## Gary Mavko

### Education

1977 | Ph.D. Geophysics Stanford University

1974 | M.S. Geophysics Stanford University

1972 | B.S. Engineering Physics with distinction Cornell University

# **Professional Experience**

1998 - Present | Professor (Research) of Geophysics Stanford University

1993 - 1998 | Associate Professor (Research) of Geophysics Stanford University

1989 - 1993 | Acting Associate Professor of Geophysics Stanford University

1984 - 1989 | Vice President of Research and Development; Senior Research Geophysicist Entropic Geophysical, Cupertino

1978 - 1984 | Geophysicist/Project Chief U.S. Geological Survey, Menlo Park

1977 - 1978 | Postdoctoral Fellow/Lecturer Geophysics, Stanford University

1974 - 1976 | U.S. Air Force Project Officer/Physicist

#### Honors & Awards

2006 - Present | Distinguished Lecturer, Soc. of Exploration Geophysicists

2001 | Honorary Membership Award, Society of Exporation Geophysicists.

2000 | Nominated for the Reginald Fessenden Award of the Society of Exploration Geophysicists

2000 | School of Earth Sciences Excellence in Teaching Award

1998 | Honorable Mention for the best paper in Geophyiscs

1996 | Outstanding Contribution SEG 65th Annual Meeting

1991 | Honorable Mention for SEG Best Poster Award

1978 | National Research Council Research Associate-ship, U.S. Geological Survey

1977 | National Science Foundation Postdoctoral Fellowship

1972 | National Science Foundation Graduate Fellowship

1972 | First in class, Engineering Physics, Cornell University

1971 | Tau Beta Pi, Phi Kappa Phi honorary fraternities

### **University Service**

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2006 - 2008 | Associate Chair, Geophysics
2005 | Bldg. Space Coordinator, Earth Sciences
2002 - 2005 | University Research Administration Steering Committee
1997 - 2001 | Stanford University Committee on Research
1997 - Present | Freshman/Sophomore advisor
1990 - Present | Co-Director, Stanford Rock Physics and Borehole Geophysics Project
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#### **Professional Activities**

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2005 - Present | Member, American Assoc. Petroleum Geologists
2004 - Present | Member, International Advisory Board, University of Bergen, Norway
2000 - 2001 | Invited Instructor, BP, Shell, Norsk Hydro
1999 | Invited Instructor, Royal-Dutch Shell, Schlumberger
1998 - 1999 | DOE Review Panel
1996 - Present | Instructor, SEG Continuing Education Program
1994 - Present | Member, Society of Petroleum Engineers
1991 - Present | Member, European Association of Geoscientists and Engineers
1972 - Present | Member, American Geophysical Union, Society of Exploration Geophysics
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# Courses Taught

