

## A. ALEXANDER G. WEBB ---- CURRICULUM VITAE

### **PERSONAL INFORMATION**

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Google Scholar: <https://scholar.google.com/hk/citations?user=-KDK-pcAAAAJ&hl=en>

### **EMPLOYMENT**

2024 – present: Professor of Tectonics and Tectonophysics, Freie Universität Berlin  
2016 – 2024: Associate Professor, University of Hong Kong  
2015 – 2016: Associate Professor, University of Leeds  
2014 – 2015: Associate Professor, Louisiana State University  
2014: Visiting Professor, Nanjing University  
2008 – 2014: Assistant Professor, Louisiana State University  
2007 – 2008: Lecturer, University of California, Los Angeles

### **EDUCATION**

2008 Postdoctoral scholar, *Thermochronology*, University of California, Los Angeles  
2007 Ph.D, *Geology*, University of California, Los Angeles  
2001 B.A. *Geology*, Amherst College

### **RESEARCH INTERESTS**

Our research group explores tectonic processes and their interactions with other planetary systems. Early work focused on testing and developing models for the construction of the Himalaya, Earth's premier natural laboratory of continent-continent collision. Continuing Himalayan research centers on Earth system interactions across the mountains, from mantle dynamics to the development of biodiversity. More recently a major interest has been tectonics of early Earth and development of hot terrestrial planets – for which rapid volcanic resurfacing appears to be a major, underappreciated control on long-term evolution. Other ongoing projects explore (a) salt extrusion dynamics and surface processes in China, Iran, and Israel, and (b) tectonic, climatic, and anthropogenic impacts on the Mississippi River delta.

### **RESEARCH APPROACH**

We use geologic mapping integrated with analytical research to dissect the architecture and evolution of complex tectonic systems. Principal analytical tools are geo-/thermo-chronology and balanced palinspastic reconstruction, by which timing, rates, and magnitudes of deformation are determined. As our range of interests expands, we increasingly pursue collaborative research employing a range of techniques (e.g., geochemistry, geodesy, numerical modeling, petrology, remote sensing, sedimentology).

## **EXTERNAL RESEARCH FUNDING**

- 2023-2026: Integrated study of rare-metal bearing granitoids across the Central Khentey region, Mongolia, (PI Webb), **General Research Fund of the Hong Kong Research Grants Council**, HK\$ 877,079 [~ US\$ 111,950].
- 2022-2025. Collaborative Research: Resolving conflicting thermobarometry and stratigraphy in the Tethyan Himalaya: is non-lithostatic pressure during orogenesis preserved at crustal scales? (PIs Victor Guevara, Peter Haproff, Andrew Zuza; Webb is external collaborator and responsible for ~50% of the project conceptualization), **U.S.A. National Science Foundation Tectonics program**, US\$ 574,221 [~HK\$ 4,507,500].
- 2022-2024. Exploring mantle-crust interactions through time during subduction via modelling: the Himalaya case study, (Hong Kong PI Webb, France PI Laurent Husson), **PROCORE - France/Hong Kong Joint Research Scheme of the Hong Kong Research Grants Council**, HK\$ 86,400 [~ US\$ 11,100] (in addition, €8,000 was awarded to France PI Husson).
- 2021-2025. Tectonics Research: Lithospheric Dynamics & Planetary System Interactions, (PI Webb), **Research Matching Grant Scheme of the Hong Kong Research Grants Council**, HK\$ 4,031,719 [~US\$ 519,300].
- 2021-2025. Continental Lithosphere: a Broadscale Investigation (CoLiBrI), (PI György Hetényi – U. Lausanne, Switzerland; Webb is Key Partner), **International Lithosphere Program (ILP)**, €16,000, ~HK\$ 134,200 [~US\$ 17,300].
- 2020-2022. Remote Characterization of groundwater storage changes using geophysical observations and Modelling of Poroelastic processes in Aquifers, under Compaction and Transient groundwater flow conditions (COMPACT), (PI Pablo Gonzalez, CSIC, Spain; Webb is research group member), **Call for "Proyectos de I+D+i Retos Investigación" (Society Challenges R+D projects), Spanish Ministry of Science, Innovation and Universities**: € 125,000, ~HK\$ 1,179,200 [~US\$ 140,700].
- 2018-2022. Early Earth's tectonic processes: quantifying deformation patterns across the Isua supracrustal belt, SW Greenland, (PI Webb), **General Research Fund of the Hong Kong Research Grants Council**, HK\$ 505,298 [~ US\$ 64,400].
- 2018-2021. Impacts of focused erosion on crustal dynamics along the Sutlej River, NW Indian Himalaya, (PI Webb), **General Research Fund of the Hong Kong Research Grants Council**, HK\$ 522,898 [~ US\$ 67,000].
- 2015-2019. Collision orogenic dynamics: Three-dimensional tectonic model, metamorphism and anatexis of Greater Himalaya (middle Nepal) exhumation process, (PI Xu Zhiqin of Nanjing University; Webb is an external collaborator), **National Natural Science Foundation of China** (grant #41430212), RMB 3,550,000, ~HK\$ 4,261,000 [~ US\$ 523,000].
- 2015-2018. Exhumation history of the Indian Lesser Himalaya: Discriminating tectonic models with implications for the Neogene isotopic composition of seawater, (PI Ryan McKenzie; Webb was Co-PI, became external collaborator upon migration to the UK), **U.S.A. National Science Foundation Tectonics program**, US\$ 361,773, ~HK\$ \$2,839,700.
- 2013-2016. Development of the Himalayan superstructure, northwestern India, (PI Webb), **U.S.A. National Science Foundation Tectonics program**, US\$ 139,970, ~HK\$ 1,098,700.
- 2013-2016. Exploring salt tectonics and surface processes, Kuqa fold-thrust belt, western China, (PI Webb), **American Chemical Society, Petroleum Research Fund: New Directions**, US\$ 100,000, ~HK\$ \$784,900.
- 2012-2015. Evaluating Mountain-Building Mechanisms in Northwest India and Southeast Tibet, (PI Webb), **Research Competitiveness Subprogram, Louisiana Board of Regents**, US\$ 124,675, ~HK\$ 978,600.

