# Yukun Huang 黄宇坤

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EDUCATION	Ph.D. in Astronomy, University of British Columbia (UBC), Canada M.S. in Aerospace Science, Tsinghua University, China	2019 - 2023 2016 - 2019		
RESEARCH POSITIONS	Project Research Fellow, National Astronomical Observatory of Japan (NAOJ), Japan Collaborator: Prof. Eiichiro Kokubo Apr. 2024 – Now			
	Visiting Scholar, Tsinghua University, China Collaborators: Prof. Wei Zhu & Prof. Chris Ormel  Jan. 2024 – Mar. 20			
	Graduate Research Associate, UBC, Canada   Advisor: Prof. Brett Glad	<mark>dman 2019 – 202</mark> 3		
	Research Associate, Tsinghua University, China   Advisor: Prof. Junfer	ng Li 2015 - 2019		
FELLOWSHIPS	NAOJ Project Research Fellow Edwin S.H. Leong Fellow	2024 – Now 2020 – 2023		
REFERED PUBLICATIONS	As first author: 1. Dynamics of Binary Planets within Star Clusters Huang, Zhu & Kokubo. submitted to ApJL (2024)			
	2. Primordial Orbital Alignment of Sednoids Huang, & Gladman. ApJL, 962, L33 (2024)			
	3. A Rogue Planet Helps Populate the Distant Kuiper Belt Huang, Gladman, Beaudoin, & Zhang. ApJL, 938, L23 (2022)			
	4. Free Inclinations for Transneptunian Objects in the Main Kuiper Huang, Gladman, & Volk. ApJS, 259, 54 (2022)	r Belt		
	5. Four-billion year stability of the Earth–Mars belt Huang, & Gladman. MNRAS, 500, 1151 (2021)			
	6. On the Instability of Saturn's Hypothetical Retrograde Co-orbita Huang, Li, Li, & Gong. MNRAS, 488, 2543 (2019)	als		
	7. Kozai-Lidov Mechanism inside Retrograde Mean Motion Resona Huang, Li, Li, & Gong. MNRAS, 481, 5401 (2018)	ances		
	8. Dynamic Portrait of the Retrograde 1:1 Mean Motion Resonance Huang, Li, Li, & Gong. AJ, 155, 262 (2018)	e		
	As contributing author:  9. Asteroid Kamoʻoalewa's journey from the lunar Giordano Brun resonance Jiao, Cheng, <b>Huang</b> , et al. Nature Astronomy, 8, 819 (2024)	o crater to Earth 1:1		
	<ol> <li>OSSOS. XXIX. The Population and Perihelion Distribution of Belt</li> <li>Beaudoin, Gladman, Huang, et al. PSJ, 4, 145 (2023)</li> </ol>	the Detached Kuiper		
	11. Flip mechanism of Jupiter-crossing orbits in the non-hierarchical Li, Lei, Huang, & Gong. MNRAS, 502, 5584 (2021)	al triple system		
	12. Dynamics of retrograde 1/n mean motion resonances: the 1/-2 Li, Huang, & Gong. Astrophysics and Space Science, 365, 165			

A semi-analytic model for the study of 1/1 resonant dynamics of the planar elliptic restricted co-orbital problem
 Li, Huang, & Gong. Research in Astronomy and Astrophysics (2020)

- 14. Assess the Risk of Potentially Hazardous Asteroids through Mean Motion Resonance Li, Huang, & Gong. Astrophysics and Space Science, 364, 78 (2019)
- 15. Survey of asteroids in retrograde mean motion resonances with planets Li, **Huang**, & Gong. A&A, 630, A60 (2019)
- 16. Centaurs Potentially in Retrograde Co-orbit Resonance with Saturn Li, Huang, & Gong. A&A, 617, A114 (2018)

