PAUL A BEDROSIAN

Research Geophysicist, United States Geological Survey
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RESEARCH INTERESTS

My research is focused on the development of electromagnetic geophysical methods and their application to a diverse set of questions spanning framework tectonics, resource assessment, natural hazards and fundamental Earth processes. Current research efforts include regional-scale tectonic and mineral-resource investigations, imaging the magmatic and hydrothermal systems of active volcanoes and understanding the importance of solid-earth conductivity to space-weather hazards. Past investigations include seismic variability along the San Andreas Fault, the tectonic evolution of the U.S. Pacific Northwest and upper Midwest, the structure of Mount St. Helens, and developing methods for joint interpretation and inversion of geophysical data.

EDUCATION

Ph.D. in Physics, University of Washington, 2002

DISSERTATION: Electromagnetic Imaging of Active Fault Zones
RESEARCH ADVISOR: Martyn J. Unsworth

M.S. in Physics, University of Washington, 1998

B.S. in Physics (magna cum laude), University of Minnesota, 1996
B.S. in Chemistry (with distinction), University of Minnesota, 1996

EMPLOYMENT

Research Geophysicist

United States Geological Survey, 2007-present

Mendenhall Postdoctoral Fellow

United States Geological Survey, 2005-2007

Humboldt Postdoctoral Fellow

GeoForschungsZentrum-Potsdam, 2002-2004

Research Assistant

Dept. of Earth and Space Sciences, Univ. of Washington, 1997-2002

HONORS AND FELLOWSHIPS

- Venture Capital Research Grant, US Geological Survey, 2006
- Mendenhall Research Fellowship, US Geological Survey, 2005
- Alexander von Humboldt Research Fellowship, 2002

- DAAD (German Academic Exchange Service) Research Fellowship, 2002
- Jack Kleinman Grant for Volcanic Research, Cascade Volcano Observatory, 2000
- Research Grant, Geological Society of America, 2000
- Allan V. Cox. Award, Geophysics Division, Geological Society of America, 2000

PROFESSIONAL ACTIVITIES

- Teaching faculty, Summer of Applied Geophysical Experience (SAGE), 2008-present
- IAGA Division VI Committee, 2019-present
- Chair, IRIS Magnetotelluric Instrumentation working group, 2019-present
- IRIS Electromagnetic Advisory committee, 2014-present
- Associate Editor, *Earth, Planets and Space*, 2016-present
- Lead Guest Editor, Special issue on 24th EM Induction Workshop, *Earth, Planets and Space*
- Guest Editor, Special issue on 23rd EM Induction Workshop, *Earth, Planets and Space*
- Chair, Earthscope Magnetotelluric working group, 2009-2013
- Special Editor, Geophysics, 2005-2008
- Amer. Geophys. Union (1997-present)
- Geological Society of America (2000-present)
- Society of Exploration Geophysics (2006-2014)

SELECTED PUBLICATIONS

P.A. Bedrosian et al. (2018) Crustal inheritance and a top-down control on arc magmatism at Mount St. Helens, *Nature Geoscience*, **11**(11), 865-870, doi:10.1038/s41561-018-0217-2.

P.A. Bedrosian (2016) Making it and breaking it in the Midwest: Continental assembly and rifting from modeling of EarthScope magnetotelluric data, *Precambrian Res.*, **278**, 337-361, doi:10.1016/j.precamres.2016.03.009.

P.A. Bedrosian & J. J. Love (2015) Mapping geoelectric fields during magnetic storms: Synthetic analysis of empirical United States impedances, *Geophys. Res. Lett.*, **23**(16), 10160-10170, doi:10.1002/2015GL066636.

P.A. Bedrosian & D.W. Feucht (2013) Structure and tectonics of the Northwestern United States from EarthScope USArray magnetotelluric data, *Earth & Planet. Sci. Lett.*, doi:10.1016/j.epsl.2013.07.035.

P.A. Bedrosian (2007) MT+, integrating magnetotellurics to determine earth structure, composition, and processes, *Surveys in Geophysics*, **28**, 121-167. doi:10.1007/s10712-007-9019-6.

P.A. Bedrosian et al. (2007) Lithology-derived structure classification from the joint interpretation of seismic and magnetotelluric models, *Geophys. J. Intl.*, **170**, 737-748. doi:10.1111/j.1365-246X.2007.03440.x.

P.A. Bedrosian et al. (2004) Geophysical images of the creeping San Andreas Fault: Implications for the role of crustal fluids in the earthquake process. *Tectonophys.*, **385**, 137-158. doi:10.1016/j.tecto.2004.02.010.