

BO ZHANG

Department of Geological Sciences, University of Alabama
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Education

- Ph.D. in Geophysics, The University of Oklahoma, Norman, OK Jul 2014
- **Dissertation:** Long Offset Data Analysis for Resource Plays
- M.S. in Geophysics, Institute of Geology and Geophysics, Chinese Academy of Science China Jul 2009
- **Thesis:** Spectrally-limited AVO Analysis and Its Application to the Tight-sand Gas Reservoir
- B.S. in Geophysics, China University of Petroleum, China Jul 2006
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Working Experience

The University of Alabama, Tuscaloosa, AL Aug 2015 – Current
Assistant Professor

Michigan Technological University, Houghton, MI Aug 2014 – Aug 2015
Visiting Assistant Professor

The University of Oklahoma, Norman, OK Aug 2014 – Jul 2014
Research Assistant

- Co-investigator for the Marine Seismic Processing Project Working with Korean Institute of Geoscience and Mineral Resources.
- Developed algorithm to minimize the stretch associated with large offset in prestack gathers.
- Developed reflection tomography algorithm to perform residual velocity analysis.
- Built prestack seismic gather conditioning algorithms and workflows.
- Developed algorithm and workflow for the automatic fault surface extraction.

BP, Houston, Texas May 2013 – Aug 2013
Seismic imaging Intern

- Developed space variable preconditioning algorithm for tomography – Application to tackling fault shadow issues in seismic imaging.

dGB Earth Sciences, Houston, Texas May 2012 – Aug 2012
Research & Development Intern

- Developed algorithm for fault attributes optimization.
 - Explored algorithm and workflows for automatic fault system extraction.
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Computer Skills

- Proficient in seismic processing software: ProMAX, SeisUP.
 - Proficient in seismic data Interpretation and inversion software: Petrel, Landmark, OpendTect, Jason, Hampson-Russell.
 - Proficient in Seismic Modeling Software: Tesseral.
 - Proficient in Programming Languages: FORTRAN, C, Matlab, MPI, C#, C++.
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Honors and Awards

- Second Place at the 1st Annual Geophysics Tech-Fest hold by SEG Student Chapter.
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Academic Services

- Reviewer of SEG Interpretation Journal.

- Reviewer of SEG Geophysics Journal.
- Reviewer of EAGE Geophysical Prospecting Journal.
- Reviewer of Scientific Proposals of Oak Ridge Associated Universities.

Publications

- **Zhang, B.**, T. Lin, S. Guo, O. E. Davogusto, K. J. Marfurt, 2015, Noise suppression of time migrated gathers using structure oriented filtering, Interpretation (under reviewing).
- Lin T., **B. Zhang**, K. J. Marfurt, D. Chang, S. Zhan, and Z. Wan, 2015, Dip correction of spectral components: Application to time- vs. depth-migrated seismic data, Interpretation (under reviewing).
- Lin T., **B. Zhang**, K. J. Marfurt, D. Chang, S. Zhan, and Z. Wan, 2015, Geometric attribute estimation using data-adaptive windows, Interpretation (under reviewing).
- Wen, X, **B. Zhang***, W. Pennington, Z. He, 2015, Relative P-impedance estimation using a dipole-based matching pursuit decomposition strategy, Interpretation, **3**, T197-T206.
- **Zhang, B.**, T. Zhao, X. Jin, K. J. Marfurt, 2015, Brittleness evaluation of resource plays by integrating petrophysics and seismic data analysis, Interpretation, **3**, T81-T92.
- **Zhang, B.**, T. Zhao, J. Qi, K. J. Marfurt, 2014, Horizon-based semi-automated nonhyperbolic velocity analysis, Geophysics, **79**, U15-U23.
- **Zhang, B.**, D. Chang, T. Lin, K. J. Marfurt, 2014, Improving the quality of prestack inversion by prestack data conditioning, Interpretation, **3**, T5-T12.
- **Zhang, B.**, Y. Liu, M. Pelissier, N. Hemstrat, 2014, Semi-automated fault interpretation based on seismic attributes, Interpretation, **2**, SA11-SA19.
- Qi, J., **B. Zhang**, H. Zhou, Kurt Marfurt, 2014, Attribute expression of fault-controlled karst - Fort Worth Basin, TX - A tutorial, Interpretation, **2**, SF91-SF110.
- **Zhang, B.**, K. Zhang, S. Guo, K. J. Marfurt, 2013, Non-stretching NMO correction of prestack time-migrated gathers using a matching-pursuit algorithm, Geophysics, **78**, U9-U18.
- Zhang, K., Y. Guo, **B. Zhang**, A. M. Trumbo, K. J. Marfurt, 2013, Seismic azimuthal anisotropy analysis after hydraulic fracturing, Interpretation, **1**, SB27-SB36.
- **Zhang, B.**, Z. Wang, S., Zhou S., Y. Pan, B. Bai, 2010, The application of spectral decomposition in the gas detection, Progress in Geophysics, China.
- Zhou S, **B. Zhang**, X. Wu, 2009, Research on fluid substitution method and its application, Progress in Geophysics, China.