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2012 (Spring) | GP 385V Poroelasticity [Enrolled 10]
2012 (Winter) | GP 385V Poroelasticity [Enrolled 9]
2011 (Fall) | GP262 Rock Physics [Enrolled 31]
2011 (Fall) | GP 385V Poroelasticity [Enrolled 6]
2010 (Winter) | GP 385 Poroelasticity [Enrolled 13]
2009 (Fall) | GP 385 Poroelasticity [Enrolled 14]
2009 (Summer) | GP 385 Poroelasticity [Enrolled 10]
2009 (Spring) | GP 385 Poroelasticity [Enrolled 14]
2009 (Winter) | GP 385 Poroelasticity [Enrolled 14]
2008 (Winter) | GP 385 Poroelasticity [Enrolled 12]
2008 (Spring) | GP 385 Poroelasticity [Enrolled 10]
2008 (Summer) | GP 385 Poroelasticity [Enrolled 10]
2008 (Fall) | GP 385 Poroelasticity [Enrolled 10]
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2008 (Fall) | GP262 Rock Physics [Enrolled 17]
2007 (Winter) | 385 Porelasticity [Enrolled 10]
2007 (Fall) | GP262 Rock Physics [Enrolled 18]
2007 (Summer) | 385 Poroelasticity [Enrolled 10]
2006 (Fall) | 385 Poroelasticity [Enrolled 10]
2006 (Winter) | 385 Poroelasticity [Enrolled 10]
2006 (Fall) | 385 Poroelasticity [Enrolled 10]
2006 (Fall) | GP262 Rock Physics [Enrolled 16]
2005 (Fall) | GP385V Poroelasticisty [Enrolled 2]
2005 (Winter) | 385 Poroelasticity [Enrolled 4]
2005 (Winter) | GP 400 Research in Geophysics [Enrolled 6]
2005 (Spring) | 385 Poroelasticity [Enrolled 10]
2005 (Winter) | GP 802 TGR [Enrolled 2]
2004 (Fall) | GP400 Geophysics Research [Enrolled 4]
2004 (Winter) | GP802 TGR Dissertation [Enrolled 1]
2004 (Fall) | GP 802 TGR Dissertation [Enrolled 1]
2004 (Fall) | GP385V Poroelasticity [Enrolled 2]
2004 (Fall) | GP385D Topics in crustal fluids (with Amos Nur) [Enrolled 1]
2004 (Winter) | GP801 TGR Project [Enrolled 1]
2004 (Fall) | GP400 Geophysics Research [Enrolled 4]
2004 (Spring) | GP262 Rock Physics [Enrolled 12]
2003 (Spring) | GP400 Geophysics Research [Enrolled 7]
2003 (Fall) | GP400 Geophysics Research [Enrolled 4]
2003 (Summer) | GP255 RPT on Energy Industry Training [Enrolled 1]
2003 (Fall) | GP802 TGR Dissertation [Enrolled 1]
2003 (Fall) | GP385V Poroelasticity [Enrolled 4]
2003 (Winter) | GP400 Geophysics Research [Enrolled 6]
2003 (Summer) | GP802 TGR Dissertation [Enrolled 1]
2003 (Summer) | GP400 Geophysics Research [Enrolled 4]
2003 (Spring) | GP262 Rock Physics [Enrolled 8]
2003 (Winter) | GP385V Poroelasticity [Enrolled 8]
2003 (Spring) | GP399 Teaching experience in geophysics [Enrolled 1]
2003 (Spring) | GP385V Poroelasticity [Enrolled 5]
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2003 (Fall) | GP802 TGR Dissertation [Enrolled 1]
2003 (Winter) | GP385V Poroelasticity [Enrolled 8]
2003 (Winter) | GP400 Geophysics Research [Enrolled 6]
2003 (Fall) | GP385D Topics in Crustal Fluids (with Amos Nur) [Enrolled 3]
2003 (Fall) | GP385V Peroelasticity [Enrolled 4]
2003 (Fall) | GP400 Geophysics Research [Enrolled 4]
2003 (Spring) | GP262 Rock Physics [Enrolled 8]
2003 (Spring) | GP385V Poroelasticity [Enrolled 5]
2003 (Spring) | GP399 Teaching Experience in Geophysics [Enrolled 1]
2003 (Spring) | GP400 Geophysics Research [Enrolled 7]
2002 | GP262 Rock Physics [Enrolled 15]
2002 | GP385D Topics in Crustal Fluids (with Nur) [Enrolled 3]
2002 | GP385V Poroelasticity [Enrolled 6]
2002 | GP400 Geophysics Research [Enrolled 23]
2001 | GP385 Tectonophysics (with Nur) [Enrolled 1]
2001 | GP385 Poroelasticity (with Nur) [Enrolled 1]
2001 | GP400 Research [Enrolled 4]
2001 | GP262 Rock Physics [Enrolled 0]
2001 | GP400 Research [Enrolled 6]
2001 | GP400 Research [Enrolled 4]
2001 | GP385 Poroelasticity [Enrolled 2]
2001 | GP400 Research [Enrolled 2]
2001 | GP262 Rock Physics [Enrolled 9]
2001 | GP399 Teaching Experience [Enrolled 2]
2000 | GP380 Exploration Geophysics [Enrolled 6]
2000 | GP185 Poroelasticity (with Nur) [Enrolled 1]
2000 | GP255 Energy Industrial Training [Enrolled 1]
2000 | GP262 Rock Physics [Enrolled 15]
2000 | GP385 Tectonophysics (with Nur) [Enrolled 4]
2000 | GP385 Poroelasticity (with Nur) [Enrolled 1]
2000 | GP400 Research [Enrolled 16]
1999 | GP400 Research [Enrolled 17]
1999 | GP385 Poroelasticity (with Nur) [Enrolled 3]
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1999 | GP385 Tectonophysics (with Nur) [Enrolled 2] 1999 | GP262 Rock Physics [Enrolled 15]

