

## FULL CURRICULUM VITA

### ALAN D. CHAVE

Senior Scientist  
The Walter A. and Hope Noyes Smith Chair  
Deep Submergence Laboratory  
Department of Applied Ocean Physics and Engineering  
Woods Hole Oceanographic Institution  
Woods Hole, MA 02543

+1-508-289-2833 (office)  
+1-508-333-4711 (mobile)  
e-mail: achave@whoi.edu  
home page: <http://www.whoi.edu/hpb/Site.do?id=13813>  
ORCID: 0000-0002-2460-1172

### EDUCATION

B.S. (physics)	1975	Harvey Mudd College
Ph.D. (marine geophysics)	1980	Massachusetts Institute of Technology/Woods Hole Oceanographic Institution Joint Program in Oceanography

### OTHER QUALIFICATIONS

Chartered Statistician (UK) #1773	2003
Federal Communications Commission General Radiotelephone License (previously First Class Radiotelephone License) with Ship Radar Endorsement	1970

### CONTINUING PROFESSIONAL EDUCATION

System Engineering for Project Managers, UCLA Extension	2003
Project Management Principles and Practice, UCLA Extension	2005
How to Document and Track Requirements Using DOORS	2008
Principles of System Engineering (PoSE), Raytheon Intelligence and Information	2009

Systems, Aurora, CO

## **POSITIONS HELD**

The Walter A. and Hope Noyes Smith Chair for Excellence in Oceanography	Woods Hole Oceanographic Institution	1/2017 to present
Senior Scientist	Deep Submergence Laboratory, Dept. of Applied Ocean Physics and Engineering, Woods Hole Oceanographic Institution	12/1999 to present
Senior Scientist	Dept. of Geology and Geophysics, Woods Hole Oceanographic Institution	12/1993 to 12/1999
Visiting Professor	Earthquake Research Institute, University of Tokyo	12/1998 to 1/1999
Guest Scientist	Earth and Environmental Sciences Division, Los Alamos National Laboratory	4/1983 to 1/1996
Associate Scientist with Tenure	Dept. of Geology and Geophysics, Woods Hole Oceanographic Institution	1/1992 to 12/1993
Visiting Investigator	Dept. of Geology and Geophysics, Woods Hole Oceanographic Institution	9/1991 to 1/1992
Member of the Technical Staff	Physics Research Division, AT&T Bell Laboratories	12/1986 to 10/1991
Associate Adjunct Professor	Institute of Geophysics and Planetary Physics, Scripps Institution of Oceanography	12/1986 to 12/1990
Associate Research Geophysicist	Institute of Geophysics and Planetary Physics, Scripps Institution of Oceanography	7/1985 to 12/1986
Staff Member	Earth and Space Sciences Division, Los Alamos National Laboratory	7/1985 to 7/1986
Adjunct Lecturer	Scripps Institution of Oceanography, University of California, San Diego	11/1982 to 11/1986
Assistant Research Geophysicist	Institute of Geophysics and Planetary Physics, Scripps Institution of Oceanography	1/1982 to 7/1985
Postdoctoral Research	Geological Research Division, Scripps	6/1980 to

**PROFESSIONAL ACTIVITIES***National and International Service*

- |           |  |
|-----------|--|
| 2016      | Witness in fact and expert witness, EMGS vs PGS, High Court of Justice, London, UK   |
| 2015      | Member, Infrastructure Panel, Research Council of Norway   |
| 2014      | Witness in fact and expert witness, EMGS vs PGS, Oslo District Court, Norway   |
| 2014      | Member, Admission and Advancement Review Panel, IEEE   |
| 2013      | Member, Basic Energy Sciences Early Career Award Panel, Department of Energy   |
| 2007-2013 | Chief System Engineer, Ocean Observing Initiative Cyberinfrastructure Implementing Organization  |
| 2011      | Scientific advisor for the opponent, Schlumberger vs EMGS re EP1256019, Technical Board of Appeal, European Patent Office, Munich, Germany |
| 2010      | Technical advisor to the claimant, Schlumberger vs EMGS, Court of Appeals, High Court of Justice, London, UK                               |
| 2010      | Scientific advisor for the opponent, OHM Inc vs EMGS re EP1256019, Opposition Division, European Patent Office, Munich, Germany            |
| 2004-2009 | Project Scientist, Laboratory for Ocean Observatory Knowledge Integration Grid (LOOKING)   |
| 2007-2008 | Expert witness for the claimant, Schlumberger vs EMGS, Patent Court, High Court of Justice, London, UK                                     |
| 2007-2008 | Expert witness for the claimant, Schlumberger vs EMGS, Patent Court, The Hague, Netherlands  |
| 2005-2007 | Member, ORION Engineering Committee  |
| 2002-2006 | Observer, International Association of Geomagnetism and Aeronomy Working Group I-2 (Electromagnetic Induction in the Earth)                |
| 2003-2004 | Chair, UNOLS Working Group on Ocean Observatory Facility Needs   |

