

HUA-WEI ZHOU

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**RESEARCH INTERESTS**

- Subsurface seismic imaging in petroleum exploration and solid Earth geophysics
- Tomographic velocity model building in applied and earthquake seismology
- Crustal & mantle seismology – probing of the structure and properties of the Earth's interior

EDUCATION

| Date | Degree/Field | Institution |
|------|----------------|--|
| 1989 | PhD/Geophysics | California Institute of Technology, Pasadena, CA, U.S.A. Dissertation: <i>Tomographic mapping of subducted lithospheric slabs in the Northwestern Pacific</i> |
| 1984 | MS/Geology | California State University, Long Beach, CA, U.S.A. Thesis: <i>Prismatic method in solving the gravitational potential, with applications at Cerro Prieto geothermal field, northern Mexico</i> |
| 1980 | BS/Mathematics | China University of Geosciences, Wuhan, China |

PROFESSIONAL EXPERIENCE

| Date | Position |
|---------------|---|
| 02/13 – | Department Chair , Dept of Earth & Atmospheric Sciences, University of Houston |
| 09/12 – | Professor & Sheriff Endowed College Professorship , Dept of Earth & Atmospheric Sciences, University of Houston |
| 10/10 – | Adjunct Professor & “Thousand-talent-plan” Guest Professor (2013 –), College of Marine Geoscience, Ocean University of China, Qingdao, China |
| 06/14 – | Guest Professor , Wuhan University, Wuhan, China |
| 08/07 – 08/12 | Professor and Joe Pevehouse Endowed Chair of Exploration Geophysics, Dept of Geosciences, Texas Tech University, Lubbock |
| 10/05 – 09/10 | Adjunct Professor & Chu-Tian Scholar, China University of Geosciences, Wuhan, China |
| 08/98 – 07/07 | Acting/Associate Director, Allied Geophysical Lab, University of Houston |
| 08/98 – 07/07 | Assistant, Associate & Professor, Dept of Geosciences, University of Houston (Adjunct Prof. from 8/2007 to 7/2010) |
| 05/97 – 07/98 | Research Specialist, Exxon Production Research Co., Houston |
| 11/89 – 05/97 | Assistant & Associate Professor, Dept of Geosciences, University of Houston |
| 06/80 – 05/82 | Lecturer, China University of Geosciences, Wuhan, China |
| 10/75 – 3/77 | Assistant Geologist, Geological Survey of Jiangsu Province, Nanjing, China |

ADVISING & TEACHING

- Supervised **18** post-docs, **37** doctoral students, and **34** master students.
- Below are semester courses taught at University of Houston & Texas Tech University:

Undergraduate Courses:

- “Geology of Hydrocarbons” and “Petroleum Geosciences for Petroleum Engineers”
- “Introduction to Earthquakes” and “Earthquakes”
- “Geophysical Studies of the Earth” and “Seismology & Earth Structure”

Graduate Courses:

- “Geophysical Data Processing” and “Seismic Data Processing”
- “Migration of Seismic Data” and “Seismic Migration”
- “Velocity Model Building” and “Seismic Velocity Analysis”
- “Exploration Geophysics” and “Petroleum Seismology”
- “Seismic Imaging” and “Seismic Depth Imaging”
- “Earthquake Seismology” and “Seismology: Theory & Practice”
- “Seismic Inversion: Current Concepts”
- “Geophysics for Engineers and Scientists”
- “Workstation Seismic Interpretation”

Short Courses Since 2012 (7):

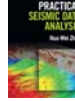
| # | Date | Institute Location | Title of Short Course |
|----|-------------------|---------------------------|---|
| 1. | Yearly since 2013 | UH short course Houston | Petroleum seismology |
| 2. | 7/18/2014 | BGP ZhuoZhou, China | Seismic imaging of conventional & unconventional reservoirs |
| 3. | 2014 | OUC Qingdao, China | Frontier of geophysics |
| 4. | 2012, 2013, 2014 | Petrobras Houston | Seismic migration |
| 5. | 2013 | WesternGeco Houston | Regularization in seismic exploration |
| 6. | 7/19/2012 | BGP ZhuoZhou, China | Seismic data processing, imaging & applications |
| 7. | 6/29/2012 | Nanjing U. China | Exploration geophysics & recent advances |

PROFESSIONAL AFFILIATION & SERVICES

| Date | Position | Organization |
|-------------|------------------------|--|
| 1984 – | Member | American Geophysical Union (AGU) |
| 1990 – | Active member | Society of Exploration Geophysicists (SEG) |
| 1998 – | Editorial Board Member | Acta Geophysica Sinica |
| 1999 – | Founding member | International Professionals for the Advancement of Chinese Earth Sciences (IPACES) |
| 1996 – 1997 | Chair | AGU Regional Advisory Committee for North America |
| 1997 – 2002 | Academic Liaison | Geophysical Society of Houston |
| 2003 | Key Contact | SEG 2003 Annual Meeting Technical Committee |

| | | |
|------------------|------------------------|--------------------------|
| 2008 – 2012 | Editorial Board Member | Acta Seismologica Sinica |
| 2009 – 2012 | Editorial Board Member | Earthquake Science |
| 2010, 2014, 2016 | Guest Editor | Journal of Earth Science |

BOOKS (2)

1. **Zhou, H.**, Practical Seismic Data Processing, Cambridge University Press, 482 pp., 2014. 
2. **Zhou, H.**, leading English translator of a Chinese book, “Systematic methods for high resolution seismic exploration” by Qingzhong Li, Geophysical Monograph Series Number 21, Society of Exploration Geophysics, 305 pp., 2017.

