Lustig, K Lewis, A Bieniek-Tobasco*

1340h **ED23D-0934 POSTER** Bilingual science outreach and communication: Broadening the participation of Spanish-speaking communities in the Earth and Atmospheric Sciences: *L Medina Luna, B A Bartel, M Hubenthal*

1340h **ED23D-0935 POSTER** Proposals for Addressing Capacity Gaps in African Ocean Science and Policy Capabilities: *P A McGilivary, J T Borges de Sousa, J Silva*

1340h **ED23D-0936 POSTER** Workforce and graduate school outcomes of NOAA’s Educational Partnership Program: *T Christenson, M Kaplan*

1340h **ED23D-0937 POSTER** Supporting Diversity, Inclusion, and Equity in Geosciences through STEM Experiences in K-12 Formal and Informal Learning Environments: *T Ostrom, S Darche*

1340h **ED23D-0938 POSTER** Have You Noticed Geology Is Missing In Introductory Textbooks?: *A M Hawthorne Allen*

1340h **ED23D-0939 POSTER** The USF Sloan Foundation University Center of Exemplary Mentoring: A Model for Increasing PhD Diversity in the Ocean Sciences: *A R Arellano, B Batson, F E Muller-Karger, D F Naar, J Zayas-Castro*

1340h **ED23D-0940 POSTER** Pathways Towards Geoscience Diversity from Urban Areas: An Example from Newark, NJ: *A E Gates*

1340h **ED23D-0941 POSTER** Successful Strategies for Promoting Inclusive Conferences in the Earth and Space Sciences: *B Smith-Keilin, A Keiling*

1340h **ED23D-0942 POSTER** What can scientific conferences tell us about diversity in geoscience?: *L King, S Cannon, L MacKenzie, M Tadaki, K Mcfarlane, D A Reid, M N Koppes*

1340h **ED23D-0943 POSTER** The first-authorship geoscience gender gap: Underrepresentation of women first authors in leading geoscience journals, 2013-2018: *T Pico, S Richardson, P R Bierman*

1340h **ED23D-0944 POSTER** Environmental Science without Borders: *D Upadhyay, A A Adhabi, K Y Nabo, B Linol, A A Kruytoff, G Jismok, F Glaser, A K Tripati*

1340h **ED23D-0945 POSTER** Data Streams, Model Workflows, and Educational Pipelines for Hydrologic Sciences: *C Bandaragoda, A A Arendt, A M Castronova, B Nijssen, E Istanbulluoglu, N C Cristea, V Smith*

1340h **ED23D-0946 POSTER** Data Visualization: Color Selection for Color Vision Deficiency: *M L Shusterman*

1340h **ED23D-0947 POSTER** A new mentoring forum for deaf and hard-of-hearing academics: *M L Cooke, A L Caicedo*

1340h **ED23D-0948 POSTER** Assessing Accessibility Climate: What undergraduates think about accessibility in the geoscience classroom: *M R M Brown, E Fairfax*

IN23A (CC) Hall A-C (Poster Hall)

Tuesday 1340h

Citizen Science: Engaging a Wider Community to Better Understand Our Planet Posters

*Presiding:* Amanda Whitehurst, ASRC Federal Holding Company; Lin Chambers, NASA Langley Research Center; Michael Jabot, State University of New York at Fredonia; Peder Nelson, Oregon State University;

1340h **IN23A-0755 POSTER** Citizen scientist with the right tools can learn how to actively participate in science investigations particular those that are most vulnerable and marginalized. This presentation will provide examples of how citizens have been successfully empowered environmental justice groups and organizations: *G A Harris*

1340h **IN23A-0756 POSTER** Merging Citizen Science with Structured Protocols: *M Jabot*
IN23B (CC) Hall A-C (Poster Hall)

Tuesday 1340h

Integrating Data and Services in the Earth, Space, and Environmental Sciences Across Community, National, and International Boundaries II Posters (cosponsored by EGU: European Geosciences Union, JPGU: Japan GeoScience Union)