2000-2004	Member, NEPTUNE Executive Team
2000-2004	Co-Chair, NEPTUNE System Engineering Team
1997-2004	Member (2000-2004) and Co-chair (1997-2000), Dynamics of Earth and Ocean Systems (DEOS) Steering Committee, Consortium on Ocean Research and Education
1996-2004	Member, Electromagnetic Studies of the Continents Facility Steering Committee
1992-2003	IRIS Ocean Cable Representative, International Cable Protection Committee
1990-2002	Member (1999-2002) and Chair (1990-1999), Steering Committee for Scientific Use of Undersea Cables, Incorporated Research Institution for Seismology and Joint Oceanographic Institutions
2000-2002	Member, Solid Earth Science Working Group, NASA
1997-2001	Member, Inter-Ridge Steering Committee and Chair, Working Group on Technology
1998-2000	Co-chair, Plate Scale Processes Working Group, DEOS
1993-1999	Chairman, IAGA/IASPEI/IAPSO Joint Committee on Scientific Reuse of Submarine Cables
1996-1999	Member, Global Seismic Network Standing Committee, Incorporated Research Institutions for Seismology
1994	Member, Ad Hoc Panel on Scientific Applications of IUSS, Joint Oceanographic Institutions, July 14-15, 1994
1993-1994	Member, Geomagnetic Observatory Task Group, US Geodynamics Committee, National Research Council
1991-1994	Member, Steering Committee, Ridge InterDisciplinary Global Experiment (RIDGE)
1992-1994	Co-Program Element Coordinator, RIDGE Mantle Melt Experiment
1988-1991	Co-chair, Ad hoc Motional Electromagnetic Measurements Group, World Ocean Circulation Experiment

1987-1990 Member, New Jersey Sea Grant Advisory Board

*Institutional Service*

2016-present Member, AOPE Recruitment Committee

2013-present Co-Lab Head, Deep Submergence Laboratory

2012-present Member, Technical Staff Evaluation Council

2007-2009 Member, Admissions Advisory Committee

2005 Chair, AOPE Department Head Search Committee

2004-2007 Co-Lab Head, Deep Submergence Laboratory

2003-2004 Steering Committee and Ocean Observing System Working Group Member, Access to the Sea Task Group

1998-2000 Member, Technical Staff Evaluation Council

1996-1997 Member, Strategic Planning Group on Access to the Sea

1996-1997 Member, Advisory Committee on Computing

1995 Member, Search Committee for Associate Director for Finance and Administration

1994-1995 Member, Admissions Advisory Committee

*Editorial Duties*

2010-2012 Guest Co-editor, special issue on scientific underwater observations and underwater robotics, *IEEE Journal of Oceanic Engineering*

2002-2005 Guest Co-editor, special issue from Workshop on EM Induction, *Surveys in Geophysics*

2000-2002 Guest Editor, special issue on ocean observatories, *IEEE Journal of Oceanic Engineering*

