Samuel Yee

EDUCATION

California Institute of Technology, Pasadena, CA **2014 – 2018 (Expected)**
B.S. in Physics, Minor in Planetary Science **GPA: 4.1**

St John's College, University of Cambridge, Cambridge, United Kingdom **Fall 2016**
Study Abroad Program in Natural Sciences/Part II Physics

RESEARCH

Division of Geological and Planetary Sciences, California Institute of Technology
Mentors: Heather Knutson, Erik Petigura
A New Long-Period Planet around HAT-P-11 **Feb 2017 – Ongoing**

- Working on a project to confirm the presence of a new long-period planet around the star HAT-P-11, and characterize the dynamical history of the system, which is intriguing because the spin axis of the star is misaligned with the orbital plane of the planets.

Precision Stellar Characterization using an Empirical Spectral Library **Mar – Dec 2016**

- Developed SpecMatch-Emp, a new Python tool to extract fundamental stellar parameters from high-resolution spectra by comparing it with an empirical spectral library. The performance of the algorithm was assessed through internal cross-validation, as well as a noise injection and resolution degradation study.
- Project website: https://github.com/samuelyeewl/specmatch-emp

Institute of High Performance Computing **Aug – Sep 2015**
Agency for Science, Technology and Research, Singapore
Research Assistant, Electronics and Photonics Department

- Used Python, MATLAB and COMSOL Multiphysics software to model and simulate the scattering spectra of dielectric structures. This work involved assessing the performance and accuracy of different models over various parameter ranges.

PUBLICATIONS

Yee, W. S., Petigura, E., Von Braun, K. Precision stellar characterization of FGKM stars using an empirical spectral library. *The Astrophysical Journal*, 836, 77.

Li, K., Lin, J., Kang, Z. Y., **Yee, W. S**., & Wong, S. J. (2011). The vertical oscillations of magnets. *European Journal of Physics*, 32(4), S1.

SELECTED COURSEWORK

Physics: Computational Physics Laboratory, Classical Field Theory, Quantum Mechanics, Relativity
Planetary Sciences: Formation and Evolution of Planetary Systems, Planetary Physics
Mathematical Methods: ODE's and PDE's, Complex Analysis, Group Theory
Computer Science: Machine Learning and Data Mining

SKILLS

Programming: Python, C++, Mathematica

EXTRACURRICULARS

Member of the Caltech **Board of Control** **2015**