

# Ruobing Dong (董若冰)

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## Employment

- Kavli Institute for Astronomy and Astrophysics, Peking University
  - Boya Distinguished Professor (博雅特聘教授) 2024 – present
- Department of Physics & Astronomy, University of Victoria
  - Adjunct Professor 2024 – present
  - Associate Professor 2023 – 2024
  - Assistant Professor 2018 – 2023
- Institute of Astronomy & Astrophysics, Academia Sinica
  - Visiting Scholar 2018 – 2024
- Steward Observatory, University of Arizona
  - Bart J. Bok Fellow 2016 – 2018
- Lawrence Berkeley National Lab / University of California, Berkeley
  - NASA Hubble Fellow 2013 – 2016
- McKinsey & Company
  - Summer Associate 2013

## Education

- Princeton University
  - Ph.D., Astrophysics, 2013 (Advisors: Roman Rafikov & James Stone)
- Peking University
  - B.S., Physics, 2008

## Selected Fellowships & Awards

- Member, College of New Scholars, Royal Society of Canada 2025
- Changjiang (Cheung Kong) Scholar Award (长江学者), Ministry of Education, China 2024
- Award for Research Excellence, Faculty of Science, University of Victoria 2022
- Sloan Research Fellowship, Alfred P. Sloan Foundation 2020
- Bart J. Bok Fellowship, Steward Observatory, University of Arizona 2016

- *NASA* Hubble Fellowship 2013
- Extraordinary Excellence Prize, Chinese Government Award for Outstanding Self-financed Students Abroad (\$10,000) 2012
- Sumsung Scholarship, Peking University 2007
- Chun-Tsung Fellowship, Peking University 2006
- Kwang-Hua Scholarship, Peking University 2005, 2006

## Funding

- Intergovernmental Science and Technology Innovation Cooperation Grant, National Key R&D Program of China (国家重点研发计划政府间国际科技创新合作, 2025YFE0123100), ¥1,500,000 2025 – 2028
- New Frontiers in Research Fund – Exploration (NFRFE-2022-00159), Tri-agency (Canada), \$250,000 (CAD) 2023 – 2025
- Discovery Grant, (RGPIN-2023-05299), Natural Sciences and Engineering Research Council (NSERC, Canada), \$230,000 (CAD) 2023 – 2028
- NOVA (ALLRP 577027-22), Fonds de recherche du Québec - Nature et technologies (FRQNT) Program (Canada), Funded Co-I (PI: Eve Lee @ McGill), \$90,000 (CAD) support for R.D. 2023 – 2024
- Alliance International Catalyst Grant (ALLRP 576488-22), Natural Sciences and Engineering Research Council (NSERC, Canada), \$25,000 (CAD) 2022 – 2023
- Sloan Research Fellowship (FG-2020-13779), Sloan Foundation, \$75,000 (USD) 2020 – 2022
- Discovery Grant + Discovery Launch Supplement (DGEGR-2018-00373), Natural Sciences and Engineering Research Council (NSERC, Canada), \$170,280 (CAD) 2018 – 2023

## Research Advising

### *Current Group Members:*

#### Graduate Students

- **Jinlin Li**, PhD, Peking University 2025 – present
- **Zhuhai Li**, PhD, Peking University 2025 – present
- **Xiaoyi Ma**, MSc → PhD, University of Victoria → Peking University 2022 – present
- **Camryn Mullin**, MSc → PhD (NSERC CGD D), University of Victoria 2022 – present
- **Dori Blakely**, MSc → PhD (NSERC CGS D), University of Victoria, co-supervisor with Doug Johnstone 2020 – present

#### Postdoctoral Fellows

- **Kan Chen**, Peking University (Boya Fellow) 2025 – present
- **Weiqi Wang**, University of Victoria 2023 – present

