LIST OF PUBLICATIONS

David E. Lumley
Stanford Exploration Project

Journal Articles

Lumley, D. E., Claerbout, J. F., and Bevc, D., 1995, Anti-aliased Kirchhoff 3-D migration: Geophysics, in preparation.

Lumley, D. E., Nichols, D. E., and Rekdal, T., 1995, Amplitude-preserved multiple suppression: Geophysics, in preparation.

Lumley, D. E., Nur, A., Strandenes, S., Dvorkin, J., and Packwood, J., 1995, Seismic monitoring of oil production: A feasibility study: Geophysics, in preparation.

Ecker, C., and Lumley, D. E., 1995, Seismic AVO analysis of methane hydrate structures: Geophysics, in preparation.

Audebert, F., Nichols, D., Rekdal, T., Biondi, B., Lumley, D., and Urdaneta, H., 1994, Imaging complex geologic structures with single-arrival Kirchhoff prestack depth migration: Geophysics, submitted.

Theses

Lumley, D. E., 1995, 4-D seismic monitoring of reservoir fluid flow: Ph.D. Thesis, Stanford University, in preparation.

Lumley, D. E., 1989, A generalized Kirchhoff–WKBJ depth migration theory for multi-offset seismic reflection data: Reflectivity model construction by wavefield imaging and amplitude estimation: M.Sc. Thesis, University of British Columbia, 208 pp.

Proceedings

Lumley, D. E., Nichols, D., Ecker, C., Levin, S., Rekdal, T., Berlioux, A., and Clapp, B., 1995, True-amplitude processing and inversion of the Mobil AVO dataset: Special Proceedings, Soc. Expl. Geophys., in preparation.

Expanded Abstracts

Lumley, D. E., Nur, A., Strandenes, S., Dvorkin, J., and Packwood, J., 1994, Seismic monitoring of oil production: A feasibility study: Expanded Abstracts, 64th Annual Internat. Mtg., Soc. Expl. Geophys., 319–322. (Note: This paper was designated as an Outstanding Abstract.)

Lumley, D. E., Claerbout, J. F., and Bevc, D., 1994, Anti-aliased Kirchhoff 3-D migration: Expanded Abstracts, 64th Annual Internat. Mtg., Soc. Expl. Geophys., 1282–1285. (Note: This paper was designated as an Outstanding Abstract.)

Ecker, C., and Lumley, D. E., 1994, Seismic AVO analysis of methane hydrate structures: Expanded Abstracts, 64th Annual Internat. Mtg., Soc. Expl. Geophys., 1100–1103.

Lumley, D. E., 1994, 4-D seismic monitoring of reservoir fluid-flow processes: Mathematical Methods in Geophysical Imaging II, S. Hassanzadeh (ed.), Proc. SPIE, **2301**, 70–81. (Note: This paper received Best Paper Award.)

Lumley, D. E., Nur, A., Strandenes, S., Dvorkin, J., and Packwood, J., 1994, Seismic monitoring of oil production: A feasibility study: Abstracts, Annual SEG Summer Research Workshop on Reservoir Monitoring, Soc. Expl. Geophys..

Lumley, D. E., Claerbout, J. F., and Bevc, D., 1994, Anti-aliased Kirchhoff migration: Abstracts, 56th Mtg., Eur. Assoc. Expl. Geophys., pp. H027.

Ecker, C., and Lumley, D. E., 1993, AVO analysis of methane hydrate seismic data: EOS, Transactions, American Geophysical Union, **74**, 370.

Lumley, D. E., 1993, Angle-dependent reflectivity estimation: Expanded Abstracts, 63rd Annual Internat. Mtg., Soc. Expl. Geophys., 746–749.

Berryman, J. G., and Lumley, D. E., 1993, Inverting ultrasonic data on solid/fluid mixtures for Biot-Gassmann parameters: 2nd Internat. Conf. on Mathematical and Numerical Aspects of Wave Propagation, Soc. for Ind. and Appl. Math., 57–69.

Lumley, D. E., and Claerbout, J. F., 1993, Anti-aliased Kirchhoff 3-D migration: A salt intrusion example: Expanded Abstracts, Annual SEG Summer Research Workshop on 3-D Seismology, Soc. Expl. Geophys., 115–123.

Dvorkin, J., Lumley, D., and Nur, A., 1993, Reservoir recovery monitoring: seismic observables and petrophysical factors: Abstracts, Annual SEG Development and Production Forum Workshop, Soc. Expl. Geophys.. (Note: This paper was selected as an Outstanding Paper and was highlighted at the Annual SEG Mtg..)

Lumley, D. E., 1992, Reservoir velocity analysis on a massively parallel Connection Machine: Expanded Abstracts, 62nd Annual Internat. Mtg., Soc. Expl. Geophys., 323–325.

Lumley, D. E., 1992, Characterizing reservoir heterogeneity by prestack migration/inversion of surface seismic data: Abstracts, Annual SEG Development and Production Forum Workshop, Soc. Expl. Geophys..

Lumley, D. E., and Biondi, B., 1992, Kirchhoff 3-D prestack time migration on a massively parallel supercomputer: Abstracts, 54th Mtg., Eur. Assoc. Expl. Geophys., 286–287.

Lumley, D. E., 1989, Kirchhoff prestack depth migration: Imaging conditions and amplitude recovery: Expanded Abstracts, 59th Annual Internat. Mtg., Soc. Expl. Geophys., 1336–1339. (Note: This paper was awarded winner of the Student Technical Paper Competition.)