Presiding: Lesley Wyborn, Australian National University; François Robida, Bureau de recherches géologiques et minières; Helen Glaves, British Geological Survey;

1340h IN23B-0757 POSTER Acquire – Analyze – Apply (A3) : An Earth SySTEM Project: J D Moore, P Dorofy, M Jabot, K Czajkowski

1340h IN23B-0758 POSTER The “World’s Largest Hackathon” - The NASA International Space Apps Challenge: P A Jacobberger-Jellison, S N Hemmings

1340h IN23B-0759 POSTER The VIIRS-Aurora SatCam Citizen Science Project: M E Mooney, L Gumley, W C Straka, K Strabala

1340h IN23B-0760 POSTER Ozone Bioindicator Gardens: a Citizen Science project to raise awareness about ozone pollution and its effects on living systems: B Hatheway, D L Lombardozzi, M E Dussault, D Hammerling, M R Pippin, S Sachs, E A Wright

1340h IN23B-0761 POSTER Validating the 2011 and 2016 NLCD Tree Canopy Cover Products using Crowdsourced Interpretations: J M Derwin, V A Thomas, R H Wynne, S S Peery, J Coulston, K Luther, G Liknes, S Bender

1340h IN23B-0762 POSTER Infragram - A DIY Multispectral Photography And Analysis Platform For Classroom Use: J Warren

1340h IN23B-0763 POSTER Engaging Citizen Scientists and Low-Cost Sensors to Understand Local Air Quality: P Doraiswamy, K Mills, P Gupta, O Pikelnaya, B Feenstra, A Polidori, R C Levy

1340h IN23B-0764 POSTER Streaming Science: M Richardson, P Gay, J L Myers, A Wilson, S Murph, N Graziano

1340h IN23B-0765 POSTER Citizen Science - Unearthing Hidden Interests: B Azubuike, P Gay, A Glushko, S Murph, N Graziano

1340h IN23B-0766 POSTER The Ecology of Outcomes: Understanding the scientific, community and cross-sectoral impacts of infrastructural work: S Slota, G C Bowker, A O Hoffman, D Ribes

1340h IN23B-0768 POSTER Competition and Collaboration: Observations of Early-Stage Cyberinfrastructure Creation: J Campbell

1340h IN23B-0769 POSTER A personal attempt of consideration on value and position of World Data System: Y Murayama

1340h IN23B-0770 POSTER The Canadian Consortium for Arctic Data Interoperability: advancing local to global connectivity through cross-cultural collaboration and distributed architecture: P L Pulsifer, M S Murray, S Christoffersen, D R F Taylor

1340h IN23B-0771 POSTER Improving Disasters Preparedness and Response: S Serich, M F Voidrot, T A Idol

1340h IN23B-0772 POSTER OGC Standards and Working Groups for geoscience: M Harrison, M Beafuls, C Kemp, B Brodaric, E Boisvert, S Grell

1340h IN23B-0773 POSTER EarthResourceML/INSPIRE Mineral Resources data models and ERML Lite: Data Standards to Deliver Mineral Resources Data EU and Globally: J Vuollo II, D Cassard, O Raymond, M Sexton, M Rattenbury, J Passmore

1340h IN23B-0774 POSTER Contributions of the German Research Center for Geosciences (GFZ) to the EPOS (European Plate Observing System) Implementation Phase 2015-19: T L Hoffmann, J Lauterjung, M Litwin Prestes

1340h IN23B-0775 POSTER Integrating Datasets and Services in the Solid Earth Domain: the EOS case: D BaiIo, R Paciello, V Vinciarelli, R Rabinson, K G Jeffery

1340h IN23B-0776 POSTER Fostering Resource Integration: The EarthCube Resource Registry: R Koskela, S M Richard, I Zaslavsky, A Kelbert, R Duerr

1340h IN23B-0777 POSTER The USGS National Digital Catalog: the registry for federal and state geoscience resources: L A Powers, S Bristol, N Latys