### *Past Group Members:*

#### Graduate and Undergraduate Students

- **Jessica Speedie**, MSc → PhD, University of Victoria 2020 – 2025
- **Shunyuao Mao**, MSc → PhD, University of Victoria 2019 – 2024
- **Jiaqing Bi**, MSc → PhD, University of Victoria 2018 – 2023
- **Minghao Zhang**, Undergraduate, Sun Yat-sen University (Summer Student) 2022 – 2023
- **Jacob Atkinson**, Undergraduate, University of Victoria 2021 – 2022
- **Xuejie Li**, Undergraduate, Shangdong University (MITACS Global Link Fellow) 2021
- **Vivek Vishwanath**, Undergraduate, University of Victoria (Jamie Cassels Undergraduate Research Awards & Mitacs Research Training Award 2020) 2020 – 2021
- **Meta Marr**, Undergraduate, University of Victoria (NSERC Undergraduate Student Research Award 2020 / Honors Thesis) 2019 – 2021
- **Jiahui Sun**, Undergraduate, Nanjing University (Summer Project) 2019
- **Benny Wang**, Undergraduate, Williams College (Summer Project) 2019
- **Kali Salmas**, Undergraduate, University of Victoria (Honors Thesis) 2018 – 2019
- **Oliver Wang**, Undergraduate, UC Berkeley (Junior year research project) 2016 – 2017

#### Postdoctoral Fellows

- **Nienke van der Marel**, Banting Fellow, University of Victoria 2019 – 2021
- **Pinghui Huang**, University of Victoria 2023 – 2024

#### Research Assistants

- **Dhruv Muley**, University of Victoria 2020 – 2021

### **Graduate Student Thesis / Supervisory Committee Member**

- Marielle Eduardo, PhD, University of Victoria 2022 – present
- Lowell Peltier, PhD, University of Victoria 2022 – present
- Katie Crofts, Master & PhD, University of Victoria 2018 – 2024
- Logan Francis, PhD, University of Victoria 2020 – 2022
- Matthew Wilson, MSc, University of Victoria 2021 – 2022

### **Teaching:**

#### ***Peking University***

##### Graduate Level

- Planet Formation Fall 2025 – 2026
- Special Topics in Astrophysics Spring 2024 – 2025

##### Undergraduate Level

- Introduction to Planetary Sciences Spring 2025 – 2026

#### ***University of Victoria***

##### Undergraduate Level

- ASTR 255, Introduction to Planetary Sciences Spring 2020 – 2023
- PHYS 321A, Classical Mechanics Fall 2019 – 2021
- PHYS 460A/460B, Colloquium Fall 2020 – 2023; Spring 2021 – 2024

Graduate Level

- ASTR 511, Exoplanets and Their Formation Fall 2018 – 2020, Spring 2023
- ASTR 561, Astronomy Paper Session Fall 2023 – 2024
- ASTR 580, Directed Study – Planet Formation Spring 2021, 2023
- ASTR 580, Directed Study – Fundamentals of Radio Interferometry Spring 2023
- ASTR 580, Directed Study – Dynamical modeling of planet-disk systems Spring 2022
- ASTR 580, Directed Study – Density Waves Summer 2021
- ASTR 580, Directed Study – Debris Disks Spring 2019

**Approved Observing Programs**

*19 programs as PI on VLT, LBT, Gemini, Keck, Subaru, and ALMA; 100+ programs as Co-I on Keck, Gemini, Subaru, HST, ALMA, VLA and SMA.*

