

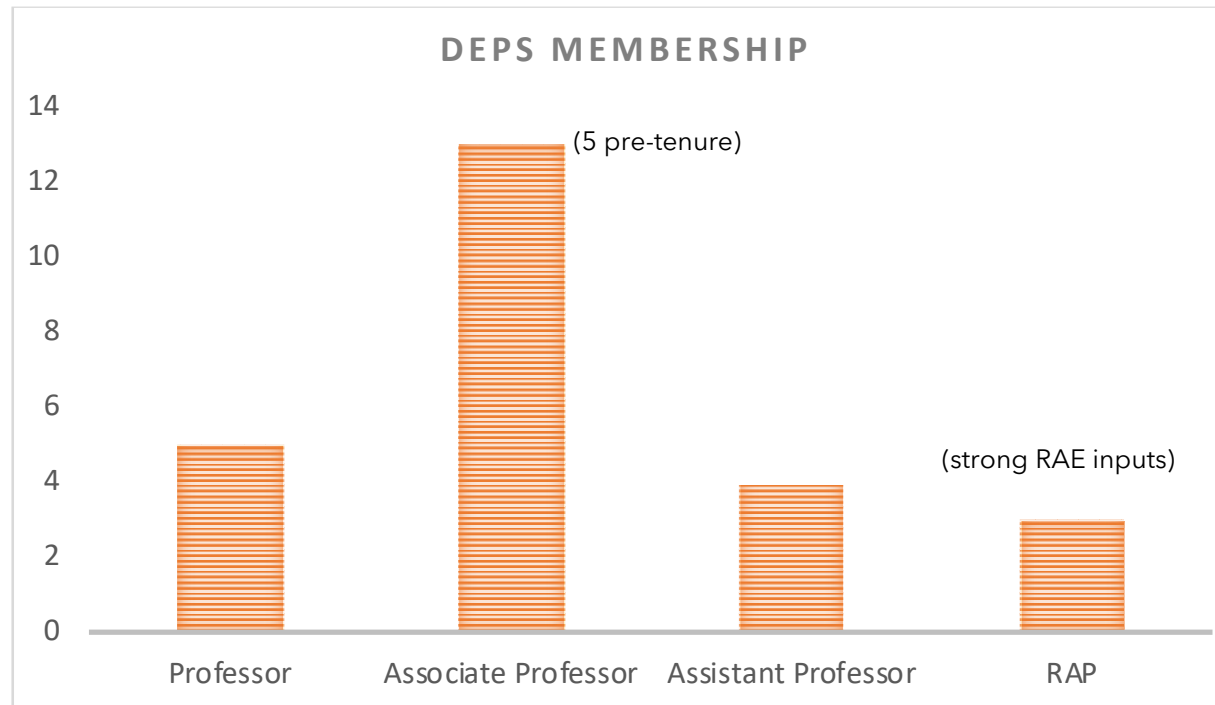


Division of Earth and Planetary Science

An introduction for prospective
Research Postgraduate students

DEPS snapshot

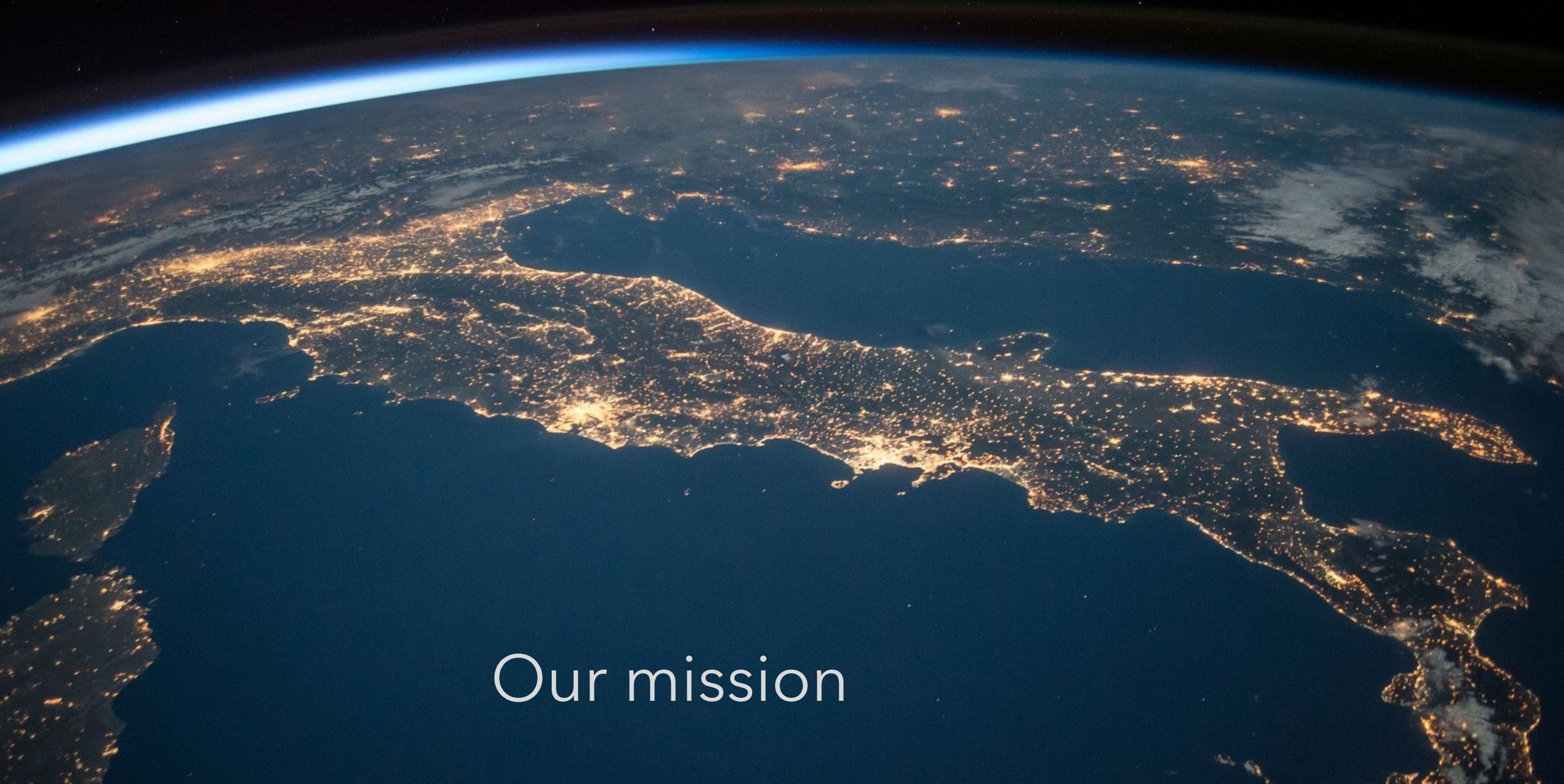
25 Faculty members



Strengths of DEPS

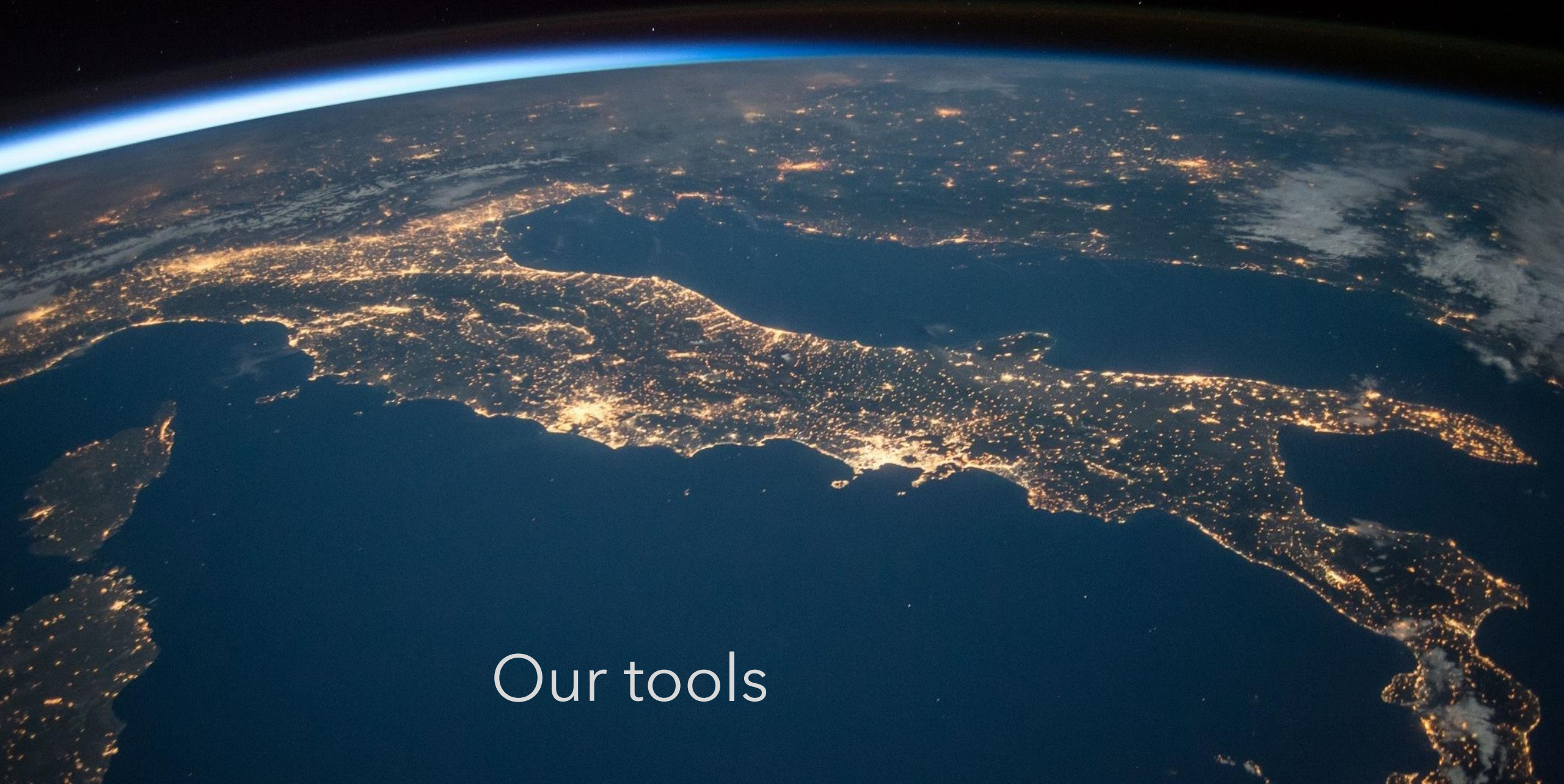
- We have a rich history of geological research, especially in plate tectonics
- Chair Professor Guochun Zhao was recently named Academician (~42,000 citations)
- HKU-CAS Joint Laboratory on Chemical Geodynamics





Our mission

To explore our global geosystem in order to understand how this planet and other planets function inside and out, from lithosphere to hydrosphere to atmosphere to magnetosphere.



Our tools

Modeling and quantitative analyses, advanced laboratory geochemistry, spectroscopy and remote sensing, and foundational field geology from right here in Hong Kong to some of the most remote corners of the globe.



We seek to serve society through high impact science that is broadly focused in three categories:

- Solid Earth and Planetary Science
- Earth History and Global Change
- Applied Geosciences



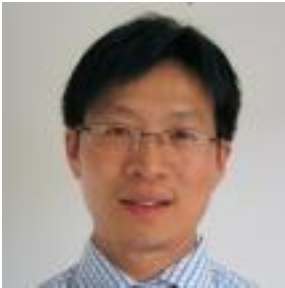
Solid Earth and Planetary Science

Exploring the evolution of the planets, with a focus on Earth's crust with regard to the evolution of plate tectonics as well as mineral resources, globally and especially within Asia.

