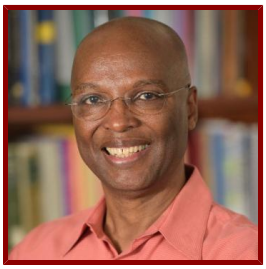
Stanford



Jerry Harris

The Cecil H. and Ida M. Green Professor in Geophysics, Emeritus

Curriculum Vitae available Online

Bio

BIO

Jerry joined Stanford in 1988 after eleven years with private industry. He and his students, together known as the Stanford Wave Physics Lab, study the physics of seismic and electromagnetic waves and fields in complex media, including modeling, numerical simulations, and the processing and inversion of field data. Their recent work has focused on (1) fractional Laplacian formulations for Q modeling and Q compensated RTM, and (2) FWI with reduced order models with sparse parameterizations and machine-learned dictionaries derived from wave propagation kernels, geological, and dynamic flow processes. Jerry co-founded Stanford's Global Climate and Energy Project (GCEP), founded and served as Director of the Stanford Center for Computational Earth and Environmental Science (CEES), and founded the School's summer undergraduate pathways program (SURGE). He has served as Geophysics department chair and SE3 Associate Dean.

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Geophysics
- Affiliate, Precourt Institute for Energy
- Member, Institute for Computational and Mathematical Engineering (ICME)
- Affiliate, Stanford Woods Institute for the Environment

ADMINISTRATIVE APPOINTMENTS

- Associate Dean, Office of Multicultural Affairs, School of Earth Sciences, Stanford University, (2010-2016)
- Associate Dean for Academic Affairs, School of Earth Sciences, Stanford University, (2007-2009)
- Director, Center for Computational Earth & Environmental Science, Stanford University, (2005-2010)
- Chair, Department of Geophysics, Stanford University, (2000-2005)
- Professor, Geophysics Department, Stanford University, (1998- present)
- Petrobras Visiting Professor, Universidade Federal Da Bahia, Brasil, (1995-1996)
- Associate Professor, Geophysics Department, Stanford University, (1988-1998)
- Research Geophysicist, Standard Oil - British Petroleum, Dallas, Texas, (1984-1988)
- Senior Research Specialist, Exxon Production Research Company, Houston, Texas, (1980-1984)
- Staff Engineer, Communications Satellite Corporation, Clarksburg, Maryland, (1974-1977)

HONORS AND AWARDS

- President's Award for Excellence Through Diversity, Stanford University (2015/16)
- Cecil and Ida Green Professor of Geophysics, School of Earth Sciences (2008-Present)

- Distinguished Lecturer, Society of Exploration Geophysicists and American Association of Petroleum Geologists (2002-2003)
- University Fellow, Stanford (1998-2000)
- Distinguished Lecturer, Society of Petroleum Engineers (1995-1996)
- David and Lucille Packard Fellow, David and Lucille Packard (1989-1994)
- Hughes Aircraft Graduate Fellow, Hughes Aircraft Company (1978-1980)
- ARCS Fellow, California Institute of Technology (1977-1978)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Invited Speaker, AGU Meeting of the Americas, Cancun (2013 - 2013)
- Invited Speaker, SUM 2103, University of Science and Technology, China (2013 - 2013)
- Leland Scholars Advisory Board, Stanford University (2012 - 2016)
- Member, Visiting Committee, Colorado School of Mines (2011 - present)
- Mentor, DARE (2011 - present)
- VPUE Selection Committee for SU STEM Fellows, Stanford University (2011 - present)
- Invited Speaker, SIAM Conference on Mathematical and Computational Geosciences (2011 - 2011)
- Member University Advisory Board, Stanford University (2010 - 2011)
- Invited Speaker, NABGG, San Francisco (2010 - 2010)
- Invited Speaker, AGU Meeting of the Americas, Iguassu Falls, Brazil (2010 - 2010)
- Member, VPGE DARE Selection Committee, Stanford University (2007 - 2010)
- Chair, Search Committee for Computational Geosciences, School of Earth Sciences (2007 - 2008)
- Member, Committee on Academic Computing and Information Systems, Stanford University (2007 - 2008)
- Member, Undergraduate Advisory Council, Stanford University (2007 - 2008)
- Member, University Committee on Committees, Stanford University (2007 - 2008)
- Member, University Faculty Senate, Stanford University (2006 - 2008)
- Invited Speaker, SEG Development and Production Workshop on Seismic Attenuation, Austin, May (2005 - 2005)
- Member, Merit Review Committee, DOE National Energy Technology Laboratory (2004 - 2006)
- First Vice President, Society of Exploration Geophysicists† (2004 - 2005)
- Member, U.S. National Committee for Geodesy and Geophysics, International Union of Geodesy and Geophysics (IUGG) (2003 - 2007)
- Chair, SES Committee of Computational Geosciences, Stanford University (2003 - 2005)
- Chair, SES Diversity Committee, Stanford University (2002 - 2004)
- Member, Committee on Staging Development of Nuclear Waste Repositories, National Research Council (2001 - 2003)
- Chair, Department of Geophysics, Stanford University (2000 - 2005)
- Member, Committee on Academic Appraisal and Achievement, Stanford University (2000 - 2002)
- Member, Search Committee in Petroleum Engineering, Stanford University (2000 - 2001)
- Member, University Search Committee, Director OCR, Stanford University (2000 - 2001)
- Member, Earth Sciences Council, Stanford University (1999 - present)
- Instructor, Stanford Summer Engineering Academy, Stanford University (1999 - 2002)
- Co-Chair, Department Admissions Committee, Stanford University (1998 - 2000)
- Freshman Advisor, Stanford University (1998 - 2000)
- Member, Faculty Search Committee in Petroleum Engineering, Stanford University (1998 - 2000)