REFEREED JOURNAL ARTICLES (73+2) (* STUDENT OR POSTDOC SUPERVISED)

1. EI Grannell, R. B., **H. Zhou**, and R. M. Wyman, Modeling of repetitive gravity observations at Cerro prieto geothermal field, Geothermal Resource Council, Trans., 8, 203-206, 1984.
2. SCI **Zhou, H.**, How well can we resolve the deep seismic slab with seismic tomography? *Geophys. Res. Lett.*, 15, 1425-1428, 1988.
3. Qian, H., C. R. Allen, Z. Lou, X. Wen, **H. Zhou**, and W. Huang, The active characteristics of Xianshuihe fault in Holocene, *Earthquake Research in China*, 4(2), 9-18, 1988.
4. SCI Allen, C. A., Z. Lou, H. Qian, X. Wen, **H. Zhou**, and W. Huang, Segmentation and recent rupture history of the Xianshuihe fault, southern China, in Fault Segmentation and Controls of Rupture Initiation and Termination, eds. D. P. Schwartz, and R. H. Sibson, *U. S. Geol. Survey, Open-file Report, 89-315*, 10-30, 1989.
5. Wen, X., C. A. Allen, Z. Lou, H. Qian, **H. Zhou**, and W. Huang, Segmentation, geometric features and seismotectonic implications of the Holocene Xianshuihe fault Zone, *Acta Seismologica Sinica*, 11, 362-372, 1989.
6. SCI **Zhou, H.**, and D. L. Anderson, Search for deep slabs in the Northwest Pacific mantle, *Proc. Natl. Acad. Sci. USA*, 86, 8602-8606, 1989.
7. Allen, C. A., Z. Lou, H. Qian, X. Wen, **H. Zhou**, and W. Huang, Seismic hazard evaluation of a highly active fault – the Xianshuihe fault of southwestern China, *Proc. Internatl. Seminar on Seismic Zonation*, Chinese State Seismological Bureau, 126-135, 1989.
8. SCI **Zhou, H.**, and R. W. Clayton, P and S wave travel-time inversions for subducting slab under the island arcs of the Northwest Pacific, *J. Geophys. Res.*, 95, 6829-6851, doi: 10.1029/89JB03455, 1990.
9. SCI **Zhou, H.**, D. L. Anderson, and R. W. Clayton, Modeling of residual spheres for subduction zone earthquakes. I. Apparent slab penetration signatures in the NW Pacific caused by deep diffuse mantle anomalies, *J. Geophys. Res.*, 95, 6799-6827, doi: 10.1029/89JB03215, 1990.
10. SCI **Zhou, H.**, Observations on earthquake stress axes and seismic morphology of deep slabs, *Geophys. J. Int.*, 103, 377-401, 1990.
11. SCI **Zhou, H.**, Mapping of P wave slab anomalies beneath the Tonga, Kermadec and New Hebrides arcs, *Phys. Earth Planet. Inter.*, 61, 199-229, 1990.