### PROFESSIONAL Referees for AJ, ApJ, MNRAS, A&A, Icarus **SERVICE**

### SCIENCE TEAMS CLASSY: Classical and Large-A Solar System Survey

2022 - Now

• Dynamical classification & modelling of discovered TNOs

## FOSSIL: Formation of the Outer Solar System: an Icy Legacy

2024 - Now

• Dynamical analysis of discovered objects & theoretical prediction

### **PRESS COVERAGE & OUTREACH**

Science: Where did Earth's oddball 'quasi-moon' come from? Scientists pinpoint famed lunar crater	2024
Space.com: Earth's weird 'quasi-moon' Kamo'oalewa is a fragment blasted out of big moon crater	2024
Phys.org: Computer model helps support theory of asteroid Kamo'oalewa as ejecta from the moon	2024
ScienceAlert: This Crater Could Be Where Earth's 'Second Moon' Broke Off The First One	2024
AAS Nova: Sednoids: Echoes of a Rogue Planet in the Early Solar System?	2024
Sky & Telescope: "Planet X" May Have Left Our Solar System Billions of Years Ago	2023
MacMillan Space Centre: Ask An Astronomer - Lunar New Year of the Rabbit	2023
New Scientist: A long-lost planet could explain unexpectedly distant asteroids	2022

INVITED TALKS	New Horizons Science Plenary Meeting: Primordial Orbital Alignment of Sednoids	Aug. 2024
	NAOJ: A Rogue Planet Hypothesis for the Formation of the Trans-Neptunian Solar System	May 2024
	Tsinghua University: The Rogue Planet Hypothesis	Mar. 2024
	Tsinghua University: Dynamics of TNOs Under the Influence of a Rogue Planet	Aug. 2023

### CONFERENCES As the speaker:

- 1. Primordial Orbital Alignment of Sednoids Huang, Zhu, & Kokubo. TNO 2024, Taipei (2024)
- 2. Dynamical Evolution of JuMBOs within Stellar Clusters Huang, Gladman, & Hu. DDA #55, Toronto (2024)
- 3. Primordial Orbital Clustering of Sednoids | Video Huang, & Gladman. DPS #55, San Antonio (2023)
- 4. A Gigantic Icy Body Reservoir Produced by an Early Rogue Planet | Abstract Huang, & Gladman. ACM 2023, Flagstaff (2023)
- 5. Steady State of a Planet-scattering Debris Disk Huang, & Gladman. DDA #54, East Lansing (2023)
- 6. Effect of a Rogue Planet on the Early Solar System | Video Huang, & Gladman. DPS #54, London (Ontario)(2022)
- 7. A Clearer View of the Primordial Kuiper Belt's inclination structure Huang, Gladman, & Volk. COSPAR #44, Athens (2022)
- 8. A Rogue Planet Populated the Distant Kuiper Belt | Video Huang, Gladman, & Beaudoin. DDA #53, New York (2022)
- 9. Dynamics of the Retrograde Co-orbital resonance Huang, Li, Li, & Gong. COOMOT, Milan (2022)
- 10. Four Billion Year Stability of the Earth-Mars Belt Huang, & Gladman. DDA #51, virtual meeting (2020)
- 11. Four Billion Year Stability of the Earth-Mars Belt Huang, & Gladman. DPS #52, virtual meeting (2020)

	<b>Huang</b> , Li, Li, & Gong. DDA #49, San Jose (2018)	
AWARDS AND	Outstanding Graduate of Beijing	2019
<b>SCHOLARSHIPS</b>	Scholarship of Takada for Excellent Students of Tsinghua	2018
	Second Prize in the 10th National Zhou Peiyuan Mechanics Competition	2015
	Yu Menglun Scholarship	2014
	Yu Menglun Award for Science & Innovation	2014
	China National Scholarship	2013
TEACHING	T.A. for Astro 310, UBC	2021
	T.A. for Astro 310 & 311, UBC	2020
	T.A. for Astro 101, UBC	2019
	T.A. for Vibration theory, Tsinghua University	2017
	T.A. for Theoretical mechanics, Tsinghua University	2016
STUDENTS	Qingru Hu (胡清茹), Tsinghua (Undergraduate Student, Astronomy)	2024 – Now

Zhuoya Cao (曹卓雅), Tsinghua (Undergraduate Student, Physics)

Huang, & Gladman. 14th EPSC, virtual meeting (2020) 13. Dynamics of the Retrograde 1/1 Mean Motion Resonance

12. Primordial Stability of the Earth–Mars Belt

### **Brett Gladman** REFERENCES

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### **Aaron Boley**

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### Wei Zhu (祝伟)

Tsinghua University Beijing, China weizhu@tsinghua.edu.cn 2024 - Now

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