#### **Publications**

- 2010 \* | Mavko, G., and Vanorio, T., 2010, The influence of pore fluids and frequency on apparent effective stress behavior of seismic velocities, Geophysics, 75, N1.
- 2009 | Gomez, C., Mukerji, T., and Mavko, G., 2009, Seismic inversion using low-frequency seismic impedance trend computed from CSEM data, SEG Expanded Abstracts, 28, 2412.
- 2009 | Bandyopadhyay, K., Dvorkin, J., and Mavko, G., 2009, Attenuation and attenuation anisotropy in laminated rocks, SEG Expanded Abstracts, 28, 2065.
- 2009 | Vanorio, T., and Mavko, G., 2009, How micrite content affects the transport, seismic, and reactive properties of carbonate rocks. Implications for 4D seismic, SEG Expanded Abstracts, 28, 2030.
- 2009 | Dutta, T., Mavko, G., and Mukerji, T., 2009, Improved granular medium model for unconsolidated sands using coordination number, porosity, and pressure relations, SEG Expanded Abstracts, 28, 1980.
- 2009 | Sain, R., Mavko, G., and Mukerji, 2009, Effect of diagenesis on elastic and transport properties using computational rock physics in realistic pore microstructure, SEG Expanded Abstracts, 28, 2105.
- 2009 | Dejtrakulwong, P., Mukerji T., and Mavko, G., 2009, Investigating Thomas-Stieber model for property estimation of thin-bedded shaly-sand reservoirs, SEG Expanded Abstracts, 28, 1965.
- 2009 | Gomez, C., Scotellaro, C., Vanorio, T., Dvorkin, G., and Mavko, G., 2009, Effective medium modeling of laboratory velocity and resistivity data on carbonates from the Apulia Platform, Italy, SEG Expanded Abstracts, 28, 2020.
- 2009 \* | Mukerji, T., Mavko, G., and Gomez, C., 2009, Cross-property rock physics relations for estimating low-frequency seismic impedance trends from electromagnetic resistivity data, The Leading Edge, 28, 94.
- 2009 \* | Ahmadov, R., Vanorio, T., and Mavko, G., 2009, Confocal laser scanning and atomic-force microscopy in estimation of elastic properties of the organic-rich Bazhenov Formation, The Leading Edge, 28, 19.
- 2009 \* | Dutta, T., Mavko, G., Mukerji, T., and Lane, T., 2009, Compaction trends for shale and clean sandstone in shallow sediments, Gulf of Mexico, The Leading Edge, 28, 590.
- 2009 \* | Vanorio, T., Mavko, G., Vialle, S., and Spratt, K., 2010, The rock physics basis for 4D seismic monitoring of CO2 fate: Are we there yet?, The Leading Edge, 29, 156.
- 2009 \* | Mavko, G., and Bandyopadhyay, K., 2009, Approximate fluid substitution for vertical velocities in weakly anisotropic VTI rocks, Geophysics, 74, D1.
- 2009 \* | Avseth, P., Jorstad, A., Winjgaarden A-J., and Mavko, G., 2009, Rock physics estimation of cement volume, sorting, and net-to-gross in North Sea sandstones, The Leading Edge, 28, 98.
- 2008 \* | Mukerji, T., and Mavko, G., 2008, The flaw of averages and the pit(Fall) |s of ignoring variability in attribute interpretations, The Leading Edge, 27, 382.