- Member, Award Review Committee, Stanford Office of Technology and Licensing, Stanford University (1998 - 1999)
- Member, Faculty Search Committee in Geophysics, Stanford University (1998 - 1999)
- Invited Speaker, SPE 1998 Archie Conference (1998 - 1998)
- Member, Board on Carbon Sequestration, Department of Energy (1998 - 1998)
- Coordinator, Department Ph.D. qualification exams, Stanford University (1997 - 1998)
- Member, Editorial Board, The Leading Edge, Society of Exploration Geophysicists (1997 - 1998)
- Partners for Academic Excellence, Black Community Services Center (1997 - 1998)
- Associate Chair, Department of Geophysics, Stanford University (1996 - 2000)
- Member, Visiting Committee, Massachusetts Institute of Technology (1995 - 2007)
- Best Paper Award, Annual Meeting, Society of Exploration Geophysicists (1995 - 1996)
- Director, Stanford Wave Physics Lab, Stanford University (1988 - present)

PROFESSIONAL EDUCATION

- Ph.D, California Institute of Technology , Electrical Engineering (1980)
- M.S., California Institute of Technology , Electrical Engineering (1974)
- B.S., Electrical Engineering , University of Mississippi (1973)

LINKS

- Stanford Wave Physics Lab: https://pangea.stanford.edu/researchgroups/swp/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Biographical Information

Jerry M. Harris is the Cecil and Ida Green Professor of Geophysics and Associate Dean for the Office of Multicultural Affairs. He joined Stanford in 1988 following 11 years in private industry. He served five years as Geophysics department chair, was the Founding Director of the Stanford Center for Computational Earth and Environmental Science (CEES), and co-launched Stanford's Global Climate and Energy Project (GCEP). Graduates from Jerry's research group, the Stanford Wave Physics Lab, work in private industry, government labs, and universities.

Research

My research interests address the physics and dynamics of seismic and electromagnetic waves in complex media. My approach to these problems includes theory, numerical simulation, laboratory methods, and the analysis of field data. My group, collectively known as the Stanford Wave Physics Laboratory, specializes on high frequency borehole methods and low frequency labratory methods. We apply this research to the characterization and monitoring of petroleum and CO2 storage reservoirs.

Teaching

I teach courses on waves phenomena for borehole geophysics and tomography. I recently introduced and co-taught a new course on computational geosciences.

Professional Activities

I was the First Vice President of the Society of Exploration Geophysicists in 2003-04, and have served as the Distinguished Lecturer for the SPE, SEG, and AAPG.

PROJECTS

- The use of groundwater for sustainable agriculture in the Nabogo River Basin of Ghana - Stanford University, Kwame Nkrumah University of Science and Technology, Ghana (April 1, 2016)
- Borehole seismic imaging and monitoring - Stanford University and Universidade Federal da Bahia (1/1/1996 - present)
- Capacity Building For Energy Geosciences and Engineering - Stanford University, Chulalongkorn University, Bangkok (3/1/2010 - 8/30/2016)
- Research and Education partnership for Energy Resources - Stanford University, King Fuad University of Petroleum and Minerals (1/1/2006 - present)

