

CURRICULUM VITA

Hongliu H. Zeng

Research Scientist

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EDUCATION

B.A. (Geological Sciences), China University of Petroleum at Dongying, 1982

M.A. (Geological Sciences), China University of Petroleum at Beijing, 1985

Ph.D. (Geological Sciences), The University of Texas at Austin, 1994

RESEARCH INTEREST

Integration of geological, geophysical, and engineering methods to solve problems in petroleum geosciences; theory and methods of seismic sedimentology and geomorphology; seismic chrono-stratigraphic modeling and correlation in soft rocks; generation and application of seismic attributes; seismic stratigraphy and sequence stratigraphy, especially in non-marine basins; reservoir modeling and characterization.

PROFESSIONAL APPOINTMENTS

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| 2012-present | Senior Research Scientist, Bureau of Economic Geology, Univ. of Texas at Austin |
| 1997-2011 | Research Scientist, Bureau of Economic Geology, Univ. of Texas at Austin |
| 2011-present | Guest Professor, China University of Geosciences, Wuhan |
| 2005-present | Guest Professor, China University of Petroleum, Qingdao |
| 2009-present | Member, Advisory Committee, sedimentology Group, China Association of Petroleum Geologists |
| 2009-present | Member, Advisory Committee, PetroChina Reservoir Characterization Center |
| 2010-present | Guest Professor, China University of Geosciences, Wuhan |
| 1994-1996 | Geoscientist and advanced Geoscientist, Texaco Inc., New Orleans, Houston |
| 1990-1993 | Graduate Research Assistant, University of Texas at Austin |
| 1985-1989 | Instructor, China University of Petroleum at Beijing, Faculty of Geological Dept. |

AWARDS AND PROFESSIONAL RECOGNITIONS

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| 2008 | Honorable Mention, Best Poster Paper, Society of Exploration Geophysicists |
| 2007 | Second Place, Thomas A. Philpott Excellence of Presentation Award, co-author, SEPM Society for Sedimentary Geology |
| 2007 | Gordon Atwater Best Poster Award, SEPM Society for Sedimentary Geology |
| 2005 | Wallace E. Pratt Award for Best Original Article published in the AAPG Bulletin, American Association of Petroleum Geologists |
| 2001 | Second-Place, Best Student Poster Award, co-author, American Association of Petroleum Geologists |
| 1996 | Boundary Buster Award (awarded for championing technical accomplishment across established business unit boundaries for the benefit of all), Texaco, Inc. |
| 1996 | Star Quality Ambassador (Employee of the Year), Texaco, Inc. |
| 1995 | Level III Award, Texaco Exploration & Production, Inc. |
| 1993 | ARCO scholarship, University of Texas at Austin |

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| 1993 | GCAGS scholarship, University of Texas at Austin |
| 1988 | National Scientific Achievement Award by Chinese government, co-awardee |
| 1987 | Award of Scientific Achievement by Petroleum Department of China, co-awardee |
| 1981 | Dean's list of best students, 1981 |
| 1980 | Dean's list of best students, 1980 |
| 1979 | Dean's list of best students, 1979 |

PROFESSIONAL AND ADMINISTRATIVE SERVICES

Editorial Committees and Reviews

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|--------------|---|
| 2009-2010 | Associate Editor, AAPG Bulletin, American Association of Petroleum Geologists |
| 1999-present | Reviewer of 16 manuscripts submitted to AAPG Bulletin, Geophysics, Journal of Petroleum Geology, Marine and Petroleum Geology, and Chemie der Erde-geochemistry (Germany) |
| 2003-present | Reviewer of 2 research proposals submitted to National Science Foundation and Petroleum Research Fund, American Chemical Society |

Professional Committees (total 9)

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|--------------|--|
| 2001-present | Member, Development and Production Committee, Society of Exploration Geophysicists |
| 2004-present | Member, Geophysical Integration Committee, American Association of Petroleum Geologists |
| 2005-present | Member, Interpretation Committee, Society of Exploration Geologists |
| 2011 | Member, Technical Program Committee, 2011 Society of Exploration Geologists Annual Meeting |
| 2010 | Member, Organizing Committee, GCSSEPM Perkins Conference on Seismic Imaging of Depositional and Geomorphic Systems, Houston, December 7-10 |
| 2009 | Member, Centennial Committee, Bureau of Economic Geology |
| 2008 | Member, Organizing Committee, Development and Production Forum, Society of Exploration Geophysicists, July, 2008 |
| 2007 | Member, Technical Program Committee, 2007 Society of Exploration Geologists Annual Meeting |
| 2004 | Member, Publication Board, Bureau of Economic Geology |

Chaired Sessions in Professional Conferences (total 8)

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| 2011 | Chair, Technical Session, Society of Exploration Geologists Annual Meeting |
| 2010 | Chair, Technical Session, Society of Exploration Geologists Annual Meeting |
| 2009 | Chair, Technical Session, CPS/SEG Beijing Meeting |
| 2008 | Chair, Technical Session, American Association of Petroleum Geologists Annual Convention |
| 2008 | Chair, Technical Session, Society of Exploration Geologists Annual Meeting |
| 2008 | Chair, Technical Session, Society of Exploration Geologists Annual Meeting |
| 2007 | Chair, Technical Session, Society of Exploration Geologists Annual Meeting |
| 2005 | Chair, Technical Session, Society of Exploration Geologists Annual Meeting |