## **INTERNAL RESEARCH FUNDING**

- 2023-2025: Unroofing of the Southern Ecuadorian Andes: causes and consequences, (PI Webb), **Seed Fund for Basic Research, University Research Committee of the University of Hong Kong**, HK\$ 64,000 [~ US\$ 8,180].
- 2023-2024: Climatic controls on lithium placers: erosion and deposition in the Central Khentey Belt, Mongolia, **Dr. Stephen S.F. Hui Trust Fund**, HK\$ 100,000 [~US\$ 12,700].
- 2022-2024: Testing Miocene lateral growth of the Himalayan mountains via molecular phylogenetic study, **Seed Fund for Basic Research, University Research Committee of the University of Hong Kong**, HK\$ 61,500 [~ US\$ 7,840].
- 2022-2023: Lamp for analogue mantle modelling project, (PI: Webb), **Additional Funding from RGC for Supporting Research Needs of HKPFS Awardees in 2021/22 (First Round)**, HK\$ 20,000 [~US\$ 2,550].
- 2021-2023: Surface records of structural development across the Kuqa fold-and-thrust belt, NW China, (PI: Webb), **Seed Fund for Basic Research, University Research Committee of the University of Hong Kong**, HK\$ 71,040 [~ US\$ 9,200].
- 2020-2022: Tectonic highlands, tessera, and coronae on Venus, (PI Webb), **Seed Fund for Basic Research, University Research Committee of the University of Hong Kong**, HK\$ 97,060 [~ US\$ 12,500].
- 2020-2022: Europe Travel Grant, (PI Webb), **Faculty of Science, University of Hong Kong**, HK\$ 20,000 [~ US\$ 2,600].
- 2020-2023: Impacts of Pliocene–Pleistocene global climatic events on tropical deep-sea biota: Investigation based on IODP Expedition 363 Western Pacific Warm Pool, (Project Leader Moriaki Yasuhara, Webb is Co-Leader), **Research Assessment Exercise Improvement Fund, Faculty of Science, University of Hong Kong**, HK\$ 200,000 [~ US\$ 25,700].
- 2020-2023. Establishing multi-disciplinary HKU expertise, data, and sample collections across Earth’s oldest terrane, the Isua supracrustal belt, (PI Webb), **Research Assessment Exercise Improvement Fund, Faculty of Science, University of Hong Kong**, HK\$ 400,000 [~ US\$ 51,000].
- 2019-2021. Seed funding to search for Hadean-type “fingerprints” in Archean zircons, (PI Webb), **Seed Fund for Basic Research, University Research Committee of the University of Hong Kong**, HK\$ 66,570 [~ US\$ 8,500].
- 2019-2020. The metamorphic conditions of Earth’s oldest iron ore deposit, Isua, SW Greenland, (PI Webb), **Grant for International Researchers, State Key Laboratory for Mineral Deposits Research, Nanjing University**, RMB 100,000 [~ US\$ 15,000].
- 2018-2020. Exploring rainfall’s potential impacts on motion of surface salt structures at Kuqa, NW China, (PI Webb), **Seed Fund for Basic Research, University Research Committee of the University of Hong Kong**, HK\$ 111,050 [~ US\$ 14,150].
- 2018-2019. Seeking one more “4” for Earth & Planetary Sciences, (PI Webb), **Faculty Research Assessment Exercise Improvement Fund, Faculty of Science, University of Hong Kong**, HK\$ 48,000 [~ US\$ 6,100].
2018. Acquisition of a Thermo Scientific iCAP Qc Quadrupole ICP-MS, (Co-I; PI is R. McKenzie), **Small Equipment Grant, University of Hong Kong**, HK\$ 531,911 [~ US\$ 67,800].
- 2017-2018. Micro-structure Analysis on Ancient Rocks from Isua, Southwestern Greenland and Pilbara, Western Australia, (PI Webb), **Pilot Scheme on International Experience for RPg Students**, HK\$ 10,000 [~ US\$ 1,300].
- 2017-2018. Tectonic development of the early Earth: the view from Isua, Greenland, (PI Webb), **Seed Fund for Basic Research, University Research Committee of the University of Hong Kong**, HK\$ 150,000 [~ US\$ 19,000].

## DONATIONS

2020. Arranged donation of geological exploration software [10 sets of the MOVE suite of reconstruction programs] from Petroleum Experts Ltd to the University of Hong Kong. The equivalent value is £2,082,391.97 [~ HK\$ 21.2 million, ~US\$ 2.7 million]. See press release at: [www.hku.hk/press/press-releases/detail/21635.html](http://www.hku.hk/press/press-releases/detail/21635.html)

## EDITORIAL BOARDS / BOOK EDITING

- The Archean Earth (planned Elsevier volume), Editor, 2021-present.
- Earth and Planetary Science Letters, Editor, 2020-present.
- Frontiers in Earth Science, Research Topic “Mountain Building,” Editor, 2020-2021.
- Journal of Geophysical Research: Solid Earth, Associate Editor, 2017-2020.
- Journal of Asian Earth Sciences, Associate Editor, 2016-2019.

## AWARDS AND HONORS

- Research Output Prize in the Faculty of Science, HKU, 2021
- Excellence in Teaching Award, Department of Earth & Space Sciences, UCLA, 2005-2006
- National Science Foundation Graduate Research Fellowship, 2002-2005
- Pauley Fellowship, UCLA, 2001-2002, 2005-2006

## PUBLICATIONS

(underlined name = directly supervised student or postdoctoral scholar; \* = corresponding author, if not also first author)

[ <https://scholar.google.co.uk/citations?user=-KDk-pcAAAAJ&hl=en> ]

*In revision:* Cheng, H.C.J., \***Webb, A.A.G.**, Michalski, J.R., Moore, W.B., New mapping along Ishtar Terra margins: use and limits of Magellan SAR data for testing Venus crustal plateau formation models. *Journal of Geophysical Research: Planets*.

*In review:* Pandit, M.K., Sen, S., Manish, K., \***Webb, A.A.G.**, Clift, P.D., Condamine, F.L., Hoorn, C., Bawa, K.S., Knoll, A.H., Toward a unified physical and biological understanding of plant diversity and distribution across the Himalaya-Tibet-Hengduan Mountain region. *Nature Geoscience*.

*In review:* Ramírez-Salazar, Sorger, D., A., Müller, T., A., Piazzolo, S., **Webb, A.A.G.**, Zuo, J.-W., Millar, I., Willbold, M., Haproff, P.J., Geochronology of the Isua supracrustal belt, SW Greenland, reveals a late Archean age for its main tectonometamorphic event. *Lithos*.

*In review:* Ramírez-Salazar, A., Piazzolo, S., Müller, T., Sorger, D., Zuo, J.-W., Dey, J., **Webb, A.A.G.**, Haproff, P.J., Quantitative microstructural and chemical analyses reveal compositional and mineralogical effects on inclusion-rich garnet growth in medium-grade rocks: An example from the Isua supracrustal belt, Greenland. *Contributions to Mineralogy and Petrology*.