Publications

PUBLICATIONS

- **Wave equation tomography in baseband with phase corrections rom the first arrival traveltimes** *Geophysical Prospecting For Petroleum*
  Yin, F., Harris, J.
  2017; 56 (1): 69-74
- **Wavefield analysis of crosswell seismic data** *Arabian Journal of Geosciences*
  Raji, W., Gao, Y., Harris, J.
  2017; 10 (9): 1-9
- **Modeling of the coseismic electromagnetic fields observed during the 2004 M-w 6.0 Parkfield earthquake** *GEOPHYSICAL RESEARCH LETTERS*
  Gao, Y., Harris, J. M., Wen, J., Huang, Y., Twardzik, C., Chen, X., Hu, H.
  2016; 43 (2): 620-627
- **Acoustic wave-equation-based earthquake location** *Geophysical Journal International*
  Tong, P., Yang, D., Liu, Q., Yang, X., Harris, J. M.
  2016; 205: 464-478
- **Improved estimation of P-wave velocity, S-wave velocity, and attenuation factor by iterative structural joint inversion of crosswell seismic data** *JOURNAL OF APPLIED GEOPHYSICS*
  Zhu, T., Harris, J. M.
  2015; 123: 71-80
- **Applications of boundary-preserving seismic tomography for delineating reservoir boundaries and zones of CO2 saturation** *GEOPHYSICS*
  Zhu, T., Harris, J. M.
  2015; 80 (2): M33-M41
- **Improved seismic image by Q-compensated reverse time migration: Application to crosswell field data, west Texas** *GEOPHYSICS*
  Zhu, T., Harris, J. M.
  2015; 80 (2): B61-B67
- **Modeling acoustic wave propagation in heterogeneous attenuating media using decoupled fractional Laplacians** *GEOPHYSICS*
  Zhu, T., Harris, J. M.
  2014; 79 (3): T105-T116
- **Q-compensated reverse-time migration** *GEOPHYSICS*
  Zhu, T., Harris, J. M., Biondi, B.
  2014; 79 (3): S77-S87
- **Quasi-continuous reservoir monitoring with surface seismic data** *GEOPHYSICAL PROSPECTING*
  Arogunmati, A., Harris, J. M.
  2014; 62 (1): 117-132
- **Approximating constant-Q seismic propagation in the time domain** *GEOPHYSICAL PROSPECTING*
  Zhu, T., Carcione, J. M., Harris, J. M.
  2013; 61 (5): 931-940

- **A constant-Q time-domain wave equation using the fractional Laplacian** *Geophysics*
  Zhu, T., Harris, J. M.
  2013: 3997-4002
- **Application of seismic boundary-preserving constrained inversion for delineating reservoir body** *SEG Houston Annual Meeting*
  Zhu, T., Harris, J. M.
  SEG.2013: 562–566
- **Phase shift approximation for the post-critical seismic wave** *JOURNAL OF GEOPHYSICS AND ENGINEERING*
  Zhang, X., Zhang, Z., Xu, T., Bai, Z., Harris, J. M.
  2012; 9 (5): 482-493
- **Numerical modeling analysis of short-offset electric-field measurements with a vertical electric dipole source in complex offshore environments** *GEOPHYSICS*
  Um, E. S., Alumbaugh, D. L., Harris, J. M., Chen, J.
  2012; 77 (5): E329-E341
- **An iterative finite element time-domain method for simulating three-dimensional electromagnetic diffusion in earth** *GEOPHYSICAL JOURNAL INTERNATIONAL*
  Um, E. S., Harris, J. M., Alumbaugh, D. L.
  2012; 190 (2): 871-886
- **Differential Acoustic Resonance Spectroscopy for the acoustic measurement of small and irregular samples in the low frequency range** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Wang, S., Zhao, J., Li, Z., Harris, J. M., Quan, Y.
  2012; 117
- **An effective crosswell seismic traveltime-estimation approach for quasi-continuous reservoir monitoring** *GEOPHYSICS*
  Arogunmati, A., Harris, J. M.
  2012; 77 (2): M17-M26
- **A Lorenz-Gauge Finite-Element Formulation for Transient Controlled-Source Electromagnetic Modeling** *Journal of Geophysical Research*
  Um, E., Alumbaugh, D., Harris, J.
  2012
- **Super resolution of time-lapse seismic images** *SPIE Conference on Defense, Security & Sensing*
  Zarantonello, S., Smithson , B., Quan, Y., Harris, J.
  2011
- **Iterative joint inversion of P-wave and S-wave crosswell traveltime data** *2011 SEG Annual Meeting*
  Zhu, T., Harris, J.
  2011
- **Reservoir monitoring with True4D surface seismic data** *2011 SEG Annual Meeting*
  Arogunmati, A., Harris, J.
  2011
- **Image integration with learned dictionaries and application to seismic monitoring** *2011 SEG Annual Meeting*
  Quan, Y., Zhu, T., Harris, J., Burnstad, R., Zarantonello, S.
  2011
- **Exact expression for the effective acoustics of patchy-saturated rocks** *GEOPHYSICS*
  Vogelaar, B., Smeulders, D., Harris, J.
  2010; 75 (4): N87-N96
- **3D time-domain simulation of electromagnetic diffusion phenomena: A finite-element electric-field approach** *GEOPHYSICS*
  Um, E. S., Harris, J. M., Alumbaugh, D. L.
  2010; 75 (4): F115-F126
- **A data-estimation based approach for quasi-continuous reservoir monitoring using sparse surface seismic data** *72nd EAGE Conference & Exhibition*