RESEARCH GRANTS AND CONTRACTS (as PI unless noted)

Total: 10 awards: \$1,738,674 to PI institute (total: \$2,758,588)

PetroChina: Digital Outcrop Modeling and Seismic Characterization of Heterogeneous Carbonate Reservoirs in China, Co-PI X. Janson and A. Shen, PetroChina Hangzhou

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| Institute of Geology | \$599,407 | 2012-2014 (pending) |
| | (total: \$1,190,000) | (signing Feb 2012) |
| PetroChina Hangzhou Institute of Geology: Reservoir Characterization Research Laboratory for Carbonate Studies (RCRL) IA membership | \$100,000 | 2012-2013 (current) |
| PetroChina: Seismic sedimentology of nonmarine Songliao Basin, China: model and application, PetroChina, Co-PIs X. Zhu, CUP Beijing and R. Zhu, RIPED, PetroChina | \$364,329 | 2010-2013 (current) |
| | (total: \$793,650) | |
| BGP Inc., CNPC, China: Methodology for predicting seismically thin sandstone reservoirs by integrating geologic and 3D seismic data | \$100,000 | 2011- 2012 (current) |
| BGP Inc., CNPC, China: Reservoir Characterization Research Laboratory for Carbonate Studies (RCRL) IA membership | \$100,000 | 2011-2012 (current) |
| BGP Inc., CNPC, China: Digital outcrop modeling and seismic characterization of a paleokarst carbonate system, phase II, Co-PI X. Janson | \$101,732 | 2010-2011 |
| BGP Inc., CNPC, China: Digital outcrop modeling and seismic characterization of a paleokarst carbonate system, Co-PI X. Janson | \$233,206 | 2008-2009 |
| BGP Inc., CNPC, China: Reservoir Characterization Research Laboratory for Carbonate Studies (RCRL) IA membership | \$90,000 | 2008- 2009 |
| Kinder Morgan: Claytonville field 3D seismic interpretation and reservoir prediction, CO-PI, (PI M. Holtz) | \$50,000 | 2006 – 2007 |

PUBLICATIONS

Peer Reviewed (Books and Chapters) (total 3)

- Zeng, H., *in press*, Construction and analysis of three-dimensional seismic porosity inversion models, in S. C. Ruppel, F. J. Lucia, R. R. Harrington, F. Wang, H. Zeng, J. Kane, and J. W. Jennings Jr., eds., *Anatomy of a giant carbonate reservoir: Fullerton Clear Fork (Lower Permian) field, Texas: Studies in Geology #63*, p. 1– 18.
- Zeng, H., 2007, Seismic imaging for seismic geomorphology beyond the seabed: potentials and challenges, in Davies, R. J., Posamentier, H. W., Wood, L. J., and Cartwright, J. A., eds., *Seismic geomorphology: applications to hydrocarbon exploration and production: Geological Society, London, Special Publications, 277*, p. 15–28.
- Zhang W., H. Zhang and H. Zeng, 1988, *Seismic stratigraphy of half-graben, nonmarine basins in east China (in Chinese): Publishing House of Petroleum University, Dongying, China.*

Peer Reviewed (Articles and BEG Reports) (total 21)

- Zeng, H., R. Loucks, X. Janson, G. Wang, Y. Xia, B. Yuan, and L. Xu, 2011, Three-Dimensional Seismic Geomorphology and Analysis of the Ordovician Paleokarst Drainage System in the Central Tabei Uplift, Northern Tarim Basin, Western China: *AAPG Bulletin*, v. 95, No. 12, p. 2061–2083.
- Loucks, R., B. T. Moore, and H. Zeng, 2011, On-shelf lower Miocene Oakville sediment-dispersal patterns within a three-dimensional sequence-stratigraphic architectural framework and implications for deep-water reservoirs in the central coastal area of Texas: *AAPG Bulletin*, v. 95, No. 10, p. 1795–1817.
- Zeng, H., Wang, G., Janson, X., Loucks, R. G., Xia, Y., Xu, L., and Yuan, B., 2011, Characterizing seismic bright spots in deeply buried, Ordovician paleokarst strata, Central Tabei Uplift, Tarim Basin, western China: *Geophysics*, v. 76, no. 4, p. B127–B137.