12. McDonald, J. A., **H. Zhou**, T. K. Jones, T. E. Owen, J. H. Bangs, and D. S. Hamilton, Transmission and inversion of very high frequency acoustic wave data in shallow clastic sediments, Proceedings of SEGJ, *Geotomography*, 1, 105-119, 1991.
13. SCI Allen, C. A., Z. Lou, H. Qian, X. Wen, **H. Zhou**, and W. Huang, Field study of a highly active fault zone: The Xianshuihe fault of southern China, *Geol. Soc. Am. Bull.*, 103, 1178-1199, 1991.
14. McDonald, J. A., C. A. Link, **H. Zhou**, J. Jech, and B. J. Evans, Crosshole tomography in a working oil field: Seventy-Six West Field, south Texas, Proceedings of SEGJ, *Geotomography*, 2, 159-178, 1992.
15. EI **Zhou, H.**, J. A. Mendoza, C. A. Link, J. Jech, and J. A. McDonald, Crosswell imaging in a shallow unconsolidated reservoir, *The Leading Edge*, 12(1) 32-36, 1993.
16. EI Link*, C. A., J. A. McDonald, **H. Zhou**, J. Jech, and B. J. Evans, Crosshole tomography in the Seventy-Six West Field, *The Leading Edge*, 12(1), 36-40, 1993.
17. SCI **Zhou, H.**, Traveltime tomography with a spatial-coherency filter, *Geophysics*, 58, 720-726, 1993.
18. Link*, C. A., J. A. McDonald, D. A. Ebrom, and **H. Zhou**, Characterization of lithology using crosshole methods, *Exploration geophysicist*, 24, 645-654, 1993.
19. **Zhou, H.**, J. A. McDonald, C. A. Link, and J. Jech, Constraining the magnitude of velocity perturbations in traveltime tomography, *J. Seism. Exploration*, 2, 365-380, 1993.
20. SCI, EI Chen*, G., and **H. Zhou**, Boundary element modeling of nondissipative and dissipative waves, *Geophysics*, 59, 113-118, 1994.
21. SCI **Zhou, H.**, Rapid 3-D hypocentral determination using a master station method, *J. Geophys. Res.*, 99, 15439-15455, doi: 10.1029/94JB00934, 1994.
22. Chen*, G., and **H. Zhou**, Numerical modeling of the response of aligned cracks to acoustic waves, *J. Seismic Exploration*, 3, 69-78, 1994.
23. SCI **Zhou, H.**, and H. Wang, A revisit to P-wave traveltime statics at teleseismic stations, *J. Geophys. Res.*, 99, 17849-17861, doi: 10.1029/94JB00234, 1994.
24. SCI, EI Ha., S. T. T., **H. Zhou**, and J. A. McDonald, Determination of reflector angular position using directional phase-encoded wavefield, *IEEE TANS Geoscience & Remote Sensing*, 33, 15-25, 1995.
25. SCI **Zhou, H.**, and G. Chen, Waveform response to the morphology of 2D subducting slabs, *Geophys. J. Int.*, 121, 511-522, 1995.
26. SCI, EI Ha*, S. T. T., **H. Zhou**, R. E. Sheriff, and J. A. McDonald, Artificial generation of a directional phase-encoded wavefield, *IEEE Trans. Geosciences & Remote Sensing*, 33, 262-267, 1995.
27. SCI Magistrale, H., and **H. Zhou**, Lithological control of the depth of earthquakes in Southern California, *Science*, 273, 639-642, 1996.
28. SCI Cizkova, H., O. Cadek, D. A. Yuen, and **H. Zhou**, Slope of the geoid spectrum and constraints on mantle viscosity stratification, *Geophys. Res. Lett.*, 23, 3063-3066, 1996.
29. SCI Ha*, S. T. T., **H. Zhou**, R. E. Sheriff, and J. A. McDonald, Fourier transforms of approximation for sweeps and phase-encoded sweeps, *Geophysics*, 61, 1440-1452, 1996.
30. SCI **Zhou, H.**, A high-resolution P-wave model for top 1200 km of the mantle, *J. Geophys. Res.*, 101, 27791-27810, doi: 10.1029/96JB02487, 1996.

31. SCI Cadec, O., D. A. Yuen, H. Cizkova, M. Kido, **H. Zhou**, D. Runet, and P. Machel, New perspectives on mantle dynamics from high-resolution seismic tomographic model P1200, *PAGEOPH*, 151, 503-525, 1998.
32. **Zhou, H.**, A. Hou, and O.K. Youn, Current status of full-wave seismic imaging, in *Development in Engineering Geophysics*, B. Xiao edi., Publication of Wuhan U. of Hydro and Electrical Powers, 25-41, 2000.
33. EI Marfurt, K. J., **H. Zhou**, K. K. Sekharan, R. E. Sheriff, S. A. Hall, S. Nagihara, and A. Hou, Future need for geophysicists and geophysical research in the oil business? Conclusions of a 'listening tour', *The Leading Edge*, 19(9), 974-980, 2000.
34. SCI, EI Youn*, O. K., and **H. Zhou**, Depth imaging with multiples, *Geophysics*, 66, 246-255, 2001.
35. **Zhou, H.** M. Murphy, and Q. Lin, Tomographic imaging of the Tibet and surrounding region: Evidence for wholesale underthrusting of Indian slab beneath the Tibetan plateau, *Earth Science Frontiers*, 9(4), 285-292, 2002.
36. SCI, EI Bjorklund, T., K. Burke, **H. Zhou**, and R. S. Yeats, Miocene rifting in the Los Angeles basin: Evidence from the Puente Hills half-graben, volcanic rocks and P-wave tomography, *Geology*, 30, 447-450, 2002.
37. SCI, EI **Zhou, H.**, Multi-scale travelttime tomography, *Geophysics*, 68, 1639-1649, 2003.
38. EI Hoelting*, C., M. Gherasim, W. Duncan, K. Marfurt, and H. Zhou, A preliminary study of salt flank illumination at Vinton Dome, Louisiana: Do we need lateral wavefield continuation? *The Leading Edge*, 22(10), 974-974, 2003.
39. SCI **Zhou, H.**, Multi-scale tomography for crustal P and S velocities in southern California, *PAGEOPH*, 161, 283-302, 2004.
40. SCI, EI **Zhou, H.**, Direct inversion of velocity interfaces, *Geophys. Res. Lett.*, 31, 447-450, L07612, 2004.
41. SCI **Zhou, H.**, and M. Murphy, Tomographic evidence for wholesale underthrusting of India beneath the entire Tibetan plateau, *Journal of Asian Earth Sciences*, 25/3, 445-457, 2005.
42. SCI, EI **Zhou, H.**, Multiscale deformable-layer tomography, *Geophysics*, 71, R11-R19, 2006.
43. SCI, EI **Zhou, H.**, First-break vertical seismic profiling tomography for Vinton Dome, *Geophysics*, 71, U29-U36, 2006.
44. Chen, R., **H. Zhou**, and H. Ge, Seismic array in North China, *J. Geodesy & Geodynamics*, 25/4, 1-5, 2006.
45. SCI, EI Thornton*, M.P., and **H. Zhou**, Crustal-scale prestack depth imaging for 1994 and 1999 LARSE surveys, *Geophysical Prospecting*, 56, 577-585, 2008.
46. SCI, EI Cao*, H., J. Xie, Y. Kim and **H. Zhou**, Multi-scale migration tomography for constraining the artifacts in depth imaging, *Geophysics*, 73, VE217-VE222, 2008.
47. SCI, EI Zhang, S.X., Y. Wang, **H. Zhou**, and L.S. Chan, Dispersion splitting of Rayleigh waves in layered azimuthally anisotropic media, *J. Applied Geophysics*, 67, 130-142, 2009.
48. EI **Zhou, H.**, P. Li, Z. Yan, and Y. He, Deformable layer tomostatics: 2D examples in western China, *The Leading Edge*, 28(2), 260-264, 2009.
49. SCI **Zhou, H.**, P. Li, Z. Yan, and H. Liu, Constrained deformable layer tomostatics, *Geophysics*, 74, WCB15-WCB26, 2009.