46. Wei, X.-C., Chen, H.-L., Garzanta, E., **Webb, A.A.G.**, McKenzie, N.R., Wang, P., 2024, Limitations of provenance diagnoses and maximum-depositional-age constraints based on detrital-zircon geochronology: the fertility bias. *Terra Nova*, doi: 10.1111/ter.12720

45. Liu, S., Zhang, G., Zhang, L., **Webb, A.A.G.**, 2023, Omphacite melting and the destruction of early high-pressure rock records. *Journal of Geophysical Research – Solid Earth*, v. 128, doi:10.1029/2023JB027395

44. Yip, M.W., **Webb, A.A.G.**, González, P.J., 2023, Quantized compression of SAR data: Bounds on signal fidelity, InSAR PS candidates identification and surface motion

- accuracy. *International Journal of Applied Earth Observation and Geoinformation*, v. 125, doi:10.1016/j.jag.2023.103548
43. Chu, Y.Y.Y., Michalski, J., **Webb, A.A.G.**, 2023, The geology of Eden Patera, a type-example of plains style caldera complexes on Mars. *Journal of Geophysical Research – Planets*, v. 128, doi:10.1029/2022JE007337
  42. Zuo, J.-W., \***Webb, A.A.G.**, Chin, E.J., Ackerman, L., Harvey, J., Haproff, P.J., Müller, T., Wang, Q., Hickman, A.H., Sorger, D., Ramírez-Salazar, A., 2022, Earth's earliest phaneritic ultramafic rocks: mantle slices or crustal cumulates? *Geochemistry, Geophysics, Geosystems*, v. 23, doi:10.1029/2022GC010519
  41. Adeoti, B., \***Webb, A.A.G.**, 2022, Geomorphology of contractional salt tectonics along the Kuqa fold-thrust belt, northwestern China: testing pre-kinematic diapir versus source-fed thrust and detachment fold models. *Journal of Structural Geology*, v.161 doi:10.1016/j.jsg.2022.104638
  40. Zhang, G., Wang, J., **Webb, A.A.G.**, Zhang, L., Liu, S., Wu, C., Wang, S., 2022, The protoliths of central Himalayan eclogites. *Geological Society of America Bulletin*, v. 134, p. 1949-1966.
  39. Zuo, J.-W., \***Webb, A.A.G.**, Johnson, T.E., McKenzie, N.R., Kirkland, C.L., Ng, H.C., Lo, C.Y., 2021, Model versus measured detrital zircon age signatures of the early Earth. *Earth and Planetary Science Letters*, v. 575 doi:10.1016/j.epsl.2021.117182
  38. Omale, A., Lorenzo, J., Clift, P., **Webb, A.A.G.**, 2021, Fault kinematics: A record of tectono-climatically controlled sedimentation along passive margins, an example from the US Gulf of Mexico. *Geological Society of America Bulletin*, v. 133, p. 2226-2240.
  37. Chu, Y.Y.Y., Michalski, J., Wright, S., **Webb, A.A.G.**, 2021, Caldera collapse and volcanic resurfacing in eastern Arabia Terra provide hints of vast under-recognized early Martian volcanism. *Geophysical Research Letters*, v. 48, e2021GL093118.
  36. Zuo, J.-W., \***Webb, A.A.G.**, Piazzolo, S., Wang, Q., Müller, T., Ramírez-Salazar, A., Haproff, P.J., 2021, Tectonics of the Isua supracrustal belt 2: Microstructures reveal distributed strain in the absence of major fault structures. *Tectonics*, v. 40, e2020TC006514.
  35. Ramírez-Salazar, A., Müller, T., Piazzolo, S., **Webb, A.A.G.**, Hauzenberger, C., Zuo, J.-W., Haproff, P.J., Harvey, J., Wong, T.K., Charlton, C., 2021, Tectonics of the Isua supracrustal belt 1: P-T-X-d constraints of a poly-metamorphic terrane. *Tectonics*, v. 40, e2020TC006516.
  34. Shen, T., Wang, G., Replumaz, A., Husson, L., **Webb, A.A.G.**, Bernet, M., Leloup, P.H., Zhang, P., Mahéo, G., Zhang, K., 2020, Miocene subsidence and surface uplift of southernmost Tibet induced by Indian subduction dynamics. *Geochemistry, Geophysics, Geosystems*, v. 21, doi:10.1029/2020GC009078
  33. Tang, C.A., \***Webb, A.A.G.**, Moore, W.B., Ma, T.H., Wang, Y.Y., Chen, T.T., 2020, Breaking Earth's shell into a global plate network. *Nature Communications*, v.11, 3621, doi:10.1038/s41467-020-17480-2
  32. Colleps, C., McKenzie, N.R., Horton, B.K., **Webb, A.A.G.**, Ng, Y.W., Singh, B.P., 2020, Sediment provenance of pre- and post-collisional Cretaceous-Paleogene strata from the frontal Himalaya of northwest India. *Earth and Planetary Science Letters*, v. 534 doi:10.1016/j.epsl.2020.116079
  31. **Webb, A.A.G.**, Müller, T., Zuo, J.-W., Haproff, P., Ramírez-Salazar, A., 2020, A non-plate tectonic model for the Eoarchean Isua supracrustal belt. *Lithosphere*, v. 12, p. 166-179.
  30. Clift, P.D., **Webb, A.A.G.**, 2019, A history of the Asian Monsoon and its interactions with solid Earth tectonics in Cenozoic South Asia. *Geological Society of London Special Publication 483* entitled Himalayan Tectonics: A Modern Synthesis, p. 631-652.