Arogunmati, A., Harris, M. J.
2010

- **TRIGONAL MESHES IN DIFFRACTION TOMOGRAPHY WITH OPTIMUM REGULARIZATION: AN APPLICATION FOR CARBON SEQUESTRATION MONITORING** *JOURNAL OF SEISMIC EXPLORATION*
  Santos, E. T., Harris, J. M., Bassrei, A., Costa, J. C.
  2009; 18 (2): 135-156

- **An approach for quasi-continuous time-lapse seismic monitoring with sparse data** *79th Annual Meeting and International Exposition, SEG, Expanded Abstracts.*
  Arogunmati, A., Harris, M. J.
  2009

- **Stochastic Seismic Inversion using both Waveform and Traveltime Data and Its Application to Time-lapse Monitoring** *SEG Las Vegas Annual Meeting*
  Quan, Y., Harris, J.
  2009

- **Experimental evidence of the relation between the Biot-Gassmann modulus and the bulk modulus measured by DARS (Differential Acoustic Resonance Spectroscopy) of oil-saturated rocks** *2009 SEG International Exposition and Annual Meeting*
  Vogelaar, B., Smeulders, D., Harris, J.
  2009 : 2189–2193

- **A finite element algorithm for 3D transient electromagnetic modeling** *2009 SEG Annual Meeting*
  Um, E., Harris, J., Alumbaugh, D.
  2009

- **DynaSIRT: A Robust Dynamic Imaging Method Applied to CO2 Sequestration Monitoring** *2008 SEG Annual Meeting*
  Santos, E. T., Harris, J. M.
  2008

- **Sensitivity study of time-domain controlled-source electromagnetic method for detecting geological CO2sequestration** *Global Climate and Energy Project Research Symposium*
  Um, E., Harris, J.
  2008

- **Differential Acoustic Resonance Spectroscopy (DARS) Measurements** *70th EAGE Conference & Exhibition*
  Vogelaar, B., Smeulders, D., Harris, J.
  2008

- **Stochastic Seismic Inversion using both Waveform and Traveltime Data and Its Application to Time-lapse Monitoring** *SEG Expanded Abstracts 27, 1915*
  Quan, Y., Harris, J.
  2008

- **Theoretical simulation of electroacoustic borehole logging in a fluid-saturated porous formation** *JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA*
  Hu, H., Guan, W., Harris, J. M.
  2007; 122 (1): 135-145

- **Ultrasonic properties of granular media saturated with DNAPL/water mixtures** *GEOPHYSICAL RESEARCH LETTERS*
  Ajo-Franklin, J. B., Geller, J. T., Harris, J. M.
  2007; 34 (7)

- **Regularized diffraction tomography for trigonal meshes applied to reservoir monitoring** *Congresso Internacional da Sociedade Brasileira de Geofísica*
  Santos, E. T., Harris, J., Bassrei, A., Costa, J. C.
  2007

- **The generalized cross validation method for the selection of regularization parameter in geophysical diffraction tomography** *Journal of the Acoustical Society of America*