- 2008 \* | Wolf., K., Vanorio, T., and Mavko, G., 2008, Measuring and monitoring heavy-oil reservoir properties, The Leading Edge, 27, 1138.
- 2008 \* | Vanorio, T., Mukerji, T., and Mavko, G., 2008, Emerging methodologies to characterize the rock physics properties of organic-rich shales, The Leading Edge, 27, 780.
- 2008 \* | Gomez, C., Dvorkin, J., and Mavko, G., 2008, Estimating the hydrocarbon volume from elastic and resistivity data: A concept, The Leading Edge, 27, 710.
- 2008 \* | Vanorio, T., Scotellaro, C., and Mavko, G., 2008, The effect of chemical and physical processes on the acoustic properties of carbonate rocks, The Leading Edge, 27, 1040.
- 2008 | Mukerji, T., Mavko, G., and Gomez, C., 2008, Estimating low frequency seismic impedance from CSEM resistivity using cross-property rock physics, relations, SEG Expanded Abstracts, 27, 1769.
- 2008 | Bandyopadhyay, K., and Mavko, G., 2008, Approximate fluid substitution in weakly anisotropic VTI rocks, SEG Expanded Abstracts, 27, 1749.
- 2008 | Bandyopadhyay, K., Vanorio, T., Mavko, G., Wenk, H-R., and Voltolini, M., 2008, Elastic anisotropy of clay, SEG Expanded Abstracts, 27, 1835.
- 2008 | Sain, R., Mukerji, T., and Mavko, G., 2008, Granular dynamics simulation for estimating elastic properties of loose unconsolidated frictional packs, SEG Expanded Abstracts, 27, 1825.
- 2008 | Richa, Mukerji, T., Mavko, G., and Shell Exploration, 2008, Analyzing thresholds for 3D reconstruction of rock from CT-scan images, SEG Expanded Abstracts, 27, 1820.
- 2008 | Vanorio, T., Mukerji T., and Mavko, G., 2008, Elastic anisotropy, maturity, and maceral microstructure in organic-rich shales, SEG Expanded Abstracts, 27, 1635.
- 2008 | Dutta, T., Mukerji, T., and Mavko, G., 2008, How does carbonate cementation in sandstones affect seismic response, SEG Expanded Abstracts, 27, 1675.
- 2008 | Scotellaro, C., and Mavko, G., 2008, Factors affecting the sensitivity of the elastic properties to pressure on carbonate rocks, SEG Expanded Abstracts, 27, 1665.
- 2007 \* | Zimmer, M. A. , M. Prasad, G. Mavko, and A. Nur, 2007, Seismic velocities of unconsolidated sands: Part 1 Pressure trends from 0.1 to 20 MPa: Geophysics, 72 , no.2, E1-E13
- 2007 \* | Zimmer, M. A., M. Prasad, G. Mavko, and A. Nur, 2007, Seismic velocities of unconsolidated sands: Part 2 Influence of sorting- and compaction-induced porosity variation: Geophysics, 72, no.1, E15-E25.
- 2007 \* | Japsen, P., T. Mukerji, and G. Mavko, 2007, Constraints on velocity-depth trends from rock physics models: Geophysical Prospecting, 55, no.2, 135-154.
- 2007 \* | Tsuneyama, F. , and G. Mavko, 2007, Quantitative detection of fluid distribution using time-lapse seismic : Geophysical Prospecting, 55, no.2, 169-184.
- 2007 \* | Sava, D., and Mavko, G., 2007, Rock physics-based integration of geologic and geophysical data for fracture characterization, The Leading Edge, 26, 1140.
- 2007 \* | Dutta, T., Mukerji T., and Mavko, G., 2007, Rock physics modeling constrained by sequence stratigraphy, The Leading Edge, 26, 870.
- 2007 \* | Spikes, K., Mukerji, T., Dvorkin, J., and Mavko, G., 2007, Probabilistic seismic inversion based on rock physics models, Geophysics, 72, R87.