- Zeng, H., 2011, Seismic sedimentology in China: a review (in Chinese): *Acta Sedimentologica Sinica*, v. 29, no. 3, p. 417–426.
- Zhao, W., Zou, C., Chi, Y., and Zeng, H., 2011, Sequence stratigraphy, seismic sedimentology, and lithostratigraphic plays: Upper Cretaceous, Sifangtuozi area, southwest Songliao Basin, China: *AAPG Bulletin*, v. 95, no. 2, p. 241–265. **Citation: ISI 2.**
- Zeng, H., 2010, Geologic significance of anomalous instantaneous frequency: *Geophysics*, v. 75, no. 3, p. P23–P30.
- Zeng, H., Loucks, R. G., and Hammes, Ursula, 2008, Linear amplitude patterns in Corpus Christi Bay Frio Subbasin, south Texas: interpretive pitfalls or depositional features?: *Geophysics*, v. 73, no. 5, p. A27–A31. **Citation: SCI 1.**
- Dong, Yanlei, Zhu, X. M., Zeng, H. L., Bian, S. T., Liu, C. L., and Sun, H. T., 2008, Seismic sedimentology study on Shayi sequence in Qinan Sag, Huanghua Depression (in Chinese): *Acta Sedimentologica Sinica*, v. 26, no. 2, p. 234–240.
- Zeng, H., Loucks, R. G., and Brown, L. F., Jr., 2007, Mapping sediment-dispersal patterns and associated systems tracts in fourth- and fifth-order sequences using seismic sedimentology: example from Corpus Christi Bay, Texas: *AAPG Bulletin*, v. 91, no. 7, p. 981–1003. **Citation: ISI 13; Google Scholar 10.**
- Zeng, H., and Backus, M. M., 2005, Interpretive advantages of 90°-phase wavelets: Part 1—modeling: *Geophysics*, v. 70, no. 3, p. C7–C15. **Citation: ISI 16; Google Scholar 28.**
- Zeng, H., and Backus, M. M., 2005, Interpretive advantages of 90°-phase wavelets: Part 2—seismic applications: *Geophysics*, v. 70, no. 3, p. C17–C24. **Citation: ISI 13; Google Scholar 22.**
- Zeng, H., and Hentz, T. F., 2004, High-frequency sequence stratigraphy from seismic sedimentology: applied to Miocene, Vermilion Block 50, Tiger Shoal area, offshore Louisiana: *AAPG Bulletin*, v. 88, no. 2, p. 153–174. **Citation: ISI 54; Google Scholar 63.**
- Zeng, H., and Kerans, C., 2003, Seismic frequency control on carbonate seismic stratigraphy: a case study of the Kingdom Abo sequence, West Texas: *AAPG Bulletin*, v. 87, no. 2, p. 273–293. **Citation: ISI 30; Google Scholar 32.**
- Hentz, T. F., and Zeng, H., 2003, High-frequency Miocene sequence stratigraphy, offshore Louisiana: cycle framework and influence on production distribution in a mature shelf province: *AAPG Bulletin*, v. 87, no. 2, p. 197–230. **Citation: ISI 9; Google Scholar 14.**
- Zeng, H., Ambrose, W. A., Villalta, Edgar, and Tyler, R., 2002, Seismic sedimentology by stratal slicing—a case history in the Mioceno Norte area, Lake Maracaibo, Venezuela: The University of Texas at Austin, Bureau of Economic Geology Report of Investigations No. 265, 41 p.
- Zeng, H., Backus, M. M., Barrow, K. T., and Tyler, Noel, 1998, Stratal slicing, part I: realistic 3-D seismic model: *Geophysics*, v. 63, no. 2, p. 502–513. **Citation: ISI 50; Google Scholar 73.**
- 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. **Citation: ISI 57; Google Scholar 81.**
- Zeng, H., Backus, M. M., Barrow, K. T., and Tyler, Noel, 1996, Facies mapping from three-dimensional seismic data: potential and guidelines from a Tertiary sandstone-shale sequence model, Powderhorn field, Calhoun County, Texas: *AAPG Bulletin*, v. 80, no. 1, p. 16–46. **Citation: ISI 12; Google Scholar 22.**
- Zhang, W. X., Zeng, H., and Zhang, H. F., 1989, Seismic facies models of half-graben, nonmarine basins in east China (in Chinese): *Technology of Petroleum Geology*, no. 1.
- Zeng, H., Zhang, W. X., and Zhang, H. F., 1988, Depositional facies characterization and prediction from well and seismic data, Tertiary Sha-he-jie Formation, Long-gu basin (in Chinese): *Bulletin of Chinese Association of Petroleum Geologists and Engineers*, v. 9, no.2.

- Zeng, H., Zhang, W. X., and Zhang, H. F., 1988, Steps for quantitative seismic velocity-lithology interpretation (in Chinese): *Geophysical Prospecting of Petroleum*, v. 23, no. 4.
- Zhang, F., Zeng, H., and Zhang, W. X., 1988, On the methodology of seismic stratigraphy in half-graben, nonmarine basins in east China (in Chinese): *Oil and Gas Geology*, v. 9, no. 3.

Non-Peer Reviewed (Articles) (total 31)