50. SCI **Zhou, H.**, L. Li, T. Bjorklund, and M.P. Thornton, A comparative analysis of deformable layer tomography and cell tomography along the LARSE lines in southern California, *Geophys. J. Int.*, 180, 1200-1222, DOI: 10.1111/j.1365-246X.2009.04472.x, 2010.
51. SCI Liu*, H., **H. Zhou**, W. Liu, P. Li, and Z. Zou, Tomographic velocity model building of near surface with reversed-velocity interfaces: A test using the Yilmaz model, *Geophysics*, 75, U39-U47, 2010.
52. SCI, EI Jiang*, F., and **H. Zhou**, Traveltime inversion and error analysis for layered anisotropy, *J. of Applied Geophysics*, 73, 101-110, 2011.
53. SCI **Zhou, H.**, On the layering artifacts in seismic imageries, *J. of Earth Science*, 22, 182-194, DOI: 10.1007/s12583-011-0171-z, 2011.
54. SCI Zou*, Z., **H. Zhou**, and W. Liao, Crustal and upper-mantle seismic reflectors beneath the Three Gorges Reservoir region, *J. of Earth Science*, 22, 205-213, 2011.
55. SCI Liu*, W., B. Zhao, **H. Zhou**, Z. He, H. Liu, and Z. Du, Wave-equation global datuming based on the double square root operator, *Geophysics*, 76, U35-U43, 2011.
56. SCI Zelt, C. A., S. Haines, M. H. Powers, J. Sheehan, S. Rohdewald, C. Link, K. Hayashi, D. Zhao, **H. Zhou**, B. L. Burton, U. K. Petersen, N. D. Bonal, and W. E. Doll, Blind test of methods for obtaining 2D near-surface seismic velocity models from first-arrival traveltimes, *J. Environmental & Engineering Geophysics*, 18, 183-194, 2013.
57. SCI Zou*, Z., **H. Zhou**, and H. Gurrola, Reverse-time imaging of a doublet of micro-earthquakes in the Three Gorges Reservoir region, *Geophysical Journal International*, 196, 1858-1868, 2014.
58. SCI Zou*, Z., **H. Zhou**, and H. Gurrola, Teleseismic virtual-source imaging of the basin structures in Three Gorges region, China, *BSSA.*, 104, 2142-2147, 2014.
59. SCI Zhang, J., T. Shi, Y. Zhao, and **H. Zhou**, Static corrections in mountainous areas using Fresnel-wavepath tomography, *J. of Applied Geophysics*, 111, 242-249, 2014.
60. SCI Zou*, H., **H. Zhou**, and J. Zhang, Imaging upper crustal structure of the Three Gorges region via teleseismic virtual reflection profiling, *Chinese J. Geophys.*, 58, 411-423, 2015.
61. SCI Bian*, A., Z. Zou, **H. Zhou**, and J. Zhang, Evaluation of multi-scale full waveform inversion with marine vertical cable data, *J. of Earth Science*, 26, 481-486, 2015.
62. SCI Gantela*, C., A. Bian, **H. Zhou**, and T. Bjorklund, De-masking multiple artifact in crustal seismic images from marine reflection data in southern California borderland, *J. of Earth Science*, 26, 592-597, 2015.
63. SCI Huang*, W., and **H. Zhou**, Least-Square seismic inversion with stochastic conjugate gradient method, *J. of Earth Science*, 26, 463-470, 2015.
64. SCI Zou, Z., A. Bian, **H. Zhou**, J. Zhang, and L. Xing, An evaluation of reverse-time imaging of clustering earthquakes, *J. of Earth Science*, 26, 548-555, DOI: 10.1007/s12583-015-0563-6, 2015.
65. SCI Zhang, J., J. Shi, L. Song, **H. Zhou**, Linear traveltime perturbation interpolation: a novel method to compute 3-D traveltimes, *Geophys. J. Int.*, 203, 548-552, DOI: 10.1111/j.1365-246X.2010.04909.x, 2015.
66. Jing*, H., **H. Zhou**, and A. Li, Quantification of the impact of seismic anisotropy in microseismic location, *International J. of Geosciences*, 7, 884-890, DOI: 10.4236/ijg.2016.77065, 2016.
67. SCI Krupnik, D., S. Khan, U. Okyay, P. Hartzell, and **H. Zhou**, Study of diagenetic features in Upper Albian rudist buildups of the Edwards Formation using ground-based hyperspectral imaging and terrestrial laser scanning, *J. of Sedimentology*, 345, 154-167, DOI: 10.1016/j.sedgeo.2016.09.008, 2016.

