

# Haochang Jiang

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## Education

- **European Southern Observatory** Garching bei München, Germany  
*ESO Studentship, Advisor: Enrique Macías* October 2022 - present
- **Tsinghua University** Beijing, China  
*Ph.D. in Astronomy, Advisor: Chris W. Ormel* August 2019 - present
- **University of Science and Technology of China** Hefei, Anhui, China  
*B.Sc. in Astronomy* August 2015 - July 2019

## Research Interests

- **planet formation** theory, particularly in the context of **pebble accretion**
- **circumstellar disks** (protoplanetary disks, debris disks) formation and evolution
- **(sub)mm interferometry** observation and **astrochemistry** of circumstellar disks
- **high-contrast imaging** on circumstellar disks and extremely young **protoplanets**

## Publications

1. **Jiang H.**, Macías E., A&A, in review  
*Grain-size measurements in protoplanetary disks indicate fragile pebbles and low turbulence*
2. **Jiang H.**, Wang Y., Ormel C. W., Krijt S., Dong R., 2023, A&A, 678, A33  
*Chemical footprints of giant planet formation. Role of planet accretion in shaping the C/O ratio of protoplanetary disks*
3. Wu Y.\*, Chen Y.-X.\*, **Jiang H.\***, Dong R., Macías E., Lin M.-K., Rosotti G. P., Elbakyan V., 2023, MNRAS, 523, 2630  
*Distinguishing Magnetized Disc Winds from Turbulent Viscosity through Substructure Morphology in Planet-forming Discs* \* equal contribution
4. Kuang R., Zang, W., Mao S., Zhang J., **Jiang H.**, 2023, MNRAS, 520, 4540  
*Simulations of Triple Microlensing Events I: Detectability of a scaled Sun-Jupiter-Saturn System*
5. **Jiang H.**, Ormel C. W., 2023, MNRAS, 518, 3877  
*Efficient planet formation by pebble accretion in ALMA rings*
6. **Jiang H.**, Zhu W., Ormel C. W., 2022, ApJL, 924, L31  
*No Significant Correlation between Line-emission and Continuum Substructures in the Molecules with ALMA at Planet-forming Scales Program*
7. **Jiang H.**, Ormel C. W., 2021, MNRAS, 505, 116  
*Survival of ALMA rings in the absence of pressure maxima*

## Awarded Telescope Time

- 2023 **Subaru**, *S23B-TE020-G*, SCE<sub>x</sub>AO/VAMPIRES+CHARIS, 2 half-night (**PI**)  
"Confirming the direct detection of a runaway accreting planet in a protoplanetary disk gap"
- 2022 **Subaru**, *S22B-TE019-G*, SCE<sub>x</sub>AO/VAMPIRES+CHARIS, 1 half-night (**PI**)  
"Astrochemistry hints at the presence of a young accreting planet"
- 2022 **VLT**, *110.245G*, MUSE, 3 hour (**PI**)  
"Astrochemistry hints at the presence of a young accreting planet"

## Observing

- 2022 **Subaru**, *remote*, SCE<sub>x</sub>AO/VAMPIRES+CHARIS, 1 half-night

## Selected Talks, Seminars & Conferences

### Invited Presentations:

- 2023/12 **Seminar** (scheduled), *Lunch Talk*, SWIFAR, Kunming, Yunnan, China
- 2023/11 **Seminar** (scheduled), *Lunch Talk*, Leiden Observatory, Leiden, Netherlands
- 2023/11 **Seminar** (scheduled), *MSSL astro seminar*, University College London, Mullard, UK
- 2023/11 **Seminar** (scheduled), *Disc group discussions*, University of Exeter, Exeter, UK
- 2023/11 **Seminar** (scheduled), *Exoplanet Seminar Series*, University of Cambridge, Cambridge, UK
- 2023/10 **Seminar**, *Monday Science Seminar*, University of Wisconsin–Madison, Remote
- 2023/05 **Seminar**, *ET Science Seminar Series*, Shanghai Astronomical Observatory, Remote
- 2023/02 **Journal club**, Steward Observatory, University of Arizona, Remote
- 2022/10 **Seminar**, *DoA Lunch talk*, Tsinghua University, Beijing, China
- 2022/05 **Seminar**, *KIAA-DoA Seminar*, Peking University, Beijing, China
- 2021/05 **Journal club**, *Star and Planet Formation Journal Club*, MPE, Remote