29. Colleps, C.L., Stockli, D.F., McKenzie, R.M., **Webb, A.A.G.**, Horton, B.K., 2019, Neogene kinematic evolution and exhumation of the NW India Himalaya: Zircon geo-/thermochronometric insights from the fold-thrust belt and foreland basin. *Tectonics*, v. 38, p. 2059-2086.
28. Colleps, C.L., McKenzie, R.M., Stockli, D.F., Hughes, N.C., Singh, B.P., **Webb, A.A.G.**, Myrow, P.M., Planavsky, N.J., Horton, B.K., 2018, Zircon (U-Th)/He thermochronometric constraints on Himalayan thrust belt exhumation, bedrock weathering, and Cenozoic seawater chemistry. *Geochemistry, Geophysics, Geosystems*, v. 19, p. 257-271.
27. Liao, J., Gerya, T., Thielmann, M., **Webb, A.A.G.**, Kufner, S.-K., Yin, A., 2017, 3D geodynamic models for the development of opposing continental subduction zones: The Hindu Kush–Pamir example. *Earth and Planetary Science Letters*, v. 480, p. 133-146.
26. Moore, W.B., Simon, J.I., **Webb, A.A.G.**, 2017, Heat-pipe Planets. *Earth and Planetary Science Letters*, v. 474, p. 13-19.
25. **Webb, A.A.G.**, Guo, H., Clift, P.D., Husson, L., Müller, T., Costantino, D., Yin, A., Xu, Z., Cao, H., Wang, Q., 2017, The Himalaya in 3D: slab dynamics controlled mountain building and monsoon intensification. *Lithosphere*, v. 9, p. 637-651.
24. Li, H.-Q., Xu, Z.-Q., **Webb, A.A.G.**, Li, T.-F., Ma, S.-W., Huang, X.-M., 2017, Early Jurassic tectonism occurred within the Basu metamorphic complex, eastern central Tibet: implications for an archipelago-accretion orogenic model. *Tectonophysics*, v. 702, p. 29-41.
23. Hu, X., Garzanti, E., Wang, J.-A., Huang, W.-T., An, W., **Webb, A.**, 2016, The timing of India-Asia collision onset – facts, theories, controversies. *Earth Science Reviews*, v. 160, p. 264-299.
22. Colón, C., **Webb, A.A.G.**, Lasserre, C., Doin, M.-P., Renard, F., Lohman, R., Li, J.-H., Baudoin, P.F., 2016, The variety of subaerial active salt deformations in the Kuqa fold-thrust belt (China) constrained by InSAR. *Earth and Planetary Science Letters*, v. 450, p. 83-95.
21. He, D., **Webb, A.A.G.**, Larson, K.P., Schmitt, A.K., 2016, Extrusion vs. duplexing models of Himalayan mountain building 2: The South Tibet detachment at the Dadeldhura klippe. *Tectonophysics*, v. 667, p. 87-107.
20. Larson, K.P., Ambrose, T.K., **Webb, A.A.G.**, Cottle, J.M., Shrestha, S., 2015, Reconciling Himalayan midcrustal discontinuities: The Main Central thrust system. *Earth and Planetary Sciences Letters*, v. 429, p. 139-146.
19. Yu, H., **Webb, A.A.G.**, He, D., 2015, Extrusion vs. duplexing models of Himalayan mountain building 1: Discovery of the Pabbar thrust confirms duplex-dominated growth of the northwestern Indian Himalaya since Mid-Miocene. *Tectonics*, v. 34, p. 313-333.
18. Myrow, P.M., Hughes, N.C., Derry, L.A., McKenzie, N.R., Jiang, G., **Webb, A.A.G.**, Banerjee, D.M., Paulson, T.S., Singh, B.P., 2015, Neogene marine isotopic evolution and the erosion of Lesser Himalayan strata: Implications for Cenozoic tectonic history. *Earth and Planetary Science Letters*, v. 417, p. 142-150.
17. He, D., **Webb, A.A.G.**, Larson, K.P., Martin, A.J., Schmitt, A.K., 2015, Extrusion vs. duplexing models of Himalayan mountain building 3: Duplexing dominates from Oligocene to present. *International Geology Review*, v. 57, p. 1-27.
16. Li, J.-H., \***Webb, A.A.G.**, Mao, X., Eckhoff, I., Colón, C., Zhang, K., Wang, H., Li, A., He, D., 2014, Active surface salt structures of the western Kuqa fold-thrust belt, northwestern China. *Geosphere*, v. 10, no. 6, p. 1219-1234.
15. Moore, W.B., **Webb, A.A.G.**, 2013, Heat-pipe Earth. *Nature*, v. 501, p. 501-505.
14. Bader, T., Franz, L., Ratschbacher, L., de Capitani, C., **Webb, A.A.G.**, Yang, Z., Pfänder, J.A., Hofmann, M., Linnemann, U., 2013, The heart of China revisited: II Early

- Paleozoic (ultra)high-pressure and (ultra)high-temperature metamorphic Qinling orogenic collage. *Tectonics*, v. 32, p. 922-947.
13. Leger, R.M., **Webb, A.A.G.**, Henry, D.J., Craig, J.A., Dubey, P., 2013, Metamorphic field gradients across the Himachal Himalaya, northwest India: Implications for the emplacement of the Himalayan crystalline core. *Tectonics*, v. 32, p. 540-557.
  12. Donaldson, D.G., **Webb, A.A.G.**, Menold, C.A., Kylander-Clark, A.R.C., Hacker, B.R., 2013, Petrochronology of Himalayan ultrahigh-pressure eclogite. *Geology*, v. 41, p. 835-838.
  11. **Webb, A.A.G.**, 2013, Preliminary palinspastic reconstruction of Cenozoic deformation across the Himachal Himalaya (northwestern India). *Geosphere*, v. 9, p. 572-587.
  10. **Webb, A.A.G.**, Yin, A., Dubey, C.S., 2013, U-Pb zircon geochronology of major lithologic units in the Eastern Himalaya: Implications for the origin and assembly of Himalayan rocks. *Geological Society of America Bulletin*, v. 125, p. 499-522.
  9. Schmidt, J., Hacker, B.R., Ratschbacher, L., Stübner, K., Stearns, M., Kylander-Clark, A., Cottle, J.M., **Webb, A.A.G.**, Gehrels, G., Minaev, V., 2011, Cenozoic Deep Crust in the Pamir. *Earth and Planetary Science Letters*, v. 312, p. 411-421.
  8. **Webb, A.A.G.**, Yin, A., Harrison, T.M., Célérier, J., Gehrels, G.E., Manning, C.E., Grove, M., 2011, Cenozoic tectonic history of the Himachal Himalaya (northwestern India) and its constraints on the formation mechanism of the Himalayan orogen. *Geosphere*, v. 7, p. 1013-1061.
  7. **Webb, A.A.G.**, Schmitt, A.K., He, D., Weigand, E.L., 2011, Structural and geochronological evidence for the leading edge of the Greater Himalayan Crystalline complex in the central Nepal Himalaya. *Earth and Planetary Science Letters*, v. 304, p. 483-495.
  6. Yin, A., Dubey, C.S., Kelty, T.K., **Webb, A.A.G.**, Harrison, T.M., Chou, C.Y., Célérier, J., 2010, Geological correlation of the Himalayan orogen and Indian craton: Part 2. Structural geology, geochronology, and tectonic evolution of the Eastern Himalaya. *Geological Society of America Bulletin*, v. 122, p. 360-395.
  5. Yin, A., Dubey, C.S., **Webb, A.A.G.**, Kelty, T.K., Grove, M., Gehrels, G.E., Burgess, W.P., 2010, Geological correlation of the Himalayan orogen and Indian craton: Part 1. Structural geology, U-Pb zircon geochronology, and tectonic evolution of the Shillong Plateau and its neighboring regions in NE India. *Geological Society of America Bulletin*, v. 122, p. 336-359.
  4. Célérier, J., Harrison, T.M., Beyssac, O., Herman, F., Dunlap, W.J., **Webb, A.A.G.**, 2009, The Kumaun and Garwhal Lesser Himalaya, India: Part 2. Thermal and deformation histories. *Geological Society of America Bulletin*, v. 121, p. 1281-1297.
  3. Célérier, J., Harrison, T.M., **Webb, A.A.G.**, Yin, A., 2009, The Kumaun and Garwhal Lesser Himalaya, India: Part 1. Structure and stratigraphy. *Geological Society of America Bulletin*, v. 121, p. 1262-1280.
  2. **Webb, A.A.G.**, Yin, A., Harrison, T.M., Célérier, J., Burgess, W.P., 2007, The leading edge of the Greater Himalayan Crystallines revealed in the NW Indian Himalaya: Implications for the Evolution of the Himalayan Orogen: *Geology*, v.35 (10), p.955-958.
  1. Cheney, J.T., **Webb, A.A.G.**, Coath, C.D., McKeegan, K.D., 2004, In situ ion microprobe <sup>207</sup>Pb/<sup>206</sup>Pb dating of monazite from Precambrian metamorphic suites, Tobacco Root Mountains, Montana, in *GSA Special Paper 377*, p. 151-179.