68. 邹志辉, 张翊孟, 卞爱飞, 周华伟, 倪宇东, 李培明, 常规检波器数据低频的评价与恢复及在地震成像中的应用, 石油地球物理勘探, 51 (5): 841 - 849, 2016.
69. SCI Zou, Z., K. Liu, W. Zhao, H. Liu, H. Zhou, X. Meng, and Y. Li, Upper crustal structure beneath the northern South Yellow Sea revealed by wide-angle seismic tomography and joint interpretation of geophysical data, *Geological Journal*, 51(S1), 108-122, DOI: 10.1002/gj.2847, 2016.
70. SCI Deng*, P., Y. Chen, Y. Zhang, and **H. Zhou**, Weighted stacking of seismic AVO data using hybrid AB semblance and local similarity, *J. Geophys. Eng.*, 13, 152-163, DOI: 10.1088/1742-2132/13/2/152, 2016.
71. SCI Ding*, Y., Y. Zheng, **H. Zhou**, M. Howell, H. Hu, and Y. Zhang, Propagation of Gaussian Wave Packets in complex media and the application to fracture characterization, *Geophys. J. Int.*, **210**, 1244-1251, 2017.
72. SCI Sun, L., S. Khan, S. Sarmiento, M. R. Lakshmikantha, and **H. Zhou**, Ground-based hyperspectral imaging and terrestrial laser scanning for fracture characterization in the Mississippian Boone Formation, *INT J APPL EARTH OBS*, **63**, 222-233, 2017.
73. Jing*, H., **H. Zhou**, and A. Li, Micro-earthquakes in West Texas: Induced or not? *GSH J*, **8**(4), 12-18, 2017.
74. SCI Zou, Z., **H. Zhou**, A. Bian, H. Gurrola, Z. Huang, and J. Zhang, Impact and solutions of seawater heterogeneity on tomographic inversion of crustal velocity for wide-angle seismic survey in deep marine environment -- numerical studies, *Journal of Earth Science*, in press, 2017.
75. SCI **Zhou, H.**, H. Hu, Z. Zou, Y. Wo, and O. Youn, Reverse time migration: A prospect of seismic imaging methodology, *Earth Science Reviews*, in review, 2017.

REFEREED EXPANDED ABSTRACTS (82) (* STUDENT OR POSTDOC SUPERVISED)

1. 1991 Link*, C., J. A. McDonald, **H. Zhou**, and B. J. Evans, Cross-well tomography in a shallow clastic reservoir: 76 West field, south Texas, *SEG Expanded Abstracts*, 10, 371-374, 1991.
2. 1991 **Zhou, H.**, How much velocity variation can be resolved by cross-well seismic traveltime tomography? *SEG Expanded Abstracts*, 10, 813-816, 1991.
3. 1991 Yang*, T. W., **H. Zhou**, and O. G. Johnson, Nonlinear traveltime tomography with shortest path ray tracing, *SEG Expanded Abstracts*, 10, 922-924, 1991
4. 1991 Mendoza*, J. A., **H. Zhou**, and J. A. McDonald, Estimating traveltimes from noisy cross-hole seismic data, *SEG Expanded Abstracts*, 10, 1420-1423, 1991.
5. 1991 **Zhou, H.**, Seismic bodywave structures at convergent plate margins around the Pacific, invited abstract at the Freeman Gilbert Global Seismology Symposium, San Diego, CA, p.12.
6. 1992 Chen*, G., and **H. Zhou**, Waveform study using boundary element method, *SEG Expanded Abstracts*, 11, 1300-1303, 1992.
7. 1993 Chen*, G., and **H. Zhou**, Detection of crack orientation using acoustic waves, *SEG Expanded Abstracts*, 12, 1010-1013, 1993.
8. 1994 Chen*, G., and **H. Zhou**, Fast estimation of seismograms for 2D and 3D heterogeneous media, *SEG Expanded Abstracts*, 13, 229-232, 1994.
9. 1995 Arbi*, N., J.A. McDonald, **H. Zhou**, D.A. Ebrom, and R.H. Tatham, A comparison of 3-D seismic time imaging results from physical model strike and dip acquisitions, *SEG Expanded Abstracts*, 14, 953-956, 1995.