- Zeng, H., 2011, Frequency-dependent seismic attributes applied to stratigraphic interpretation, *in* 31th Annual GCSSEPM Foundation Bob F. Perkins Research Conference, December 4-7, 2011, Houston, Texas, p. 284–304.
- Zeng, H., Wang, G. Z., Loucks, R. G., Janson, X., Xia, Y. P., and Xu, L. G., 2010, Seismic geomorphologic, core, and outcrop expression of an Ordovician paleokarst system in north-central Tarim Basin, China, *in* 30th Annual GCSSEPM Foundation Bob F. Perkins Research Conference, December 5-8, 2010, Houston, Texas, p. 73–87.
- Zeng, H., 2010, Frequency dependency of seismic facies and seismic sedimentology, *in* 30th Annual GCSSEPM Foundation Bob F. Perkins Research Conference, December 5-8, 2010, Houston, Texas, p. 11–21.
- Dong, Y., Zhu, X., Zeng, H., Bian, S., Chen, K., and Wang, P., 2010, Mapping sediment-dispersal characteristics from the Shahejie-1 to Minghuazhen sequences using seismic sedimentology: examples from Qinan Sag, Huanghua Depression, China, *in* 30th Annual GCSSEPM Foundation Bob F. Perkins Research Conference, December 5-8, 2010, Houston, Texas, p. 295–327.
- Zeng, H., 2010, Stratal slicing: benefits and challenges: *The Leading Edge*, September, p. 1040–1047.
- Zeng, H., 2009, Rivers from modern to ancient, *in* Laubach, S. E., and Tinker, S. W., eds., 2009, *Earth's art: celebrating the Centennial of the Bureau of Economic Geology, 1909–2009: The University of Texas at Austin, Bureau of Economic Geology*, p. 124–125.
- Hovorka, S. D., Choi, J. -W., Meckel, T. A., Treviño, R. H., Zeng, H., Kordi, M., Wang, F. P., and Nicot, J. -P., 2009, Comparing carbon sequestration in an oil reservoir to sequestration in a brine formation—field study, *in* *Energy Procedia* (v. 1, no. 1), *Proceedings of 9th International Conference on Greenhouse Gas Control Technologies GHGT9*, November 16–20, Washington D.C., p. 2051–2056.
- Zeng, H., 2009, How thin is a thin bed? An alternative perspective: *The Leading Edge*, October, *Interpreter's Corner*, 1192–1197. **Citation: *Google Scholar* 3.**
- Li, Xiupeng, and Zeng, H., 2008, Seismic sedimentology and depositional systems in the Upper Cretaceous Olmos Formation, Gold River North field, Webb County, south Texas, *in* *Gulf Coast Association of Geological Societies Transactions*, v. 58, p. 623–634.
- Aconcha, E. S., Kerans, Charles, and Zeng, H., 2008, Seismic geomorphology applied to Lower Glen Rose patch reefs in the Maverick Basin, southwest Texas: *Gulf Coast Association of Geological Societies Transactions*, v. 58, p. 3–24.
- Hammes, Ursula, Zeng, H., Loucks, Robert, and Brown, Frank, Jr., 2007, All fill—no spill: slope-fan sand bodies in growth-faulted subbasins: Oligocene Frio Formation, South Texas Gulf Coast: *Gulf Coast Association of Geological Societies Transactions*, v. 57, p. 361–371.
- Zeng, H., and Loucks, R. G., 2007, Seismic sedimentological expression of higher-order lowstand slope fans and prograding deltas in the Frio Formation, Corpus Christi Bay, Texas: *Gulf Coast Association of Geological Societies Transactions*, v. 57, p. 843–852.