- 2007 \* | Dvorkin, J., Mavko, G., and Gurevich, B., 2007, Fluid substitution in shaley sediment using effective porosity, Geophysics, 72, O1.
- 2007 | Scotellaro, C., Vanorio, T., and Mavko, G., 2007, The effect of mineral composition and pressure on carbonate rocks, SEG Expanded Abstracts, 26, 1684.
- 2007 | Scotellaro, C., Vanorio, T., and Mavko, G., 2007, To fluid-substitute or not to fluid-substitute: How pore shape and chemical processes affect Gassmann's predictability, SEG Expanded Abstracts, 26, 1584.
- 2007 | Wolf, K. and Mavko, G., 2007, PSEI modeling of bitumen sand implications for reservoir characterization and monitoring, SEG Expanded Abstracts, 26, 1480.
- 2007 | Dutta, T., Mukerji, T., and Mavko, G., 2007, Quantifying spatial trend of sediment parameters in channelized turbidite, West Africa, SEG Expanded Abstracts, 26, 1674.
- 2007 | Sain, R., Mukerji, T., Mavko, G., and Keehm, Y., 2007, Evolution of elastic properties and fabric tensor in a deposition model using granular dynamics simulation, SEG Expanded Abstracts, 26, 1669.
- 2006 \* | Dvorkin, J. P. and Mavko, G., 2006, Modeling attenuation in reservoir and nonreservoir rock: The Leading Edge, 25, no. 3, 194-197.
- 2006 \* | Vega, S., Mavko, G., Nur, A., and Prasad, M., 2006, Detection of stress-induced velocity anisotropy in unconsolidated sands, The Leading Edge, 25, 3, 252-256.
- 2006 \* | Hacikoylu, P., Dvorkin, J., and Mavko, G., 2006, Resistivity-velocity transforms revisited , The Leading Edge, 25, 8, 1006-1009.
- 2006 \* | Wempe, W., and Mavko, G., 2006, A new method for constraining total porosity; the new total porosity-electrical resistivity upper bound, The Leading Edge, 25, 6, 714-719.
- 2006 \* | Cordon, I., J. Dvorkin, and G. Mavko, 2006, Seismic reflections of gas hydrate from perturbational forward modeling: Geophysics, 71, no.6, F165-171. 2006 Hacikoylu, P., J. Dvorkin, and G. Mavko, 2006, Link between Elelctrical Resistivity and Seismic Velocity: 68th Meeting, EAGE, Expanded Abstracts, F014.
- 2006 | Wolf, K., T. Mukerji, and G. Mavko, 2006, Attenuation and velocity dispersion modeling of bitumen saturated sand: 76th Annual International Meeting, SEG, Expanded Abstracts, 1993-1997.
- 2006 | Avseth, P., A. van Wijngaarden, G. Mavko, and T.A. Johansen, 2006, Combined porosity, saturation, and net-to-gross estimation from rock physics templates: 76th Annual International Meeting, SEG, Expanded Abstracts, 1856-1860.
- 2006 | Hacikoylu, P., J. Dvorkin, and G. Mavko, 2006, Elastic and petrophysical bounds for unconsolidated sediments: 76th Annual International Meeting, SEG, Expanded Abstracts, 1762-1766.
- 2006 | Richa, R., T. Mukerji, G. Mavko, and Y. Keehm, 2006, Image analysis and pattern recognition for porosity estimation from thin sections: 76th Annual International Meeting, SEG, Expanded Abstracts, 1968-1972
- 2006 | Dutta, T., T. Mukerji, G. Mavko, and P. Avseth, 2006, Reservoir-quality prediction by integrating sequence stratigraphy and rock physics: 76th Annual International Meeting, SEG, Expanded Abstracts, 1811-1815.
- 2006 | Gonzalez, E.F., G. Mavko, and T. Mukerji, 2006, Rock physics and multiple-point geostatistics for seismic inversion: 76th Annual International Meeting, SEG, Expanded Abstracts, 2047-2051.

- 2006 | Spikes, K.T., J. Dvorkin, and G. Mavko, 2006, Rock-physics model-based seismic inversion: 76th Annual International Meeting, SEG, Expanded Abstracts, 1645-1649.
- 2006 | Vanorio, T., and G. Mavko, 2006, Vp/Vs ratio in gas-pressured saturated sandstones: 76th Annual International Meeting, SEG, Expanded Abstracts , 1545-1549
- 2006 | Avseth, P. A., A. J. van Wijngaarden, T. A. Johansen, and G. Mavko, 2006, Seismic Fluid Prediction in Heterogeneous Reservoirs: 68th Meeting, EAGE, Expanded Abstracts, P127.
- 2005 \* | Avseth, P., Mukerji, T., and Mavko, G., Quantitative seismic interpretation, Cambridge University Press. A Book.
- 2005 \* | Tsuneyama, F. and Mavko, G., 2005, Velocity anisotropy estimation for brine-saturated sandstone and shale: The Leading Edge, 24, no. 09, 882-888.
- 2005 | Dvorkin, J. and Mavko, G., 2005, P-Wave Attenuation in Reservoir and Non-Reservoir Rock, 67th Mtg.: Eur. Assn. Geosci. Eng., H033.
- 2005 | Dorn-Lopez, D., Sorensen, A., Mavko, G., Fabricius, I.L. and Hedegaard, K., 2005, Modeling Seismic Response of Danish Chalk Reservoirs to Changes Induced by Production, 67th Mtg.: Eur. Assn. Geosci. Eng., H031.
- 2005 | Japsen, P., Mavko, G., Gommesen, L., Jacobsen, F., Vejbaek, O., Rasmussen, R. and Schiott, C.R., 2005, Chalk Background Velocity ñ Influence of Effective Stress and Texture, 67th Mtg.: Eur. Assn. Geosci. Eng., H027.
- 2005 | Avseth, P., van Wijngaarden, A.- J., Flesche, H., Fristad, T., Rykkje, J. and Mavko, G., 2005, Seismic Fluid Prediction in Poorly Consolidated and Clay Laminated Sands, 67th Mtg.: Eur. Assn. Geosci. Eng., F011.
- 2005 | Gonzalez, E. F., Mavko, G. and Mukerji, T., 2005, Bootstrapping AVA for Uncertainty Assessment in Lithology and Fluid Identification, 67th Mtg.: Eur. Assn. Geosci. Eng., F009.
- 2005 | Sava, Dr. D. C. and Mavko, Dr. G., 2005, Quantitative integration of geological and seismic data using statistical rock physics: Example for fracture characterization, 75th Ann. Internat. Mtg.: Soc. of Expl. Geophys., 1613-1616.
- 2005 | Mavko, Dr. G., Dvorkin, Dr. J. and Walls, Dr. J. D., 2005, A rock physics and attenuation analysis of a well from the Gulf of Mexico, 75th Ann. Internat. Mtg.: Soc. of Expl. Geophys., 1585-1588.
- 2005 | Mavko, Dr. G., Dvorkin, Dr. J. and Walls, Dr. J. D., 2005, A theoretical estimate of S-wave attenuation in sediment, 75th Ann. Internat. Mtg.: Soc. of Expl. Geophys., 1469-1472.
- 2005 | Mukerji, T. and Mavko, Dr. G., 2005, The flaw of averages and the pit(Fall) |s of ignoring variability in rock physics interpretation, 75th Ann. Internat. Mtg.: Soc. of Expl. Geophys., 747-750.
- 2005 | Gonzalez, E. F., Mukerji, T. and Mavko, Dr. G., 2005, Automatic detection of data inconsistencies for AVA analysis: Bootstrap and LMS regression, 75th Ann. Internat. Mtg.: Soc. of Expl. Geophys., 242-245.
- 2005 \* | R gen, B., Fabricius, I., Japsen, P., Hoier, C., Mavko, G. and Pedersen, J., 2005, Ultrasonic velocities of North Sea chalk samples: influence of porosity, fluid content and texture: Geophys. Prosp., Eur. Assn. Geosci. Eng., 53, 481-496.
- 2005 \* | Florez-Nino, J.-M., Aydin, A., Mavko, G., Antonellini, M., and Ayaviri, A., 2005, Fault and fracture systems in a fold and thrust belt; an example from Bolivia, AAPG Bulletin, 89, 4, 471-493.