### Conference Presentations:

- 2023/07 **Contributed talk**, *European Astronomical Society Annual Meeting 2023*, Kraków, Poland
- 2023/06 **Contributed talk**, *Emerging Researchers in Exoplanet Science symposium 2023*, New Haven, CT
- 2023/06 **Poster**, *Origins of Solar Systems Gordon Research Conference*, South Hadley, MA
- 2023/03 **Contributed talk**, *Meeting of ALMA Young Astronomers*, Remote

- 2022/11 **Contributed talk**, *Disks and Planets across ESO Facilities*, ESO, Garching, Germany
- 2022/03 **Contributed talk**, *Meeting of ALMA Young Astronomers*, Remote
- 2022/01 **Contributed talk**, *East Asia ALMA Science Workshop 2022*, Remote
- 2021/12 **Contributed talk**, *Annual Meeting of the Chinese Astronomical Society 2021*, Remote
- 2021/06 **Contributed talk**, *Chinese Planetary Science Conference 2021*, Suzhou, Jiangsu, China
- 2021/03 **Contributed talk**, *From cores to codes: planning for the next steps in planet formation*, Remote

#### Scientific visits:

- 2023/11 **Visitor talk** (scheduled), University of Leicester, Leicester, UK
- 2023/07 **Visitor talk**, Ludwig-Maximilians-Universität München, München, Germany
- 2023/07 **Visitor talk**, Max-Planck-Institut für Astronomie, Heidelberg, Germany
- 2023/07 **Visitor talk**, Institute of Theoretical Astrophysics, Heidelberg University, Heidelberg, Germany
- 2023/06 **Visitor talk**, University of Michigan, Ann Arbor, MI
- 2023/06 **Visitor talk**, Boston University, Boston, MA
- 2023/06 **Visitor talk**, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA
- 2023/05 **Visitor talk**, Lunar and Planetary Laboratory, University of Arizona, Tucson, AZ
- 2023/02 **Visitor talk**, Department of Physics, University of Milan, Milan, Italy
- 2023/02 **Visitor talk**, Observatoire de la Côte d’Azur, Nice, France
- 2022/11 **Visitor talk**, Ludwig-Maximilians-Universität München, München, Germany
- 2021/11 **Visitor talk**, Departamento de Astronomía, Universidad de Chile, Remote

### Teaching & Mentoring

- 2023 Summer **Julia Perla** (w/ **Claudia Toci**, **Enrique Macías**), M.Sc. student at Adam Mickiewicz University  
ESO Summer Research Programme, results in a presentation in the ESO workshop
- 2021 Spring **Teaching Assistant**, *40920013-90 Star & Planet*, Instructor: Chris W. Ormel

### Professional Services

- 2023/12 **LOC**, *Exoplanets & Planet Formation Workshop 2023*, Yanqing, Beijing, China
- 2023/09– **Organiser**, *ESO Journal Club*
- 2023/05 **Scientific Assistant**, *ESO Observing Programmes Committee P112*

- 2022/12 **LOC**, *Disks and Planets across ESO Facilities*, Garching bei München, Germany
- 2022/11 **Scientific Assistant**, *ESO Observing Programmes Committee P111*
- 2020–2021 **Organization Assistant**, *Tsinghua DoA Colloquium*

## Selected Honors & Awards

- 2022-2024 **ESO Research Studentship**, 1.5 year
- 2022 **Tsinghua Astrophysics Outstanding (TAO) Scholarship**, 30000 ¥ (~4000 \$)  
The top student prize for outstanding research in the department, 1 per year among ~70 students
- 2020-2023 **Tsinghua Comprehensive Scholarship**, *multiple times*, total 20000 ¥ (~3000 \$)

## Outreach

- 2023/08– **Co-organizer**, *ESO Beer Friday*  
A weekly after-party on Friday afternoon happening among visitors, ESO students & fellows
- 2020–2021 **Volunteer**, *THU Graduate Admissions*  
Chair the social events during the open days for astrophysics Ph.D. program candidates
- 2018–2020 **Volunteer**, *USTC Undergraduate Admissions*  
Advice and support prospective students after the yearly Chinese college entrance exam
- 2022– **Press releases**
- Tsinghua DoA**, "*Accreting Planets Leave Chemical Footprints in Protoplanetary Disks*"  
<https://astro.tsinghua.edu.cn/info/1055/2562.htm>
- Tsinghua DoA**, "*Chickens or Eggs? ALMA Rings as Planet Factories*"  
<https://astro.tsinghua.edu.cn/info/1055/1905.htm>
- Tsinghua DoA**, "*Are Substructures in Different Components of Protoplanetary Disks Correlated?*"  
<https://astro.tsinghua.edu.cn/info/1055/1618.htm>