Houck, R. T., Benefiel, M. E., Lumley, D. E., Shirley, T. E., Malloy, J. E., Meek, R. A., Moeckel, G. P., and Solanki, J. J., 1988, Vibrator phaselock control experiments on soft and hard ground: Expanded Abstracts, 58th Annual Internat. Mtg., Soc. Expl. Geophys., 97–100.

Report Articles

Lumley, D. E., Nichols, D., and Rekdal, T., 1994, Amplitude-preserved multiple suppression: Stanford Exploration Project Report, **82**, 25–46.

Lumley, D. E., 1994, Estimating a pseudounitary operator for velocity-stack inversion: Stanford Exploration Project Report, **82**, 63–78.

Ecker, C., and Lumley, D. E., 1994, Velocity analysis of the Mobil AVO dataset: Stanford Exploration Project Report, **82**, 17–24.

Audebert, F., Biondi, B., Lumley, D., Nichols, D., Rekdal, T., and Urdaneta, H., 1994, Marmousi traveltime computation and imaging comparisons: Stanford Exploration Project Report, **80**, 47–66.

Audebert, F., Bevc, D., Biondi, B., Lumley, D., Nichols, D., Palacharla, G., Rekdal, T., and Urdaneta, H., 1994, Review of traveltime computation methods: Stanford Exploration Project Report, **80**, 25–46.

Bevc, D., and Lumley, D. E., 1994, When is anti-aliasing needed in Kirchhoff migration?: Stanford Exploration Project Report, **80**, 467–476.

Lumley, D. E., 1994, 3-D seismic monitoring of an active steamflood: Stanford Exploration Project Report, **80**, 263–272.

Lumley, D. E., Claerbout, J. F., and Bevc, D., 1994, Anti-aliased Kirchhoff 3-D migration: Stanford Exploration Project Report, **80**, 447–466.

Lumley, D., Nur, A., Strandenes, S., Dvorkin, D., and Packwood, J., 1994. Seismic monitoring of oil production: A feasibility study: Stanford Exploration Project Report, **80**, 209–262.

Ecker, C., and Lumley, D. E., 1994, Seismic AVO analysis of methane hydrate structures: Stanford Exploration Project Report, **80**, 277–292.

Ecker, C., Lumley, D., Levin, S., Rekdal, T., Berlioux, A., Clapp, R., Wang, Y., and Ji, J., 1994, An AVO analysis project: Stanford Exploration Project Report, **80**, 333–348.

Berlioux, A., and Lumley, D. E., 1994, Amplitude balancing for AVO analysis: Stanford Exploration Project Report, **80**, 349–360.

Lumley, D. E., and Beydoun, W. B., 1993, Angle-dependent reflectivity estimation by Kirchhoff migration/inversion: Theory: Stanford Exploration Project Report, **79**, 205–226.

Lumley, D., Dvorkin, J., Nur, A., 1993, Time-lapse seismic reservoir monitoring: The petrophysical basis: Stanford Exploration Project Report, **79**, 177–204.

Ecker, C., and Lumley, D. E., 1993, AVO analysis of methane hydrate seismic data: Stanford Exploration Project Report, **79**, 161–176.

Berryman, J. G., and Lumley, D. E., 1993, Inverting ultrasonic data on solid/fluid mixtures for Biot-Gassmann parameters: Stanford Exploration Project Report, **77**, 231–244.

Lumley, D. E., 1993, Kirchhoff prestack impedance inversion: a gas reservoir pilot study: Stanford Exploration Project Report, **77**, 211–230.

Lumley, D. E., 1993, Angle-dependent reflectivity estimation: Stanford Exploration Project Report, **77**, 189–210.

Lumley, D. E., 1993, Coalbed methane: A 3-D reservoir seismic data set: Stanford Exploration Project Report, **77**, 59–70.

Lumley, D. E., 1993, Anti-aliased Kirchhoff 3-D migration: A salt intrusion example: Stanford Exploration Project Report, **77**, 1–18.

Lumley, D. E., 1992, Estimation of elastic specular reflectivity by Kirchhoff prestack depth migration: WKBJ least-squares theory: Stanford Exploration Project Report, **75**, 355–368.

Lumley, D. E., 1992, Green's function traveltime interpolation: Stanford Exploration Project Report, **75**, 215–242.

Lumley, D. E., 1992, Monte Carlo automatic velocity picks: Stanford Exploration Project Report, **75**, 1–20.

Lumley, D. E., 1992, On the validity of a variable velocity acoustic wave equation: Stanford Exploration Project Report, **73**, 429–434.

Lumley, D. E., Bevc, D., Ji, J., Tálas, S., 1992, Lab measurement of elastic velocities in dry and saturated Massilon Sandstone: Stanford Exploration Project Report, **73**, 133–146.

Lumley, D. E., 1992, Reservoir velocity analysis on the Connection Machine: Stanford Exploration Project Report, **73**, 97–114.

Lumley, D., and Biondi, B., 1991, Kirchoff 3-D prestack time migration on the Connection Machine: Stanford Exploration Project Report, **72**, 123–134.

Lumley, D. E., and Beydoun, W. B., 1991, Elastic parameter estimation by Kirchhoff prestack depth migration/inversion: Stanford Exploration Project Report, **70**, 165–192.

Lumley, D. E., 1991, Some aspirations in seismic reservoir characterization: Stanford Exploration Project Report, **70**, 161–164.