

Curriculum Vitae

Lei Sun

PhD in Geology
Department of Earth and Atmospheric Sciences, University of Houston
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Education

Doctor of Philosophy, Geology, University of Houston, 05/2018
Master of Science, Geology, University of Houston, 08/2014
Certificate in Geographic Information Systems, University of Houston, 2014
Bachelor of Science, Geochemistry, University of Science and Technology of China, 07/2011

Research Interest

Imaging spectroscopy, laser scanning, geographic information system, photogrammetry, inorganic geochemistry, unmanned aerial vehicles

Research Experience

PhD Dissertation: “Integrated Ground-based Hyperspectral Imaging, Terrestrial Laser Scanning, and Geochemical Study of Geological Outcrops”. 08/2014 - 04/2018. Advisor: Dr. Shuhab Khan.
MS Thesis: “Remote Sensing of Hydrocarbon-induced Rock Alterations at Cement Field, Oklahoma”, 08/2013 – 07/2014. Advisor: Dr. Shuhab Khan.
Undergraduate Thesis: “Phengite Rb-Sr Dating and Mineral Inclusion Study of Eclogite from the Taohang Area in Sulu Orogen”, 07/2010 – 06/2011. Advisor: Dr. Fukun Chen.

Appointments

Post-Doctoral Fellow, Department of Earth and Atmospheric Sciences, University of Houston, Houston, TX, 08/2018 to present
Teaching Assistant, Department of Earth and Atmospheric Sciences, University of Houston, Houston, TX, 08/2012 to present
Research Assistant, Department of Earth and Atmospheric Sciences, University of Houston, Houston, TX, Summer 2017, 2016, 2015, and 2014
Research Assistant, Laboratory for Radiogenic Isotope Geochemistry, Chinese Academy of Science Key Laboratory of Crust – Mantle Materials and Environments, University of Science and Technology of China, Hefei, China, 07/2011~07/2012, in Isotope Geochemistry, Geochronology, and Raman spectroscopy

Teaching Experience

Remote Sensing, fall 2017, 2016, 2015, and 2014
Introduction to GIS, spring 2018, 2017, 2016, and 2015
Mineralogy, fall 2013 and 2012
Petrography, spring 2014 and 2013
Geophysical Field Camp, summer 2016

Publications

Published in peer-reviewed journals

3. **Sun, L.**, Khan, S. D., and Godet, A. (2018). Integrated ground-based hyperspectral imaging and geochemical study of the Eagle Ford Group in West Texas. *Sedimentary Geology*, 363: 34-47

2. **Sun, L.**, Khan, S. D., Sarmiento, S., Lakshmikantha, M. R., and Zhou, H. (2017). Ground-based hyperspectral imaging and terrestrial laser scanning for fracture characterization in the Mississippian Boone Formation. *International Journal of Applied Earth Observations and Geoinformation*, 63: 222-233
1. **Sun, L.** and Khan, S. D. (2016). Ground-based hyperspectral remote sensing of hydrocarbon-induced rock alterations at Cement, Oklahoma. *Marine and Petroleum Geology*, 77:1243-1253

In review or in preparation

3. **Sun, L.** and Mann, P. Evaluation of a submarine slide offshore northwest Puerto Rico from high-resolution bathymetry as a possible trigger of the 1918 Puerto Rico Tsunami. In preparation.
2. Ahmad, S., **Sun, L.**, and Khan, S. D. X-Ray Diffraction and Remote Sensing of the Hydrocarbon Source Rocks in the Salt Range, Pakistan. In preparation.
1. **Sun, L.**, Khan, S. D., and Shabestari, P. Integrated hyperspectral and geochemical study of sediment-hosted disseminated gold at Goldstrike district, Utah. Submitted to *International Journal of Applied Earth Observations and Geoinformation*.

Conference Presentations

8. **Sun, L.**, Khan, S. D., and Godet, A., “Integrated Ground-based Hyperspectral Imaging and Geochemical Study of the Eagle Ford Group in West Texas”. AGU Fall Meeting, New Orleans, LA, 2017
7. **Sun, L.**, Khan, S. D., Sarmiento, S., and Lakshmikantha, M. R., “Fracture Characterization on Virtual Outcrop Model of Mississippian Boone Formation”. AAPG Annual Convention & Exhibition, Houston, TX, 2017
6. Crockett, M., Khan, S. D., Alonso de Linaje, V., and **Sun, L.**, “A Comparative Hyperspectral Study of Hydrocarbon Seepages near Uvalde, Texas: An Analysis of Classification Method Accuracy”. GSA South-Central Section meeting, San Antonio, TX, 2017
5. Onyango, E., Khan, S. D., Talbot, R., and **Sun, L.**, “Application of Airborne and Ground-based Hyperspectral Imaging in Detecting Methane”. GSA South-Central Section meeting, San Antonio, TX, 2017
4. **Sun, L.**, and Khan, S. D., “Ground-based Hyperspectral Imaging of the Eagle Ford Formation.” GSA South-Central Section meeting, San Antonio, TX, 2017
3. **Sun, L.**, and Khan, S. D., “Ground-based Hyperspectral Remote Sensing and Terrestrial Laser Scanning of the Eagle Ford Formation”. AAPG Annual Convention & Exhibition, Calgary, AB, Canada, 2016
2. **Sun, L.**, and Khan, S. D., “Ground-based Hyperspectral Remote Sensing and Terrestrial Laser Scanning of the Eagle Ford Formation”. Gulf Coast Association of Geological Societies 65th Annual Convention, Houston, TX, 2015
1. **Sun, L.**, Khan, S. D., Hauser, D., Glennie, C. L., Snyder, C. and Okyay, U., “Ground-based Hyperspectral Remote Sensing for Mapping Rock Alterations and Lithologies: Case Studies from Semail Ophiolite, Oman and Rush Springs Sandstone, Oklahoma”. AGU Fall Meeting, San Francisco, CA, 2014

Awards

University of Houston Scholarship for Outstanding Graduate Work in Geology, 2017
 University of Houston Outstanding Academic Achievements Scholarship in Geology, 2015
 University of Houston Hess Scholarship for Outstanding Achievement in Geology, 2013
 University of Science and Technology of China Outstanding Student Scholarship, 2010
 University of Science and Technology of China Outstanding Student Scholarship, 2009
 University of Science and Technology of China Zhao Jiuzhang Scholarship, 2008
 University of Science and Technology of China Outstanding Freshman Scholarship, 2007

Professional training

3. Faculty Development Workshop: “Developing the Diverse Department We Want: How do we cultivate it at the undergraduate, graduate, and faculty levels?” University of Houston. Apr. 2018
2. National Science Foundation Grant Writing Workshop. University of Houston, Feb. 2018
1. Faculty Development Workshop: “QUBES: Quantitative Undergraduate Biology Education and Synthesis: Integration of Quantitative Modeling”. University of Houston. Feb. 2018

Professional Services

- 2018 Reviewer, AAPG Bulletin
- 2018 Reviewer, Earth Science Reviews
- 2018 Reviewer, Arabian Journal of Geosciences
- 2018 Reviewer, Earth Science Reviews
- 2017 Reviewer, Earth Science Reviews
- 2017 Reviewer, ISPRS Journal of Photogrammetry and Remote Sensing
- 2017 Reviewer, AAPG Bulletin
- 2016 Reviewer, ISPRS Journal of Photogrammetry and Remote Sensing