Santos, E. T., Bassrei, A., Harris, J.
2007

- **Time-lapse diffraction tomography for trigonal meshes with temporal data Integration applied to CO2 sequestration monitoring** *2007 SEG Annual Meeting*
  Santos, E. T., Harris, J. M.
  2007
- **A survey of the geophysical properties of chlorinated DNAPLs** *JOURNAL OF APPLIED GEOPHYSICS*
  Ajo-Franklin, J. B., Geller, J. T., Harris, J. M.
  2006; 59 (3): 177-189
- **Using resolution-constrained adaptive meshes for traveltime tomography** *JOURNAL OF SEISMIC EXPLORATION*
  Ajo-Franklin, J. B., Urban, J. A., Harris, J. M.
  2006; 14 (4): 371-392
- **Estimating flow properties of porous media with a model for dynamic diffusion** *SEG Expanded Abstracts 25, 1831*
  Xu, C., Harris, J. M., Quan, Y.
  2006
- **Estimating flow properties of porous media with a model for dynamic diffusion** *76th Annual International Meeting, Society of Exploration Geophysicists*
  Xu, C., Harris, J. M., Quan, Y.
  2006
- **Two-dimensional finite-difference seismic modeling of an open fluid-filled fracture: Comparison of thin-layer and linear-slip models** *72nd Annual International Meeting of the Society-for Exploration-Geophysicists*
  Wu, C. L., Harris, J. M., Nihei, K. T., Nakagawa, S.
  SOC EXPLORATION GEOPHYSICISTS.2005: T57–T62
- **Differential Acoustic Resonance Spectroscopy: An experimental method for estimating acoustic attenuation in porous media** *2005 SEG Annual Meeting*
  Harris, J. M., Quan, Y., Xu, C.
  2005
- **Temporal integration of seismic traveltime tomography** *2005 SEG Annual Meeting*
  Ajo-Franklin, J. B., Urban, J., Harris, J. M.
  2005
- **The dielectric properties of granular media saturated with DNAPL/water mixtures** *GEOPHYSICAL RESEARCH LETTERS*
  Ajo-Franklin, J. B., Geller, J. T., Harris, J. M.
  2004; 31 (17)
- **Seismic attenuation due to wave-induced flow** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Pride, S. R., Berryman, J. G., Harris, J. M.
  2004; 109 (B1)
- **Cross-well seismic monitoring of Coal Bed Methane (CBM) production: A case study from the Powder River Basin of Wyoming** *2004 SEG Annual Meeting Expanded Abstracts*
  Akintunde, O. M., Harris, J. M., Quan, Y.
  2004
- **An optimized variable-grid finite-difference method for seismic forward modeling** *Journal of Seismic Exploration*
  Wu, C., Harris, J. M.
  2004; 12: 343-353
- **San Juan single-well seismic data analysis and modeling study** *74th Annual International Meeting, Society of Exploration Geophysicists*
  Wu, C., Harris, J. M., Daley, T. M., Majer, E. L.
  2004
- **San Juan single-well seismic data analysis and modeling study** *SEG Expanded Abstracts 23, 342*

Wu, C., Harris, J. M., Daley, T. M., Majer, E. L.
2004

- **Seismic attenuation due to waveinduced flow** *Journal of Geophysical Research*
  Pride, S. R., Berryman, J. G., Harris, J. M.
  2004; 109: B01201.01–B01201.19
- **Cross-well seismic modeling with inclusion of tube waves and tube-wave-related arrivals** *Geophysical Research Letters*
  Wu, C., Harris, J. M.
  2004; 31 (11)
- **Inversion for elliptically anisotropic velocity using VSP reflection traveltimes** *GEOPHYSICAL PROSPECTING*
  Zhang, Z., Lin, G., Chen, J., Harris, J. M., Han, L.
  2003; 51 (2): 159-166
- **Permeability dependence of seismic amplitudes** *The Leading Edge of Geophysics*
  Pride, S. R., Harris, J. M., Johnson, D., Mateeva, A., Nehei, K., Nowack, R., Rector, J., Spetzler, H., Wu, R., Yamamoto, T., Berryman, J., Fehler, M.
  2003: 518-525
- **Borehole seismic modeling with inclusion of tube waves and other tube-wave-related arrivals** *2003 SEG Annual Meeting*
  Wu , C., Harris, . M.
  2003
- **Preliminary Characterization of a NAPL-Contaminated Site using Borehole Geophysical Techniques** *2003 Symp. App. Geop. Envi. Eng. Prob. (SAGEEP), EEGS*
  Ajo-Franklin, J. B., Geller, J. T., Majer, E. L., Peterson, J. E., Williams, K., Harris, J. M.
  2003
- **Time-lapse imaging of saline-tracer transport in fractured rock using difference-attenuation radar tomography** *Water Resources Research*
  Day-Lewis, .., Lane, J. W., Harris, J. M., Gorelick, S. M.
  2003; 39 (10): 1290
- **Time-lapse inversion of crosswell radar data** *GEOPHYSICS*
  Day-Lewis, F. D., Harris, J. M., Gorelick, S. M.
  2002; 67 (6): 1740-1752
- **Technology is important** *The Recorder, Canadian Society of Exploration Geophysicists*
  Harris, Jerry M.
  2002; 27: 12-18
- **Time-lapse inversion of crosswell radar data** *Geophysics*
  Day-Lewis, F., Harris, J. M., Gorelick, S.
  2002; 67 (6): 1740-1752
- **Single-well seismic modeling in viscoelastic media using a variable-grid finite-difference method** *71 st Ann. Internat. Mtg: Soc. of Expl. Geophys. (SEG*
  Wu, C., Harris, J., Franklin, J. B.
  2002: 1155–1158
- **2D finite-difference seismic modeling for a single fluid-filled fracture: comparison of thin-layer and linear-slip models** *2002 SEG Annual Meeting*
  Wu, C., Harris, J. M., Nihei, K. T.
  2002
- **Finite-difference calculation of direct-arrival traveltimes using the eikonal equation** *Geophysics*
  Mo, L. W., Harris, J. M.
  2002; 67: 1270-1274
- **A high-order fast marching scheme for the linearized eikonal equation** *Journal of Computational Acoustics*
  Franklin, J., Harris, J. M.
  2001; 9: 1095-1109

