Dispersion in Poroelastic Systems

James G. Berryman

References

Aki, K., and P. G. Richards, *Quantitative Seismology: Theory and Methods*, Volume 1, Freeman and Company, New York, 1980, pp. 170–177.

Berryman, James G., 1980a, Long-wavelength propagation in composite elastic media I. Spherical inclusions, *J. Acoust. Soc. Am.* **68**, 1809–1819.

Berryman, James G., 1980b, Long-wavelength propagation in composite elastic media I. Ellipsoidal inclusions, *J. Acoust. Soc. Am.* **68**, 1820–1831.

Berryman, J. G., 1982, Effective medium theory for elastic composites, in: *Elastic Wave Scattering and Propagation*, edited by V. K. Varadan and V. V. Varadan (Ann Arbor Science, Ann Arbor, Michigan), pp. 111–129.

Berryman, J. G., 1995, Mixture theories for rock properties, in: *Rock Physics and Phase Relations: A Handbook of Physical Constants*, edited by T. J. Ahrens (AGU, Washington, DC), pp. 205–228.

Berryman, J. G., 1998, Transversely isotropic poroelasticity arising from thin isotropic layers, in: *Mathematics of Multiscale Materials*, K. M. Golden, G. R. Grimmett, R. D. James, G. W. Milton, and P. N. Sen (eds.), Springer, New York, pp. 37–50.

Berryman, J. G., P. A. Berge, and B. P. Bonner, 2000, Transformation of seismic velocity data to extract porosity and saturation values for rocks, *J. Acoust. Soc. Am.* **107**, 3018-3027.

Berryman, J. G., and H. F. Wang, 2000, Elastic wave propagation and attenuation in a double-porosity dual-permeability medium, *Intern. J. Rock Mech.* **37**, 63–78.

Biot, M. A., 1962, Mechanics of deformation and acoustic propagation in porous media, *J. Appl. Phys.* **33**, 1482–1498.

Biot, M. A., and D. G. Willis, 1957, The elastic coefficients of the theory of consolidation, *J. Appl. Mech.* **24**, 594–601.

Brown, R. J. S., and J. Korringa, 1975, On the dependence of the elastic properties of a porous rock on the compressiblity of the pore fluid, *Geophysics* **40**, 608–616.

Budiansky, B., 1965, On the elastic moduli of some heterogeneous materials, *J. Mech. Phys. Solids* **13**, 223–227.

Burridge, R., and J. B. Keller, 1981, Poroelasticity equations derived from microstructure, *J. Acoust. Soc. Am.* **70**, 1140–1146.

Carroll, M. M., 1980, Mechanical response of fluid-saturated porous materials, in: *Theoretical and Applied Mechanics*, F. P. J. Rimrott and B. Tabarrok (eds.), Proceedings of the 15th International Congress of Theoretical and Applied Mechanics, Toronto, August 17–23, 1980, North-Holland, Amsterdam, 1980, pp. 251–262.

Chin, R. C. Y., J. G. Berryman, and G. W. Hedstrom, 1985, Generalized ray expansion for pulse propagation and attenuation in fluid-saturated porous media, *Wave Motion* **7**, 43–66.

Gassmann, F., 1951, Über die Elastizität poroser Medien, *Veirteljahrsschrift der Naturforschenden Gesellschaft in Zürich* **96**, 1–23.

Hashin, Z., and S. Shtrikman, 1961, Note on a variational approach to the theory of composite elastic materials, *J. Franklin Inst.* **271**, 336–341.

Hill, R., 1965, A self-consistent mechanics of composite materials, *J. Mech. Phys. Solids* **13**, 213–222.

Kaelin, B., and L. R. Johnson, 1998a, Dynamic composite elastic medium theory. Part I. One-dimensional media, *J. Appl. Phys.* **84**, 5451–5457.

Kaelin, B., and L. R. Johnson, 1998b, Dynamic composite elastic medium theory. Part II. OThree-dimensional media, *J. Appl. Phys.* **84**, 5458–5468.

Milton, G. W., 1985, The coherent potential approximation is a realizable effective medium scheme, *Comm. Math. Phys.* **99**, 463–500.

Plona, T. J., 1980, Observation of a second bulk compressional wave in a porous medium at ultrasonic frequencies, *Appl. Phys. Lett.* **36**, 259–261.

Schoenberg, M., and J. Douma, 1988, Elastic wave propagation in media with parallel fractures and aligned cracks, *Geophysical Prospecting* **54**, 571–590.

Schoenberg, M., F. Muir, and C. Sayers, 1996, Introducing ANNIE: A simple three-parameter anisotropic velocity model for shales, *J. Seismic Exploration* **5**, 35–49.

Skempton, A. W., 1954, The pore-pressure coefficients A and B, *Geotechnique* **4**, 143–147.

Walpole, L. J., 1966a, On bounds for the overall elastic moduli of inhomogeneous systems I., *J. Mech. Phys. Solids* **14**, 151–162.

Walpole, L. J., 1966b, On bounds for the overall elastic moduli of inhomogeneous systems II., *J. Mech. Phys. Solids* **14**, 289–301.

Walpole, L. J., 1969, On the overall elastic moduli of composite materials, *J. Mech. Phys. Solids* **17**, 235–251.

Watt, J. P., G. F. Davies, and R. J. O'Connell, 1976, Elastic properties of composite materials, *Rev. Geophys. Space* **14**, 541–563.