1992-1997 Editor-in-chief, *Reviews of Geophysics*

1991-1992 Editor, *Reviews of Geophysics*

1987-1990 Associate Editor, *Journal of Geophysical Research*

*Meeting Organization*

- 2010-2011 Program Committee, Workshop on Ocean Mantle Dynamics: From Spreading Center to Subduction Zone, Inter-Ridge, Kashiwa, Japan, 4-6 Oct 2011
- 2005-2006 Co-convenor, 4th International Workshop on the Scientific Use of Submarine Cables, Dublin, Ireland, 8-10 Feb 2006
- 2002-2003 Co-convenor, 3rd International Workshop on the Scientific Use of Submarine Cables, Tokyo, Japan, 25-27 June 2003
- 2000-2002 Co-chair, Program and Local Organizing Committees, 16th Workshop on Electromagnetic Induction, Santa Fe, NM, 17-22 June 2002
- 1997-1998 Co-convenor, Long Term Monitoring of the Mid-Atlantic Ridge (MOMAR) Workshop, Interridge, Lisbon, Portugal, 28-31 Oct 1998
- 1995-1997 Chair, Program Committee, 2nd International Workshop on Scientific Use of Submarine Cables, Okinawa, Japan, 25-28 Feb 1997
- 1995-1996 Member, Program Committee, 13th Workshop on Electromagnetic Induction, Onuma, Japan, 12-18 July 1996
- 1994-1995 Member, Steering Committee, International Ocean Network Workshop, Marseilles, France, 11-13 January 1995
- 1994 Co-convenor, Workshop on Technical Approaches for a Seafloor Geomagnetic Observatory, Woods Hole, MA, November 1994
- 1992-1994 Member, Program Committee, 12th Workshop on Electromagnetic Induction, Brest, France, 8-13 August 1994
- 1993 Invited participant, Symposium on Coastal Oceanography and Littoral Warfare, Tactical Training Center, San Diego, 2-6 August 1993
- 1991 Invited participant and facilitator, Symposium on Naval Warfare and Coastal Oceanography, Naval Amphibious Base, Little Creek, VA, 29 April-2 May 1991
- 1990 Chair, Scientific Steering Committee, 1st Workshop on Scientific Uses of Undersea Cables, Honolulu, HI, 30 Jan-1 Feb 1990

- 1989 Chair, Steering Committee, ONR Workshop on Understanding the Oceanic Electromagnetic Environment: Status and Prospects
- 1989 Co-convener, WOCE Workshop on Electromagnetic Measurements, Seattle, WA, 7-8 February 1989

## CRUISE EXPERIENCE

<i>R/V Kairei</i>	Nov 2007	EM recovery
<i>R/V Kairei</i>	Dec 2005	EM deployments
<i>R/V Magnus Heinason</i>	Jul 2005	EM deployments
<i>R/V Roger Revelle</i>	Jun-Jul 2004	H2O servicing/Jason (chief scientist)
<i>R/V T.G. Thompson</i>	Sep-Oct 2003	H2O servicing/Jason (chief scientist)
<i>R/V Roger Revelle</i>	May 2002	Instrument recoveries (chief scientist)
<i>R/V Roger Revelle</i>	April 2001	Instrument deployments (chief scientist)
<i>R/V R.G. Sproul</i>	Sep 2000	Instrument tests (chief scientist)
<i>R/V T.G. Thompson</i>	Sep-Oct 1999	H2O servicing/Jason (chief scientist)
<i>R/V T.G. Thompson</i>	Aug-Sep 1998	H2O installation/Jason (chief scientist)
<i>R/V Atlantis</i>	Jun-Jul 1998	Alvin dives/vent light studies (chief scientist)
<i>R/V Atlantis</i>	Nov-Dec 1997	Alvin dives/vent light studies (chief scientist)
<i>R/V Melville</i>	May-Jun 1997	MELT EM recoveries (chief scientist)
<i>R/V T.G. Thompson</i>	May-Jun 1996	MELT EM deployments (co-chief scientist)
<i>R/V Atlantis II</i>	Apr 1996	Alvin dives/vent light studies(chief scientist)
<i>R/V Melville</i>	Mar-Apr 1995	EM deployments, Antarctic Circumpolar Current

