

ABOUT AGU

Outstanding Student Paper Awards

The following members received Outstanding Student Paper Awards at the 2012 AGU Fall Meeting in San Francisco, Calif. See also "Outstanding Student Paper Awards" published previously (Eos, 94(8), 82). Look to future issues of Eos for more award winners.

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Biogeosciences (B)

Carmen Emmel, University of British Columbia, Vancouver, British Columbia, Canada, *Determining the vertical carbon dioxide source/sink distribution in a mountain pine beetle attacked forest: A comparison of eddy-covariance and ecophysiological approaches*

Dorothy Fibiger, Brown University, Providence, Rhode Island, *Towards the tracing of NO_x sources by isotopic signature*

Jeffrey Geddes, University of Toronto, Toronto, Ontario, Canada, *Observations of reactive nitrogen oxide fluxes by eddy covariance above a mid-latitude mixed hardwood forest*

Steven Hall, University of California, Berkeley, *Minerals vs. microbes: Biogeochemical controls on carbon storage in humid tropical forest soils*

Adam Jew, Stanford University, Stanford, California, *A sequential chemical extraction and spectroscopic assessment of the potential bioavailability of mercury released from the inoperative New Idria Mercury Mine, San Benito Co., CA*

Adrienne Phillips, Montana State University, Bozeman, *Biofilm-induced calcium carbonate precipitation: Application in the subsurface*

David Reed, University of Wyoming, Laramie, *Contrasting ecosystem drivers of mass and energy fluxes at upper and lower elevation sagebrush steppe sites*

Lucy Rose, University of Pittsburgh, Pittsburgh, Pennsylvania, *Highly variable $\delta^{15}N$ and $\delta^{18}O$ of event-based precipitation nitrate indicate dynamic contributions from biogenic and anthropogenic NO_x sources*

Elizabeth Trembath-Reichert, California Institute of Technology, Pasadena, *Expanding diversity of potential bacterial partners of the methanotrophic ANME archaea using Magneto-FISH*

Samantha Trumbo, Cornell University, Ithaca, New York, *A mathematical model for estimation of kelp bed productivity: Age dependence and contributions of subsurface kelp*

Xia Zhu, University of California, Davis, *Influence of oxygen content on N₂O produce from nitrifier denitrification*

Cryosphere (C)

Timothy C. Bartholomaeus, University of Alaska Fairbanks, *Tidewater terminus tug-of-war*

Ben Linhoff, Massachusetts Institute of Technology, Cambridge, *Greenland ice sheet hydrology: Insights from an isotope mixing model during the 2011 and 2012 melt seasons*

Chris Marsh, University of Saskatchewan, Saskatoon, Canada, *Implications of mountain shading on calculating energy for snowmelt using unstructured triangular meshes*

Brooke Medley, University of Washington, Seattle, *New, high-resolution spatio-temporal accumulation rate measurements and their validation of climate models and implication for the recent sea-level contribution from West Antarctica*

Toby Meierbachtol, University of Montana, Missoula, *Rapid adjustment of Greenland subglacial system to discharge perturbations: In situ measurements in boreholes*

David Shean, University of Washington, Seattle, *Quantifying ice-sheet/ice-shelf dynamics and variability with meter-scale DEM and velocity timeseries*

Kristal Verhulst, University of California, Irvine, *A Holocene record of atmospheric methyl chloride from Antarctic ice cores*

Earth and Planetary Surface Processes (EPSP)

Matthew Jungers, Arizona State University, Tempe, *Mid-Pleistocene erosion-deposition cycles in the hyperarid Atacama Desert of northern Chile*

Jose M. Mier, University of Illinois at Urbana-Champaign, *3D LDV measurements in oscillatory boundary layers*

Lindsay Olinde, University of Texas at Austin, *Evaluating bedload transport with RFID and accelerometer tracers, airborne LiDAR, and HEC-GeoRAS modeling: Field experiments in Reynolds Creek, Idaho*

Alejandra C. Ortiz, Massachusetts Institute of Technology, Cambridge, *Turbulent and mean velocity near rigid and flexible plants, and implications for deposition*

Andrew D. Wickert, University of Colorado, Boulder, *Ice age geomorphology of North America*

Jessica Zinger, University of Illinois at Urbana-Champaign, *From meander bend to oxbow lake: Flow, channel morphology and sedimentology of an evolving chute cutoff on the Wabash River, IL-IN*

Earth and Space Science Informatics (ESSI)

Mostafa Elag, University of South Carolina, Columbia, *Design and application of an*

ontology for component-based modeling of water systems

Toni Rosati, National Center for Atmospheric Research, Boulder, Colorado, *Facilitating NCAR data discovery by connecting related resources*

Geodesy (G)

Estelle Chaussard, University of Miami, Coral Gables, Florida, *Precursory deformation and depths of magma storage revealed by regional InSAR time series surveys: Example of the Indonesian and Mexican volcanic arcs*

Christof Lorenz, Karlsruhe Institute of Technology, Karlsruhe, Germany, *Improving the spatial resolution of terrestrial water storage changes from GRACE using hydrological- and hydro-meteorological information*

