

Peng JIANG

Assistant Faculty Specialist • MAS Early Career Scholar • Department of Earth Sciences • University of Hawai'i at Mānoa

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Education

- **Ph.D.** (Geology), University of Florida (UF), **2022**.
Co-Advisors: David A. Foster and Michael Perfit
- **M.S.** (Mineralogy, Petrology & Economic Geology), Institute of Geology and Geophysics, Chinese Academy of Sciences (IGGCAS), **2017**.
Co-Advisors: Hongrui Fan and Kuifeng Yang
- **B.S.** (Geology), China University of Geosciences (CUG), **2013**.
Co-Advisors: Changqian Ma and Jianwei Li

Research Interests and Projects

- Research Interests:
 - ✚ Petrochronology, Geochemistry, Accessory minerals, Microanalysis, Giant gold mineralization, Crust evolution and Craton destruction, Orogenesis and metamorphism, Oceanic magmatism and mantle source characteristics, Tectonics, Thermodynamic-geochemical modeling, Experimental petrology, etc.
- Research Projects: (See [web](#) for details)
 - ✚ Olivine geochemistry study as a probe into mantle source characteristics and magmatic differentiation in East Pacific Rise 2020-present
 - ✚ Monazite petrochronology study in Damara Orogen to gain insights into monazite growth mechanism and tectonic evolution 2019-present
 - ✚ Method Developments on high-precision and high accuracy EPMA and LA-(MC)ICP-MS elemental and isotopic analyses on accessory minerals (monazite, zircon, olivine, etc.) 2017-present
 - ✚ Hydrothermal monazite and metal sulfides geochemical study to constrain the timing of gold mineralization and mechanisms for Au deposition 2014-2017
 - ✚ Titanite petrochronology study as a probe into the tectono-magmatic evolution in Jiaodong during destruction of North China Craton 2013-2016

Professional Position / Experience

- Assistant Faculty Specialist, Electron Microprobe Lab Manager 2022-present
- Convener & Chair of 2022 Goldschmidt session “The Formation, Dynamics, and Influence of Magmatic Systems in the Oceanic Crust”, Hawaii 2022
- Chair of 2021 AGU session “The Dynamics of Magmatic Plumbing Systems”, NOLA 2021
- Graduate research assistant, University of Florida 2017-2022
- Journal reviewer for *American Mineralogists*, *Journal of African Earth Sciences*, *Ore Geology Reviews*, *Geological Magazine*, etc. 2016-2017
- Graduate research assistant, Chinese Academy of Sciences 2014-2017

- Undergraduate research assistant, China University of Geosciences 2012-2013

Honors and Awards

- ❖ Fellowship, scholarships, and awards so far reach around **\$26,083.33**
 - UF Dissertation Scholarship (\$8,266) 2022
 - UF pre-doctoral *MOU Fellowship* (\$10,124.33) 2021-22 & 2019
 - *Honorary Mention* at the NanoFlorida 2020 Conference 2020
 - *MAS (Microanalysis Society) Early Career Scholar* 2019
 - *Research Publication Awards* (¥23,000; c. \$3,289) from IGGCAS 2019 & 2017
 - *National Graduate Scholarship* (¥20,000; c. \$2,860) for Master student (China) 2016
 - *Merit Student* at IGGCAS 2014
 - *Tsang Hin-chi Scholarship* (¥3,600*3; c. \$1,544) for successive three years 2010-2012
 - *University-level Outstanding Student* (three times) at CUG 2010-2012
 - *Excellent Intern for Zhoukoudian Geological Internship* (CUG) 2011

Grants and Funds

- ❖ Travel & Research grants/funds so far reach **\$158,407.22**
 - University of Hawai'i at Mānoa start-up fund, \$150,000 2022-2025
 - Land Use and Environmental Change Institute (LUECI) funds (4 times), \$1,300 2018-2022
 - UF Graduate Student Council (GSC) Travel Grant (3 times), \$1050 2018, 2021, 2022
 - UF Geological Department Travel Grant (4 times), \$1100 2018-2022
 - UF College of Liberal Arts and Sciences (CLAS) Travel Grant (twice), \$600 2019, 2022
 - Geological Society of America (GSA) Graduate Student Research Grants (\$1,240) 2020
 - UF Geological Department Research Grants (\$1,000) 2020
 - UF Geological Department Chair's funding for Conference Travel Support, \$640 2019
 - MAS Quantitative Microanalysis 2019 Topical Conference Travel Grant, \$748 2019
 - UCLA SIMS Workshop Travel Grant, \$535 2019

