Xiaohan Song

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EDUCATION

PEKING UNIVERSITY **BEIJING, CHINA**

Bachelor of Science, School of Earth and Space Science (SESS) Sep. 2017 - Jul. 2021

RESEARCH INTERESTS

Seismology, Rupture Property, Catastrophe Analysis, Earth Evolution

PUBLICATION

The Role of the Friction Coefficients in the Granular Segregation in Small Systems

- Authors: **Xiaohan Song**, Guohui Zhang
  Powder Technology, 372, 40-47 (2020).

Evidence that the 2008 M_w 7.9 Wenchang Earthquake Could Not Have Been Induced by the Zipingpu Reservoir

- Authors: K. Deng, S.Y. Zhou, R. Wang, R. Robinson, C. Zhao, W.Z. Cheng. Translator: **Xiaohan Song**
  Translated World Seismology, 49(3), 183-194 (2018).

RESEARCH EXPERIENCE

Summer Intern on the Focal Mechanisms near Oblique Subduction Zones. July 2020 till Now

Advisor: Professor Miaki Ishii Department of Earth and Earth and Planetary Sciences, Harvard

- Classified the earthquakes near Sumatra from 2010 to 2019 with double couple assumption.

Undergraduate Research on the Focal Mechanisms in Ordos China May 2019 till Now

Advisor: Professor Li Zhao Institute of Theoretical and Applied Geophysics, PKU

- Did background research on the seismicity around Ordos block and learned the method of CAP.
- Inversed the focal mechanisms of some earthquakes around Ordos block from 2010 to 2011.
- Did research on existing suitable velocity models for the later inversion with higher completeness.
- Realized the automatization of the trace selection during the inversion process.
- Inversed the focal mechanisms of the earthquakes around Ordos block from 2010 to 2018 with body magnitudes above 3.5 using CAP, and calculated the P and T axis orientation (catalog from IRIS).

Undergraduate Research on the Segregation of Granular Materials Feb. 2018 - Sep. 2019

Advisor: Professor Guohui Zhang Institute of Heavy Ion Physics, PKU

- Did background research on the behaviors of granular materials under regular vibration.
- Learned the theory of DEM (Discrete Element Method) and the use of simulation software LIGGGHTS.
- Simulated the process of granular size segregation under a vertical sinusoidal vibration with a granular bed containing 2000 particles.
- Analyzed the variation curves of the scaling indicators by changing the friction coefficients and proposed several possible mechanisms under the size segregation.

Translating Deng's Article about the Cause of 2008 Mw 7.9 Whenchan Earthquake Dec. 2017 - May 2018

Advisor: Professor Shiyong Zhou Institute of Theoretical and Applied Geophysics, PKU

- Learned basic knowledge of seismology for the understanding of the Deng's article [1].
- Translated the paper to Chinese and published it on Translated World Seismology, Vol. 49, No. 3, May, 2018.

[1] K. Deng, S.Y. Zhou, R. Wang, R. Robinson, C. Zhao, W.Z. Cheng, Evidence that the 2008 M_w 7.9 Wenchang Earthquake Could Not Have Been Induced by the Zipingpu Reservoir, Bulletin of the Seismology Society of America, Vol. 100, No. 5B, pp. 2805-2814, Nov. 2010, doi: 10.1785/012009022