<i>R/V R.G. Sproul</i>	Sep 1994	EM/tilt instrument tests, San Diego (chief scientist)
<i>R/V R.G. Sproul</i>	July 1994	EM/tilt instrument tests, San Diego (chief scientist)
<i>R/V Cape Hatteras</i>	Mar 1994	EM deployments, North Atlantic (chief scientist)
<i>R/V Endeavor</i>	Oct 1992	EM recoveries, North Atlantic (chief scientist)
<i>R/V Endeavor</i>	May 1992	EM deployments, North Atlantic (chief scientist)
<i>R/V Malcolm Baldrige</i>	Feb 1992	EM/pressure recoveries, Abaco area
<i>R/V Malcolm Baldrige</i>	Sep 1990	EM/pressure deployments, Abaco area
<i>R/V R.G. Sproul</i>	Jun 1990	Acoustic release testing (chief scientist)
<i>R/V Oceanus</i>	Aug 1989	Electrometer deployments, Gulf Stream
<i>R/V Le Suroit</i>	Mar-Apr 1989	EM deployments, Tahiti area
<i>R/V Thomas Washington</i>	May 1988	Big G bathymetric survey, North Pacific (co-chief scientist)
<i>R/V New Horizon</i>	Jul 1986	EM deployments, North Pacific (co-chief scientist)
<i>R/V New Horizon</i>	Sep 1983	Controlled source EM, North Pacific (co-chief scientist)
<i>D/V Glomar Challenger</i>	Jun-Jul 1980	Leg 74 paleomagnetism, Walvis Ridge
<i>R/V Atlantis II</i>	Jul 1977	Piston coring/heat flow, North Atlantic
<i>R/V Knorr</i>	Feb 1977	Heat flow, Galapagos Spreading Center
<i>R/V Alexander Agassiz</i>	Aug 1976	Magnetometer deployments, North Pacific
<i>R/V Moana Wave</i>	Jul-Aug 1974	Manganese nodule exploration, equatorial Pacific



## EDUCATIONAL ACTIVITIES

Instructor	1994 to present	MIT 12.714, Computational Data Analysis
Instructor	2013	Short (5 day) course on Computational Statistics, Irish Geoscience Graduate Program, Dublin, Ireland
Instructor	2012	Short (4 day) course on Computational Statistics, Irish Geoscience Graduate Program, Dublin, Ireland
Guest student sponsor	2011	Maik Neukirch, CSIC, Spain
Postdoctoral advisor	2008-2010	Tetsuo Matsuno
Dissertation advisor	2002-2007	Anna P.M. Michel, "Laboratory evaluation of laser-induced breakdown spectroscopy (LIBS) as a new <i>in situ</i> chemical sensing technique for the deep ocean", Ph.D., MIT/WHOI Joint Program in Oceanography
Instructor	2007	Short (3 day) Course on Statistics, Dublin Institute for Advanced Studies, Ireland
Postdoctoral advisor	2001-2003	Pamela Lezaeta
Postdoctoral advisor	2002-2003	Kiyoshi Baba
Postdoctoral advisor	2001-2002	Sheri N. White
Guest student sponsor	2000	Kiyoshi Baba, Chiba University, Japan
Dissertation advisor	1994-2000	Sheri N. White, "Measurement of Ambient Light at Deep Sea Hydrothermal Vents", Ph.D., MIT/WHOI Joint Program in Oceanography
Guest student sponsor	1999	Takao Koyama, University of Tokyo
Outside examiner	1997	Katherine M. Edwards, "The application of modern statistical and numerical techniques to magnetotelluric data", Ph.D., Department of Physics, University of Queensland, Brisbane, Australia

