Kai Wang

Master Candidate in Solid Geophysics

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Education:

2018-present   **M.Sc.** Candidate in Solid Geophysics, Institute of Geology and Geophysics, Chinese Academy of Sciences, Beijing, China. Supervisor: A/Prof. Wei Wei.

2014-2018   **B.Sc.** in Geophysics, China University of Geosciences, Wuhan, China. Supervisor: Prof. Peimin Zhu.
Thesis title: The Android and iOS client design of geomagnetic earthquake warning system.

Research Experiences:

2018-present   1. Blended acquisition and resolution analysis. The traditional resolution evaluation method is not suitable for blended acquisition, because the shot focus result is no longer a function, but a matrix due to the aliasing effect between shot records. I developed an imaging resolution evaluation method for blended acquisition to achieve quantitative evaluation of the effectiveness of blended acquisition schemes.

2. Study on amplitude-frequency response of vibrator source under different near-surface conditions. The amplitude-frequency response of the coupled near-surface medium to the vibrator source varies with the near-surface conditions. I designed a numerical simulation method to guide the application of vibrator source in production.

2017-present   The Android and iOS client design of geomagnetic earthquake warning system. I designed a software to collect three-component geomagnetic data and position information in real time using electronic compasses and GPS chips on smartphones and upload abnormal data to the server. The server determines whether there will be an earthquake and sends location information of the earthquake source to the client after calculation.

Awards and honors

2018	The Second Prize of National Post-Graduate Mathematical Contest in Modeling, top 14%	National
2018	Outstanding Graduation Thesis Award, top 5%	CUG
2017	National Encouragement Scholarship for Undergraduate Students, top 5%	National

2017	The First Prize of China Undergraduate Mathematical Contest in Modelling, top 8%	Provincial
2015	The First Prize in Physics Competition, top 5%	CUG
2015	National Encouragement Scholarship for Undergraduate Students, top 5%	National

Main Courses Taken

MS English Program; PhD English Program; Advanced Course on Mathematical Geoscience; Theoretical Seismology; Engineering Seismology; Seismic Wave Theory; Interior Physics of The Earth; Continuous Medium Mechanics; Digital Signal Processing; Numerical Analysis; Information Theory and Machine Learning; Surveying; Field Theory; Geomagnetism; Geoelectricity; Gravitology; Object-oriented Programming (C++); Application of Matlab Language; Python for Scientific Computation and Data Analysis.

Expertise & Skills

Languages	Mandarin Chinese, English.
Driving	China Driver License.
Programming	C, C++, Python, Matlab, Shell, Java, Swift.
Waveform modeling	Reflectivity Method, Finite Difference Method.
Software	SAC, GMT, ObsPy, TauP, Madagascar, LaTeX, Mathematica.