*Replies to Comments*

- Ramírez-Salazar, A., Zuo, J.-W., Müller, T., **Webb, A.A.G.**, Sorger, D., Piazzolo, S., Haproff, Harvey, J., P.J., Wang, Q., Hauzenberger, C., Wong, T.K., 2022, Reply to Comment by A.P. Nutman et al. on “Tectonics of the Isua Supracrustal Belt 1: P-T-X-d Constraints of a Poly-Metamorphic Terrane” by A. Ramírez-Salazar et al. and “Tectonics of the

Isua Supracrustal Belt 2: Microstructures Reveal Distributed Strain in the Absence of Major Fault Structures” by J. Zuo et al. *Tectonics*, v.41, e2021TC007148.  
<https://doi.org/10.1029/2021TC007148>.

**Webb, A.A.G.**, Yin, A., Harrison, T.M., Célérier, J., Burgess, W.P., 2009, Reply to comments on “The leading edge of the Greater Himalayan Crystallines revealed in the NW Indian Himalaya: Implications for the Evolution of the Himalayan Orogen” by A.K. Dubey: *Geology*, v.37 (2), e189-190.

*Book reviews, Editorials, Field-trip guides*

Hetényi, G., **Webb, A.A.G.**, Handy, M.R., 2021, Editorial: Mountain Building.  
[doi.org/10.3389/feart.2021.789741](https://doi.org/10.3389/feart.2021.789741)

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#### **SESSION CONVENER IN INTERNATIONAL MEETINGS**

- 2020 EGU General Assembly / Online Sharing: Evolutionary pathways of terrestrial planets: Interior/exterior coupling, feedbacks and interaction, convener: Cédric Gillmann, co-conveners: Gregor Golabek, Sandra Piazzolo, Elena Sizova, **A.A.G. Webb**.
- 2017 GSA Annual Meeting: Asthenosphere to Atmosphere: Tectonics, Topography, and Climate, advocates: **A.A.G. Webb**, P.D. Clift.
- 2016 EGU General Assembly: Continental collision of the Zagros-Himalaya-Tibet orogens, convener: Xiumian Hu, co-conveners: **A.A.G. Webb**, Di-Cheng Zhu, Ling Chen.
- 2012 AGU Annual Meeting: Understanding Deformation Phases of the India-Asia Continental Collision, conveners: **A.A.G. Webb**, Lucy Flesch.
- 2010 AGU Annual Meeting: Deformation Processes in Collisional Orogens. AGU 2010, conveners: György Hetényi, Kyle Larson, **A.A.G. Webb**.

#### **INVITED TALKS**

- The heat-pipe hypothesis for early Earth and hot terrestrial planets*, University of Göttingen (Germany), May 2024.
- From the Himalayas to Hell*, Universität Heidelberg (Germany), May 2024.
- A decade of heat-pipe Earth*, Earth-Life Science Institute, Tokyo Institute of Technology (Japan, via Zoom), November 2023.
- Recounting of Himalayan Tectonic Models and Their Relationship with the South Asian Monsoon*, Centre of Excellence Government College Sanjauli (India, via Google Meet), October 2023.
- Tectonics of early Earth and young terrestrial planets*, Mongolian University of Science and Technology (Mongolia), August 2023.
- Near-field effects of the India-Asia collision*, Mongolian University of Science and Technology (Mongolia), August 2023.

*Methods in Tectonics*, Nanjing University (China), August [2023](#).

*Himalayan tectonics models and their implications for South Asian monsoon development*, Zhejiang University (China), July [2023](#).

*Field-based structural mapping*, University of Hong Kong (Hong Kong, China), June [2023](#).

*The tectonics of young cooling terrestrial bodies*, University of Rennes (France), January [2023](#).

*How Himalayan tectonics modulated the South Asian monsoon and other Earth system elements in Oligo-Miocene time*, Monsoon Seminar Series [monsoongeoseminars.com] (International, via Zoom), November [2022](#).

(1) *A tour of the HKU Tectonics group*; (2) *Philosophies of (early) Earth exploration*, University of Hong Kong (Hong Kong, China), November [2022](#).

*Ancient Earth, early terrestrial planets, and the Isua supracrustal belt*, University of California, Los Angeles (USA), August [2022](#).

*Geodynamics and Earth system interactions across the Himalaya*, Universität Heidelberg (Germany, via Zoom), April [2022](#).

*Himalayan tectonics from slab dynamics to Earth system interactions*, University of Innsbruck (Austria, via Zoom), April [2022](#).

*Tectonics and Earth system science across the Himalayan mountains*, New Mexico State University (USA, via Zoom), February [2022](#).

*Earth system science: for earliest Earth, and across the Himalaya*, Mini-Symposium on Interdisciplinary Research (MSIR) for Environment and climate change, University of Hong Kong (Hong Kong, China), January [2022](#).

*Planetary tectonics*, Kiron Refugee University talk hosted by the Laboratory for Space Research, University of Hong Kong (Hong Kong, China), December [2021](#).

*Scientific Lecture: Himalayan Tectonics in Earth System context*, Freie Universität Berlin (Germany, via Zoom), October [2021](#).

*Tectonics Research: Lithosphere Dynamics & Planetary System Interactions*, Laboratory for Space Research – Research Jamboree, University of Hong Kong (Hong Kong, China), July [2021](#).

*The Tectonics of the Sichuan Basin*, Chinese University of Hong Kong (Hong Kong, China), July [2021](#).

*Scientific Lecture: Himalayan Tectonics in Earth System context*, Technische Universität Bergakademie Freiberg (Germany, via Zoom), July [2021](#).

*Earth System development from the solid Earth to climate and evolution across the Himalaya*, ETH Zurich (Switzerland, via Zoom), February [2021](#).

*Exploring Earth's earliest tectonics across the Isua supracrustal belt of SW Greenland*, University of Göttingen (Germany, via Zoom), November [2020](#).

*Early tectonics*, University of Hong Kong (Hong Kong, China; in-person and via Zoom), September [2020](#).

*Early tectonics of terrestrial bodies*, University of Southern California (USA, via Zoom), September [2020](#).

*Discussion of recent publication: Breaking Earth's shell into a global plate network*, Earth-Life Science Institute, Tokyo Institute of Technology (Japan, via Zoom – this event was akin to a panel discussion moderated by Tokyo Tech professors, with the invited panelists being Webb and co-authors Chunan Tang and William Moore), August [2020](#).

*Scientific Lecture: Volcanism and early lithospheres*, GFZ Helmholtz Centre Potsdam jointly with Freie Universität Berlin (Germany), February [2020](#).

*From mantle to biosphere, Himalayan duplexing in a new framework*, California Institute of Technology (USA), September [2019](#).

*Volcanic control of early tectonics on Earth and other terrestrial bodies*, University of Nevada, Reno (USA), September [2019](#).

*Across the Himalaya, from mantle to biosphere*, Institute of Geology and Geophysics, Chinese Academy of Sciences (China), July [2019](#).

*Heat-pipe Earth, heat-pipe planets*, Northwest University (China), January [2019](#).

