

Meet the Authors



Andrew P. Barth is a petrologist and Chancellor's Professor of Earth Sciences at Indiana University – Purdue University Indianapolis (IUPUI). He received his PhD from the University of Southern California. His research focuses on the tectonic evolution of orogenic belts at convergent margins. His philosophy is that field mapping provides the starting point for laboratory studies of the geochronology and geochemical evolution of igneous and metamorphic rocks.



Peter G. DeCelles is a professor in the Department of Geosciences, University of Arizona. Trained as a sedimentologist (PhD, Indiana University), he is an expert on foreland basin development and related fold-and-thrust-belt deformation. His main interests have broadened over the years to include several "big picture" issues in continental tectonics. Among them, he studies the causes of cyclic behavior of magmatism and deformation in Andean orogens. He has active projects in most of the major young orogenic belts on Earth: the Andes, western North American Cordillera, the Alps, Himalaya-Tibet, and the Pamirs.



Shanaka "Shan" L. de Silva is a professor at Oregon State University. He has degrees from the University of Southampton and the Open University. With fieldwork as a point of departure, he has adopted a "forensics" approach to understanding silicic volcanism and associated magmatism, with particular reference to supereruptions. Current field areas include the Central Andes, Japan, China, Sumatra, New Zealand, and the Italian Alps. He is a fellow of the Geological Society of America, science editor for the journal *Geosphere*, and an associate editor of *the Journal of Volcanology and Geothermal Research*.



Mihai N Ducea is a professor of geology at the University of Arizona and also holds a courtesy appointment at the University of Bucharest. He received a PhD at the California Institute of Technology. Ducea's research is aimed at understanding the links between igneous and metamorphic petrologic processes and the tectonic evolution of continents. He is interested in continental margin processes and conducts fieldwork at various field locations in the western North American Cordillera, the central Andes, the Carpathians, and southern Tibet. He runs a geochemical and radiogenic isotope laboratory at the University of Arizona.



Oliver Jagoutz is an associate professor of geology at the Massachusetts Institute of Technology. He received his PhD from ETH Zurich. His research involves detailed geological field mapping to provide the groundwork for subsequent petrological, geochemical, and geochronological studies. He is interested in the magmatic evolution of volcanic arcs, plate tectonic processes related to continental rifting and collision, and seafloor alteration during the Archaean. His field areas include the Himalayas of Pakistan and India, Mongolia, Morocco, western US, the Swiss and Italian Alps. He has been a seagoing scientist on cruises studying the Mid-Atlantic Ridge.



Brian R. Jicha is a research scientist at the University of Wisconsin–Madison where he manages the WiscAr Geochronology Laboratory. He determines the ages of rocks and minerals that occur over the entirety of Earth history, but specializes in $^{40}\text{Ar}/^{39}\text{Ar}$ dating of young (Pleistocene to Holocene) lavas and ash deposits. His interests include studying the long-term eruptive histories of active and dormant arc volcanoes and constraining the development of circum-Pacific arcs since the Eocene.



Jade Star Lackey is an associate professor of petrology and geochemistry at Pomona College. He earned his PhD at the University of Wisconsin–Madison. His research uses many petrologic and geochemical tools, but especially stable isotopes, to conduct field-based investigations of plutonic, volcanic, and coeval metamorphic rocks in arcs. His studies center on understanding how changes of magma production and volatile budgets are controlled by the incorporation of supracrustal rocks into continental arcs, especially in Mesozoic circum-Pacific batholiths like the Sierra Nevada.



Cin-Ty Lee is a professor of geochemistry at Rice University. He earned a PhD at Harvard University. His interests are in using petrology and geochemistry to interrogate the evolution of the Earth's crust, mantle, and atmosphere.



Meghan S. Miller is a professor at the University of Southern California. She is a structural seismologist whose research involves studying the interactions between upper-mantle convection and tectonics, in particular the role of subduction and continental dynamics. She obtained a PhD at the Australian National University. She has studied mantle dynamics through field-based studies in a range of locations, including plate boundary systems of the Caribbean, Mediterranean, North America, and the western Pacific.



Scott R. Paterson is a professor of Earth sciences at the University of Southern California. He received a PhD at the University of California, Santa Cruz. Paterson's research initially focused on the structure, strain and tectonic histories of orogenic belts but evolved to include the structure and geochemistry of magmatic systems, particularly continental arcs. His present interest in arc tempos allows him to combine studies of both orogenic and magmatic systems. He presently conducts fieldwork in the western North American Cordillera (Cascades, Sierras, Mojave), the Andes, and in inner and outer Mongolia.



Nancy R. Riggs is a professor of geology at Northern Arizona University. She received degrees from the University of Arizona and the University of California, Santa Barbara. She undertakes field studies that link volcanism to plate tectonics, both in young rocks and through deep time. In the lab, she examines the geochronological and geochemical signatures of magmatic arcs as determined from detrital zircons in sedimentary successions. Primary field areas are in the North American Cordillera, Ireland, and Mexico.



Jeroen van Hunen is a reader in computational geosciences at Durham University. He received his PhD in geophysics from Utrecht University. His research interests are related to numerically modeling large-scale mantle dynamics, lithosphere–mantle interaction, and the thermo-mechanical processes within the lithosphere. He has a particular interest in convective instabilities at the lithosphere–asthenosphere boundary, the dynamics of subduction and continental collision systems, and the evolution of plate tectonics throughout Earth's history.