Manuscripts in Preparation (to be submitted)

[Google Scholar](#)

[Research Gate](#)

[ORCID](#)

- [Jiang, P.](#), Foster, D.A., Goscombe, B., Kamenov, G., and Trucco, A. (202x) Episodic and semi-continuous monazite growth within an orogenic cycle: Insights from variously correlated Th-U-Y-Ce zonation and U-Pb dates. *To be submitted*.
- [Jiang, P.](#), Perfit, M., Anderson, M., Kamenov, G., Herzberg, C., and Trucco, A. (202x) Major and trace elements in Seamount Olivine: Proxies reveal the 'missing pyroxenite' and mantle metasomatism beneath the East Pacific Rise. *To be submitted*.

Manuscripts under Review / in Revision / Accepted

- Peng, H.W., Fan, H.R., Lai, J.Q., [Jiang, P.](#), Yang, Y.H., Wu, S.T. (202x) Post-deposition hydrothermal alteration and U-Pb isotopic resetting of wolframite in the Tiantangshan deposit, Nanling Range (south China): implications of complex isotopic ages. *Ore Geology Reviews* (under review).

- Zhang, Y.W., Fan, H.R., Li, L., Li, Q.L., Hu, F.F., Cai, Y.C., **Jiang, P.**, Feng, K. (202x) Archean atmospheric sulfur stocked in the Cretaceous gold deposits. *Geochimica et Cosmochimica Acta* (under review after revision).
- **Jiang, P.**, Foster, D.A., Perfit, M, and Trucco, A. (202x) Improved analytical protocols for monazite Th-U-total Pb chemical dating and Ti-in-zircon thermometry by electron microprobe. *Chemical Geology* (in revision).

Peer-Reviewed Papers

- **Jiang, P.**, Perfit, M., Foster, D.A., and Trucco, A. (2022) Accurate analyses of key petrogenetic minor and trace elements in olivine by electron microprobe. *Chemical Geology*, 614, 121199. [Link](#)
- Goscombe, B., Foster, D.A., Kelsey D., Wade, B., Gray, D., Mulrooney, L., **Jiang, P.**, Haseler M., Marsellos A. (2022) Episodic intra-continental reactivation during collapse of a collisional orogen: the Damara Belt, Namibia. *Gondwana Research* (invited review), 109, 285-375. [Link](#)
- Peng, H.W., Fan, H.R., **Jiang, P.**, Hu, H.L. and Lan, T.G. (2021) Two-stage rollbacks of the paleo-Pacific plate beneath the Cathaysia block during Cretaceous: Insights from A-type granites and volcanic rocks. *Gondwana Research*, 97, 158-175. [Link](#)
- Peng, H.W., Fan, H.R., Santosh, M., Hu, F.F. and **Jiang, P.** (2020) Infrared microthermometry of fluid inclusions in transparent to opaque minerals: challenges and new insights. *Mineralium Deposita*, 55, 1425-1440. [Link](#)
- Yang, K.F., **Jiang, P.***, Fan, H.R., Zuo, Y.B. and Yang, Y.H., (2018). Tectonic transition from a compressional to extensional metallogenic environment at~ 120 Ma revealed in the Hushan gold deposit, Jiaodong, North China Craton. *Journal of Asian Earth Sciences*, 160, 408-425. [Link](#)
- Feng, K., Fan, H.R., Hu, F.F., Yang, K.F., Liu, X., Shangguan, Y.N., Cai, Y.C. and **Jiang, P.** (2018) Involvement of anomalously As-Au-rich fluids in the mineralization of the Heilan'gou gold deposit, Jiaodong, China, Evidence from trace element mapping and in-situ sulfur isotope composition. *Journal of Asian Earth Sciences*, 160, 304-321. [Link](#)
- Ma, W.D., Fan, H.R., Liu, X., Pirajno, F., Yang, K.F., Xu, W.G., Yang, Y.H., and **Jiang, P.** (2017). Geochronological framework of the Xiadian gold deposit in the Jiaodong province, China: Implications for the timing of gold mineralization. *Ore Geology Reviews*, 86, 196-211. [Link](#)
- **Jiang, P.**, Yang, K.F., Fan, H.R., Liu, X., Cai, Y.C., and Yang, Y.H. (2016). Titanite-scale insights into multi-stage magma mixing in Early Cretaceous of NW Jiaodong terrane, North China Craton. *Lithos*, 258, 197-214. [Link](#)