*Listing only PI programs*

1. Subaru, Gemini2026AC020 (Exchange Program), 0.5-night, admin PI
2. Subaru, Gemini CA-2024B-009 (Exchange Program), 0.5-night, admin PI
3. Subaru, Gemini2022AC004 (Exchange Program), 1-night, admin PI
4. VLT, 106.20YJ, 2 hour
5. VLT, 105.20JG, 1 hour
6. VLT, 0104.C-0538, 1 hour
7. LBT, 2018B, 1 night
8. LBT, 2018B, 1 night
9. LBT, 2017A, 1 night
10. Gemini, GS-2016A-Q-33, 2.5 hours
11. Keck (Admin PI Eugene Chiang), 2016A\_U131N2, 0.5 night
12. ALMA, Cycle 12, 2025.1.01619.S, 3.3 hours
13. ALMA, Cycle 11, 2024.1.00330.S, 15.0 hours
14. ALMA, Cycle 9, 2022.1.00315.S, 21.9 hours
15. ALMA, Cycle 8, 2021.1.00690.S, 21.9 hours
16. ALMA, Cycle 5, 2017.1.00492.S, 7.6 hours
17. ALMA, Cycle 4, 2016.2.00168.S, 1.0 hours
18. ALMA, Cycle 4, 2016.1.00262.S, 4.4 hours
19. ALMA, Cycle 4, 2016.1.00110.S, 3.8 hours

**Selected Press Releases / Media Exposures (*links embedded*)**

- *“Escaping the Dust Trap: Simulations of Dust Dynamics in Protoplanetary Disks”*  
AAS NOVA (Huang et al. 2025, ApJ Letters, 981, 30) 2025 / 07
- *“A Late-Stage Infall Renovation: Mapping the Circumstellar Disk of AB Aurigae”*  
AAS NOVA (Speedie, Dong et al. 2025, ApJ Letters, 981, 30) 2025 / 03
- *“ALMA Detects Hallmark “Wiggle” of Gravitational Instability in Planet-Forming Disk”*  
Joint Press Release, Joint ALMA Observatory / National Radio Astronomy Observatory /

- University of Victoria / Cambridge University (**Speedie, Dong et al. 2024, Nature, 633, 58**)  
 New York Times report; Interview by the Kavli Foundation 2024 / 09
- “James Webb Space Telescope takes its first images of forming planetary systems”  
 Joint Press Release by University of Victoria, University of Arizona, and University of Michigan (**Mullin, Dong et al. 2024, AJ, 167, 183**) 2024 / 03
  - “Spotlight on Machine Learning in Astrophysics”  
 AAS NOVA (**Mao, Dong et al. 2023, ApJ Letters, 950, 12**) 2023 / 10
  - “ALMA catches “intruder” redhanded in rarely detected stellar flyby event”  
 Press Release, Joint ALMA Observatory / National Radio Astronomy Observatory / Subaru Telescope (**Dong et al. 2022, Nature Astronomy, 6, 331**) 2022 / 01
  - “A Young Star’s Disk Dilemma”  
 AAS NOVA (**Muley & Dong 2021, ApJ Letters, 921, 34**) 2021 / 11
  - “Do Planets Make Only Puffy Gaps?”  
 AAS NOVA (**Bi, Lin & Dong 2021, ApJ, 921, 107**) 2021 / 07
  - “ALMA Discovers Misaligned Rings in Planet-Forming Disk Around Triple Stars”  
 Press release, Joint ALMA Observatory / NRAO / ESO / NAOJ (**Bi, van der Marel, Dong et al. 2020, ApJ Letters, 851, 18**) 2020 / 09
  - “Seeing Things in Threes”  
 AAS NOVA (**Bi, van der Marel, Dong et al. 2020, ApJ Letters, 851, 18**) 2020 / 06
  - “What We Don’t Know About Protoplanetary Disks”  
 AAS NOVA (**van der Marel, Dong et al. 2019, ApJ, 872, 112**) 2019 / 04
  - “Filling (Dust) Gaps in Our Knowledge of Planet Formation”  
 AAS NOVA (**Dong et al., 2018, ApJ, 866, 110**) 2018 / 09
  - “ALMA Discover Exciting Structures in a Young Protoplanetary Disk That Support Planet Formation”  
 Press release, Joint ALMA Observatory / NAOJ / ASIAA (**Dong et al. 2018, ApJ, 860, 124**) 2018 / 06
  - “Imaged Companion Drives Spiral Arms in Disk”  
 AAS NOVA (**Wagner, Dong et al. 2018, ApJ, 854, 130**) 2018 / 03
  - “UA Astronomers Track the Birth of a ‘Super-Earth’”  
 Press release, University of Arizona (**Dong et al., 2017, ApJ, 843, 127**) 2017 / 07
  - “Featured Image: Simulating Planetary Gaps”  
 AAS NOVA (**Dong & Fung 2017, ApJ, 835, 146**) 2017 / 03
  - “Planet Masses from Disk Spirals”  
 AAS NOVA (**Fung & Dong 2015, ApJ Letters, 815, 21**) 2015 / 12
  - “Spirals in Dust Around Young Stars May Betray Presence of Massive Planets”  
 Press release, NASA (**Dong et al., 2015, ApJ Letters, 809, 5**) 2015 / 10
  - “Direct Infrared Image of an Arm in Disk Demonstrates Transition to Planet Formation”  
 Press release, NAOJ / Princeton University (**Mayama et al. 2012, ApJ Letters, 760, 26**) 2013 / 02
  - “Discovery of a Giant Gap in the Disk of a Sun-like Star May Indicate Multiple Planets”

