

perspective in polar ocean research, a needed approach in a field characterized by the presence of many partially overlapping areas of study. IMPETUS 2008 strengthened existing collaborations and built up new networks that include scientists from a range of career stages, from early career to senior scientists.

The success of IMPETUS 2008 highlighted the value of improved communication between disciplines, approaches, and research levels. Participants discussed the need to meet beyond the traditionally established venues and build up new networks, which contribute to early development of cross-cutting projects, methods, and relevant scientific questions. In addition, the poster session, which included more than 60 posters covering all fields in polar marine research, fostered through discussion the development of new scientific networks and projects aimed at facing the challenge of a changing Arctic environment.

IMPETUS 2008 also served as an important step toward the international interdisciplinary dialogue necessary to make the marine science plans developed by the Second International Conference on Arctic Research Planning (ICARP II) a reality. The early career scientists at IMPETUS 2008 were encouraged to join the effort of the ICARP II Marine Roundtable (MRT; [www.aosb.org/programs.html](http://www.aosb.org/programs.html)) to initiate a pan-Arctic, multidisciplinary science plan on Arctic marine research.

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the Integrated School of Ocean Sciences, the International Arctic Science Committee, the Scientific Committee on Antarctic Research, the Climate and Cryosphere Project, and Arcticnet, as well as Aanderaa Instruments and the Norwegian Polar Institute.

Presentations and speaker biographies are available on the conference Web site ([http://www.otto-schmidt-laboratory.de/?Events:Past\\_Events](http://www.otto-schmidt-laboratory.de/?Events:Past_Events)).

We thank J. A. Hoelemann (AWI), N. van Nieuwenhove (IFM-GEOMAR), L. Timokhov (AARI), Hugues Lantuit (AWI), J. Baeseman (Association of Polar Early Career Scientists), and the Otto Schmidt Laboratory for Polar and Marine Research for their support during the IMPETUS 2008 workshop.

—CAROLYN WEGNER and HEIDEMARIE KASSENS, Leibniz Institute of Marine Science at University of Kiel (IFM-GEOMAR), Kiel, Germany; E-mail: [cwegner@ifm-geomar.de](mailto:cwegner@ifm-geomar.de)

## ABOUT AGU

### Lundquist Receives 2008 Cryosphere Young Investigator Award

*Jessica D. Lundquist received the 2008 Cryosphere Young Investigator Award at the 2008 AGU Fall Meeting Honors Ceremony, held 17 December in San Francisco, Calif. The award is for a significant contribution to cryospheric science and technology.*

PAGE 159

#### Citation

I want to introduce to you Jessica Lundquist, of the University of Washington, selected this year for the AGU Cryosphere Young Investigator Award. Jessica has addressed critical questions in cryospheric science and linked her work to the sciences of hydrology and climate.

Jessica originally came to Scripps (part of the University of California, San Diego, even though they don't like to admit it) to study coastal fog! But her love of the outdoors and her associations with Dan Cayan and Mike Dettinger led her to the study of snow, particularly in the spring when runoff occurs and when the Sierra Nevada is most pleasant, especially before the mosquitoes hatch.

As a graduate student, and as an assistant professor at the University of Washington, Jessica has published an impressive list of journal articles in the highest-impact journals in snow science and hydroclimatology, including *Water Resources Research*, *Journal of Geophysical Research*, and *Journal of Hydrometeorology*. I first got to know her through her work that explained diurnal variability in snowmelt runoff, what she called the "pulse of the mountains," at a variety of

scales, a problem I had worked on without much success. She has shown innovation in field methods, especially in the use of small temperature and pressure sensors for characterizing snowmelt runoff in the high-elevation basins. Her recently developed technique for implanting small temperature sensors high in the forest canopy is amazing; essentially it is a high-end slingshot.

To summarize, Jessica's contributions include the importance of snowpack spatial heterogeneity to streamflow timing; the effect of the interplay between climate warming, earlier snowmelt, and spatial heterogeneity; a model of cold air pooling in mountainous terrain; cross-disciplinary research that promotes the important role of the mountain snowpacks in climate, hydrology, atmospheric science, and ecology; and communicating her results to the lay public.

Congratulations, Jessica, from all of us. We look forward to reading your work for many years.