* **NOTE: Co-first author. Contribute equally to the paper.**

Selected Conference Abstracts

- **Jiang, P.**, Perfit, M., Anderson, M., Kamenov, G., and Trucco, A. (2022) "Probing" mantle source compositions and melt evolution beneath the northern East Pacific Rise using olivine geochemistry. *Goldschmidt 2022*, 5fT2 (Oral).
- **Jiang, P.**, Perfit, M., Anderson, M., Kamenov, G., and Trucco, A. (2021) Unraveling MORB petrogenesis along the East Pacific Rise (EPR) 8°20' N Seamounts and Siqueiros Transform: Insights from olivine minor and trace element geochemistry. *AGU Abstracts*, V54B-03 (Oral, Highlighted). [Link](#)
- **Jiang, P.**, Foster, D.A., Goscombe, B., Kamenov, G., and Trucco, A. (2021) Episodic and continuous monazite growth within an orogenic cycle: A monazite petrochronology case study in the central Damara Orogen. *AGU Abstract*, T15E-0213. [Link](#)
- **Jiang, P.**, Foster, D.A., Perfit, M., and Trucco, A. (2020) Pushing the boundaries for electron

microprobe: sub-micron scale high-precision and high accuracy minor and trace element analysis.

NanoFlorida 2020 Conference abstract. (Received “Honorary Mention” for the conference) [Link](#)

- [Jiang, P.](#), Foster, D.A., Goscombe, B. and Trucco, A. (2019) Monazite Growth in Response to Metamorphic and Deformation Events at Different Structural Levels. *AGU Abstracts*, V52B-03 (Oral).
- [Jiang, P.](#), Foster, D.A., Perfit, M., and Trucco, A. (2019) Capability of Cameca SXFive Field Emission EPMA in Acquiring High-precision and High-accuracy Minor and Trace Elemental Data at High Spatial Resolution. *MAS Quantitative Microanalysis 2019 Topical Conference Abstracts*, 118-119. [Link](#)
- [Jiang, P.](#), Foster, D.A., Perfit, M., and Trucco, A. (2018) Application of High Spatial Resolution Major and Trace Element Analyses of Accessory Minerals in Metamorphic Tectonites by Electron Microprobe. *GSA Abstracts with Programs*, 50 (6).
- [Jiang, P.](#), Yang, K.F., Fan, H.R., and Liu, X. (2016) Magma mixing, mingling and its accompanying isotopic and elemental partitioning: Records from titanites in Guojialing-type granodiorites and dioritic enclaves, Jiaodong, North China. *AGU Abstracts with Programs*, V23B-2971.
- [Jiang, P.](#), Yang, K.F., Fan, H.R., Liu, X., et al. (2016) Superimposed gold mineralization triggered by multi-stage fluids in Heilangou deposit, Jiaodong: Insights from Au-bearing sulfide geochemistry and fluid inclusions in quartz. *18th National Conference for Inclusions and Geofluids Abstracts* (Oral).
- [Jiang, P.](#), Yang, K.F., Fan, H.R., Liu, X., et al. (2016) A record of ~120 Ma compressional-extensional metallogenic environmental transition: Implications for a two-stage superimposed mineralization of Hushan gold deposits, Jiaodong. *13th National Conference for Mineral Deposits Abstracts* (Oral).