Guest student sponsor	1995-6	Xavier Garcia, University of Barcelona, Spain
Guest investigator sponsor	1995-6	Dr. Nobukazu Seama, Chiba University, Japan
Dissertation committee member	1995	Stewart K. Sandberg, "Simultaneous modeling of transient electromagnetic and resistivity/induced polarization soundings to improve resolution in hydrogeological investigations", Ph.D., Department of Geosciences, Rutgers, The State University of New Jersey
Guest student sponsor	1995	Ikuko Fujii, Earthquake Research Institute, University of Tokyo
Chair, general examination committee	1995	Robert J. Greaves, MIT/WHOI Joint Program in Oceanography
Guest student sponsor	1993-4	Ikuko Fujii, Earthquake Research Institute, University of Tokyo
Generals paper advisor and examination committee member	1993	Daniel Lizarralde, MIT/WHOI Joint Program in Oceanography
Outside examiner	1992	Ian James Chant, "Time-frequency Analysis of Magnetotelluric Signals", Ph.D., Department of Physics, University of Queensland, Brisbane, Australia
Dissertation advisor (informal)	1991	Martyn J. Unsworth, "Electromagnetic exploration of the oceanic crust with controlled sources", Ph.D., University of Cambridge
Dissertation committee member	1990	Krishnendu Ghosh, "Robust multivariate regression analysis of complex-valued data", Ph.D., Dept. of Statistics, Temple University
Dissertation committee member	1988	Scott J. Hills, "The analysis of microfossil shape: experiments using planktonic foraminifera", Ph.D., UCSD/SIO
Dissertation co-advisor	1987	Catherine Constable, "Some statistical aspects of the geomagnetic field", Ph.D., UCSD/SIO

Postdoctoral advisor	1985-6	Adam Schultz
Postdoctoral advisor (w/ C.S. Cox)	1983-5	Steven Constable
Co-instructor	1985	SIO 223, Geophysical Data Analysis
Co-instructor	1984	SIO 239, Seminar on EM Geophysics

## PROFESSIONAL SOCIETIES

American Association for the Advancement of Science (M'81)

American Geophysical Union (M'76)

European Association of Geoscientists and Engineers (M'15)

Institute of Electrical and Electronic Engineers (M'89, SM'02)

Royal Statistical Society (F'03)

Society of Exploration Geophysicists (M'15)

## HONORS AND AWARDS

*Who's Who in America* (2010-present)

Senior Member, Institute of Electrical and Electronic Engineers (2002)

*Who's Who in the East* (1992-present)

*Who's Who in Science and Engineering* (1992-present)

*American Men and Women of Science* (1988-present)

J. Robert Oppenheimer Fellowship, Los Alamos National Laboratory (1985-1986)

Ruth and Paul Fye Award for Excellence in Oceanographic Research, WHOI (1979)

NSF Graduate Fellowship (1975-1978)

Thomas Benjamin Brown Award for Research in Physics, Harvey Mudd College (1975)

Graduated with Distinction and Departmental Honors, Harvey Mudd College (1975)

**A. Published Works (peer reviewed)** Google Scholar h-index=47, i-10 index=114, total citations=7556 as of 2/17/2017 [# of Google Scholar citations; NT=not tracked]

1. Chave, AD & CR Denham, Climatic changes, magnetic intensity variations, and fluctuations of the eccentricity of the earth's orbit during the past two million years and a mechanism which may be responsible for the relationship: a discussion, *Earth Planet. Sci. Lett.*, 44, 150-152, 1979. [22]
2. Chave, AD, Lithospheric structure of the Walvis Ridge from Rayleigh wave dispersion, *J. Geophys. Res.*, 84, 6840-6848, 1979. [33]
3. Chave, AD, RP Von Herzen, KA Poehls & CS Cox, Electromagnetic induction fields in the

