# Michelle Jing Dong

**Last update: September 5, 2021**


CONTACT INFORMATION

88 Xingzhou St, RM 103, BLDG 78,
Suzhou, Jiangsu, China, 215021
Tel: (+86)158-6260-0505

Linkedin: linkedin.com/in/micd/
✉ E-mail: mid@berkeley.edu


## EDUCATION

**University of California, Berkeley**, Berkeley, CA — 2021 - 2025 (expected)

- Intended Majors: Physics, Math, & Computer Science, Current GPA: 4.0.

**Stanford Pre-Collegiate University-Level Online Math**, Online. — 2020–2021

- Courseworks: Linear Algebra (A), Multivariable Calculus (A+A)

**Suzhou High School of Jiangsu Province**, Suzhou, Jiangsu, China. — 2018-2021

- Honors: S.-T. Yau High School Science Award (Physics) Second Prize, NHSMUN Best Delegate, SMUN Outstanding Delegate, AP Scholar ('19, '20, '21), Fan Zhongyan Scholarship ('20, '21).
- Received 11 5s in AP Exams including Physics 1/2/Mechanics/E&M, Calculus BC, Chemistry, & Computer Science A.

**Phillips Exeter Academy Summer**, Exeter, NH. — 2018

- Courseworks: Writing (Honor Grade), Quantum Physics and Relativity (Honor Grade), Astrophysics (Honor Grade), Lifeguarding (Certified), Orchestra (Piano), & Harp.

## RESEARCH EXPERIENCE

**Summer Science Programs, Astrophysics**, Student Researcher. — Jun. 2020 – Jul. 2020.

- Operated research-grade telescopes and manipulated JPL-Horizons to take images of the asteroids;
- Performed data reduction with AstroImageJ and SAO DS9;
- Drafted report and published the data to Minor Planet Center;
- Calculated its six orbital elements of 2003 GE42 with Method of Gauss based on Python;
- Completed an error analysis with Monte Carlo simulations;
- Predicted the chance of the asteroid Earth impacting in the future;
- Wrote a 32-page paper of 2003 GE42 Orbital Determination paper in a group of three.

**Polar Institute of China, Theoretical Physics**, Student Researcher. — Mar. 2020 – Dec. 2020.

- Conducted research in a theoretical method of detecting early exoplanets through gravitational microlensing singularly, including discussing superluminal motion, cosmological distances, machine learning algorithms for auto-classifying microlensing events;
- Conducted graph-making, model-fitting, calculations, and simulations with Python;
- Wrote a 46-page paper & presented at Fudan University; awarded for S.-T. Yau High School Science Award.

**Independent Research, Exoplanet**, Student Researcher. — Jan. 2020 – Mar. 2020.

- Conducted research on Transit Time Variations and its Application in Detecting & Characterizing Unseen Planets with Discussion in Kepler-46, including discussing mean motion resonance and analyzing the stability of the different systems, graphing, simulating, & model-fitting with Python, guided by Professor Tucker from Brown University.

## SKILLS

**Programming Languages:**

- Python (NumPy/SciPy/AstroPy/Matplotlib/VPython/Pandas/PyTorch/Scikit-learn),
- Java, Javascript, R, MATLAB.

**Computer Software:**

- LaTeX, AstroImageJ, SAO DS9, Stellarium,
- G Suite, Microsoft Office, Adobe Premiere Pro, Notion.

**Languages:**

- English, Mandarin (Fluent), French (Intermediate).

## STEM Activities

**Berkeley Physics Directed Reading Program**, Mentee. 2021-2022 (expected)

- Read on Quantum Mechanics, Relativity, Quantum Field Theory, Topology, etc. for String Theory guided by the graduate student.

**Summer Science Program (SSP) Connect**, Mentor. 2021-2022 (expected)

- Mentor two SSP '21 Astrophysics students in applying college, build up resumes and preparing for interviews, learning STEM-related skill sets, answering questions of college life and potential research opportunities.

**Hack Club SHS**, Founder & Lead. 2020-2021

- Hosted guest lectures/workshops/hackathons and developed lesson plans in CS/Programming; initiated 2-month mentorship programs for STEM subjects; marketed through social media; solicited sponsors.

**Superposition Suzhou**, Founder & Lead. 2020-2021

- Developed lesson plans and teach lessons in STEM subjects including CS/Data Science, Physics/ Astrophysics, & Math/Statistics; organized participation of science seminars and competitions.

**ShareSTEM (WeChat Official Account w/ 8.4k+ followers)**, Vice President. 2020-2021

- Published articles on STEM fields, AP Preparations, & Learning/Networking Opportunities, etc.; held panels in CS/Astrophysics/Math/other STEM subjects for introducing opportunities & answering questions; connected leaders of student organizations to maximize the utility of resources.

**Codefy/Elevate Tech/Coding Girls**, Python/Java/R Director & Instructor. 2020-2021

- Taught courses weekly or themed workshops both online & offline, designed & guided related projects.

**TestDaily**, AP Physics C: Mechanics Tutor & Content Creator. 2020-2021

- Taught 1.5-hour AP Physics C lesson weekly & graded & commented on assignments; created AP Physics C exam answer explanations and study guides.

**Panopath**, AP Computer Science A Instructor. 2021

- Instructed and tutored a complete AP Computer Science A course in Spring 2021, 25 hrs/week.

## Other Activities

**TEDxYouth**, @Suzhou: Coach & Co-Curator, @SHS: Coach Leader. 2021

- Coached speakers for the TEDx Talk, designed salons and workshops, organized meetings between teammates, ran WeChat official accounts for publication of the events, solicited sponsors.

**SHS Model UN Club**, Vice President & Academic Director, Conference Chair. 2018-2021

- Participated in 9 conferences as Delegate; 8 conferences as Chair; 3 conferences as Secretary/ Executive; held academic training and solicited sponsors, led school team, organized conferences, solicited sponsors.

**Wave Learning Festivals**, Instructor, Moderator, &Social Media Ambassador. 2020-2021

- Designed & taught 5-wk course Chinese Classical Culture: Communicating & Collaging and 4-session seminar Postmodern Literature: Scattering and Bricolaging; moderated 5 courses; advertised for WaveLF on social media.

**Publicizing Department of Student Government**, President. 2018-2021

- Organized, introduced, & recorded school events, managed school website and official account, held academic and athletic competitions, solicited sponsors.

## Hobbies

**Art & Music:**

- Electric Organ, Palm-leaf Weaving, Hiphop Dancing, Musicals.

**Sports:**

- Badminton, Tennis, Swimming.

## References

Dr. **Peng Jiang**
Polar Research Institute of China
E-mail: jiangpeng@pric.org.cn