Invited Talks/Seminars

- *Academic job searching seminar* for graduate students at IGGCAS Nov 2022
- *PhD defense talk* for graduate students at the University of Caldas Oct 2022
- *Geological Sciences Brownbag Seminar Series – EPMA method development*, UF Sep 2020
- *Geological Sciences Brownbag Seminar Series – Titanite petrochronology*, UF Sep 2017
- *Annual Research Symposium of Key Laboratory of Mineral Resources (2016)*, IGGCAS Jan 2017

Teaching Experience

- ** Awarded the “Ernst Award” by the department as an *outstanding teaching assistant* 2021
- ESC1000 – *Introduction to Earth Science*, Graduate Teaching Assistant, UF 2022
- GLY3200C – *Principles of Mineralogy*, Graduate Teaching Assistant, UF 2021
- GLY4310C – *Igneous and Metamorphic Petrology*, Graduate Teaching Assistant, UF 2021
- GLY3200C – *Principles of Mineralogy*, Graduate Teaching Assistant, UF 2020
- GLY4310C – *Igneous and Metamorphic Petrology*, Graduate Teaching Assistant, UF 2020
- GLY3200C – *Principles of Mineralogy*, Graduate Teaching Assistant, UF 2019

Students Mentored

- *Denali Kincaid*, last-year undergraduate at UF. (Guided her with EPMA mount preparation, EPMA MORB glass analysis, data reduction, and AGU poster revision, etc.) 2021
- *Jiaying Wu*, previous graduate student at NUS (now at UIUC). (Mentored her for academic

- career preparation, overseas university DIY application, paper writing, etc.) 2018-2021
- *Hong-Wei Peng*, previous graduate student at IGGCAS. (Guided him with data reduction, data interpretation, paper manuscript writing and revision, etc.) 2018-2021
- *Kai Feng*, previous graduate student at IGGCAS. (Guided him with LA-ICP-MS, EPMA and SIMS experiments, helped with data reduction and interpretation, etc.) 2016-2017

Professional Development & Training

- Goldschmidt *AlphaMELTS 2* Thermodynamic Modeling workshop attendee (Hawaii) 2022
- UF Graduate Professional Development, *Fall 2021 Writing Program*, participant 2021
- “*Phase Equilibrium Modeling: Approaches and Pitfalls*” workshop attendee (virtual) 2021
- 2nd International Workshop on EPMA-ATHENS attendee (virtual) 2021
- Goldschmidt Virtual Diffusion Workshop 2020 attendee 2020
- UF “*Science Communication*” workshop attendee, Gainesville, Florida, USA 2020
- UCLA SIMS Workshop attendee, Los Angeles, California, USA 2019
- USTC Isotopic Geochronology Short Course attendee, Hefei, Anhui Province, China 2013

Professional Field Experience

- Mineralogy Field Trip to North Carolina and Georgia (Mineralogy course; Co-leader) 2021
- Death Valley National Park field study (~2weeks) 2018
- Jiaodong scientific field investigation and sampling (4 field seasons, ~8 weeks in total) 2013-2016
- Graduation internship in Tieshan and Jinshandian Fe-skarn deposits (Hubei) (~7weeks) 2012
- Hong ‘an ultra-high pressure (UHP) metamorphic rocks’ field study (2 days) 2011
- Zhoukoudian comprehensive field study and independent geologic mapping (~6 weeks) 2011
- Granitoids observations and sampling in South China (Zhejiang-Fujian) (2 weeks) 2011
- Beidaihe cognitive geologic field study (~2 weeks) 2010

Public Outreach & Extracurricular Activities and Honors

- Florida Museum (at UF) *Can You Dig It* annual event, Instructor on Volcano “eruption” 2022
- *Speed Mentoring Event* for grads and undergrads, UF, Participant 2021
- Florida Museum (at UF) *Can You Dig It* annual event, Instructor on AR sandbox 2019
- K-12 students’ “*Earth Science Popular Science Education*” at IGGCAS, Invited presenter 2016
- “English Salon Night” at IGGCAS, Principal organizer 2014-2015
- *Second Prize* for “*National University Student Arts Festival*” (in China), Orchestra team 2012
- Chinese traditional orchestra concerts (five times), Orchestra team and Solo (or lead) 2010-2012
- Social practice survey on “*Wuhan Hanzheng Street Removal*”, *Third Prize*, Organizer 2011