

Meet the Authors



Lucilla Benedetti is a researcher at the Research Center for Environmental Geosciences (CEREGE) in Aix-en-Provence, France. After completing a PhD in geology and geophysics in 1999 at IPG Paris, she broadened her research into the field of isotope geochemistry and cosmogenic nuclides. She participated in developing the use of ^{36}Cl in the Earth sciences and continues to work on pioneering applica-

tions of cosmogenic nuclides in the field of active tectonics. Her research investigates the role of plate tectonics in a range of processes, including the occurrence of strong earthquakes, the kinematics of active deformation in the Mediterranean, and erosional processes. One of her goals is to quantitatively constrain the dynamics of those processes using Quaternary geochronology and in particular, cosmogenic nuclides.



Jason P. Briner is an associate professor of geology at the University at Buffalo, USA. He holds degrees in geology from the University of Washington (BS), Utah State University (MS), and the University of Colorado–Boulder (PhD). He is a geologist who studies the response of ice sheets and glaciers to past climate change. He has traveled to field sites above the Arctic Circle more than 30 times,

where he and his graduate students study the effects of climate change on glaciers in Alaska, Canada, Greenland, and Norway. He specializes in reconstructing the timing of past glacier changes and relies on geological methods, ranging from lake-sediment stratigraphy to cosmogenic isotope geochemistry.



Jean L. Dixon is an assistant professor in the Department of Earth Sciences and the Institute on Ecosystems at Montana State University, USA. Her primary research interests surround the geomorphology and geochemistry of mountain soils. She uses cosmogenic nuclides to explore climate controls on landscape evolution and the relationships between the physical and chemical processes that produce and transform soils. She received her PhD from Dartmouth College and her BA from Carleton College, and she held postdoctoral positions at Arizona State University, the GFZ German Research Centre for Geosciences, and the University of California at Santa Barbara.



Tibor J. Dunai has been a professor of geology at the University of Cologne, Germany, since 2010. He received his PhD in geochemistry from the ETH Zürich in 1994. Subsequently, he worked at the Vrije Universiteit Amsterdam and the University of Edinburgh. His main research involves noble gas geochemistry and the methodology and application of cosmogenic nuclides to topics relating to Earth-

surface processes. Between 2004 and 2008, he was coordinator of CRONUS-EU, a European research and training network focused on the improvement of cosmogenic nuclide methodology. He worked extensively on production-rate calibrations, the reaction pathways of cosmogenic nuclides, and the scaling of the cosmic ray flux.



Darryl E. Granger is a professor in the Department of Earth, Atmospheric, and Planetary Sciences at Purdue University, USA, and a member of the Purdue Rare Isotope Measurement Laboratory (PRIME Lab), a national facility for accelerator mass spectrometry. He received his PhD in 1996 from the University of California, Berkeley, and is a fellow of the Geological Society of America.

His research has focused on developing applications for cosmogenic nuclides, primarily for measuring erosion rates and for dating buried sediment. He specializes in burial dating of cave deposits and river terraces. His current research interests include tectonic geomorphology, caves and karst, and the application of cosmogenic nuclides to archeology and human evolution.



Susan Ivy-Ochs is a Quaternary geologist and senior lecturer in the department of Earth Science of ETH Zürich, Switzerland, with a joint appointment at ETH Zürich (Ion Beam Physics) and the University of Zürich (Geography). She did her PhD and habilitation (both in geology) at ETH. She and her students use basic field mapping and cosmogenic nuclides to understand how the landscape of

the Alps has changed over the course of the Quaternary. A special focus is on the extent and timing of glacier variations in the Alps from the onset of the Last Glacial Maximum to the present.



Nathaniel A. Lifton is an assistant professor in the departments of Earth, Atmospheric, and Planetary Sciences and Physics and Astronomy, at Purdue University, USA. He received his BS in geological sciences from the University of California at Santa Barbara and a PhD from the University of Arizona. His research interests focus on developing methods for using in situ cosmogenic nuclides to derive surface

exposure ages and/or erosion rates for process-oriented geomorphic studies. He has developed reliable methods for extracting in situ cosmogenic ^{14}C from quartz and continues to advance these techniques. He also has been investigating the effects of millennial-scale geomagnetic variability on cosmogenic nuclide production rates in time and space.



Clifford S. Riebe is an associate professor in the Department of Geology and Geophysics at the University of Wyoming, USA. After completing an undergraduate degree in civil engineering at the University of Michigan, he received his PhD in Earth and planetary science from the University of California, Berkeley, in 2000. His research group seeks quantitative insight into processes that break

rock down and move sediment and solutes across landscapes. To obtain it, they use a variety of geochemical, isotopic, and geophysical methods to measure properties of the surface and shallow subsurface. Together, these measurements reveal patterns of erosion, weathering, regolith formation, and biogeochemical cycling.



Mirjam Schaller is a research scientist at the University of Tübingen, Germany. After completing her PhD in geochemistry at the University of Bern, Switzerland, she was a post-doctoral researcher at the University of Cambridge and the University of Michigan. Her research investigates landscape evolution with cosmogenic nuclides. She analyses active river sediments to determine catchment-wide

erosion rates as well as sediment from river terraces to calculate paleo-erosion rates. Furthermore, she applies the technique of surface-exposure dating on fluvially sculpted surfaces in order to determine fluvial incision rates.



Jérôme van der Woerd is a researcher at the School and Observatory of Earth Sciences in Strasbourg (France). He received his PhD from the Institut de Physique du Globe in Paris in 1998 and worked for three years as a postdoc at Lawrence Livermore National Laboratory in California. He has been working on determining long-term fault slip rates using geological and geomorphic methods. In particular,

his work focuses on the large strike-slip faults of Tibet and the use of cosmogenic isotopes to constrain the ages of offset alluvial fans, terraces, and moraines. He is mainly interested in understanding landscape evolution at various timescales from earthquakes to mountain building.



Friedhelm von Blanckenburg is a professor of the geochemistry of the Earth's surface at the Helmholtz Centre Potsdam – GFZ German Research Center for Geosciences and at the Freie Universität Berlin, Germany. He obtained a degree in geology at the Technical University of Berlin and a doctoral degree on magmatism in the Alps at ETH Zürich, and he held previous positions at the universities of Cambridge,

Oxford, Berne, and Hannover. He is a geochemist who characterizes Earth-surface cycles by means of isotope ratio measurements. By detecting very low concentrations of cosmogenic nuclides in materials of the Earth's surface and measuring shifts in the relative abundances of metal stable isotopes, he is exploring how geologic, climatic, and biological forces act to sculpt landscapes through geochemical cycles.



Jane K. Willenbring is an assistant professor in the Department of Earth and Environmental Sciences and a member of the Center for Excellence in Environmental Toxicology at the University of Pennsylvania, USA. She received her PhD from Dalhousie University, her BSci and MA from North Dakota State University and Boston University. She held an Alexander von Humboldt fellowship while at the

University of Hannover, Germany, and the Helmholtz Centre Potsdam – GFZ German Research Center for Geosciences. She and her research group use geochemical methods, including cosmogenic nuclides, to solve problems related to the pace of the evolution of landscapes, climate change, biogeochemical cycling and anthropogenic impacts on the environment.

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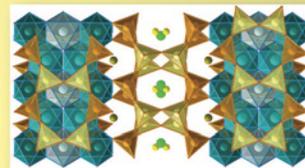
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