*A new mantle-to-biosphere model of Himalayan tectonics, and BeiDa's model test via high pressure metamorphism timing*, Peking University (China), December [2018](#).

*Heat-pipe Earth, heat-pipe planets*, Dalian University of Technology (China), December [2018](#).

*Gender diversity in the Faculty of Science*, University of Hong Kong (Hong Kong, China), December [2018](#).

*Heat-pipe planets*, Nanjing University (China), May [2018](#).

*From mantle to crust to surface to climate: a new Himalayan tectonics model*, Nanjing University (China), May [2018](#).

*"A casual examination of Archean rocks" and vertical tectonics across the solar system*, Tokyo Tech (Japan), April [2018](#).

*From mantle dynamics to climate change across the Himalaya*, Sun-Yat Sen University (China), March [2018](#).

*"A casual examination of Archean rocks" and vertical tectonics across the solar system*, University of Hong Kong (Hong Kong, China), September [2017](#).

*How do terrestrial planets develop lithospheres? The case for Io-style heat-pipe cooling*, Macau University of Science and Technology (Macau, China), May [2017](#).

*The Himalaya in 3D: slab dynamics controlled mountain building and monsoon intensification*, Université de Montpellier (France), April [2017](#).

*The Himalaya in 3D: slab dynamics controlled mountain building and monsoon intensification*, ISTERre at Université Grenoble Alpes (France), April [2017](#).

*The Himalaya in 3D: slab dynamics controlled mountain building and monsoon intensification*, Chinese University of Hong Kong (Hong Kong, China), February [2017](#).

*Heat-pipe Earth and beyond: Do Barberton and similar terranes record a sinking single plate lithosphere?*, Badplass Field Workshop on Archean Geodynamics (South Africa), August [2016](#).

*'The essence of the way is detachment'... Finding meaning in Himalaya (geology)*, University of Leeds (United Kingdom), February [2016](#).

*The Himalaya, the Hadean, in-between, and beyond*, University of Cambridge (United Kingdom), November [2015](#).

*Heat-pipe Earth and beyond*, University of Portsmouth (United Kingdom), November [2015](#).

*The past, present, and future of Himalayan tectonic models*, University of Hong Kong (Hong Kong, China), November [2015](#).

*Proposal: A joint project using NanZee Sensing technology to advance knowledge of atmospheric impacts on the solid Earth*, Nanjing University (China), April [2015](#).

*Cooling and crust formation on young terrestrial planets by rapid volcanic resurfacing*, Southern University (USA), March [2015](#).

*Heat-pipe Earth and beyond*, University of Leeds (United Kingdom), September [2014](#).

*Heat-pipe Earth and beyond*, Geological Survey of Western Australia (Australia), May [2014](#).

*Heat-pipe Earth and beyond*, University of New South Wales (Australia), May [2014](#).

*Heat-pipe Earth and beyond*, Louisiana State University (USA), March [2014](#).

*Heat-pipe Earth and beyond*, Earth-Life Science Institute, Tokyo Institute of Technology (Japan), March [2014](#).

*The heat-pipe Model of Early Earth*, Chinese Academy of Geological Sciences, Beijing (China), January [2014](#).

*The Persistence of Duplexing as the Dominant Mode of Himalayan Mountain Building*, Chinese Academy of Geological Sciences, Beijing (China), January [2014](#).

*Use of regional tectonics investigations to answer questions about the India-Asia collision*, Nanjing University (China), December [2013](#).

*The Himalayan Mountains were Built by Underplating*, Nanjing University (China), December [2013](#).

*Active salt surface flows and tectonics, Kuqa fold-thrust belt, Xinjiang, China*, Nanjing University (China), December [2013](#).

*The heat-pipe model of early Earth*, Nanjing University (China), December [2013](#).

*Active salt surface flows and tectonics, Kuqa fold-thrust belt, Xinjiang, China*, Peking University (China), September [2013](#).

*Extrusion vs. Underplating, Rainfall vs. Rivers: What Processes Control Himalayan Mountain-Building?*, University of Houston (USA), September [2012](#).

*Extrusion vs. Underplating, Rainfall vs. Rivers: What Processes Control Himalayan Mountain-Building?*, University of New Orleans (USA), September [2012](#).

*How were the Himalaya built?*, Panjab University (India), August [2012](#).

*Were the Himalayan Mountains Built by Extrusion or Underplating?*, Peking University (China), June [2012](#).

*The Emplacement of the Himalayan Crystalline Core*, University of Texas at Arlington (USA), April [2012](#).

*Searching for Himalayan Shortening*, Louisiana State University (USA), March [2012](#).

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*Shortening across the Himalaya*, Peking University (China), December [2011](#).

*Emplacement of the Greater Himalayan Crystalline Complex*, Geological Survey of India, Chandigarh (India), December [2011](#).

*Exploring the India-Asia Collision, Tectonics Research at Louisiana State University*, Louisiana State University (USA), March [2011](#).

*The structural geometry of the Himalaya: new discoveries require new tectonic models*, Peking University (China), November [2010](#).

*Structural Geology of the Western and Central Himalaya*, Bates College (USA), October, [2010](#).

*New Observations Require a Tectonic Wedging Model for the Himalayan Orogen*, Technische Universität Bergakademie Freiberg (Germany), October [2009](#).

*New Observations Require a Tectonic Wedging Model for the Himalayan Orogen*, Queens University (Canada), November [2008](#).

*New Observations Require a Tectonic Wedging Model for the Himalayan Orogen*, University of Toronto (Canada), November [2008](#).

*Structural and Geochronological Observations in Himachal Pradesh Lead to a new Himalayan Tectonic Model*, Wadia Institute of Himalayan Geology (India), August [2008](#).

*A New Geometric Framework and 3-D Kinematic Evolution of the Himalayan Orogen*, University of Southern California (USA), March [2008](#).

*A New Geometric Framework and 3-D Kinematic Evolution of the Himalayan Orogen*, Louisiana State University (USA), March [2008](#).

*A New Geometric Framework and 3-D Kinematic Evolution of the Himalayan Orogen*, University of Saskatchewan (Canada), March [2008](#).

*A New Geometric Framework and 3-D Kinematic Evolution of the Himalayan Orogen*, Open University (United Kingdom), March 2008.

*A New Geometric Framework and 3-D Kinematic Evolution of the Himalayan Orogen*, University of Leeds (United Kingdom), March 2008.

*A New Geometric Framework and 3-D Kinematic Evolution of the Himalayan Orogen*, Kansas State University (USA), February 2008.

*Investigating the Mechanism of Tibetan Uplift by Integrated Studies in Eastern Tibet*, University of California at Santa Barbara (USA), February 2008.

*A New Geometric Framework and 3-D Kinematic Evolution of the Himalayan Orogen*, University of California at Santa Barbara (USA), February 2008.

*Structural Relationships in the NW Indian Himalaya: Implications for the 3-D Evolution of the Himalayan Orogen*, University of California at Riverside (USA), November 2007.

