

## Hiu Ching Jupiter Cheng, Ph.D. student

Department of Geology, University of Georgia  
Geography-Geology Building, Room 310, 210 Field Street; Athens, GA 30602-2501  
Email: [jupiterchc@uga.edu](mailto:jupiterchc@uga.edu)  
Lab Phone: (706) 542-9908

### Education

---

#### **Doctor of Philosophy (Ph.D.) | The University of Georgia (UGA)**

Aug 2019 – Present (expected 2023)

- Geology Department: Structural Geology and Geomechanics Laboratory

#### **Master of Philosophy (MPhil) | The University of Hong Kong (HKU)**

Sep 2017 – Aug 2019

- Earth Science Department: Tectonics and planetary science

#### **Bachelor of Science (BSc) | The University of Hong Kong (HKU)**

Sep 2013 – Aug 2017

- Major in Geology and Minor in Geography

### Research Experience

---

#### **Doctoral Research | The University of Georgia (UGA)**

Aug 2019 – Present (expected 2023)

- **Thesis committee:** Dr. Christian Klimczak (Major professor), Dr. Rob Hawman (Internal), Dr. Steven Holland (Internal), Dr. Caleb Fassett (External)
- **Research Topic:** Mixed-mode fracturing: The origin of the large-scale troughs on Asteroid 4 Vesta
- Conducted detailed structural mapping and lithospheric strength calculations to examine the origin of large-scale troughs on Asteroid 4 Vesta

#### **Master Research | The University of Hong Kong (HKU)**

Sep 2017 – Aug 2019

- **Supervisors:** Dr. A. Alexander G. Webb (primary) and Dr. Joseph Michalski
- **Thesis Title:** Geological and structural mapping of Ishtar terra margins on Venus: Implications for crustal plateau evolution.
- Mapped geological units and deformational structures along Venus tessera highland margins on ArcGIS and generated multiple interpretations from the maps to study the crustal plateau formation models

#### **Visiting Student | Hampton University (HU)**

Nov 2018

- **Research mentor:** Dr. William B. Moore
- Constructed the temperature profiles of Venus using the volcanic heat flux under heat-pipe tectonics

#### **Undergraduate Thesis | The University of Hong Kong (HKU)**

Sep 2016 – Apr 2017

- **Supervisors:** Dr. A. Alexander G. Webb (primary) and Dr. Joseph Michalski
- **Thesis Title:** Geological mapping on Venus highland margins to test the heat pipe hypothesis
- Conducted preliminary mapping along Venus tessera highland margins to test the heat pipe hypothesis

### Industry Experience

---

#### **Summer Intern | Tysan Foundation Geotechnical Limited (Hong Kong)**

Jul – Aug 2016

### Teaching Experience

---

#### **GEOL 1121L Earth Processes and Environments Lab | UGA – Instructor**

Fall 2019 and Spring 2020

• **Course Evaluations:**

Course	Semester	Enrollment	Evaluations	Overall Rating	Instructor
GEOL 1121L	Fall 2019	12	9	4.4/5	
GEOL 1121L	Fall 2019	14	8	4.4/5	
GEOL 1121L	Spring 2020	17	4	4.3/5	

<b>GEOL 1121 Earth Processes and Environments</b>	<b>UGA – Teaching Assistant</b>	Spring 2020
<b>EASC3405 Environmental Remote Sensing</b>	<b>HKU – Teaching Assistant</b>	Spring 2018 and 2019
<b>Undergraduate Taiwan Field Trip</b>	<b>HKU – Teaching Assistant</b>	Jan 2019
<b>EASC4407 Regional Geology</b>	<b>HKU – Teaching Assistant</b>	Fall 2017 and 2018

## Languages

<b>English</b> (proficiency)	<b>Cantonese</b> (mother tongue)	<b>Mandarin</b> (proficiency)
------------------------------	----------------------------------	-------------------------------

## Computer Skills

<b>Microsoft Office</b> <b>ArcGIS</b>	<b>Adobe Illustrator</b> <b>ENVI</b>	<b>R</b>
--	---	----------

## Publications

**Cheng, H. C. J.** and Klimczak, C. “The large-scale troughs on Asteroid 4 Vesta are opening-mode fractures.” Earth and Planetary Science Letter, in review.

## Professional Presentations

**Cheng, H. C. J.** and Klimczak, C. “The large-scale troughs on Asteroid 4 Vesta are opening-mode fractures.” 23<sup>rd</sup> Small Bodies Assessment Group (SBAG) meeting. June 2020. Early career talks. *\*Virtual due to COVID-19*

**Cheng, H. C. J.** and Klimczak, C. “Opening-mode fractures are an alternative explanation for large-scale troughs on Asteroid 4 Vesta.” Lunar and Planetary Science Conference. Vol. 51. 2020. Abstract [#1002](#)  
*\*Canceled due to COVID-19. Intended talk: <https://youtu.be/l4IFWnN0ykk>*

Webb, A. A. G., Moore, W. B., Zuo, J., **Cheng, H. C. J.**, Tang, C., Müller, T., Haproff, P. and Simon, J. “Heat-pipe tectonics.” European Geosciences Union: Ada Lovelace Workshop on Modelling Mantle and Lithosphere Dynamics. 2019. Invited talk. Certosa di Pontignano, Siena, Italy

**Cheng, H. C. J.**, Webb, A.A.G., Michalski, J.R. and Moore, W.B. "Testing crustal plateau formation models for Venus using geological mapping of Ishtar Terra marginal areas." Lunar and Planetary Science Conference. Vol. 50. 2019. Abstract [#1332](#). Poster presentation. The Woodlands, TX, USA

## Travel Grants

<b>Early-career Travel Award</b>   Small Bodies Assessment Group (SBAG)   2020	<i>*Virtual due to COVID-19</i>
<b>Watts Wheeler Travel Award</b>   Department of Geology   University of Georgia   2020	<b>\$800</b>
<b>Travel Support for Research Postgraduate Students</b>   The University of Hong Kong   2018	<b>\$1300</b>

## Service Experiences

<b>UGA Academic Honesty Student Panelist</b>	Fall 2019 - Present
--	---------------------