- Wang, Fred, Ruppel, S. C., Lucia, F. J., Jones, R. H., Kane, J. A., and Zeng, H., 2007, Full-field modeling of the largest Lower Permian carbonate reservoir in the Permian Basin: Fullerton Clear Fork field, Andrews County, Texas: *West Texas Geological Society Bulletin*, v. 46, no. 5, p. 4–9.
- Zeng, H., Loucks, R. G., and Hammes, Ursula, 2007, Linear amplitude patterns in Corpus Christi Bay Frio subbasin, south Texas: artifacts or depositional features?, *in Society of Exploration Geophysicists International Exposition and Seventy-Seventh Annual Meeting*, San Antonio, September, p. 912–916.
- Lucia, F. J., Ruppel, S. C., Jones, R. H., Kane, J. A., Wang, Fred, and Zeng, H., 2006, Reservoir characterization of the Fullerton Clear Fork field, Andrews County, Texas, *in Slatt, R.M., Rosen, N. C., Bowman, M., Castagna, J., Good, T., Loucks, R., Latimer, R., Scheihing, M., and Smith, R., eds., Reservoir characterization: integrating technology and business practices: Proceedings of the 26th Annual GCSSEPM Foundation Bob F. Perkins Research Conference*, p. 651–683.
- Zeng, H., 2006, Seismic imaging? Try stratal slicing: *AAGP Explorer*, Geophysical Corner, June, p. 28.
- Zeng, H., Ruppel, S. C., and Kerans, Charles, 2005, Full-spectrum seismic inversion as a hard constraint in reservoir modeling and simulation, *in SEG 75th Annual Convention*, Houston, November 6–11, 4 p.
- Hammes, Ursula, Zeng, H., Brown, L. F., Jr., Loucks, R. G., and Montoya, Patricia, 2005, Seismic geomorphology of Oligocene Frio lowstand slope and basin-floor sedimentary bodies in growth-faulted subbasins in South Texas: *Gulf Coast Association of Geological Societies Transactions*, v. 55, p. 278–282.
- Zeng, H., 2004, Construction and analysis of 3-D seismic porosity inversion models, *in Ruppel, S. C., ed., Multidisciplinary imaging of rock properties in carbonate reservoirs for flow-unit targeting: The University of Texas at Austin, Bureau of Economic Geology, final technical report prepared for U.S. Department of Energy under contract no. DE-FC26-01BC15351*, p. 305–342.
- Zeng, H., 2004, Seismic geomorphology-based facies classification: *The Leading Edge*, v. 23, no. 7, p. 644–646. **Citation: Google Scholar 6.**
- Wood, L. J., Hentz, Tucker, Zeng, H., DeAngelo, Michael, and Dutton, Shirley, 2003, Applying sequence stratigraphy and seismic stratal slice technology in the Gulf of Mexico: *GasTIPS*, v. 9, no. 1, p. 10–21.
- Holtz, M. H., Lake, L. W., Zeng, H., Knox, Paul, and DeAngelo, Mike, 2003, 3-D geocellular modeling of Gulf Coast Miocene water-drive gas reservoirs—example from Starfak field, Louisiana, *in Proceedings, Third Annual E-EXITEP*, Veracruz, Mexico: CIPM, 12 p.
- Zeng, H., Ruppel, S. C., and Jones, R., 2003, Reconditioning seismic data for improved reservoir characterization, lower Clear Fork and Wichita, Fullerton field, West Texas, *in Hunt, T. J., and Lufholm, P. H., The Permian Basin: back to basics: West Texas Geological Society Fall Symposium: West Texas Geological Society Publication #03-112*, p. 67–78.
- Zeng, H., and Hentz, T. F., 2002, High-frequency sequence stratigraphy from seismic sedimentology: a Miocene Gulf Coast example, *in Armentrout, J. M., and Rosen, N. C., Sequence stratigraphic models for exploration and production: evolving methodology, emerging models and application histories: 22nd Annual Gulf Coast Section SEPM Foundation, Bob F. Perkins Research Conference*, p. 55–75.
- Hentz, T. F., Wood, L. J., DeAngelo, M. V., Zeng, H., Holtz, M. H., Dutton, S. P., Chan, Ke-Sheng, Rassi, Claudia, Garcia, Javier, Kim, E. M., Dunlap, D. B., Barba, R. E., and Knox, P. R., 2002, Targeting reserve growth opportunities in the northern Gulf of Mexico Basin: transferring secondary gas recovery technology to the offshore environment: The University of Texas at Austin, Bureau of Economic Geology, final report prepared for the U.S. Department of Energy,

National Energy Technology Laboratory, under contract no. DE-FC26-98FT40136DOE, 237 p. + CD-ROM.

Zeng, H., Hentz, T. F., and Wood, L. J., 2001, Stratal slicing of Miocene-Pliocene sediments in Vermilion Block 50-Tiger Shoal Area, offshore Louisiana: *The Leading Edge*, v. 20, p. 408–418. **Citation: *Google Scholar* 31.**

Zeng, H., 2001, From seismic stratigraphy to seismic sedimentology: a sensible transition: *Gulf Coast Association of Geological Societies Transactions*, v. 51, p. 413–420. **Citation: *Google Scholar* 7.**

Zeng, H., Ambrose, W. A., and Villalta, Edgar, 2001, Seismic sedimentology and regional depositional systems in Mioceno Norte, Lake Maracaibo, Venezuela: *The Leading Edge*, v. 20, no. 11, p. 1260–1269. **Citation: *Google Scholar* 46.**

Zeng, H., 1997, Seismic amplitude analysis, in Guevara, E. H., Brink, Gherard, Zeng, H., Sparlin, M. A., Barba, R. E., Holtz, M. H., Etherington, Randall, Nelson, H. R., Jr., van Wyk, N. J. S., Von Lunen, Eric, Bullen, Graeme, Fouad, Khaled, Dunlap, D. B., Martinez, C. R., Remington, Lisa, Camposano, C. L., Moya, Mauro, and de Salazar, M. S., Exploration opportunities in Lagoven S.A., Blocks B, C, and D, South Lake Maracaibo, Venezuela: The University of Texas at Austin, Bureau of Economic Geology, final report prepared for PDVSA, Maracaibo, Venezuela, unpaginated.

Zeng, H., Backus, M. M., Barrow, K. T., and Tyler, Noel, 1995, Three-dimensional seismic modeling and seismic facies imaging: *Gulf Coast Association of Geological Societies Transactions*, v. 45, p. 621–628.

Non-Peer Reviewed (Institutional Publications)

Zeng, H., 1996, Stratal slicing—a tool for facies imaging from 3-D seismic data: Texaco Inc., Internal Publication, 96 p.

Non-Peer Reviewed (Grant Reports)

Author or co-author of 16 scientific reports summarizing results of sponsored research between 1999 and 2011.

Abstracts (total 67)

Zeng, H., 2011, Value of instantaneous-frequency spikes in thin-bed and stratigraphic interpretation (ext. abs.), in 81st Annual International Meeting, SEG, p. 1973–1977.

Zeng, H., Zhu, X., Zhu, R., and Zhang, Q., 2011, Ultra-thin, lacustrine sandstones imaged on stratal slices in the Cretaceous Qijia Depression, Songliao Basin, China (ext. abs.), in 81st Annual International Meeting, SEG, p. 951–955.