*Structural Relationships in the NW Indian Himalaya: Implications for the 3-D Evolution of the Himalayan Orogen*, U Tennessee Knoxville (USA), February 2007.

*Structural Relationships in the NW Indian Himalaya: Implications for the 3-D Evolution of the Himalayan Orogen*, Colgate University (USA), January 2007.

*Structural Relationships in the NW Indian Himalaya and their implications for the 3-D evolution of the Himalayan Orogen*, California Institute of Technology (USA), January 2007.

## **TEACHING INTERESTS**

As a teacher I focus less on imparting knowledge to students and more on developing their ability to practice the scientific method. To this end, I prefer using problem-based (“active-learning”) approaches instead of traditional lecture-based instruction. My favorite exercise of this type is the field mapping test, in which students spend a few hours independently determining the geological evolution of a site. The value of this exercise is the rapid iterative use of the scientific method that it requires. As the students start their work, they come up with ideas for how the site evolved, and then they collect data to test these ideas. They generate new ideas in response to the new findings, and then proceed to test these new ideas – thus continually completing and restarting the method of multiple working hypotheses. At the end of the field mapping day, they turn in their maps and we do a walk-through so that they can get immediate feedback. With enough experience of this kind, geoscience students become relatively fearless in tackling new problems. To my knowledge, a well-chosen field mapping exercise offers more rapid scientific method use than any other standard geology learning approach. This is a key reason why field teaching persists as a valuable learning experience for future geo-scientists of all disciplines.

This focus on independent discovery is one of the core elements of my teaching philosophy. The other is communication. I communicate to students in a variety of ways because students learn in a variety of ways. Also, I want students to be adept at communicating science. Therefore I assign a lot of informal and formal projects, to groups and individuals, which involve a range of communication components. For instance, in some of my advanced undergraduate / graduate classes, students construct Wikipedia articles complete with production of at least one original figure. This project has advantages over my prior approach (a term paper), including higher perceived responsibility (the pages are public!), more feedback (any Wiki user can comment on and alter the page), and stronger citation practices (this may seem surprising, but the Wiki community may be nearly as determined as the scientific community to require appropriate citation, and undergraduates understand the need for robust citation readily in the Wiki context). The ongoing success of the students undertaking these projects can be observed at the following page, where links to all 108 articles they have created across eight semesters are listed: <https://en.wikipedia.org/wiki/User:Aagwebb> .

The Wikipedia project was originally motivated by the Communications-across-the-Curriculum (CxC) program at Louisiana State University. At the University of Hong Kong, we have in turn used this project and the CxC program as the inspiration for our Communication-intensive



Courses (CiC) initiative. CiC is a nascent university-wide course badging program (hosted by our Centre for Applied English Studies in partnership with our Centre for the Enhancement of Teaching and Learning) that will certify and highlight courses delivering extraordinary disciplinary communication training in written, spoken, visual, and/or digital modes.

### **INTERNAL TEACHING FUNDING**

2019. A handheld XRF (X-ray fluorescence) spectrometer for field-based quantitative Earth science learning, (Project Leader Webb), University of Hong Kong, Faculty of Science Teaching Innovation Fund, Category: Equipment enhancement / procurement, partial funding of HK\$ 120,000 [~ US\$ 15,300].
2019. New Capabilities and Innovative Approaches for Analysis of Soils and Clays by X-Ray Diffraction Methods, (Project Leader Joseph Michalski, Webb is Co-Leader), University of Hong Kong, Faculty of Science Teaching Innovation Fund, Category: Equipment enhancement / procurement, HK\$ 100,000 [~ US\$ 12,800].
- 2018-2020. Communicate @ HKU: Teaching and Learning Innovation through Communication-intensive Courses, (PI Michelle R. Raquel, Webb is a Co-PI), University of Hong Kong Teaching Development Grant (TDG) Award (project no. 18), HK\$ 506,044 [~ US\$ 65,000].
2018. The development of the Common Core course "Women in Science", (PI Aleksandra Djuricic, Webb is a Co-PI), University of Hong Kong Teaching Development Grant (TDG) Award (project no. 701), HK\$ 70,000 [~ US\$ 8,950].

### **COURSES TAUGHT**

*Undergraduate Earth Sciences:* Structural Geology; Plate Tectonics; Field Geology; Sedimentary Petrology; Development of the Terrestrial Planets; Regional Geology.

*Undergraduate Common Core:* Women in Science.

*Graduate Earth Sciences:* Advanced Structural Geology; Plate Tectonics; Seminars in Field Mapping, Structural Geology, Continental Evolution, Tectonics, Methods in Tectonics (brown-bag series).

### **INTERNATIONAL CONFERENCE PRESENTATIONS ON TEACHING AND LEARNING**

(student names are underlined)

**INVITED:** **Webb, A.A.G.**, Wang, Q., 2014, Field mapping training with Chinese characteristics. Geological Society of America Annual Meeting.

**Chamberlain, E.L.**, **Webb, A.A.G.**, **Bergeron, P.G.**, 2011, Field Apprentice-Instructors: A Means of Enhancing Graduate And Undergraduate Education In Exercise-Based Geology Field Trips. Geological Society of America Annual Meeting.

### **INVITED TALKS AT UNIVERSITIES ON TEACHING AND LEARNING**

*Philosophies and practices of publishing*, Zhejiang University (China), July 2023.

*Philosophies and practices of publishing*, Peking University (China, via Zoom), April 2023.

*Teaching Lecture: The ~~Fat~~ Dough of Linear Fabrics*, University of Innsbruck (Austria, via Zoom), April 2022.

*Teaching Lecture: Faults and shear zones: transitions, kinematics, rheology*, Freie Universität Berlin (Germany, via Zoom), October 2021.

*Teaching Lecture: Stress and strain and their practical application*, Technische Universität Bergakademie Freiberg (Germany, via Zoom), July 2021.

*Every challenge is an opportunity: Online Pedagogy, Wikipedia, & Communication-Intensive Courses*, University of Hong Kong (Hong Kong, China), presented as part of the Half-Day Virtual Forum: Online T&L 2019-20: The HKU Experience, May 2020.

*TeL@HKU Series: Dr. Alex Webb and Wikipedia*, University of Hong Kong (Hong Kong, China), March 2020. At: <https://www.youtube.com/watch?v=2xvTt2oDVAM>

*Teaching Lecture: Probing the relationships between lithospheric motion, faulting, and seismicity*, GFZ Helmholtz Centre Potsdam jointly with Freie Universität Berlin (Germany), February 2020.

*Communication-rich activities that help students develop digital literacy*, Communications-intensive Courses Symposium, University of Hong Kong (Hong Kong, China), May 2019.

*Students can make Wikipedia pages, but only with a thorough feedback (feed-forward!) plan*, Join-the-Conversation Feedback session, University of Hong Kong (Hong Kong, China), June 2018.

*Making instead of taking: Advantages and challenges in guiding students to create Wikipedia pages*, Communications-intensive Courses Symposium, University of Hong Kong (Hong Kong, China), June 2018.

