

Xueyi (Alex) Jia

Personal Summary

Geophysics Ph.D. candidate and research assistant at Center for Wave Phenomenon who has a strong background in mathematics, physics and programming. Expertise in seismic data analysis, redatuming, model building, and imaging for complex structures. In-depth knowledge and first-hand experience in full waveform inversion (FWI) and Marchenko imaging.

Easy going by nature, and enjoy working in collaborative and learning environments.

Education

Ph.D. in Geophysics, Center for Wave Phenomena, Colorado School of Mines	2019 (expected)
GPA: 3.8/4.0	
M.S. in Geophysics, University of Houston	05/2015
GPA: 3.8/4.0	
B. S. in Physics, Peking University, China	08/2012

Research Experience

Experimental elastic full waveform inversion	06/2017-09/2017
• Addressed the limitation of acoustic FWI in salt related problems; investigation the power of elastic FWI for top salt model building.	
3D Marchenko imaging	01/2017-06/2017
• Numerical implementation of the Marchenko framework using data acquired in three-dimensional environments.	
Subsalt Marchenko imaging with Gulf of Mexico field data	01/2016-1/2017
• First successful field data application of Marchenko imaging for subsalt structures, which shows significant improvements in eliminating the artifacts due to multiples compared with RTM.	
GPS network infrastructure in Houston and land subsidence monitoring	09/2013- 05/2015
• Managed the project of establishing high-accuracy GPS network in Houston for natural hazards study; data processing and preparation for global GPS users. (Published on Natural Hazards)	
Mantle Plume Structure and seismic evidence for plume-induced rifting	09/2012
• Research on seismic evidence such as average crustal thickness and V_p/V_s ratio recorded during major earthquakes to reveal the mechanisms for plume-induced rifting. (Published on ACTA Geologica Sinica)	
Shear Wave Characteristics of Fluid Saturated Reservoir Sandstones Study	02/2012
• Undergraduate research on dispersion effects of shear wave velocity and attenuation due to fluid viscosity with the sandstone samples acquired at Weixi oil field.	

Professional Experience

Shell Oil Company, Houston, Texas, Summer Intern Geophysicist	06/2017-09/2017
• Resolve velocity issues around salt bodies through the application of full waveform inversion in seismic imaging team; investigate the necessity of elastic FWI in salt related problems and design workflow for elastic FWI.	
South American Branch of Mega China, Suriname, Exploration Geophysicist	09/2012-08/2013
• Survey design and planning for drilling and well operations at Kara creek gold mine; mineral and geological mapping.	
Micromine CO., LTD, Beijing, Summer Intern	07/2011-09/2011
• Trained clients to use Micromine software for ore model building and reservoir evaluation; mineral reservoir evaluation for Zambia MO61 program.	

Programming Skills

C, Fortran, Python, MATLAB

Seismic analysis environment: Madagascar, Seismic Unix, SIPMAP, JobPro, SMART, nDI

Awards & Activities

Champion of UH 3V3 basketball tournament at team Pain & Gain	08/2014
Allan Wong Endowed Scholarship given by University of Houston	05/2014
Captain of men's basketball team of school of physics at Peking University	2009-2012