- deep ocean northeast of Hawaii: Implications for mantle conductivity and source fields, *Geophys. J. Roy. Astr. Soc.*, 66, 379-406, 1981. [27]
4. Chave, AD & CS Cox, Controlled electromagnetic sources for measuring electrical conductivity beneath the oceans, 1, forward problem and model study, *J. Geophys. Res.*, 87, 5327-5338, 1982. [288]
  5. Denham, CR & AD Chave, Detrital remanent magnetization: Viscosity theory of the lock-in zone, *J. Geophys. Res.*, 87, 7126-7130, 1982. [29]
  6. Chave, AD, On the theory of electromagnetic induction in the earth by ocean currents, *J. Geophys. Res.*, 88, 3531-3542, 1983. [39]
  7. Moore, TC, PD Rabinowitz et al. (14 authors), The Walvis Ridge transect, Deep Sea Drilling Project Leg 74: The geologic evolution of an oceanic plateau in the South Atlantic Ocean, *Geol. Soc. Am. Bull.*, 94, 907-925, 1983. [11]
  8. Chave, AD, Numerical integration of related Hankel transforms by quadrature and continued fraction expansion, *Geophysics*, 48, 1671-1686, 1983. [230]
  9. Chave, AD & CS Cox, EM induction by ocean currents and the conductivity of the oceanic lithosphere, *J. Geomagn. Geoelectr.*, 35, 491-499, 1983. [12]
  10. Chave, AD, Lower Paleocene-Upper Cretaceous magnetic stratigraphy from Sites 525, 527, 528 and 529, Deep Sea Drilling Project, Leg 74, in: TC Moore, PD Rabinowitz et al., *Initial Reports of the Deep Sea Drilling Project, 74*, 525-532, 1984. [73]
  11. Shackleton, NJ et al. (14 authors), Accumulation rates in Leg 74 sediments, in: TC Moore, PD Rabinowitz et al., *Initial Reports of the Deep Sea Drilling Project, 74*, 621-644, 1984. [43]
  12. Chave, AD & JH Filloux, Electromagnetic induction fields in the deep ocean off California: oceanic and ionospheric sources, *Geophys. J. Roy. astr. Soc.*, 77, 143-171, 1984. [28]
  13. Shure, L & AD Chave, Comment on "An inverse approach to signal correlation" by DG Martinson, W Menke, and P Stoffa, *J. Geophys. Res.*, 89, 2497-2499, 1984. [6]
  14. Chave, AD, The Fréchet derivatives of electromagnetic induction, *J. Geophys. Res.*, 89, 3373-3380, 1984. [47]
  15. Park, J & AD Chave, On the estimation of magnetotelluric response functions using the singular value decomposition, *Geophys. J. Roy. astr. Soc.*, 77, 683-709, 1984. [23]
  16. Chave, AD, Reply to W.L. Anderson, *Geophysics*, 49, 1813, 1984. [2]
  17. Chave, AD, On the electromagnetic fields induced by oceanic internal waves, *J. Geophys. Res.*, 89, 10519-10528, 1984. [35]
  18. Chave, AD & JH Filloux, Observation and interpretation of the seafloor vertical electric field in the eastern North Pacific, *Geophys. Res. Lett.*, 12, 793-796, 1985. [24]
  19. Cox, CS, SC Constable, AD Chave & SC Webb, Controlled-source electromagnetic sounding of the oceanic lithosphere, *Nature*, 320, 52-54, 1986. [230]

20. Edwards, RN & AD Chave, A transient electric dipole-dipole method for mapping the conductivity of the seafloor, *Geophysics*, 51, 984-987, 1986. [99]
21. Chave, AD, DJ Thomson & ME Ander, On the robust estimation of power spectra, coherences, and transfer functions, *J. Geophys. Res.*, 92, 633-648, 1987. [313]
22. Cheesman, SJ, RN Edwards & AD Chave, On the theory of seafloor conductivity mapping using transient electromagnetic systems, *Geophysics*, 52, 204-217, 1987. [153]
23. Chave, AD, ME Ander, MA Zumberge, JA Hildebrand & FN Spiess, Polar ice test of the scale dependence of G, *Nature*, 326, 250-251, 1987. [12]
24. Chave, AD & JR Booker, Electromagnetic induction studies, *Rev. Geophys.*, 25, 989-1006, 1987. [24]
25. Luther, DS, AD Chave & JH Filloux, BEMPEX: a study of barotropic ocean currents and lithospheric electrical conductivity using seafloor pressure and electromagnetic instruments, *EOS*, 68, 618-619 & 628-629, 1987. [21]
26. Booker, JR, DI Gough et al. (33 authors), The EMSLAB electromagnetic sounding experiment, The EMSLAB electromagnetic sounding experiment, 1988. [41]
27. Hildebrand, JA, AD Chave, FN Spiess, RL Parker, ME Ander & MA Zumberge, The Newtonian gravitational constant: On the feasibility of an oceanic measurement, *EOS*, 69, 769 & 779-780, 1988. [9]
28. Ander, ME, MA Zumberge et al. (22 authors), Test of Newton's inverse-square law in the Greenland ice cap, *Phys. Rev. Lett.*, 62, 985-988, 1989. [87]
29. Chave, AD, JH Filloux & DS Luther, Electromagnetic induction by ocean currents: BEMPEX, *Phys. E. Pl. Int.*, 53, 350-359, 1989. [6]
30. Filloux, JH, LK Law et al. (10 authors), Offshore EMSLAB: objectives, experimental phase, and early results, *Phys. E. Pl. Int.*, 53, 422-431, 1989. [10]
31. Travis, BJ & AD Chave, A moving finite element method for magnetotelluric modeling, *Phys. E. Pl. Int.*, 53, 432-443, 1989. [17]
32. Booker, JR & AD Chave, Introduction to the special issue on the EMSLAB-Juan de Fuca experiment, *J. Geophys. Res.*, 94, 14093-14098, 1989. [29]
33. Wannamaker, PE, JR Booker et al. (17 authors), Magnetotelluric observations across the Juan de Fuca subduction system in the EMSLAB project, *J. Geophys. Res.*, 94, 14111-14126, 1989. [70]
34. Wannamaker, PE, JR Booker et al. (7 authors), Resistivity cross section through the Juan de Fuca subduction system and its tectonic implications, *J. Geophys. Res.*, 94, 14127-14144, 1989. [191]
35. Chave, AD, JH Filloux, DS Luther, LK Law & A White, Observations of motional electromagnetic fields during EMSLAB, *J. Geophys. Res.*, 94, 14153-14166, 1989. [34]
36. Jones, AG, AD Chave, GD Egbert, D Auld & K Bahr, A comparison of techniques for