*Mystery mapping: a field-mapping training bullet train to 4D interpretative capability*, Nanjing University (China), May 2018.

*How do we advance Science students' communication skills?*, University of Hong Kong (Hong Kong, China), February 2017.

*Teaching approaches and programme structure for under- and post-graduate students (in geology, and beyond)*, University of Hong Kong (Hong Kong, China), September 2016.

*Making instead of Taking: Advantages and challenges in guiding students to create Wikipedia pages*, Communications across the Curriculum Summer Institute, Louisiana State University (USA), May 2013.

## **RESEARCH POSTGRADUATE STUDENTS / POSTDOCTORAL SCHOLARS**

### *Current Postdoctoral Scholars (3):*

Diego Costantino (2022 – present HKU)  
Marie Genge (2022 – present HKU)  
Ariuntsetseg Ganbat (2022 – present HKU)

### *Current Graduate Advisees (4):*

Mohammadhossein Mohammadnia (PhD 2022 – present HKU)  
Eunice Leung (PhD 2021 – present HKU)  
Man Wai (Michelle) Yip (PhD 2021 – present HKU)  
Hayley Hunt (PhD 2020 – present HKU) (Hong Kong PhD Fellowship Awardee)

### *Former Postdoctoral Scholar (2):*

Huai-Hsuan May Huang (2020 HKU; next post: Smithsonian Institution postdoctoral scholar)  
Jiawei Zou (2021 – 2022 HKU; next post: HKU postdoctoral scholar with Chair Prof. G. Zhao)

### *Graduate Degrees Awarded (15):*

Blessing Adeoti (PhD 2023 HKU; next post with Fugro in Hong Kong S.A.R. China)  
Yuwei Huang (MPhil 2022 HKU; next post PhD research at Guangzhou Institute of Geochemistry)  
Jiawei Zou (PhD 2021 HKU; next post HKU postdoctoral scholar)  
Man Wai (Michelle) Yip (MPhil 2021 HKU; next post PhD research at the University of Hong Kong)  
Hui Ching (Jupiter) Cheng (MPhil 2019 HKU; next post PhD research at U Georgia)  
Samantha Bell (MGeol 2016 U Leeds; next post PhD research at U Cambridge)

Andrew Webb (MSc 2016 LSU; next post PhD research at Louisiana State University) (*no relation*)

Jiawei Zou (MSc 2016 LSU; next post PhD research at the University of Hong Kong)

Hongcheng Guo (MSc 2016 LSU; next post PhD research at Lehigh University)

Cindy Bergeron, née Colón (PhD 2016 LSU; adjunct Professor at Lone Star College)

Dennis Donaldson (PhD 2016 LSU; next post U.S. Department of Energy postdoctoral scholar)

Kexin Zhang (MSc 2015 LSU)

Chase Billeau (MSc 2014 LSU; next post with Kleinfelder, Houston, USA)

Hongjiao Yu (PhD 2014 LSU; next post with Shell Structural Geology Group, Houston, USA)

Dian He (PhD 2013 LSU; next post with Shell Structural Geology Group, Houston, USA)

## **RESEARCH PROJECT STUDENTS FROM TAUGHT-MSc PROGRAM**

*Past Advisees (3):*

Yat Hei Jason Siu (MSc 2020 HKU)

Zak Wing Ng (MSc 2019 HKU)

Rigel Ng (MSc 2019 HKU)

## **MAJOR SERVICE ROLES**

Member, Laboratory for Space Research Advisory Board, University of Hong Kong. December 2020 to present.

Member of (1) Higher Degrees Committee, (2) Review Committee on Student Performance and Discontinuation, (3) Board of Examiners for Higher Degrees, all three within the Faculty of Science, University of Hong Kong. October 2019 to June 2022.

Chair, Research Postgraduate Committee, Division of Earth and Planetary Sciences (2019-2021) / Department of Earth Sciences (2021-2022), Faculty of Science, University of Hong Kong. This position includes management of research postgraduate student admissions and advising. October 2019 to June 2022.

Science Faculty representative on the University's Communication-intensive Courses Committee, University of Hong Kong. June 2018 to present.

Earth Sciences Advisor, Young Scientist Scheme, Faculty of Science, University of Hong Kong. November 2016 to present.

Member, Teaching Committee, Department of Earth Sciences, University of Hong Kong. March 2016 to present.

Co-Chair, Self-Assessment Team for Gender Equity, Faculty of Science, University of Hong Kong. November 2016 to February 2022.

Coordinator for the Major in Geology and the Major in Geology (Intensive), Department of Earth Sciences, University of Hong Kong. March 2016 to February 2019. This position included management of the Geological Society of London Accredited Pathway, which since Fall 2018 has been formalized as the Major in Geology (Intensive).

Diversity Committee member, College of Science, Louisiana State University. 2013-2015.

## **KNOWLEDGE EXCHANGE**

Commentary about findings from [[ Killingback et al., 2020, A bigger splat: The catastrophic geology of a 1.2-b.y.-old terrestrial megaclast, northwest Scotland. *Geology*, v.49, doi.org/10.1130/G48079.1 ]] for National Geographic article "Before plants or animals existed, this 250,000-ton rock fell in the mud. Here's how we know" by Maya Wei-Haas: <https://www.nationalgeographic.com/science/2020/10/huge-rock-fell-in-the-mud-billion-years-ago-how-we-know/> - October 2020.

Presentation to the Institute of Himalayan Risk Reduction (Nepal, via Zoom), on: *How mantle dynamics guided the main phases of Himalayan crustal tectonics* – August 2020.

Presentation at the Opening Ceremony of the Lobster Eye X-ray Space Observatory & Workshop on Space Science and Astrophysics, LongHua District, ShenZhen (China), on: *Terrestrial planets at the University of Hong Kong*. - January 2018.

Presentation to the China National Petroleum Corporation (Houston office), on: *Active salt surface flows and tectonics, Kuqa fold-thrust belt, Xinjiang, China* - November 2013.

Presentation to the Tarim Research Institute, PetroChina Company Ltd. (China), on: *Exploring the Tectonic development of the Himalaya: from Initial Collision to Ongoing Convergence*, - July 2011.

Presentation to the Research Institute of Petroleum Exploration and Development, PetroChina Company Ltd. (China), on: *The Structural Geometry of the Himalaya: New Discoveries Require New Tectonic Models* - November 2010.

Presentation to ExxonMobil (Upstream Research & Exploration, Houston), on: *Structural Relationships in the NW Indian Himalaya: Implications for the 3-D Evolution of the Himalayan Orogen* - January 2007.

### **MEMBERSHIPS**

American Geophysical Union  
European Geosciences Union  
Geological Society of America  
National Association of Geoscience Teachers

### **INDUSTRY EXPERIENCE**

Field Geologist: Nevada Land & Resource, LLC, Carson City, Nevada, summer 2000 (gold exploration).

Staff Geologists' Assistant: Inmet Mining Co., USA, Sparks, Nevada, summers 1997, 1998 (gold exploration).