10. 1997 Wang*, H., and **H. Zhou**, A comparative study of some traveltimes tomography methods, SEG Expanded Abstracts, *16*, 1862-1865, 1997.
11. 1997 **Zhou, H.**, Determination of velocities and interfaces by multi-scale tomography, SEG Expanded Abstracts, *16*, 1877-1880, 1997.
12. 1998 Youn*, O. K., **H. Zhou**, and R. E. Sheriff, Structural effects on AVO: A modeling study, SEG Expanded Abstracts, *17*, 197-200, 1998.
13. 1998 Youn*, O. K., **H. Zhou**, S. Hall, and R. E. Sheriff, Post-critical angle AVO for carbonate reservoirs, 60th EAGE convention, Leipzig, Exp. Abs., 1998.
14. 1999 Youn*, O. K., and **H. Zhou**, Depth imaging with multiples, SEG Expanded Abstracts, *18*, 1182-1185, 1999.
15. 1999 Hou*, A., and **H. Zhou**, Multi-component depth imaging of a fluid-filled dome, SEG Expanded Abstracts, *18*, 1196-1199, 1999.
16. 1999 Hou*, A., and **H. Zhou**, Pseudospectral prestack depth imaging of common shot gathers, SEG Expanded Abstracts, *18*, 1473-1476, 1999.
17. 1999 Guo*, M., Hou, A., and **H. Zhou**, A 2-D comparison of Kirchhoff and full-wave migration, SEG Expanded Abstracts, *18*, 1552-1555, 1999.
18. 2000 Hou*, A., **H. Zhou**, and R. W. Wiley, Reverse VSP prestack depth migration with multiples, SEG Expanded Abstracts, *19*, 766-769, 2000.
19. 2000 Thornton*, M. P., and **H. Zhou**, Pre-stack depth migration of the 1994 LARSE survey over LA basin, SEG Expanded Abstracts, *19*, 898-901, 2000.
20. 2000 **Zhou, H.**, and A. Hou, A reverse VSP tomographic velocity analysis, SEG Expanded Abstracts, *19*, 1771-1774, 2000.
21. 2000 Zhuang*, D., Y. Xu, and **H. Zhou**, Seismic attributes optimizing analysis in predicting and monitoring reservoir, SEG Expanded Abstracts, *19*, 2158-2161, 2000.
22. 2001 Al-Rufaii*, K., **H. Zhou.**, L. Lu, Tomographic velocity analysis in complex areas, SEG Expanded Abstracts, *20*, 748-751, 2001.
23. 2001 Al-Otaibi*, M., K. Marfurt, **H. Zhou.**, F. Hilterman, and N. Kabir, Effect of velocity transition zones on the apparent polarization of ocean-bottom cable multicomponent data, SEG Expanded Abstracts, *20*, 1253-1256, 2001.
24. 2001 **Zhou, H.**, K. Al-Rufaii, J. Byun, and S. L. Roche, Retrieval of high-resolution components by deterministic deconvolution: A field example, SEG Expanded Abstracts, *20*, 1827-1830, 2001.
25. 2002 Pankhurst*, D., K. Marfurt, C. Sullivan, **H. Zhou**, Hilterman, F., and Gallagher, J., Long Offset AVO in a Mid-Continent Tight Gas Sand Reservoir, SEG Expanded Abstracts, *21*, 297-299, 2002.
26. 2002 **Zhou, H.**, Kirchhoff reflection tomography: Concept and preliminary result, SEG Expanded Abstracts, *21*, 953-956, 2002.
27. 2002 Hoelting*, C., W. Duncan, M. Gherasim, K. Marfurt, and **H. Zhou**, A preliminary study of salt flank illumination at Vinton Dome, Louisiana: Do we need lateral wavefield continuation? SEG Expanded Abstracts, *21*, 1368-1371, 2002. (**Best paper award**)
28. 2003 Lin*, Q., and **H. Zhou**, A study of long-offset seismic imaging, SEG Expanded Abstracts, *22*, 1154-1157, 2003.