Janson, Xavier, Zeng, H., Wright, Wayne R., Loucks, R. G., Bonnaffé, Florence, Wang, Q., Xia, X., Wang, C., Li, S., and Yang, T., 2011, Digital outcrop analogues model of Ordovician paleokarst in North-Central Tarim Basin, China (abs.): American Association of Petroleum Geologists Annual Convention & Exhibition Abstracts Volume, v. 20, p. 92.

Zeng, H., Loucks, R. G., Janson, X., Wang, Q., Xia, Y., Yuan, B., and Xu, L., 2011, Seismic geomorphology and analysis of the Ordovician paleokarst drainage system in the Central Tabei Uplift, northern Tarim Basin, western China (abs.): American Association of Petroleum Geologists Annual Convention & Exhibition Abstracts Volume, v. 20, p. 203–204.

Zhang, X., Zeng, H., Lin, C., Zhang, T., and Dong, C., 2011, Seismic-sedimentologic interpretations of fluvial sedimentary architectures: we should focus more on development scale (abs.): American

- Association of Petroleum Geologists Annual Convention & Exhibition Abstracts Volume, v. 20, p. 205.
- Loucks, R. G., Xia, Y., Wang, Q., and Zeng, H., 2011, Paleokarst and deep pore networks in Ordovician limestone in north-central Tarim Basin, China (abs.): American Association of Petroleum Geologists Annual Convention & Exhibition Abstracts Volume, v. 20.
- Janson, Xavier, Zeng, H., and Loucks, R. G., 2010, An ultra-deep paleokarst system in the Ordovician, North-Central Tarim Basin, China: outcrop analog and synthetic seismic models (abs.), *in* GSA Denver Annual Meeting, October 31–November 3, p. 1531–1534.
- Zeng, H., 2010, Thin-bed detection and correlation with instantaneous frequency (abs.), *in* SEG Denver Annual Meeting, October 31–November 3, p. 1292–1296.
- Zeng, H., Loucks, R. G., and Janson, X., 2010, An ultra-deep paleokarst system in the Ordovician, North-Central Tarim Basin, China: high-resolution 3D seismic interpretation (abs.), *in* GSA Denver Annual Meeting, October 31–November 3, p. 1526–1530.
- Zeng, H., 2009, Seismic sedimentology: concepts and challenges (ext. abs.), *in* CPS/SEG 2009 International Geophysical Conference & Exhibition, Beijing, China, Abstract 36, 4 p.
- Zeng, H., 2009, A new definition of seismic resolution for predicting very thin (1 m) reservoirs in layered media (ext. abs.), *in* CPS/SEG 2009 International Geophysical Conference & Exhibition, Beijing, China, Abstract 23, 4 p.
- Treviño, R. H., Ambrose, W. A., Meckel, Tip, Lu, J., Zeng, H., and Kordi, M., 2009, Sequence stratigraphy of the Tuscaloosa from Cranfield field, Mississippi—a carbon sequestration study from enhanced oil recovery operation (abs.): American Association of Petroleum Geologists Annual Convention, v. 18, p. 217.
- Zeng, H., 2009, Frequency-dependent seismic stratigraphy for high-resolution interpretation of depositional sequences (abs.): American Association of Petroleum Geologists Annual Convention, v. 18, p. 235–236.
- Zeng, H., 2009, Frequency-dependent seismic stratigraphy (ext. abs.), *in* 79th Annual International Meeting, SEG, p. 1097–1101.
- Aconcha, E. S., Kerans, C., and Zeng, H., 2008, Integrating core, well logs, and seismic interpretation to improve understanding of Albian patch reefs, Maverick Basin, SW Texas (abs.): AAPG 2008 Annual Convention and Exhibition Abstracts Volume, v. 17, p. 1.
- Fillon, R. H., and Zeng, H., 2008, Geomorphic responses to relative sea level change above a developing salt dome resolved with seismic stratal slices (abs.): AAPG 2008 Annual Convention and Exhibition Abstracts Volume, v. 17, p. 59.
- Zeng, H., 2008, Understanding seismic detection and resolution of high-frequency sequences and systems tracts (abs.): AAPG 2008 Annual Convention and Exhibition Abstracts Volume, v. 17, p. 221, 228.
- Zeng, H., 2008, How thin is a thin bed? An alternative perspective (ext. abs.), *in* SEG Las Vegas 2008 Annual Meeting, p. 834–838.
- Zeng, H., Loucks, R. G., and Hammes, U., 2007, Linear amplitude patterns in Corpus Christi Bay Frio subbasin, South Texas: artifacts or depositional features? (ext. abs.), *In* SEG/San Antonio 2007 Annual Meeting: Society of Engineering Geologists, p. 912–916.
- Hammes, U., Zeng, H., Loucks, R., and Brown, F., 2007, All fill—no spill: slope-fan sand bodies in growth-faulted subbasins, Frio Formation, South Texas Gulf Coast (abs.): American Association of Petroleum Geologists Annual Convention Abstracts Volume, v. 16, p. 59.
- Janson, X., Zeng, H., Kerans, C., Wang, F., and Fomel, S., 2007, Using outcrop-based 3D geocellular model as seismic benchmark: prestack seismic modeling of grainstones in Lawyer Canyon