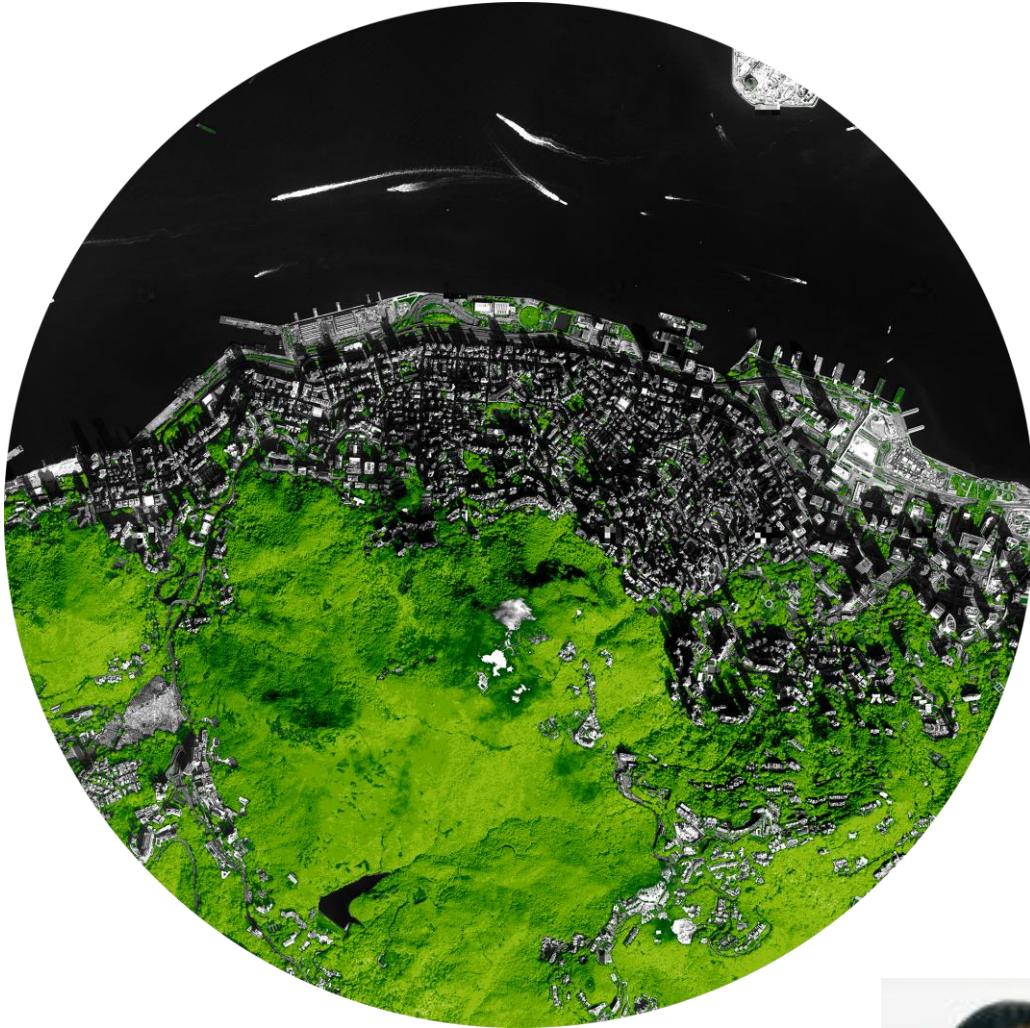


Earth History and Global Change

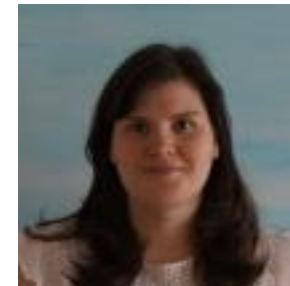
- Explore the characteristics of Earth's climate in deep time, how the climate evolved with the Earth.
- Understand critical drivers of modern climate and characterize how climate affects coastal processes, marine geochemistry and weathering-feedback processes.