29. 2003 Lapin*, S., S. Kisin, and **H. Zhou**, Joint VSP and surface seismic tomography, SEG Expanded Abstracts, 22, 2342-2344, 2003.
30. 2003 **Zhou, H.**, Deformable layer tomography and application to the Vinton Dome, SEG Expanded Abstracts, 22, 2345-2348, 2003.
31. 2003 Kisin*, S., and **H. Zhou**, VSP tomography of Vinton Dome, Louisiana, SEG Expanded Abstracts, 22, 2349-2352, 2003.
32. 2003 Duncan*, W.S., **H. Zhou**, and P. Constance, Velocity model building of Vinton Dome, Southwest Louisiana, SEG Expanded Abstracts, 22, 2175-2179, 2003.
33. 2004 **Zhou, H.**, VSP multi-scale deformable layer tomography, SEG Expanded Abstracts, 23, 2327-2330, 2004.
34. 2005 Zhao*, B., and **H. Zhou**, Fizz and gas separation with SVM classification, SEG Expanded Abstracts, 24, 297-301, 2005.
35. 2005 Pralica*, N., **H. Zhou**, S. Jin, and S. Wang, Tomostatics using deformable layer tomography, SEG Expanded Abstracts, 24, 2605-2609, 2005.
36. 2006 Zhao*, B., **H. Zhou**, X. Li, and D. Han, Water saturation estimation using Support Vector Machine, SEG Expanded Abstracts, 25, 1693-1697, 2006.
37. 2007 Zhao*, B., **H. Zhou**, X. Li, and D. Han, Attenuation analysis on commercial and low-saturation gas reservoirs, SEG Expanded Abstracts, 26, 1412-1416, San Antonio, 2007.
38. 2007 Cao*, H., and **H. Zhou**, Reflection attenuation tomography, SEG Expanded Abstracts, 26, 2610-2614, San Antonio, 2007.
39. 2008 **Zhou, H.**, H. Liu, F. Jiang, and P. Li, First-break deformable-layer tomostatics constrained by shallow reflections, SEG Expanded Abstracts, 27, 3224-3228, Las Vegas, 2008.
40. 2008 Li*, P., Z. Yan, Y. He, **H. Zhou**, H. Liu, and F. Jiang, Application of 2-D deformable-layer tomostatics in western China, SEG Expanded Abstracts, 27, 3335-3339, Las Vegas, 2008.
41. 2009 Zou*, Z., **H. Zhou**, F. Jiang, and H. Liu, The role of acquisition geometry and components for imaging microseismicity, SEG Expanded Abstracts, 28, 162-166, Houston, 2009.
42. 2009 Li*, P., Z. Yan, M. Guo, and **H. Zhou**, 2-D deformable-layer tomostatics with a joint use of first breaks and shallow reflections, SEG Expanded Abstracts, 28, 1335-1339, Houston, 2009.
43. 2009 Liu*, H., **H. Zhou**, Z. Zou, and F. Jiang, Improved shortest-path ray tracing with locally linear velocity variations, SEG Expanded Abstracts, 28, 2597-2601, Houston, 2009.
44. 2009 Cao*, H., J. Xie, Y. Kim, and **H. Zhou**, Ray-count weighted multi-scale tomography, the 8th CPS/SEG 2009 International Geophysical Conference & Exposition, p.218, Beijing, 2009.
45. 2009 Cao*, H., **H. Zhou**, F. Hilterman, Reflection attenuation tomography: comparison between two neighboring ray approaches, SEG Expanded Abstracts, 28, 4009-4013, Houston, 2009.
46. 2009 Jiang*, F., **H. Zhou**, Z. Zou, and H. Liu, 2D Tomographic velocity model building in tilted transversely isotropic media, SEG Expanded Abstracts, 28, 4024-2028, Houston, 2009.
47. 2009 Liu*, H., **H. Zhou**, F. Jiang, and Z. Zou, First arrival tomography using depth-varying velocity gradients, SEG Expanded Abstracts, 28, 4034-4038, Houston, 2009.
48. 2009 Zhang, J., B. Zhao, and **H. Zhou**, Fat ray tomography with optimal relaxation factor, SEG Expanded Abstracts, 28, 4044-4048, Houston, 2009.

49. 2010 Zou*, Z., and **H. Zhou**, Assessing the reliability of low frequencies in geophone records, SEG Expanded Abstracts, 29, 121-126, Denver, 2010.
50. 2010 Jiang*, F., and **H. Zhou**, A strategy to estimate anisotropic parameters by error analysis of traveltimes inversion, SEG Expanded Abstracts, 29, 323-327, Denver, 2010.
51. 2010 Cao*, H., **H. Zhou**, and F. Hilterman, Reflection attenuation tomography: a field example, SEG Expanded Abstracts, 29, 2815-2819, Denver, 2010.
52. 2010 Liu*, H., **H. Zhou**, W. Liu, and Z. Zou, Tomographic velocity model building of near surface with reversed-velocity interfaces, SEG Expanded Abstracts, 29, 4364-4368, Denver, 2010.
53. 2011 Zou*, Z., and **H. Zhou**, Reverse time imaging of small earthquakes using 2D array data in Three Gorges Reservoir region, China, SEG Expanded Abstracts, 30, 1674-1678, San Antonio, 2011.
54. 2011 **Zhou, H.**, P. Li, Z. Yan, and F. Yuan, 3D multi-scale tomostatics using first arrivals, International Petroleum Technology Conference, Bangkok, Thailand, 15-17 November, 2011.
55. 2011 **Zhou, H.**, F. Yuan, Z. Zou, and H. Liu, Blind testing of deformable layer tomography using near-surface first arrivals, 24th EEGS Symposium on the Application of Geophysics to Engineering and Environmental Problems, Exp. Abs., 2011.
56. 2012 Li, P., Z. Yan, Z. Feng, Q. Ma, and **H. Zhou**, 2D multi-scale cell tomography for near surface velocities, 74th EAGE Conference and Exhibition, Exp. Abs., DOI: 10.3997/2214-4609.20148166, 2012.
57. 2012 **Zhou, H.**, and P. Li, Deformable layer tomostatics with 3D gradient velocity models, SEG, Expanded Abstracts, 31, 1-5, Las Vegas, 2012.
58. 2012 Zhang*, Y., Z. Zou, and **H. Zhou**, Estimating and recovering the low-frequency signals in geophone data, SEG, Expanded Abstracts, 31, Las Vegas, 2012.
59. 2013 Zou*, Z., and **H. Zhou**, Identifying seismic source types using reverse time imaging, SEG, Expanded Abstracts, 32, 2178-2182, Houston, 2013.
60. 2013 Zhang*, Y., M. Zhang, **H. Zhou**, and Z. Zou, Separation of ISS seismic data via vector median filter in T-X and F-X domains, SEG, Expanded Abstracts, 32, 4377-4381, Houston, 2013.
61. 2014 Huang*, W., and **H. Zhou**, Stochastic conjugate gradient method for least-square seismic inversion problems, SEG, Expanded Abstracts, 33, 4003-4007, Denver, 2014.
62. 2014 Huang, X., and **H. Zhou**, A hybrid L_1/L_2 -norm scheme with an adaptive weight factor for multiple subtraction, SEG, Expanded Abstracts, 33, 4167-4171, Denver, 2014.
63. 2014 Zou*, Z., **H. Zhou**, Y. Zhang, D. Jia, X. Huang, and L. Li, Virtual-source imaging of basin structures using low-frequency teleseismic data, SEG, Expanded Abstracts, 33, 2368-2372, Denver, 2014.
64. 2014 Zhang, J., T. Zhao, Y. Sun, and **H. Zhou**, 3-D traveltimes computation using interpolation of traveltimes perturbation, SEG, Expanded Abstracts, 33, 3382-3387, Denver, 2014.
65. 2015 Bian*, A., J. Cai, Z. Zou, J. Zhang, and **H. Zhou**, Multi-scale full waveform inversion with marine vertical cable data, SEG Workshop: Depth Model Building: Full-waveform Inversion, 67-70, Beijing, 2015.
66. 2015 Deng*, P., W. Huang, Y. Chen, W. Huang, Y. Zhang, and **H. Zhou**, Stacking seismic AVO data using AB semblance and local similarity, SEG, Expanded Abstracts, 34, 607-612, New Orleans, 2015.
67. 2015 Zhang*, B., **H. Zhou**, Z. Ding, R. Li, Z. He, and J. Wu, Integrated processing techniques to low signal-to-noise ratio OBC dual-sensor seismic data, SEG, Expanded Abstracts, 34, 2180-2184, New Orleans, 2015.