1340h IN23B-0778 POSTER Enhancing Australian Foundation Spatial Data Framework to support Australia’s future: I Bastrakova, N J Car, A Whiting, G Logan, R Newham

1340h IN23B-0779 POSTER Real-time GNSS data and product streams at NASA GSFC CDDIS: S M Blevins, B P Michael, C E Noll

1340h IN23B-0780 POSTER CyberConnector COVALI: enabling inter-comparison and validation of Earth science models: Z Sun, L Di


1340h **IN23B-0783 POSTER** Establishing a Common Global Framework for Marine Data Management: Building on the Ocean Data Interoperability Platform: **H Glaves**

1340h **IN23B-0784 POSTER** The JCMM Observations Coordination Group: Integrating Data and Information from a Global Array of Ocean Platforms: **K O’Brien**


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**V231 (CC) Hall A-C (Poster Hall)**

**Tuesday 1340h**

**Data Science and Geochemistry: Applying a Data-Driven Approach in Geochemistry-Centric Studies Posters**

(joint with B, EP, H, IN)

**Presiding:** Tao Wen, Pennsylvania State University; Fang Huang, Rensselaer Polytechnic Institute; Chao Liu, Carnegie Institution for Science Washington; Lisa Warden, Carnegie Institution for Science Washington;

1340h **V231-0157 POSTER** Mining of Chemistry Data Explains the Fate of Radium in Hydraulic Fracturing Wastewater: **B Ouyang**, DJ Renock, JD Landis, X Feng

1340h **V231-0158 POSTER** Statistical Evaluation of Conservative Solute Ratios of Brines from the Eastern United States Sedimentary Basins: **J M Bartos**, DGallagher, TJBurbey

1340h **V231-0160 POSTER** Dynamic Interactions of Methanogens and Archean Earth Environment: **D Cui**, FTian

1340h **V231-0161 POSTER** Gold Favorability Modeling from Stream Sediment Geochemical Data using Fractal-Geospatial Approach: An Example from Sonakhan Greystone Belt, India: **S Behera**, MKPanigrahi

1340h **V231-0162 POSTER** East African Rift Tephra Database [EARTHxD]: a compilation documenting and analyzing explosive volcanism in East Africa: **S Mana**, EDiMaggio, KFontijn

1340h **V231-0163 POSTER** Potential Consequences of the Compositional Distribution of Trace Element Partitioning Experiments: **R Nielsen**, S Tung, GKUstunisik

1340h **V231-0164 POSTER** Detecting anomalous methane in groundwater in shale gas production areas using big data: **T Wen**, M Liu, JWoda, GZheng, ZLi, SBrantley

1340h **V231-0165 POSTER** Principal Component Analysis Reveals Diverse Mantle Melting at the Galápagos Plume-ridge Interaction Zone: **M Uno**, KUeki, TKuwatani

1340h **V231-0166 POSTER** Open-source Data Processing in Stable Isotope Ratio Mass Spectrometry: New Software Packages for Efficient, Transparent and Reproducible IRMS Data Reduction: **S Kopf**

1340h **V231-0167 POSTER** Average Chemical Composition of Indian Shale Composite: **E Ray**, DPaul

1340h **V231-0168 POSTER** Predicting Silicate Weathering Rates across the Continental United States: **S Zhang**, NPlanavsky

1340h **V231-0169 POSTER** Application of multivariate statistics to geochemical and precipitation data to evaluate dissolved organic matter-trace element variability in a Coastal Bay: **S Manalikaka Sasdharan**, PDash, YLu, VPaul, AMercer, ZArslan

1340h **V231-0170 POSTER** New Bond-Valence Parameters for Inferring the Oxidation State of Transition Metals in Sulfide and Sulfosalt Minerals: **O C Gagné**, RTDowns, SMorrison, RHazen

