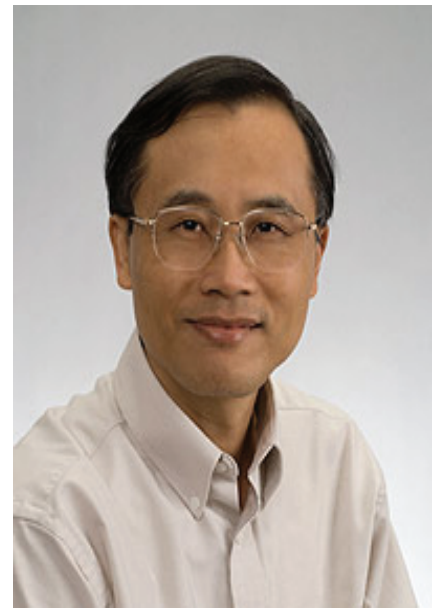


Hongliu Zeng

Research Scientist

Bureau of Economic Geology

The University of Texas at Austin



Professional Summary: One focus of my research has been seismic sedimentology and its application in seismic stratigraphy, high-frequency sequence stratigraphy, and reservoir prediction. I study seismic frequency controls on clastic and carbonate seismic stratigraphy and the ways a good-quality seismic pick of geologic-time surfaces can improve depositional systems imaging. I invented the stratal slicing technique and am pushing for transfer of this technology to industry. As part of my research, I am experimenting with seismic data optimization and attribute analysis for better, geologically meaningful representation of seismic geomorphology. I investigate how morphologic patterns on stratal slices relate to various depositional systems and how depositional history can be rebuilt by sequential analysis of stratal slices. Recent research topics include using stratal slicing as a tool for high-frequency sequence stratigraphy, and applying Neural Net to automate geomorphology-based seismic facies analysis. Another theme of my research involves seismic characterization of thin-bedded reservoirs. I do seismic modeling of outcrop and subsurface data to study optimal forms of seismic data (frequency, wavelet phase, attribute, etc.) for thin-bed interpretation. I pursue data integration of well-based and seismic-based interpretations to avoid pitfalls and to minimize prediction error. Working with reservoir geologists and engineers, I promote using seismic data as a hard constraint to reservoir and simulation models. Present studies are focused on the interpretive advantages of 90° wavelets, and full-spectrum, progressive inversion of well and seismic data.

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Research Interests: Seismic sedimentology, Seismic and sequence stratigraphy, 3-D seismic: processing, modeling, and inversion, Characterization of thin-bed reservoirs

Education: B.A., Geology, Petroleum University, Dongying, China, 1982
M. A., Geology, Petroleum University, Dongying, China, 1985
Ph.D., Geophysics, The University of Texas at Austin, 1994

Professional History: Research Scientist, Bureau of Economic Geology, The University of Texas at Austin, 1997-present
Advanced Geoscientist, Texaco International Exploration, Houston, Texas, 1996-1997
Geoscientist, Texaco Exploration & Production Inc., New Orleans, Louisiana, 1994-1996
Graduate Research Assistant, Bureau of Economic Geology, The University of Texas at Austin, 1990-1993
Instructor, Petroleum University at Beijing, China, 1985-1989

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Selected Publications: Zeng, Hongliu, and Hentz, T. F., 2004, High-frequency sequence stratigraphy from seismic sedimentology: applied to Miocene, Vermilion Block 50, Tiger Shoal area, offshore Louisiana: American Association of Petroleum Geologists Bulletin, v. 88, no. 2, p. 153-174.

Zeng, Hongliu, 2004, Seismic geomorphology-based facies classification: The Leading Edge, v. 23, no. 7, p. 644-646.

Zeng, Hongliu, and Kerans, Charles, 2003, Seismic frequency control on carbonate seismic stratigraphy: a case study of the Kingdom Abo sequence, West Texas: American Association of Petroleum Geologists Bulletin, v. 87, no. 2, p. 273-293.

Zeng H., Backus, M. M., Barrow, K. T., and Tyler, N., 1998, Stratal slicing, part I: realistic 3-D seismic model: Geophysics, v. 63, no. 2, p. 502-513.

Zeng H., Henry, S. C., and Riola, J. P., 1998, Stratal slicing, part II: real seismic data: Geophysics, v. 63, no. 2, p. 514-522.

Selected Committees: Ph.D. dissertation committee for a graduate student in UTDOGS
Member, AAPG Geophysical Integration Committee, American Association of Petroleum Geologists, since 2004.
Member, SEG Development and Production Committee, Society of Exploration Geophysicists, since 2001.
Member, Publication Board, Bureau of Economic Geology, since 2004.

Awards: Wallace E. Pratt Award for Best Original Article published in the AAPG Bulletin in 2003.
Star Quality Ambassador, 1996, Texaco Worldwide.
National Science Award, China, 1988.