# Kai Wang

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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.
Admitted as a recommended exam-exemption postgraduate student.

2014-2018 **B.Sc.** in Geophysics, China University of Geosciences, Wuhan, China.
Supervisor: Prof. Peimin Zhu.
The Title of the Thesis: The Android and iOS Client Design of Geomagnetic Earthquake Earning System.

## Research Experiences:

2018-present 1. Resolution analysis of blended acquisition. The conventional evaluation method of imaging resolution is not suitable for blended acquisition because of the aliasing effect between shot records. I developed a method to evaluate the imaging resolution of blended acquisition. It can help us predict the efficiency of the acquisition scheme and design the blended acquisition parameters.

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

2017-2018 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 & Honors

2018 University of Chinese Academy of Sciences Scholarship, University of Chinese Academy of Sciences, China

2018 The Second Prize of National Post-Graduate Mathematical Contest in Modeling, China Academic Degrees and Graduate Education Development Center, China **[top 14%]**

2018 Outstanding Graduation Thesis Award, China University of Geosciences, China **[top 5%]**
2017 National Encouragement Scholarship for Undergraduate Students, Ministry of Education, China **[top 5%]**
2017 The First Prize of China Undergraduate Mathematical Contest in Modelling, China Society for Industrial and Applied Mathematics, China **[top 8%]**
2017 Earth Science Elite Scholarship, China University of Geosciences, China **[top 10%]**
2015 The First Prize in Physics Competition, China University of Geosciences, China **[top 5%]**
2015 National Encouragement Scholarship for Undergraduate Students, Ministry of Education, China **[top 5%]**

## Professional Societies

2019-present Member of the Chinese Geophysical Society (CGS)

## Papers under Review & in Preparation

1. **Wang K**, Wei W, Fu L Y, Sun W J. Imaging resolution analysis of seismic blended acquisition. *Progress in Geophysics (in Chinese)* [under review]
2. **Wang K,** Wei W, Fu L Y. Amplitude-frequency response of vibrator source under different near-surface conditions [in preparation]

## Meeting Abstracts

1. **Wang K**, Wei W, Fu L Y. Spatial Resolution Analysis of Seismic Blended Acquisition. Presented at 2020 Annual Meeting of Chinese Geoscience Union (CGU), Chongqing, China

## Main Courses Taken

Advanced Mathematics; Geology; Exploration Geophysical methods; Advanced Course on Mathematical Geoscience; Theoretical Seismology; Engineering Seismology; Interior Physics of the Earth; Continuous Medium Mechanics; Digital Signal Processing; Information Theory and Machine Learning; Geomagnetism; Geoelectricity; Gravitology; Object-oriented Programming (C++); Python for Scientific Computation and Data Analysis.

## Expertise & Skills

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| **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, Madagascar, LaTeX. |