1340h **V231-0171 POSTER** Data-Driven Approaches toward Assessing Impacts of Industrial Development on Surface Water Quality in the U.S.A.: **M Liu**, GZheng, TWen, XNiu, ZLi, SBrantley

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**IN24A (CC) 145A**

**Tuesday 1600h**

**Climate Informatics: Methods and Applications**

(joint)

**Presiding:** Jakob Runge, German Aerospace Center; Gustau Camps-Valls, Universitat de València; Markus Reichstein, Max-Planck Institute for Biogeochemistry; Veronika Eyring, German Aerospace Center (DLR);

1600h **IN24A-01** Algorithms for Climate Informatics: Learning from Spatiotemporal Data with Both Spatial and Temporal Non-stationarity: **C Monteleoni**

1615h **IN24A-02** A Bayesian framework for causality estimation: **P J van Leeuwen**

1630h **IN24A-03** Project DisCo: Physics-Based Discovery of Coherent Structures in Spatiotemporal Systems: **A Rupe**, KKashinath, NKumar, JPCrutchfield, MPrabhat
IN24B (CC) 209A-C

Tuesday 1600h

Toward Networks of Trusted Data Repositories in the Earth and Space Sciences I ©

Presiding: Danie Kinkade, Woods Hole Oceanographic Institution; Kenneth Casey, NOAA/NESDIS/NODC; Stephen Diggs, Univ. of California San Diego; Jessica Hausman, Jet Propulsion Laboratory;

1645h IN24A-04 Large-scale causal network discovery in CMIP5 models: robustness and intercomparison: P J Nowack, J Runge

1700h IN24A-05 Spatio-Temporal Climate Data Causality Analytics – An Analysis of ENSO’s Global Impacts: J Wang, H Song, Z Zhang, P Guo

1715h IN24A-06 Information measures of land-carbon source-sink dynamics: Y Liu, J Dong, A Jurgens, A Kraay, K Ogle, C R Schwalm, S Stopnitzky, J L Weissman, S H Zhan

1730h IN24A-07 Towards Topological Pattern Detection Methods in Climate Data: Application to Atmospheric Blocking Events: G Muszynski, K Kashinath, V Kurlin, M F Wehner, M Prabhat

1745h IN24A-08 Exploring the Spatio-temporal Connectivity of Blizzard Conditions and Mid-latitude Cyclones: A Template for a Process-based Workflow: M Bauer, K S Kuo, A Olosa, M L Rilee

1600h IN24B-01 Connecting community data repositories for discovery and sharing by leveraging schema.org and JSON-LD: D Fils, A Shepherd, S M Richard, N Jarboe, D Clark, M Carter-Orlando

1615h IN24B-02 Towards Networks of Trusted Virtual Domain Repositories that are connected to Networks of Persistent Physical Repositories: L A Wyborn, B J K Evans, K Lehnert, A Treloar, A Burton, T Rawling, S Stall

1630h IN24B-03 Facilitating and Improving Environmental Research Data Repository Interoperability: C Smith, C Gries, A E Budden, C M Laney, M O’Brien, M S Servilla, W Sheldon, K Vanderbilt, D Vieglais

1645h IN24B-04 Data Management Plans 2.0: A Hub of Information to Facilitate Research: S Simms

1700h IN24B-05 CEOS VIRTUAL DATA REPOSITORIES FOR WGISS DATA ASSETS: Y Enloe, A E Mitchell, M Albani, M Yapur

1715h IN24B-06 Growing an Interoperable Network of Trusted Repositories through DataONE: M B Jones, A E Budden, D Vieglais, K K Benedict

1730h IN24B-07 Extending the Climate Data Initiative to GeoPlatform.gov: A W Sisco, S Ramdeen, K Bugbee, J Davidson, L Duffy, P Neal, T O Dabolt, A Whitehurst, R Ramachandran

1745h IN24B-08 The National Polar Data Centers are Key Elements in Connecting Data Providers and Data Users within the Polar Research Community: T De Bruin, M Tacoma