68. 2015 Zhang*, Y., P. Ping, P. Deng, **H. Zhou**, and S. Zhang, A free surface formulation for finite difference modeling of surface waves in porous media, SEG, Expanded Abstracts, 34, 2406-2411, New Orleans, 2015.
 69. 2015 Yuan*, F., **H. Zhou**, Z. Meng, B. Gong, and F. Qiao, Multi-scale reflection layer tomography to estimate base-salt geometry, SEG, Expanded Abstracts, 34, 5243-5247, New Orleans, 2015.
 70. 2016 Deng*, P., W. Huang, **H. Zhou**, Full-waveform inversion by multi-scale temporal integration, SEG, Expanded Abstract, 35, 1432-1437, Dallas, 2016.
 71. 2016 Ding*, Y., Y. Zheng, **H. Zhou**, Y. Zhang, and H. Hu, Seismic characterization of fractures using exact localized waves: Gaussian wave packet, SEG, Expanded Abstract, 35, 3646-3650, Dallas, 2016.
 72. 2016 Huang*, W., P. Deng, and **H. Zhou**, Effects of fracture density on P-wave reflection coefficients for shale/sand model with HTI anisotropy, SEG, Expanded Abstract, 35, 597-601, Dallas, 2016.
 73. 2016 Huang*, W., P. Deng, and **H. Zhou**, Least-squares reverse-time migration with Hessian preconditioning, SEG, Expanded Abstracts, 35, 4193-4197, Dallas, 2016.
 74. 2016 Song*, W., **H. Zhou**, Z. Deng, R. Wang, and F. Yan, Fast Matching pursuit decomposition based near surface seismic logging data Q estimate with shaping regularization, SEG, Expanded Abstracts, 35, 2334-2338, Dallas, 2016.
 75. 2016 Thongsang*, P., **H. Zhou**, and H. Hu, Analysis of oscillational behaviors of waves in gas-pocket reservoirs via decoupling wavefields, SEG, Expanded Abstracts, 35, 4049-4053, Dallas, 2016.
 76. 2016 Wei*, Z., H. Hu, A. Lau, Y. Zheng, and **H. Zhou**, Joint inversion for microseismic event positions and velocity structure by combining multi-scale deformable-layer tomography and master station earthquake location method, SEG, Expanded Abstract, 35, 2498-2502, Dallas, 2016.
 77. 2016 Wo*, Y., **H. Zhou**, and F. Wu, A layer-cell approach of near-surface first-arrival tomography, SEG, Expanded Abstract, 35, 2382-2386, Dallas, 2016.
 78. 2017 Deng*, P., W. Huang, **H. Zhou**, and L. Fu, Velocity and attribute analysis using AB semblance: A case study using 2D marine data from the Nankai trough, SEG Intern. Geophys. Conf., 99-103, Qingdao, 2017.
 79. 2017 Bian, A., Y. Ni, Z. Zou, and **H. Zhou**, Constrained time-lapse waveform inversion for target oriented deep-water exploration, SEG 2017 Workshop: OBN/OBC Tech. & App., 79-82, Beijing, 2017.
 80. 2017 Thongsang*, P., H. Hu, **H. Zhou**, and A. Lau, Relaxed flatness-constraint of angle-domain-common-image gathers generating by Poynting vectors via concurrent vector-median-filter, SEG, Expanded Abstracts, 36, 4661-4665, Houston, 2017.
 81. 2017 Deng*, P., **H. Zhou**, W. Huang, Y. Zhang, Y. Tan, F. Li, and B. Yang, Double-weighted stacking using local similarity, SEG, Expanded Abstracts, 36, 5049-5053, Houston, 2017.
 82. 2017 Jing*, H., **H. Zhou**, and A. Li, Microearthquakes in west Texas: Induced or not? SEG, Expanded Abstracts, 36, 5350-5355, Houston, 2017.
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