Curriculum Vitae Objective: Ph.D. in Earth Sciences

Zhi Li

University of Science and Technology of China
96 Jinzhai Road, Hefei, Anhui, P. R. China | Phone: +86 18905557622
E-mail: lizhi555@mail.ustc.edu.cn | Web: http://home.ustc.edu.cn/~lizhi555

RESEARCH INTERESTS

- Theoretical and Computational Geophysics
- Large Earthquake Rupture Processes and Subduction Zone
- Deep Earth Structure and Scattering
- Theoretical Understanding of Geophysical Phenomena like Glaciers, Volcanoes and Tsunamis

EDUCATION

University of Science and Technology of China (USTC) **Aug. 2013 – Present**

- Bachelor of Science with Honors (Estimated time of completion: June, 2017)
- School of the Gifted Young
- Geophysics, School of Earth and Space Science

Seismological Laboratory, California Institute of Technology **Jun. 2016 - Sep. 2016**

- Visiting Undergraduate Research Project (4 selected from USTC)

Ma'anshan No.2 High School (Admitted to USTC a year in advance) **Aug. 2011 – Jun. 2013**

ACADEMIC PERFORMANCE & STANDARDIZED TESTS

Overall GPA: 3.63/4.3, 86.86/100 **Major GPA**: 3.88/4.3, 89.7/100

Rank: **1/8**, 1st out of 8 students from School of the Gifted Young

TOEFL iBT: **Total 102** Reading 29; Listening 28; Speaking 22; Writing 23

GRE General Test: **Total 318** Verbal 150; Quantitative 168

RESEARCH EXPERIENCES

Caltech Visiting Undergraduate Research Project (VURP) **Jun. 2016 - Sep. 2016**

Topic: Analyzing Velocity Structure and Scattering in Homestake Area *Mentor: Prof. Victor Tsai*

- Beamforming of deep earthquakes with fk analysis
- Reconstructed direction of incoming wave at various depths and frequencies
- Strong difference at different depths suggests near-surface scattering pattern

Visiting Research in Boise State University **Jun. 2016 - Jul. 2016**

Topic: Analyzing Active Source Data in Homestake Mine *Mentor: Prof. Lee Liberty & Gabriel Gribler*

- Wavepath eikonal traveltime inversion for P wave
- Joint-inversion using Rayleigh-wave dispersion and horizontal-to-vertical (H/V) spectral ratios for S wave

Lab Research **Mar. 2016 - Present**

Topic: Imaging the Earth's Core–Mantle Boundary with Seismic Migration *Mentor: Prof. Daoyuan Sun*

- Kirchhoff Depth Migration, Gaussian Beam Migration, and Weighted Reverse Rime Migration
- 2D finite difference forward modelling

National Innovation Program **Apr. 2016 - Present**

Topic: Seismic Data Regularization *Mentor: Prof. Wei Zhang*

- 5D interpolation with MWNI and POCS algorithm
- Sparse inversion and Iterative Shrinkage Thresholding in Curvelet domain
- Compressive sensing and K-SVD dictionary learning for signal reconstruction

MAIN ACTIVITIES AND EXPERIENCES

- **Teaching Assistant in Electrodynamic Course** **2016**

End-of-Term Evaluation: 4.66/5.00 (Top 10% among all the TAs in USTC)

- **The International Genetically Engineered Machine (iGEM) Competition Mar. 2015-Oct. 2015**

I was elected as the Captain of USTC-Software team, leading the team to develop a software for automatic design which integrates methods including electrical engineering, stochastic simulation, and circuit performance analysis, aiming to rationally design synthetic gene circuits with specific functions. Finally, I joined the Giant Jamboree held in Boston, MA, together with my eleven teammates, to present our software project, and won gold medal.

- **Robot Game of USTC** **Summer 2014**

We designed to build the robot called STAR that can automatically do the cooking with the auto-control system and food-agitation function.

SCIENTIFIC COMPUTING SKILLS

C/C++, Fortran, Python, Pascal, Ruby, Shell, Matlab, Mathematica, COMSOL, IDL, SAC, GMT, Latex

SCHOLARSHIP & HONORS

2016 Honors Graduate

2014 - Present Membership of Zhao Jiuzhang Talent Program in Earth and Space Sciences

2015 Gold Medal in the International Genetically Engineered Machine (iGEM) Competition (280 teams globally and 8 teams in software track)

2015 AEGON Global Scholarship (5/276 in School of the Gifted Young)

2014/2015/2016 Outstanding Student Scholarship (Top 10% in USTC)

2013 Outstanding Freshmen Scholarship (Top 5% among freshmen)

2012 The 2nd Prize of the Chinese Mathematical Olympiad, Chinese Mathematical Society (Top 1%)

2012 The 2nd Prize of the Chinese Physics Olympiad, Chinese Physical Society (Top 1%)