—JEFF DOZIER, University of California, Santa Barbara

#### Response

Thank you, Jeff, for your kind introduction, and to AGU and the National Snow and



Jessica D. Lundquist

Ice Data Center for supporting this award. I am honored.

My childhood goals were to grow up to be like John Muir, hiking and writing in Yosemite National Park of the Sierra Nevada, California. That changed during undergraduate studies at University of California, Davis, when Jim McClain, Terry Nathan, Jeff Mount, and many other professors convinced me to change my major from nature-literature to meteorology; they showed me that science is fun and worthwhile.

Inspired by Jim Edson and Wade McGillis at a National Science Foundation Research Experience for Undergraduate program at Woods Hole Oceanographic Institution, I went to Scripps Institution of Oceanography (SIO) at University of California, San Diego, to study marine meteorology with David

Rogers. After my M.S. degree on coastal fog, I stumbled across Mike Dettinger and Dan Cayan, who were studying snow and climate in Yosemite. I thank Dan and Mike for encouraging creativity, whether swapping labor for instruments, or smiling when the abominable snowman appeared on an AGU poster or two. I also thank the students and professors of SIO. Fellowships from National Defense Science and Engineering Technology, California Institute for Telecommunications and Information Technology (Cal-IT2), and Canon provided essential support for me as SIO's first "high-altitude oceanographer."

Following my Ph.D. I joined Randy Dole, Marty Ralph, and David Kingsmill, who

mentored me at the National Oceanic and Atmospheric Administration's Earth Science Research Lab (ESRL) in Boulder, Colo. ESRL is a wonderfully close-knit and friendly community of scientists. I thank Mark Losleben and Dave Clow for helping me establish my Rocky Mountain field research and Nick Pepin for partnering with me to understand mountain temperatures. I especially thank Connie Millar for serving as my "science mom" during this time period, as my best female role model of how to be both a successful scientist and a well-rounded person.

In 2006, I joined the University of Washington, where Steve Burges took me under his wing and taught me how to use a

background in meteorology and oceanography to become a successful professor of civil and environmental engineering. Thank you, Steve. I thank Steve Loheide for partnering with me on my first successful NSF grant, Janneke Hille Ris Lambers for jogging with me and advising on everything, my students for making work fun, and Bob Westfall for reading any paper draft I sent him.

Finally, I thank the people who hold me up when the times are toughest: my mom, my dad, and Andrey Shcherbina.

—JESSICA D. LUNDQUIST, University of Washington, Seattle

## Judy Holoviak Leaves AGU

PAGE 159

Judy C. Holoviak, AGU director of publications, leaves AGU on 6 May 2009. Her nearly 45-year career at AGU was recognized when she received the 2008 Edward A. Flinn III Award (see *Eos*, 89(52), 546, 2008).

During her tenure, the journals program grew from 803 articles published per year to an average of 22 articles published per day (about 5670 per year); *Eos* grew from a quarterly journal (under the title of *Transactions, American Geophysical Union*) to a monthly magazine, and then to a weekly

newspaper; and AGU became recognized as a leader in electronic publication.

Holoviak was hired by AGU's first executive director, Waldo Smith, and is the longest-serving staff member. She served for more than 20 years as the deputy to AGU's second executive director, Fred Spilhaus, until his departure from AGU this past January.

## Outstanding Student Paper Awards

The following members received Outstanding Student Paper Awards at the 2008 AGU Fall Meeting in San Francisco, Calif. Awards for other sections and focus groups will be announced in subsequent issues of *Eos*.

PAGES 159–160

### Atmospheric Sciences (AS)

**Emily V. Fischer**, University of Washington, Seattle, *Importing ozone precursors to the North American free troposphere: Spring 2008 Peroxyacetyl nitrate (PAN) and NO<sub>x</sub> observations from Mount Bachelor*.

**Antonia Gambacorta**, University of Maryland, Baltimore County, *Temperature change and water vapor feedback: A comprehensive assessment using the atmospheric infrared sounder*.

**Yi-wen Huang**, Harvard University, Cambridge, Mass., *Experimental study of the kinetics of the reaction of acetic acid with hydroxyl radicals from 255 to 355 K*.

