

MICHAEL E. WYSESSION: CURRICULUM VITAE

PRESENT POSITION: Department of Earth and Planetary Sciences, Campus Box 1169;
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<http://epsc.wustl.edu/seismology/michael/web/index.html>.

HISTORY OF EMPLOYMENT:

Associate Professor, then Professor, Washington University, 1997-present;
Assistant Professor, Washington U., 1991-1997;
Graduate Assistant, Northwestern U., 1986-1991;
High School Math and Physics Teacher, Staten Island (N.Y.) Academy, 1984-1986.

DEGREES: Ph.D. (Geophysics), Northwestern U., 1991; Sc.B. (Geophysics), Brown U., 1984.

RESEARCH INTERESTS:

My research in seismology has primarily involved the computer modeling and interpretation of seismic data for Earth structure, addressing questions of Earth composition and dynamics. Areas of focus have been core-mantle boundary region structure and dynamics, core structure, physical causes of mantle and crustal attenuation, causes of intraplate volcanism and seismicity, and the forensic identification of seismic sources such as nuclear tests and military operations. My research has been supported by 22 NSF grants, as well as funding from the Packard, Kemper, Lilly, and Pew Foundations. I have supported 4 PhD graduates (an additional 4, currently) and over 40 undergraduate research assistants. I have been PI or Co-PI of four NSF-funded IRIS PASSCAL seismic field deployments:

- MACOMO: Investigaton of Sources of Intraplate Volcanism Using PASSCAL Broadband Instruments in Madagascar, the Comores, and Mozambique (PIs: M. Wyssession, D. Wiens, A. Nyblade), 2010-present.
- SPREE: Superior Province Rifting EarthScope Experiment (PIs: S. van der Lee, D. Jurdy, S. Stein, A. Frederiksen, J. Revenaugh, F. Darbyshire, D. Wiens, and M. Wyssession), 2011-present.
- FLED: Florida to Edmonton Broadband Seismic Deployment (PIs: K. Fischer, M. Wyssession), 2005-2010.
- MOMA: Missouri to Massachusetts Broadband Seismic Deployment (PIs: T. Clarke, K. Fischer, M. Wyssession), 1994-1997.

HONORS:

Northwestern University Distinguished Alumni Award, 2015.
Ambassador Award (Inaugural), American Geophysical Union, 2014.
American Geophysical Union Fellow, 2014.
Missouri Education Service Award, 2013.
NAGT Distinguished Lecturer, 2009.
IRIS Distinguished Lecturer, 2005.
Distinguished Faculty Award, Washington University, 2000.
St. Louis Science Academy Innovation Award, 1999.
National Science Foundation Presidential Faculty Fellowship, 1997–2002.
Lilly Foundation Teaching Fellowship, 1995.
Kemper Foundation Faculty Award, 1993, 1999.
Packard Foundation Fellowship for Science and Engineering, 1992-1997.
AAAS Mass Media Science and Engineering Fellowship, 1988.

MEMBERSHIPS:

American Association for the Advancement of Science

American Geophysical Union
Geological Society of America
National Association of Geoscience Teachers
National Earth Science Teachers Association
Seismological Society of America

SERVICE TO THE COMMUNITY:

- Achieve, Inc.:** Organizing Team member of the national K-12 *Next Generation Science Standards* (responsible for Earth and Space Science standards), 2010-present.
- AGU (American Geophysical Union):** Editor, *Geophysical Research Letters* (2009-present); Co-editor, *The Core Mantle Boundary Region*, AGU Monograph, 1998; Seismology Editor, *Eos*, 1998-1999; Studies of the Earth's Deep Interior Committee (SEDI), 1994-1998 (Chair, 1996-1998); Associate Editor, *Journal of Geophysical Research*, 1994-1996; Associate Editor, *Computational Seismology*, 1992-1994; Co-organizer of AGU meeting sessions: Fall of 1996, 1998, 2000, 2005, 2011, 2012, 2013, 2014.
- CIG (Computational Infrastructure for Geodynamics):** Co-founder, and CIG Steering Committee, 2003-2004; Seismology Working Group, 2005-present.
- ESLI (Earth Science Literacy Initiative):** Chair, 2008-present. Lead author of the *Earth Science Literacy Principles*.
- EarthScope:** Education and Outreach Committee, 2013-present; Co-author of the *EarthScope 2010-2020 Science Plan*, 2010; Deep Earth Structure working group, 2008-2011.
- IRIS (Incorporated Research Institutions for Seismology):** Board of Directors, 2013-present; Chair, Education & Outreach Comm., 2005-2009; Meetings & Publications Comm., 2005-2009; Membership Comm., 2005-2009; Co-author, Long Range Seismology Plan, 2009; Planning Comm., 2003-2005; Elections Comm., 2003-2004; Legal Affairs Comm., 2004; Secretary, Executive Comm., 1998-2001; Global Seismic Network Comm., 1998; Co-Organizer, Annual Workshop, June, 2002.
- NASA (National Aeronautics and Space Administration):** Developer and presenter of geoscience educational workshops for NASA engineers, 2008-present.
- NAGT (National Association of Geoscience Teachers):** Advisory Board, Building Strong Geoscience Departments, 2007-2012.
- NRC (National Research Council of the National Academies of Science):** Vice-Chair, Committee on Seismology and Geodynamics, National Academy of Sciences, 2007-2012; Chair, Earth and Space Science Design Team for the NRC report "*A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas.*"
- NSF (National Science Foundation):** Integrated Earth Science panel, 2015; Cooperative Studies of the Earth's Deep Interior panel, 2015; Mathematics-Geophysics panel, 2005 and 2007; COMPRES panel, 2002.
- OTCE (On the Cutting Edge: Professional Development for Geoscience Teachers):** Co-PI, 2009-present; Co-organizers of six professional development workshops (2007-2014).
- Pearson (formerly Prentice Hall):** Author of national K-16 science programs and textbooks, 2001-present; Consultant for K-12 curriculum development, 2006-present; Professional development for high school science teachers, 2003-present; Author of college digital-format Physical Geology textbook (in preparation).
- The Teaching Company:** Author and lecturer for two video courses as part of the "Great Courses" series: *How the Earth Works*, 2008 (48 half-hour lectures); *The World's Greatest Geologic Wonders*, 2013 (36 half-hour lectures).

Television Media: Scientific host of “Journey to the Earth’s Core,” a television show produced by Wall-to-Wall Media for the History Channel, March, 2011; Frequent commentator on local and national news during following large earthquakes.

Public Outreach: More than 75 lectures in the past 5 years at teachers’ meetings, museums, colleges, and other informal education venues on geoscience topics that include natural hazards, natural resources, human impacts on the earth, climate change, and science literacy.