

# Jacky Siu-Wang Chan

📍 Hong Kong SAR    ✉ [xhchen@pmo.ac.cn](mailto:xhchen@pmo.ac.cn)    🔗 [My\\_Website](#)

## RESEARCH INTERESTS

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Galaxy Evolution, Galaxy Structure, High Redshift Galaxies, Chemical Abundances

## EDUCATION

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**Msc(Astronomy)** 2023-2026

University of Science and Technology of China, Hefei, People's Republic of China

Purple Mountain Observatory, CAS, Nanjing, People's Republic of China

✓ GPA: 3.37/4.3

✓ *Related coursework:*

Galactic Astronomy, Radiative Processes in Astrophysics, Astronomical software and programming technology, Fundamental Astrophysics, Cosmology, Radio Astronomy, Statistical Methods in Astrophysics

**Bsc(Physics)** 2019-2023

Jilin University, Changchun, People's Republic of China

✓ *Related coursework:*

- Mathematics: Advanced Mathematics, Linear Algebra, Probability Theory.  
- Physics: Thermodynamics and Statistical Mechanics, Electrodynamics, Computational Physics, Mechanics, Optics, Thermodynamics, Electromagnetism, Theoretical Mechanics, Mechanical Engineering, and Physics. Magnetism, Theoretical Mechanics.

## RESEARCH PROJECTS

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### Disclosing Submillimeter Galaxy Formation: Mergers or Secular Evolution?

✓ **Status:** Published by ApJ (Independent Research Project)

✓ **Purpose:** Investigate formation mechanisms of Sub-millimeter Galaxies (SMGs) using morphological diagnostic tools

✓ **Methods:**

Classified bulge types using Sersic index & bulge-to-total-luminosity-ratio, CAS system, Gini-M20 plot, and stellar bar identification

✓ **Findings & Conclusion:**

- Identified 24% with merger signatures and 7% with clear stellar bar
- Majority of SMGs clusters in the area with high B/T but low s é rsic
- **Secular evolution takes precedence over mergers** , in which merger acts only as a booster for star formation activities , suggesting that filamentary gas inflow plays a key role in bulge formation

✓ **Extra Info:** This work challenges the long-established paradigm and opens new perspectives about galaxy formation at high- $z$  , and it has sparked attentions and interests from peers worldwide, and praised by Dr. Anton M. Koekemoer (STScI) as "a very valuable contribution to this field".

## CERTIFICATIONS & AWARDS

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- ✓ **China National Scholarship** - 中华人民共和国国家奖学金 - 2025  
The Highest Recognition in College for top 0.2% nationwide  
(Awarded by Ministry of Education of the People's Republic of China, Evaluated based on academic performance, research , leadership, and overall quality)
- ✓ Honorable Mention — The Mathematical Contest in Modeling(MCM) - 2022

## SKILLS

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### Tech-related

- Python
- Linux Commands

### Languages

- Chinese (Mandarin + Cantonese): Native
- English: Second language, Fluent
- ✓ IELTS: Listening - 7.5, Reading - 8.5, Writing - 7.0, Speaking - 6.5  
Overall band Score - 7.5
- ✓ CET4: 590, CET6: 589

### Typesetting

- L<sup>A</sup>T<sub>E</sub>X: