Jie CHEN

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Nationality: Chinese

Professional experience

2022.01-now	Postdoc Researcher, Institut de Physique du Globe de Paris (IPGP), Université Paris Cité Topic: Numerical thermal modelling of the global mid-ocean ridge Supervisor: Mathilde Cannat and Jean-Arthur Olive

Education

2018.09-2021.12	Ph.D., Marine geophysics, IPGP, Université Paris Cité Thesis title: The impact of melt supply on fault distribution, volcanism, and the thermal regime at slow spreading ridges. Supervisor: Mathilde Cannat. Co-supervisors: Wayne C. Crawford and Jean-Arthur Olive
2015.07-2018.08	M. E., Marine geophysics, Second Institute of Oceanography, MNR Thesis title: Segmentation and melt supply along the ultraslow spreading Southwest Indian Ridge 46-53°E. Supervisor: Chunhui Tao. Co-supervisors: Tao Zhang and Huaiming Li
2011.08-2015.06	B. E., College of Marine Geosciences, Ocean University of China

Research Interests

- Mid-Ocean Ridges
- Slow and ultraslow spreading ridges
- Magmatic and tectonic processes
- High-resolution bathymetry
- Oceanic detachment faults
- Ridge segmentation
- Hydrothermal system
- Submarine volcanism
- Seismicity
- Numerical modelling
- Geological mapping
- Geographic Information System

Publications

1. **Chen J.**, Crawford W. C., and Cannat M (2023). Microseismicity and lithosphere thickness at a nearly-amagmatic oceanic detachment fault system. *Nature Communications*. https://doi.org/10.1038/s41467-023-36169-w.
2. **Chen J.**, Olive J.A., and Cannat M. (2022) Thermal Regime of Slow and Ultraslow Spreading Ridges Controlled by Melt Supply and Modes of Emplacement. *Journal of Geophysical Research: Solid Earth*. https://doi.org/10.1029/2021JB023715.

3. **Chen J.**, Cannat M., Tao C., Sauter D., and Munschy M. (2021). 780 thousand years of upper-crustal construction at a melt-rich segment of the ultraslow spreading Southwest Indian Ridge 50°28'E. *Journal of Geophysical Research: Solid Earth*. https://doi.org/10.1029/2021JB022152.
4. Ding T., Wang J., Tao C., Dias Á.A., Liang J., Wang Y., **Chen J.** et al. (2021). Trace-element compositions of sulfides from inactive Tianzuo hydrothermal field, Southwest Indian Ridge: Implications for ultramafic rocks hosting mineralization. *Ore Geology Reviews*. https://doi.org/10.1016/j.oregeorev.2021.104421.
5. Ding T., Tao C., Dias Á.A., Liang J., **Chen J.** et al. (2021). Sulfur isotopic compositions of sulfides along the Southwest Indian Ridge: implications for mineralization in ultramafic rocks. *Mineralium Deposita*. https://doi.org/10.1007/s00126-020-01025-0.
6. Li, H., Tao, C., Yue, X., Baker, E.T., Deng, X., Zhou, J., Wang, Y., Zhang, G., **Chen, J.** et al. (2020). Enhanced hydrothermal activity on an ultraslow-spreading supersegment with a seismically detected melting anomaly. *Marine Geology*. https://doi.org/10.1016/j.margeo.2020.106335.
7. **Chen J**, Tao C, Liang J, et al., (2018). Newly discovered hydrothermal fields along the ultraslow-spreading Southwest Indian Ridge around 63°E. *Acta Oceanologica Sinica*. https://doi.org/10.1007/s13131-018-1333-y.

Submitted / Under review / In press

1. **Chen J.**, Zhang T., Li H., Tao C., Cannat M., and Sauter D., Evolution of enhanced magmatism at the ultraslow spreading Southwest Indian Ridge between 46°E and 53.5°E. Submitted to *Tectonophysics*.
2. **Chen J.**, Zhang T., Tominaga M., Escartin J., and Kang R., Ocean Sciences with the Spilhaus Projection: A Seamless Ocean Map for Spatial Data Recognition. Submitted to *Scientific Data*.

Conferences Abstract

1. Cannat M, **Chen J**, and Olive JA. Beyond Spreading Rate: Controls on the Thermal Regime of Mid-Ocean Ridges. AGU, 2022.
2. **Chen J**, Li J, Zhang T, Niu X, Ding W, and the Jasmine team. Chen J, Cannat M, and Olive JA. Beyond Spreading Rate: Controls on the Thermal Regime of Mid-Ocean Ridges. AGU, 2022.
3. **Chen J**, Cannat M, and Olive JA. Beyond Spreading Rate: Controls on the Thermal Regime of Mid-Ocean Ridges. Ocean Floor Symposium, 2022.
4. Cannat M, **Chen J**, and JA Olive. The thermal regime of mid-ocean ridges: geological perspectives and numerical modelling. EGU, 2022.
5. **Chen J**, Crawford W C, and Cannat M. Microseismicity constraints on brittle lithosphere thickness at a nearly amagmatic spreading corridor of the ultraslow Southwest Indian Ridge. AGU, 2020.
6. **Chen J**, Cannat M, and Tao C. 780-thousand years of volcanic seafloor accretion at a melt-rich segment of the ultraslow-spreading Southwest Indian Ridge 50°28'E. AGU, 2019.
7. **Chen J**, Li H, Zhang T, et al., Characteristics and mechanisms of magma supply along Southwest Indian Ridge between 46°E and 52.3°E. CGU, 2017.

Invited Presentations

2022.06	Second Institute of Oceanography, MNR
2021.09	Southern University of Science and Technology
2021.06	Institut de Physique du Globe de Paris, Université Paris Cité

Sea-going Experience

Pourquoi Pas? Momarsat19 at Mid-Atlantic Ridge, June 10-July 4, 2019

XueLong icebreaker, Trial in the Pacific Ocean, July 7-14, 2017

Funding

2018.09-2021.10 China Scholarship Council (CSC)

Supervising and mentoring

Daoxin Su Master student (2022.01-2022.06, Second Institute of Oceanography)

Kaixuan Yan Master student (2022.01-2022.06, Second Institute of Oceanography)

Relevant Skills & Others

Computer Skills: GMT, Global Mapper, MATLAB, ArcGIS, Bash shell, Python, SEISAN, Cloud computation

Language: Chinese (native), English (fluent), French (beginner)

Hobby: Chinese Kungfu – Meihuazhuang