- 2004 | Sava, D. C. and Mavko, G., 2004, Azimuthal analysis of reflectivity for fracture characterization: Rock physics modeling and field example, 74th Ann. Internat. Mtg.: Soc. of Expl. Geophys., 1583-1586.
- 2004 | Gonzalez, E. F., Mavko, G., and Mukerji, T.: A practical procedure for P-to-S "elastic" impedance (PSEI) inversion: Well log and synthetic seismic examples for identifying partial gas saturations. 74th. Ann. Internat. Mrg. Soc. of Expl. Geophys.
- 2004 \* | Japsen, P., Bruun, A., Fabricius, I. L., Rasmussen, R., VejbÊk, O.V., Pedersen, J. M., Mavko, G., Morgensen, C. and Hoier, C., 2004, Influence of porosity and pore fluid on acoustic properties of chalk: AVO response from oil, South Arne Field, North Sea: Petroleum Geoscience, Eur. Assn. Geosci. Eng., 10, 319-330.
- 2004 | Japsen, P., Bruun, A., Fabricius, I. L., Rasmussen, R., Vejbaek, O.V., Pedersen, J.M., Mavko, G. and Mogensen, C., 2004, Effect of Pore Fluid on Acoustic Properties of Chalk AVO-Response from Oil, South Arne Field, North Sea, 66th Mtg.: Eur. Assn. Geosci. Eng., G021.
- 2004 | Gonzalez, E. F., Mavko, G. and Mukerji, T., 2004, A practical procedure for P-to-S ielasticî impedance (PSEI) inversion: Well log and synthetic seismic examples for identifying partial gas saturations, 74th Ann. Internat. Mtg.: Soc. of Expl. Geophys., 1782-1785.
- 2004 | Florez-Nino, J.-M. and Mavko, G., 2004, Pressure-solution and the rock physics diagenetic trend in quartzose sandstones, 74th Ann. Internat. Mtg.: Soc. of Expl. Geophys., 1702-1705.
- 2004 | Eidsvik, J., Avseth, P., Omre, H., Mukerji, T. and Mavko, G., 2004, Stochastic reservoir characterization using prestack seismic data: Geophysics, Soc. of Expl. Geophys., 69, 978-993.
- 2004 \* | Japsen, P., Bruun, A., Fabricius, I., and Mavko, G., 2004, Identification of hydrocarbons in chalk reservoirs from surface seismic data, Geological Survey of Denmark and Greenland Bulletin, 7, 13-16.
- 2003 \* | Gonzalez, E. F., Mukerji, T., Mavko, G., Michelena, R. J., Near and far offset P-to-S elastic impedance for discriminating fizz water from commercial gas, The Leading Edge, Vol. 22, No 10. pp. 1012-1015. October.
- 2003 \* | Sengupta, M., Mavko, Gary. Impact of flow-simulation parameters on saturation scales and seismic velocity, Geophysics, Vol. 68, No 4, pp. 1267-1280. August.
- 2003 \* | Sengupta, M., Mavko, G., Muerji, T., Quantifying subresolution saturation scales from time-lapse seismic data; a reservoir monitoring case study. Geophysics, Vo. 68, No 3. pp. 803-814. June.
- 2003 \* | Diaz, E., Prasad, M., Mavko, G., Dvorkin, J., Effect of glauconite on the elastic properties, porosity and permeability of reservoir rocks. The Leading Edge, Vol. 22, No 1, pp. 42-45, January.
- 2003 | Dvorkin, J., Walls, J., Taner, T., Derzhi, N. and Mavko, G., 2003, Attenuation at Patchy Saturation ñ A Model, 65th Mtg.: Eur. Assn. Geosci. Eng., E23.
- 2003 | Dvorkin, J., Mavko, G. and Walls, J., 2003, Seismic wave attenuation at full water saturation, 73rd Ann. Internat. Mtg.: Soc. of Expl. Geophys., 1684-1686.
- 2003 | Florez-Nino, J.-M., Aydin, A., Mavko, G., Antonellini, M. and Ayaviri, A., 2003, Variability of fracture density along the strike azimuth of folded structures, 73rd Ann. Internat. Mtg.: Soc. of Expl. Geophys., 1553-1556.