Conference Contributions

- **Zhang, B.**, S. Guo, F. Li, P. Li, K. J. Marfurt, 2014, Brittleness evaluation of resource plays by integrating petrophysics and seismic analysis, SEG expanded abstract, Denver.
- **Zhang, B.**, T. Zhao, J. Qi, K. J. Marfurt, 2014, Strategies to preserve the data fidelity at far offset, SEG expanded abstract, Denver.
- Chang, D., T. Lin, **B. Zhang**, S. Guo, K. J. Marfurt, 2014, Seismic attributes estimation using a self-adaptive window size, SEG expanded abstract, Denver.
- Lin, T., **B. Zhang**, Z. Zhan, Z. Wan, F. Li, K. J. Marfurt, 2014, Seismic attributes of time- vs. depth-migrated data using self-adaptive window, SEG expanded abstract, Denver.
- Guo. S., **B. Zhang**, S. Verma, K. J. Marfurt, 2014, Vector correlation of AVAz and curvature attribute- Application to Mississippian Tripolitic Chert, Osage County, Northeast Oklahoma, SEG expanded abstract, Denver.
- Li, F., **B. Zhang**, K. J. Marfurt, I. Hall, 2014, Random noise suppression using normalized convolution filter, SEG expanded abstract, Denver.
- **Zhang, B.**, Y. Liu, M. Pelissier, N. Hemstrat, 2013, Semi-automated fault interpretation based on seismic attributes, SEG expanded abstract, Houston.

- Lin, T., Z. Wan, **B. Zhang**, S. Guo, K. J. Marfurt, 2013, Spectral decomposition of time- vs. depth-migrated data, SEG expanded abstract, Houston.
- Guo, S., **B. Zhang**, T. Lin, K. J. Marfurt, 2013, Correlation of AVAz and curvature – application to the Barnett shale, Presented at the Unconventional Resources Technology Conference, 12-14 August 2013, in Denver.
- Guo, S., **B. Zhang**, V. A. Cabrales, K. J. Marfurt, 2012, Noise suppression using preconditioned least-squares prestack time migration: Application to the Mississippian Limestone, SEG expanded abstract, Las Vegas.
- **Zhang, B.**, T. Wang, K. J. Marfurt, 2011, Revisiting NMO stretch and velocity analysis, SEG expanded abstract, San Antonio.
- Zhang, K., **B. Zhang**, K. J. Marfurt, 2010, Seismic azimuthally impedance anisotropy in the Barnett Shale, SEG expanded abstract, Denver.

Current Research Project

2015-2017, Shale resources characterization by integrating seismic and petrophysics data analysis, China State Key laboratory of Oil and Gas Reservoir Geology and Exploitation, Oversea Expert Project. Grant number, PLC201401, PI.