- magnetotelluric response function estimation, *J. Geophys. Res.*, *94*, 14201-14214, 1989. [207]
37. Chave, AD & DJ Thomson, Some comments on magnetotelluric response function estimation, *J. Geophys. Res.*, *94*, 14215-14226, 1989. [199]
  38. Chave, AD, Seafloor electromagnetic exploration methods, in GR McMurray (ed.), *Gorda Ridge: A Seafloor Spreading Center in the United States' Exclusive Economic Zone*, New York: Springer-Verlag, pp. 191-200, 1989. [2]
  39. Chave, AD & DS Luther, Low-frequency, motionally induced electromagnetic fields in the ocean, 1, theory, *J. Geophys. Res.*, *95*, 7185-7200, 1990. [96]
  40. Luther, DS, Chave, AD, JH Filloux & PF Spain, Evidence for local and nonlocal barotropic responses to atmospheric forcing during BEMPEX, *Geophys. Res. Lett.*, *17*, 949-952, 1990. [63]
  41. Zhao, G-z, T Yukutake et al. (10 authors), Investigation on magneto-variational data of the Juan de Fuca plate in eastern Pacific Ocean, *Acta Geophysica Sinica*, *33*, 521-529, 1990 (in Chinese with English abstract). [7]
  42. Zhao, G-z, T Yukutake et al. (10 authors), The investigation on magnetotelluric data of the Juan de Fuca plate, *Seismology and Tectonics*, *12*, 159-167, 1990 (in Chinese with English abstract). [NT]
  43. Chave, AD, AH Flosadottir & CS Cox, Some comments on seabed propagation of ULF/ ELF electromagnetic fields, *Radio Sci.*, *25*, 825-836, 1990. [47]
  44. Thomson, DJ & AD Chave, Jackknife error estimates for spectra, coherences, and transfer functions, in S. Haykin (ed.), *Advances in Spectral Analysis and Array Processing*, Vol. 1, Englewood Cliffs: Prentice-Hall, pp. 58-113, 1991. [250]
  45. Vernon, FL, J Fletcher, L Carroll, AD Chave & E Sembera, Coherence of seismic body waves from local events as measured by a small-aperture array, *J. Geophys. Res.*, *96*, 11981-11996, 1991. [64]
  46. Luther, DS, JH Filloux & AD Chave, Low-frequency, motionally induced electromagnetic fields in the ocean, 2, Electric field and Eulerian current comparison from BEMPEX, *J. Geophys. Res.*, *96*, 12797-12814, 1991. [49]
  47. Filloux, JH, DS Luther & AD Chave, Update on seafloor pressure and electric field observations from the north-central and northeast Pacific: tides, infratidal fluctuations, and barotropic flow, in B Parker (ed.), *Tidal Hydrodynamics*, New York: John Wiley, pp. 617-640, 1991. [20]
  48. Chave, AD, DS Luther & JH Filloux, Variability of the wind stress curl over the eastern North Pacific: Implications for the oceanic response, *J. Geophys. Res.*, *96*, 18361-18379, 1991. [31]
  49. Chave, AD, SC Constable & RN Edwards, Electrical exploration methods for the seafloor, in MN Nabighian (ed.), *Electromagnetic Methods in Applied Geophysics*, Vol. 2, Tulsa: Society of Exploration Geophysicists, pp. 931-966, 1991. [230]