- 2003 | Gonzalez, E., Mukerji, T., Mavko, G. and Michelena, R., 2003, Far offset P-to-S elastic impedance for lithology and partial gas saturation (fizz water) identification: Applications with well logs, 73rd Ann. Internat. Mtg.: Soc. of Expl. Geophys., 1446-1449.
- 2003 | Vega, S., Prasad, M. and Mavko, G., 2003, Comparative study of velocities under hydrostatic and nonhydrostatic stress in sands, 73rd Ann. Internat. Mtg.: Soc. of Expl. Geophys., 1231-1234.
- 2003 | Vega, S., Mukerji, T., Mavko, G. and Prasad, M., 2003, Stratification in loose sediments and its seismic signature, 73rd Ann. Internat. Mtg.: Soc. of Expl. Geophys., 1219-1222.
- 2002 \* | Eidsvik, J., Omre, H., Mukerji, T., Mavko, g., Avseth, P., Seismic reservoir prediction using Bayesian integration of rock physics and Markov random fields: A North Sea example, The Leading Edge, Vol. 21, No. 3, pp. 290-294.
- 2002 \* | Zimmer, M., Prasad, M., Mavko, G., Pressure and porosity influences on V (sub p) -V (sub s) ratio in unconsolidated sands, The Leading Edge, Vol. 21, no. 2, pp. 178, 180-183.
- 2002 | Sava, D. C., Florez, J., Mukerji, T., Mavko, G., Seismic fracture characterization using statistical rock physics: James Limestone reservoir, Neuville Field, Expanded Abstracts of the 72nd. Annual International Meeting SEG, Salt Lake City, UT.
- 2002 \* | Eidsvik, J., Onre, H., Mukerji, T., Mavko, G., Avseth, P., Seismic reservoir prediction using Bayesian integration of rock physics and Markov random fields: A North Sea example. March.
- 2002 | Zimmer, M. A., Prasad, M., Mavko, G., Empirical velocity-pressure and porosity-pressure trends in unconsolidated sands, SEG Annual Meeting Expanded Technical Programs with Abstracts. Vol. 72. pp. 1866-1869.
- 2002 | Wempe, Wendy, Mavko, G., Effective porosity-total porosity model applied to Fontainebleau sandstone. SEG Annual Meeting Expanded Technical Program Abstracts. Vol. 72, pp. 1870-1872.
- 2002 | Japsen, Peter, Hoier, C., Rasmussen, J. B., Fabricius, I. L., Mavko, G., Pedersen, J. M., Effect of fluid substitution on ultrasonic velocities in chalk plugs, South Arne Field, North Sea. SEG Annual Meeting Expanded Technical Program Abstracts. Vol. 72. pp. 1881-1884.
- 2002 | Fabricus, I. L., Mavko, G., Morgensen, C., Japsen, P., Elastic moduli of chalk as a reflection of porosity, sorting, and irreducible water saturation, SEG Annual Meeting Expanded Technical Program Abstracts, Vol. 72, pp. 1903-1906.
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### **Advisee Degrees**