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- Ambrose, W. A., Hamilton, D. S., Zeng, H., Holtz, M. H., Light, M., Yeh, J. S., de Carvajal, G., Pinto, J., Garibaldi, L., and Azpirtxaga, I., 1999, Application of RMS amplitude anomaly mapping in inferring controls on fluid saturation and fault-bound reservoir compartments in the C4 Member (lower Misoa Formation), Phase III Area, Bloque I Area, Lake Maracaibo, Venezuela (ext. abs.), *in* Rio 99: 6th International Conference of the Brazilian Geophysical Society, Rio de Janeiro: Sociedade Brasileira de Geofísica, European Association of Geophysicists and Engineers, Society of Exploration Geophysicists, and Latin American Geophysical Union, 4 p., CD-ROM.
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- Backus, M. M., Zeng, H., and Simmons, J. L., Jr., 1993, Displaying 3-D data cube and its perturbations (abs.), *in* 3-D seismology: integrated comprehension of large data volumes: SEG Summer Research Workshop, Technical Program and Abstracts, p. 266–269.
- Zeng, H., Backus, M. M., Barrow, K. T., and Tyler, N., 1993, Facies-guided 3-dimensional seismic modeling, part 1 (abs.), *in* SEG 63rd Annual International Meeting: p. 938–941.
- Zeng, H., Backus, M. M., Barrow, K. T., and Tyler, N., 1993, Facies-guided 3-dimensional seismic modeling, part 2 (abs.), *in* SEG 63rd Annual International Meeting: p. 1253–1256.
- Zeng, H., Backus, M. M., Barrow, K. T., and Tyler, N., 1992, On the expected signals from pore fluids and facies: an example from Powderhorn field, Texas (abs.), *in* How useful is amplitude-versus-offset (AVO) analysis?: SEG/EAEG Summer Research Workshop, Technical Program and Abstracts, p. 278–288.

DISSERTATION AND THESIS

- Facies-guided 3-D seismic modeling and reservoir characterization, The University of Texas at Austin, Ph.D. dissertation, 164 p., 1994.
- Seismic stratigraphy of Long-Gu Basin, North-Central China: China University of Petroleum at Beijing, M.S. thesis, 1985.

SCHOLARLY PRESENTATIONS

Invited Short Courses at Universities and Institutes

Total: 9 short courses (1 to 5 days each)

- 2011 “Seismic sedimentology and sequence stratigraphy” at China University of Petroleum, Beijing, China

- 2011 “Seismic sedimentology as a tool of hydrocarbon exploration” at PetroChina Lanzhou Research Institute, Lanzhou, China
- 2011 “Seismic stratigraphy and seismic geomorphology” at JOGMEC, Chiba, Japan
- 2008 “Introduction to seismic sedimentology” at Graduate School, China University of Petroleum, Dongying, China
- 2005 “Seismic sedimentology” at China University of Petroleum, Dongying, China
- 2005 “Using seismic sedimentology and stratal slicing to explore for and map reservoirs in the Tertiary of the GOM” as GCSSEPM Short Course, Austin, Texas
- 2003 “Seismic applied to lithology: facies imaging, attribute analysis, and inversion” at Pemex, Villahermosa, Mexico
- 1998 “Characterization of heterogeneous reservoirs”, co-lectured at China University of Petroleum, Beijing, China
- 1998 “Seismic characterization of heterogeneous reservoirs: 3-D modeling, facies imaging and attribute analysis” at PETROBRAS, Rio de Janeiro, Brazil

Invited Lectures at Universities and Institutes

Total: 27 lectures (30 to 90 minutes each)

- 2011 Shaanxi Yanchang Petroleum (Group) Co., Ltd., Xi’an, China
Chengdu University of Technology, Chengdu, China
China Petroleum & Chemical Corporation (SINOPEC), Beijing, China
Liaohe Oilfield Company, Panjin City, China
Huabei Oilfield Company, Renqiu City, China
Hongzhou Geologic Institute, PetroChina, Hangzhou, China
Shaanxi Yanchang Petroleum (Group) Co., Ltd., Xi’an, China
- 2010 Tongji University, Shanghai, China
PetroChina Lanzhou Research Institute, Lanzhou, China
Daqing Oilfield Company, Daqing City, China
China University of Geosciences, Wuhan, China
PetroChina Hongzhou Geologic Institute, Hangzhou, China
- 2009 China University of Petroleum, Beijing, China
RIPED, PetroChina, Beijing, China
BGP Inc., CNPC, Zhuozhou City, China
- 2008 Shell, Houston, Texas
- 2007 South Texas Geological Society, San Antonio, Texas
- 2005 Schlumberger/WesternGeco, Houston, Texas
China Petroleum & Chemical Corporation (SINOPEC), Beijing, China
China University of Petroleum, Beijing, China
The Austin chapter of SIPES, Austin, Texas
- 2004 China Petroleum & Chemical Corporation (SINOPEC), Beijing, China
China National Offshore Oil Corporation (CNOOC), Beijing, China
Permian Basin Geophysical Society Luncheon Meeting, Midland, Texas
- 2003 China University of Petroleum, Beijing
- 2001 Corpus Christi Geological Society/Coastal Bend Geophysical Society Luncheon Meeting, Corpus Christi, Texas
- 1999 China University of Petroleum, Dongying, China, 1999.