Press release, NAOJ / Princeton University (**Hashimoto, Dong et al. 2012, ApJ Letters, 758, 19; Dong et al. 2012, ApJ, 750, 161**) 2012 / 11

*Note on American Astronomical Society (AAS) NOVA Highlights: NOVA is AAS' main news outlet and "highlights feature research articles that are selected because they are of particular importance or are of potential interest to a broad community". On average, NOVA highlights 2.7% of research articles published in peer reviewed AAS journals each year.*

## Invited Talks at Conferences

- Dec 2025 Exoplanets and Planet Formation, Shanghai, China
- Nov 2025 Division of Science Workshop at NAOJ, Hayama, Japan
- Apr 2025 The 2<sup>nd</sup> International Conference of Deep Space Sciences, Hefei, Anhui
- Dec 2024 2024 China-Spain Bilateral Workshop on the Milky Way and Exoplanets, Zhuhai, Guangdong
- Nov 2024 2024 Post-Gaia Conference, Nanjing, Jiangsu
- Oct 2024 National Conference on Planetary Sciences 2024, Nanjing, Jiangsu
- Sep 2024 Born in Fire: Eruptive Stars and Planet Formation 2024, Santiago, Chile
- Jun 2024 Asia Oceania Geosciences Society (AOGS) 21<sup>st</sup> Annual Meeting, Peyeongchang, South Korea
- May 2024 50 years of Binaries and Disks: Lubow@75, Las Vegas, USA
- Apr 2024 Science with the Hubble and James Webb Space Telescopes VII, Porto, Portugal
- Mar 2024 Simulating Physics in Celestial Ecosystems, Sendai, Japan
- Dec 2023 Exoplanets & Planet Formation Workshop, Beijing, China
- Jul 2023 First Science Forum of Institute for Frontiers in Astronomy and Astrophysics, Beijing Normal University, Xining, China
- May 2023 The 2nd Athena++ Workshop, Center for Computational Astrophysics, NYC, USA
- April 2023 Protostars and Protoplanets VII, Kyoto, Japan
- Mar 2023 The 5<sup>th</sup> Young Scientists Forum of Planetary Science, Sanya, China
- Aug 2022 NCTS-ASIAA Workshop: Stars, Planets, and Formosa, online
- Jun 2022 240th Meeting of the American Astronomical Society (AAS), Pasadena, CA
- May 2022 Canadian Astronomy Society General Meeting 2022, online
- Aug 2021 Forum on the application of Machine Learning in hydrodynamics, Kunming, Yunnan, China
- Jun 2021 Chinese Planetary Science Conference, Suzhou, Jiangsu, China
- Dec 2019 Workshop for Protoplanetary Disks and Exoplanets, Taipei, R.O.C.
- Nov 2019 Subaru Telescope 20th Anniversary, Hilo, HI
- Oct 2019 In the Spirit of Lyot 2019, Tokyo, Japan
- Oct 2019 Planet<sup>2</sup> / RESCEU Symposium 2019, Okinawa, Japan
- Jul 2019 Great Barriers in planet formation, Palm Cove, Australia
- Jul 2019 Astrophysical Dynamics Conference, T. D. Lee Institute, Shanghai, China
- Jun 2019 Canadian Astronomy Society General Meeting 2019, Montreal, QC, Canada
- Dec 2018 Chinese Astronomical Society Planetary Science Division Annual Meeting, Yixing, China
- Dec 2018 Mini-Workshop in Astrophysics, T. D. Lee Institute, Shanghai, China