Applied Geosciences

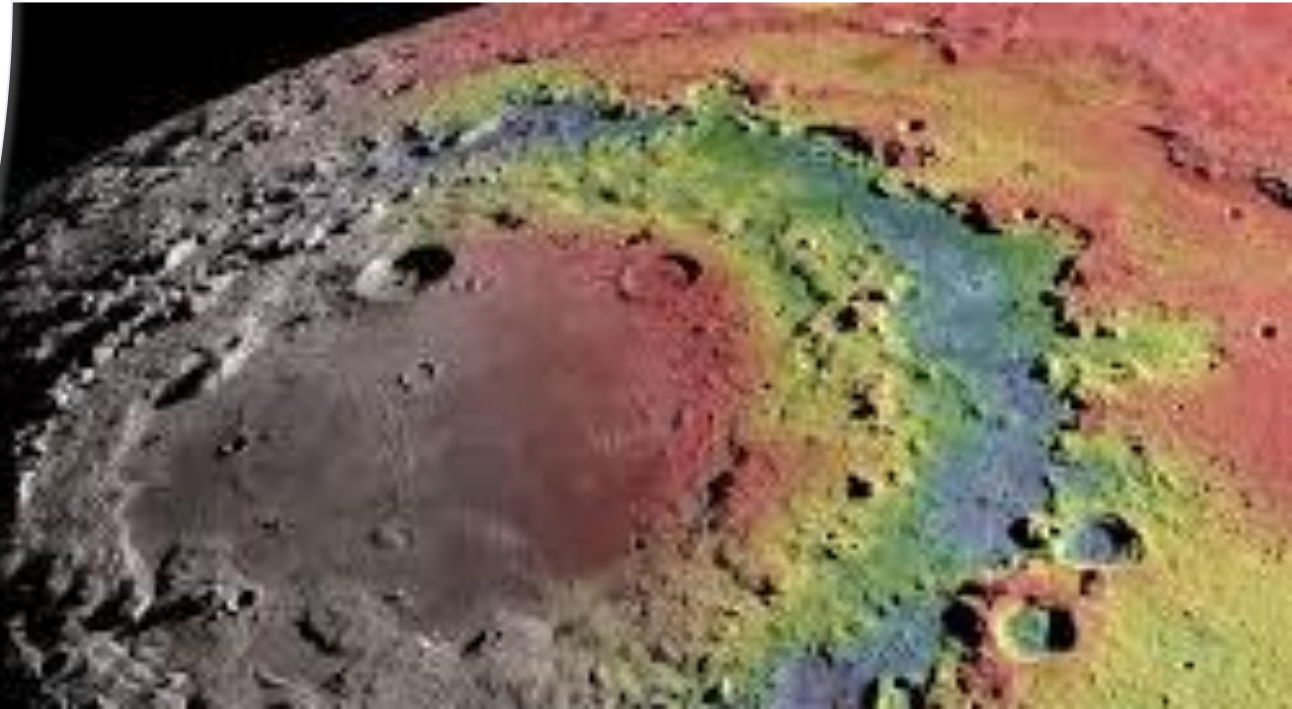


- Have a history of strong geotechnical and applied geoscience
- We focus on various elements of Urban Geology and Ocean Sciences, using fundamental geological research to inform policy issues, development plans, conservation and sustainability strategies, and technology development for remote sensing applications.
- We work closely with HK government on geotechnical projects, and with local industry on pursuit of new technologies and geoscience applications