- **Single-well seismic modeling in viscoelastic media using a variable-grid finite-difference method**
  Wu, C., Harris, J. M., Franklin, J.
  2001
- **Inferring the relation between seismic slowness and hydraulic conductivity in heterogeneous aquifers** *WATER RESOURCES RESEARCH*
  Hyndman, D. W., Harris, J. M., Gorelick, S. M.
  2000; 36 (8): 2121-2132
- **Terrestrial sequestration of CO2: an assessment of research needs** *Advances in Geophysics*
  Wawersik, W., Rudicki, J. W., Dove, P., Harris, J. M., Logan, J. M., Pyrak-Nolte, L., Orr, F. M., Ortoleva, P. J., Richter, F., Warpinski, N., Wilson, J., Wong, T.
  2000; 43: 97-177
- **Progress and issues in single well seismic imaging** *2000 SEG Annual Meeting*
  Daley, T. M., Majer, E. L., Gritto, R., Harris, J. M.
  2000
- **Multi-component wavefield simulations in extensively dilatancy anisotropic media** *Physics of the Earth and Planetary Interiors*
  Zhang, Z., Wang, G., Harris, J. M.
  1999; 114: 25-38
- **DARS based acoustic properties measurements of small and irregular samples at low frequencies** *Journal of Geophysical Research*
  Wang, S., Quan, Y., Harris, J.
  1999
- **A model study for the effects of flow on seismic signatures** *1999 SEG Annual Meeting*
  Pal , A., Phan, V., Harris, J. M.
  1999
- **Amplitude vs. Angle—Influence of petrophysical parameters in porous media** *1998 SEG Expanded Abstracts*
  deRoque, F., Harris, J. M., Barsotelli-Botelho, M. A.
  1998
- **Seismic wave modeling in Poroelastic media using the generalized relfection/transmission(R/T) coefficients method** *SEG 1998 Annual Meeting*
  Wu, X., Harris, J. M.
  1998
- **Buena Vista Hills 3-D attenuation and velocity tomography** *1998 SEG Annual Meeting*
  Wang, G. Y., Harris, J. M., Magalhaes, C. G., Julander, D., Morea, M.
  1998
- **Elastic waves in complex radially symmetric media** *1996 SEG Annual Meeting*
  Quan, Y., Chen, X., Harris, J. M.
  1996
- **Experimental verification of seismic monitoring of CO2 injection in carbonate reservoirs** *1996 SEG Annual Meeting*
  Harris, J. M., Langan, R. T., Fasnacht, T., Melton, D., Smith, B., Sinton, J., Tan, H.
  1996
- **Enhanced oil recovery monitoring using P-wave attenuation** *1996 SEG Annual Meeting*
  Harris, J. M., Yin, F., Quan, Y.
  1996
- **PRACTICAL ALGORITHMS FOR CROSSWELL SEISMIC IMAGING** *Conference on Mathematical Methods in Geophysical Imaging*
  Harris, J. M.
  SPIE - INT SOC OPTICAL ENGINEERING.1993: 14–21
- **BLOWOUT AT YUCCA FLAT** *NATION*
  Harris, J.

1978; 226 (1): 18-20