Invited Presentations at Professional Conferences

Total: 7 presentations (15 to 25 minutes each)

- 2011 Society of Exploration Geologists Annual Meeting, workshop: Case Studies and Methods in Computational Seismic Chronostratigraphy, “*Benefits and precautions of displaying and interpreting in flattened, relative geologic-time domain: cases in Tertiary GOM*”, San Antonio, Texas
- 2011 International Symposium on Petroleum Seismogeology sponsored by PetroChina, “*Seismic sedimentology in China: an overview*”, Lanzhou, China
- 2009 CPS/SEG 2009 International Geophysical Conference & Exhibition, “*Seismic sedimentology: concepts and challenges*”, Beijing, China
- 2009 Society of Exploration Geologists Annual Meeting, workshop: What's New in Seismic Interpretation? “*Stratal slicing: benefits and challenges*”, Houston, Texas
- 2009 CNPC-MLR-CGS-PETRAD-CCOP Seminar on the Technology for Exploration of the Non-Structure Oil Pools and Unconventional Resource Plays, “*Seismic Sedimentology: a Tool for Thin-Reservoir Prediction and Litho-Stratigraphic Play Analysis*”, Dalian, China
- 2001 Society of Exploration Geologists Development & Production Forum: “*Reducing uncertainty of attribute analysis by AVF-based detuning*”, Taos, New Mexico
- 2000 Society of Exploration Geologists Development & Production Forum: “*Seismic sedimentology—applied to facies and lithology prediction*”, Snowmass, Colorado

UT Teaching

- 2010 Geology 391: Multidimensional Data Analysis: co-taught with Dr Sergey Fomel (50/50) at the Department of Geological Sciences, Austin, Texas

Graduate Student Advising and Service

Ph.D (total 5)

| <u>Student</u> | <u>School</u> | <u>Role</u> | <u>Status</u> | <u>Appointment</u> |
|----------------|-----------------------|---------------|------------------|---------------------|
| Yawen He | DGS, UT Austin | Co-supervisor | enrolled Fall 10 | |
| Xianguo Zhang | China Univ. Petroleum | Co-supervisor | Graduated 2011 | CUP, Assit. Prof. |
| Xiupeng Li | China Univ. Petroleum | Co-supervisor | Graduated 2010 | SinoPect, China |
| Hongbo Lu | DGS, UT Austin | Committee | Graduated 2004 | Shell |
| Yong-Joon Park | DGS, UT Austin | Committee | Graduated 2003 | Back to South Korea |

M.S. (total 4)

| <u>Student</u> | <u>School</u> | <u>Role</u> | <u>Status</u> | <u>Appointment</u> |
|----------------|----------------|---------------|----------------|--------------------|
| Enzo Aconcha | DGS, UT Austin | Co-supervisor | Graduated 2009 | Chevron |
| Brian Moore | DGS, UT Austin | Committee | Graduated 2005 | Devon |
| Songul Yildiz | DGS, UT Austin | Committee | Graduated 2003 | Back to Turkey |
| Shouan Tang | PGE, UT Austin | Committee | Graduated 1998 | Houston, unknown |

Visiting Scientists Supervised (total 9)

- Hongtao Zhu, Ph.D. 2012. Associate Professor, China University of Geosciences at Wuhan. Petroleum geology, seismic sedimentology, reservoir characterization. 1/2012-present.
- Xiugang Pu, Ph.D. 2012. Senior Geologist and Manager, PetroChina Dagang Oilfield Company. Sedimentology, reservoir characterization. 1/2012-present.
- Wanhui Liu, Ph.D. 1/2011-12/2011. BGP Inc., CNPC. Petroleum geophysics, seismic inversion and attribute analysis, seismic modeling. Current: Chief geologist, BGP Xinjiang Research Institute, China.
- Dagang Zhang, Ph.D. 1/2011-12/2011. China University of Petroleum at Qingdao. Petroleum systems, reservoir characterization. Current: Assistant Professor at CUPQ.

- Guizhong Wang, Ph.D. 1/2010-12/2010. BGP Inc., CNPC. Outcrop geology, seismic interpretation, seismic modeling. Current: Vice President and chief geologist, BGP South Xinjiang Research Institute, China.
- Xianguo Zhang, Ph.D. 1/2009-12/2009. China University of Petroleum at Qingdao. Seismic sedimentology. Current: Assistant Professor at CUPQ.
- Xiupeng Li, Ph.D. 1/2008-12/2008. China University of Petroleum at Qingdao. Seismic sedimentology, petroleum geology. Current: geologist, SinoPect, Beijing, China.
- Xiaomin Zhu, Ph.D. 12/1999-5/2000. China University of Petroleum at Dongying. Sedimentology, sequence stratigraphy, petroleum geology. Current: Dean and Professor, College of Geosciences, China University of Petroleum at Beijing, China.
- Ming Zha, Ph.D. 3/1999-5/1999. China University of Petroleum at Dongying. Petroleum geology, sedimentology. Current: Vice president and Professor, China University of Petroleum at Qingdao, China.