2009 | Carmen Gomez: Reservoir Characterization Combining Elastic Velocities and Electrical Resistivity Measurements, Ph.D. (Shell)

2009 | Kaushik Bandyopadhyay: Seismic Anisotropy: Geological Causes and Its Implications to Reservoir Geophysics, Ph.D. (ExxonMobil)

2009 | Tanima Dutta: Integrating Sequence Stratigraphy and Rock Physics to Interpret Seismic Amplitudes and Predict Reservoir Quality, Ph.D. (ExxonMobil)

2007 | Richa, M.S. (Stanford Geophysics)

2007 | Kevin Wolf, M.S. (Stanford Geophysics)

2006 | Ezequiel Gonzalez: Physical and quantitative interpretation of seismic attributes for rocks and fluids identification, Ph.D. (Shell)

2006 | Pinar Hacikoylu, M.S. (Turkish Petroleum)

2005 | Anyela Marcote-Rios: Rock Physics of Coal, M.S. (Occidental Petroleum)

2005 | Juan-Mauricio Florez: Integrating geology, rock physics, and seismology for reservoir-quality prediction., Ph.D. (i.reservoir.com)

2005 | Futoshi Tsuneyama: Quantitative detection of fluid distribution using time-lapse seismic., Ph.D. (Idemitsu)

2004 | Diana Sava: Quantitative data integration for fracture characterization using statistical rock physics., Ph.D. (UT, Austin)

2003 | Sandra Vega: Intrinsic and stress-induced velocity anisotropy in unconsolidated sands., Ph.D. (University of Miami)

2003 | Juan Florez: Outcrop studies for fractured reservoir characterization., M.S. (i.reservoir.com)

- 2002 | Salman Alkhater: Pore fluid and porosity mapping from seismic., M.S. (Aramco)
- 2002 | Elizabeth Diaz: Rock physics of glauconite and glauconitic sandstone reservoirs., M.S. (Occidental Oil & Gas Co)
- 2002 | Manuel Diaz: Impact of attenuation on the AVO response., M.S. (Petrobras)
- 2002 | Diana Sava: Rock physics and fracture modeling of San Andreas reservoir., M.S. (UT, Austin)
- 2001 | Oscar Moreno: Influence of seismic frequency & thin layers of amplitude vs. offsets (AVO)., M.S. (Ecopetrol)
- 2000 | Per Avseth: Combining rock physics and sedimentology for seismic reservoir characterization of North Sea urbidite systems., Ph.D. (Norsk Hydro, Norway)
- 2000 | Sengupta Madhumita: Integrating rock physics and flow simulation to reduce uncertainties in seismic reservoir monitoring., Ph.D. (Schlumberger)
- 2000 | Wendy Wempe: Using geophysical data to predict flow properties: improving aquifer characterization., Ph.D. (Post-doc, CSM. Colorado)
- 2000 | Alexander Medina: Effect of texture, porosity, and pore fluid on the elastic-wave velocity in heavy-oil sands., M.S. (PDVSA Intevep SA, Venezuela)
- 2000 | Debra Sandra Vega: Stress-induced anisotropy in sands., M.S. (Stanford)
- 2000 | Carlos Cobos: Using geological trends to contain seismic classification of lithology and effect of azimuthal-range in AVOZ inversion for rock properties., M.S. (PDVSA Intevep. S.A. Venezuela)
- 1998 | Isao Takahashi: Quantifying information and uncertainty of rock property estimation from seismic data., Ph.D. (JNOC, Japan)
- 1998 | Page Stites: The relation between rock physics and sedimentology in two California turbidite systems., M.S. (Walnut Hill School)
- 1996 | Hrijoy Bhattachargee: Analytical solution of a presure diffusion problem., M.S. (unknown)
- 1994 | Carol Estes: Relationship beween velocity, porosity, clay content and permeability of unconsolidated sediments., M.S. (Pioneer Resources)
- 1994 | Christina Chan: Fluid substitution: Estimating changes in VP without knowing VS., M.S. (University of Houston, TX)
- 1993 | Daniel Mujica: Numerical study of reservoir heterogeneities and their interaction with seismic wave at varing scales., M.S. (unknown)

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