Bryan Riel, California Institute of Technology, Pasadena, *Multiscale transient signal detection: Localizing transients in geodetic data through wavelet transforms and sparse estimation techniques*

Geomagnetism and Paleomagnetism (GP)

Anita Di Chiara, Istituto Nazionale di Geofisica e Vulcanologia, Bologna, Italy, *Paleomagnetic secular variation at the Azores during the last 3 ka*

Global Environmental Change (GEC)

Daniel Griffin, University of Arizona, Tucson, *Monsoon failure enhances drought in southwestern North America*

Yuwei Liu, University of California, Berkeley, *Teleconnection mechanisms from extratropical North Atlantic cooling to reduced Sahel rainfall*

Kelly McCusker, University of Washington, Seattle, *Climate response to abrupt cessation of solar radiation management*

Yoichi Shiga, Stanford University, Stanford, California, *Exploring the ability of inverse methods to isolate the fossil fuel emission signal from atmospheric CO₂ measurements*

Scott Stephenson, University of California, Los Angeles, *Impacts of projected sea ice changes on trans-Arctic navigation*

Hydrology (H)

Sanyogita Andriyas, Utah State University, Logan, *Bayesian belief networks approach for modeling irrigation behavior*

David Cameron, Stanford University, Stanford, California, *Closed-loop aquifer management for geological carbon storage*

Jane Chui, Massachusetts Institute of Technology, Cambridge, *Interface evolution during miscible viscous fingering*

Jacob Diamond, University of Florida, Gainesville, *Concentration-discharge relationships for variably sized streams in Florida: Patterns and drivers in long-term catchment studies*

James Dietrich, University of Oregon, Eugene, *Mapping land and water surface*

topography with instantaneous structure from motion

Xue Feng, Duke University, Durham, North Carolina, *Changes in rainfall seasonality in the tropics*

David L. Hochstetler, Stanford University, Stanford, California, *Impact of compound-specific transverse mixing on steady-state reactive plumes*

Dan Li, Princeton University, Princeton, New Jersey, *Hydro-meteorological and micro-climatic impacts of urbanization*

Franziska Moebius, Eidgenössische Technische Hochschule Zürich, Zurich, Switzerland, *Pore invasion dynamics during fluid front displacement in porous media—Functional pore size distribution and phase entrapment*

Phu D. Nguyen, University of California, Irvine, *Improving flash flood forecasting through coupling of a distributed hydrologic rainfall-runoff model (HL-RDHM) with a hydraulic model (BreZo)*

Nicole Rudolph, University of Potsdam, Potsdam, Germany, *Highly resolved imaging at the soil-plant root interface: A combination of fluorescence imaging and neutron radiography*

Mineral and Rock Physics (MRP)

Corliss Kin I Sio, University of Chicago, Chicago, Illinois, *Telling zoned from zoned: LA-MC-ICPMS and SIMS iron isotopic measurements of olivine*

Aaron S. Wolf, California Institute of Technology, Pasadena, *A simplified cation speciation model for silicate liquids at mantle pressures and temperatures*

Natural Hazards (NH)

Xiaoman Jiang, Nanjing University, Nanjing, China, *Diagnostic analysis of a heavy rainfall event over Beijing on July 21-22, 2012*

Amir Jina, Columbia University, New York, New York, *Development after disaster: Multidecadal impacts of tropical cyclones upon long-run economic growth*

Nicholas Roberts, Simon Fraser University, Burnaby, British Columbia, Canada, *Landslide-generated tsunami geomorphology at Chehalis Lake, British Columbia*

Near-Surface Geophysics (NS)

Andrea Miller, University of Texas at Austin, *Developing age models to utilize high Arctic coastal sediments for paleoclimate research: Results from the Colville Delta and Simpson Lagoon, Alaska*

Carolyn Tewksbury-Christle, University of Tennessee, Knoxville, *Comparing theoretical predictions with experimental data showing the relationship between ground penetrating radar amplitude response and fluid salinity, fracture aperture, and channel width of a fractured bedrock analog*

Nonlinear Geophysics (NG)

Shibabratt Naik, Virginia Polytechnic Institute and State University, Blacksburg, *Lobe dynamics and homoclinic tangles in atmospheric flows*

Ocean Sciences (OS)

Antoinette Abeyta, University of Minnesota, Twin Cities, Minneapolis, *Transport dynamics of mass failures along weakly cohesive clinoform foresets*

Knut Arne Birkedal, University of Bergen, Bergen, Norway, *Electrical resistivity measurements in sandstone during CH₄ hydrate formation and CH₄-CO₂ exchange*

Tyler Chandos Brown, University of Wyoming, Laramie, *Gabbro microstructure and crystallography from Pito Deep: Evidence for gabbro glacier flow*

Sarah Donne, University College Dublin, Dublin, Ireland, *Towards a quantification of ocean wave height off the west coast of Ireland using land based seismic data*

David Honegger, Oregon State University, Corvallis, *A synopsis of X-band radar-derived results from New River Inlet, NC (May 2012): Wave transformation, bathymetry, and tidal currents*

Ben Reineman, University of California, San Diego, La Jolla, *Development and testing of instrumentation for ship-based UAV measurements of ocean surface processes and the marine atmospheric boundary layer*