50. Zumberge, MA, JA Hildebrand, JM Stevenson, RL Parker, AD Chave, ME Ander & FN Spiess, Submarine measurement of the Newtonian gravitational constant, *Phys. Rev. Lett.*, 67, 3051-3054, 1991. [58]
51. Chave, AD, DS Luther & JH Filloux, The Barotropic Electromagnetic and Pressure Experiment, 1. Barotropic current response to atmospheric forcing, *J. Geophys. Res.*, 97, 9565-9593, 1992. [42]
52. Chave, AD, DS Luther, LJ Lanzerotti & LV Medford, Geoelectric field measurements on a planetary scale: Oceanographic and geophysical applications, *Geophys. Res. Lett.*, 19, 1411-1414, 1992. [25]
53. Unsworth, MJ, BJ Travis & AD Chave, Electromagnetic induction by a finite electric dipole source over a two-dimensional earth, *Geophysics*, 58, 198-214, 1993. [141]
54. Lanzerotti, LJ, RE Langel & AD Chave, Geoelectromagnetism, in GL Trigg (ed.), *Encyclopedia of Applied Physics*, Vol. 7, VCH Publishers, NY, pp. 109-123, 1993. [7]
55. Tarits, P, AD Chave & A Schultz, Comment on "The electrical conductivity of the oceanic upper mantle" by G Heinson and S Constable, *Geophys. J. Int.*, 114, 711-716, 1993. [22]
56. Schultz, A, RD Kurtz, AD Chave & AG Jones, Conductivity discontinuities in the upper mantle beneath a stable craton, *Geophys. Res. Lett.*, 20, 2941-2944, 1993. [144]
57. Lanzerotti, LJ, AD Chave, CH Sayres, LV Medford & CG MacLennan, Large-scale electric field measurements on the earth's surface: A review, *J. Geophys. Res.*, 98, 23525-23534, 1993. [24]
58. Chave, AD & JT Smith, On electric and magnetic galvanic distortion tensor decompositions, *J. Geophys. Res.*, 99, 4669-4682, 1994. [169]
59. Lizarralde, D, AD Chave, JG Hirth & A Schultz, Long period magnetotelluric study using Hawaii-to-California submarine cable data: Implications for mantle conductivity, *J. Geophys. Res.*, 100, 17837-17854, 1995. [156]
60. Van Dover, CL, GT Reynolds, AD Chave & JA Tyson, Light at deep-sea hydrothermal vents, *Geophys. Res. Lett.*, 23, 2049-2052, 1996. [65]
61. Wannamaker, PE, AD Chave et al. (9 authors), Magnetotelluric experiment probes deep physical state of southeastern US, *EOS*, 77, 329&332-333, 1996. [18]
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## **B. Work in Progress (submitted to; in press)**

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2. Chave, AD, *Computational Statistics for the Earth Sciences*, Cambridge University Press, in press Mar 2017.
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### **C. Books**

1. Chave, AD & AG Jones (eds.), *The Magnetotelluric Method: Theory and Practice*, Cambridge University Press, 552 pp., 2012. [170]

### **D. Patents**

1. Farr, NE, L Freitag, J Preisig, DR Yoerger, SN White & AD Chave, Systems and methods for underwater optical communication, US Patent 7,953,326; filing date 6 Feb 2006; granted 31 May 2011. [34]

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### **E. Other**

87 extended abstracts and technical reports

287 meeting abstracts