**Anne Kunz**, ICG-1: Stratosphäre and ICG-2: Troposphäre, Institut für Chemie und Dynamik der Geosphäre, Jülich, Germany, *High static stability in the mixed layer above the extratropical tropopause*.

**Matthew Lebsock**, Colorado State University, Fort Collins, *Multi-sensor observations of aerosol-cloud relationships from CloudSat and the A-train*.

**John E. Ten Hoeve III**, Stanford University, Stanford, Calif., *Analysis of biomass burning aerosol impacts on clouds and precipitation over Amazonia*.

### Atmospheric and Space Electricity (ASE)

**Bryna Hazelton**, University of California, Santa Cruz, *The spectral dependence of TGFs on source distance*.

**Robert Marshall**, Stanford University, Stanford, Calif., *Elves and associated ionospheric density perturbations due to horizontal in-cloud lightning EMP*.

**Ziad H. Saleh**, Florida Institute of Technology, Melbourne, *Properties of the X-ray emission from rocket-triggered and natural lightning as measured by the Thunderstorm Energetic Radiation Array*.

### Biogeosciences (B)

**Mikhail Mastepanov**, Lund University, Lund, Sweden, *Methane emissions from a high arctic valley: Findings and challenges*.

**Eric M. Pfeifer**, University of Idaho, Moscow, *Aboveground tree carbon stocks and flux following mountain pine beetle outbreaks*.

### Geodesy (G)

**Richard D. Koehler**, University of Nevada, Reno, *The accommodation of distributed crustal strain across the northern basin and range on active faults: A paleoseismic study*.

**Ozgur Kozaci**, University of Southern California, Los Angeles, *Constancy of strain release rates along the North Anatolian fault*.

**Karen M. Simon**, University of Victoria, British Columbia, Canada, *Ocean loading effects on predictions of uplift and gravity changes due to glacial isostatic adjustment in Antarctica*.

### Geomagnetism and Paleomagnetism (GP)

**Ciaran Beggan**, University of Edinburgh, Edinburgh, UK, *Core flow modelling from satellite-derived "virtual observatories"*.

**Eric M. King**, University of California, Los Angeles, *Boundary layer control of rotating convection systems*.

### Hydrology (H)

**Henry D. Adams**, University of Arizona, Tucson, *Global change enhances vegetation vulnerability to drought: Warmer drought kills pinyon pines faster*.

**Konstantinos Andreadis**, University of Washington, Seattle, *Multi-scale assimilation of remotely sensed snow observations for hydrologic estimation*.

**Josephine A. Archibald**, Cornell University, Ithaca, N. Y., *Phosphorus accumulating organisms and biogeochemical hot spots*.

**Ilenia Battiato**, University of California, San Diego, La Jolla, *Mixing-induced precipitation phenomena: Range of applicability of macroscopic equations*.

**Dino Bellugi**, University of California, Berkeley, *Searching for the optimal landslide size*.

**Pamela Schultz Birak**, University of North Carolina, Chapel Hill, *Rheology of dense non-aqueous phase liquids at former manufactured gas plants*.

**Adam M. Booth**, University of Oregon, Eugene, *Automated landslide mapping using spectral analysis and high-resolution topographic data: Puget Lowlands, Washington, and Portland Hills, Oregon*.

**Eric Booth**, University of Wisconsin, Madison, *A case where a shallower water table leads to drier soils following the restoration of a pre-settlement floodplain surface: Insight from numerical modeling*.

**D. N. Bradley**, University of Colorado, Boulder, *A model of the heavy-tailed, anomalous dispersion of radioactive tracer sand by a river*.

**Kyle Brown**, University of Arizona, Tucson, *A multi-tracer approach to determine the impacts of agricultural irrigation recharge on groundwater sustainability in the Columbia Plateau basalt aquifers, central Washington, USA*.

**Brian P. Buchanan**, Cornell University, Ithaca, N. Y., *The role of roadside ditch networks in short-circuiting natural hydrologic pathways: Implications for nonpoint source pollution transport*.

**Arnaud Burtin**, Ecole Normale Supérieure, Paris, France, *Seismic detection of debris flow in the Himalayas and their spatiotemporal characteristics*.