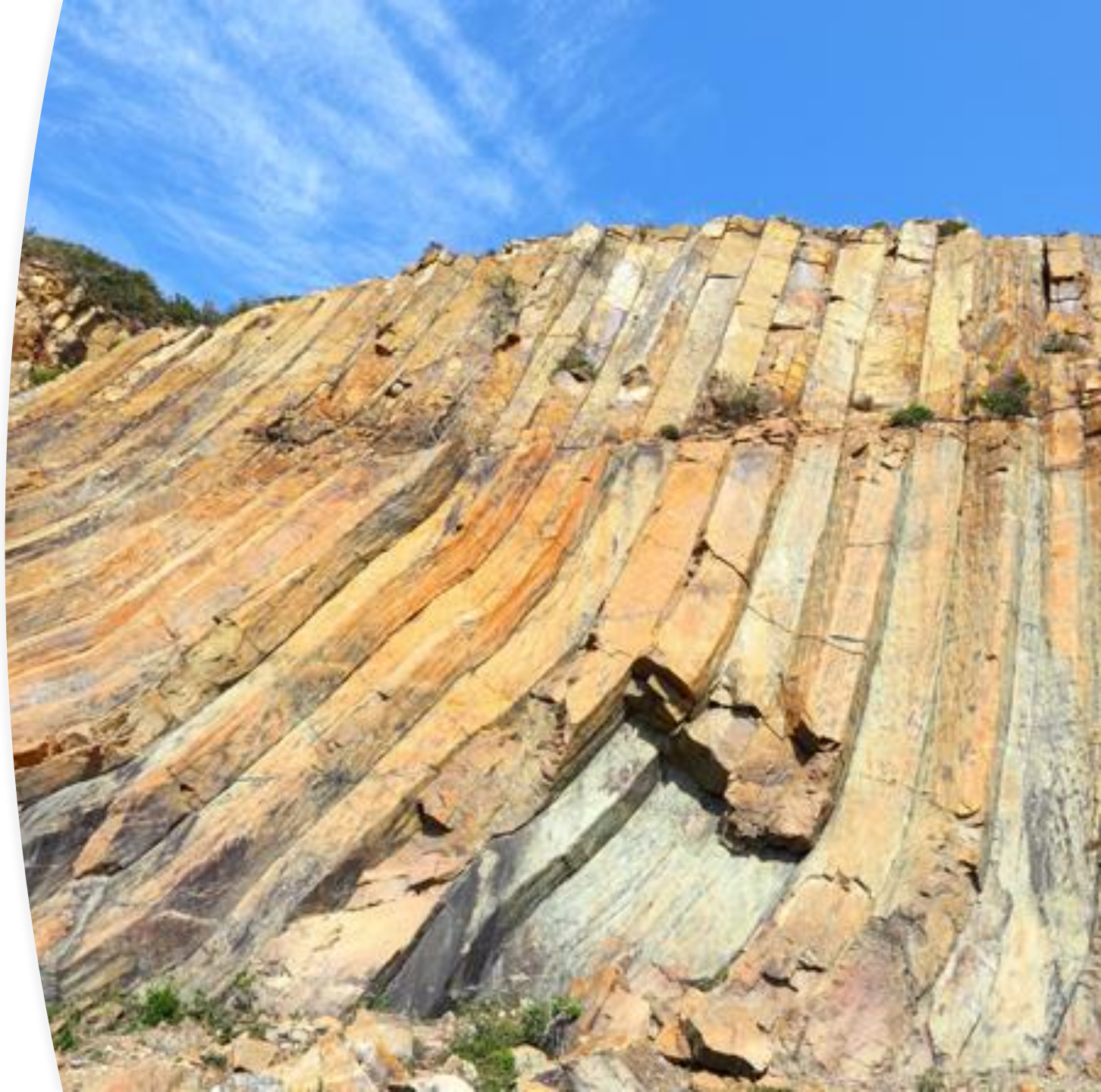
Interdisciplinary and Innovative Geoscience

- Early Earth research (AoE)
- Ocean Sciences and Marine Geosciences
- Planetary Science
- Climate Science



We are the only Geoscience Dept in Hong Kong

- Remember that geology is fundamentally an applied science
- Our unique place in HK is therefore a challenge but also a strategic advantage
- Many of the big problems in geology have been understood for ~40-50 years, so we are now in a new phase where geology ties into other disciplines – discovery happens at these boundaries



Our work requires physical labs and fancy kit

- We are committed to continuing to develop top mass spectroscopy facilities
 - Existing LA-ICP-MS facility
 - Proposals are in for a New Ion Probe (~\$HK 50M) and Nano-SIMS
- Multi-scale infrared and Raman spectral imaging (~\$HK 2-4M)
- Drone-deployable technologies
- Field geophysics



New revenue streams

- In the last 9 months, we submitted 17 GRF, 5 CRF, 2 ANR, 2 RIF, 1 AoE, 1 NSFC, 3 RGC-NSFC joint, 1 RMGS (different acronyms for different calls for proposals)
- Major initiatives in mainland China
 - Ocean sciences, planetary exploration, rare Earth element exploration

Geological Museum

- The museum highlights beautiful mineral collections and exhibits exploring Earth history, many of which are informed by ongoing research in the Division of Earth and Planetary Science
- We use the museum for hosting informal and public-facing talks, fundraising events, entertaining VIPs, etc.