- Dec 2018 Workshop for Protoplanetary Disks and Exoplanets, Taipei, R.O.C.  
 Dec 2017 Exoplanets and Planet Formation, Shanghai, China  
 Nov 2017 Numerical Simulations of Planet-Disc Interactions, Cuernavaca, Mexico  
 Nov 2017 Thirty Meter Telescope Science Forum 2017, Mysuru, India  
 Jul 2017 TIARA/CHARMS Mini-Workshop on Disks in the Protoplanetary Systems, ASIAA, Taipei, R.O.C.  
 Jul 2017 Workshop on the Accreting Universe, TDLI, Shanghai, China  
 Jun 2017 AAS 230, Austin, TX  
 Mar 2017 Observational Galactic Astrophysics Symposium, Zurich, Switzerland  
 Sep 2016 4<sup>th</sup> Annual GMT Community Science Meeting, Pacific Grove, CA  
 Sep 2016 Fellows at the Frontiers, Northwestern University, Evanston, IL  
 Aug 2016 TIARA/CHARMS Mini-Workshop on Disks in the Protoplanetary Systems, Taipei, R.O.C.  
 April 2016 4th Session of the Sant Cugat Forum on Astrophysics, Sant Cugat, Spain  
 Mar 2016 Hubble Fellows Symposium, Baltimore, MD  
 Jun 2015 3rd DTA Symposium the Origins of Planetary Systems, Tokyo, Japan  
 Mar 2015 Hubble Fellows Symposium, Baltimore, MD

### Invited Colloquia and Seminars

- Oct 2025 Department of Astronomy, Shanghai Jiaotong University, Shanghai, China  
 Sep 2025 Department of Astronomy, Tsinghua University, Beijing, China  
 May 2025 School of Physics, Jilin University, Changchun, China  
 Apr 2025 Department of Atmospheric Sciences, Peking University, Beijing, China  
 Mar 2025 School of Atmospheric Sciences, Sun Yat-Sen University, Zhuhai, Guangdong, China  
 Sep 2024 Department of Physics & Astronomy, Clemson University, Clemson, SC  
 Jul 2024 Institute of Astronomy and Astrophysics, Academia Sinica, Taipei, R.O.C.  
 Jun 2024 Department of Astronomy, University of Science and Technology of China, Hefei, China  
 May 2024 Institute for Astronomy, Zhejiang University, Hangzhou, China  
 Oct 2023 National Astronomical Observatory of Japan, Mitaka, Japan  
 Oct 2023 Department of Chemical and Physical Sciences, University of Toronto, Toronto, Canada  
 Sep 2023 Department of Physics, McGill University, Montreal, Canada  
 May 2023 Department of Astronomy, Shanghai Jiaotong University, Shanghai, China  
 Nov 2022 Department of Astronomy, Xiamen University, Xiamen, Fujian, China  
 Nov 2022 Kavli Institute of Astronomy and Astrophysics, Peking University, Beijing, China  
 Nov 2022 Square Kilometer Array Cradle of Life, online  
 Oct 2022 GTC Forum, National Astronomical Observatory of China, Beijing, China  
 Sep 2022 University of Leicester, Leicester, UK  
 Sep 2022 Tsung-Dao Lee Institute, Shanghai, China  
 Sep 2022 Shanghai Astronomical Observatory, Shanghai, China

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Jun 2022	Department of Astronomy, Huazhong University of Science and Technology, Wuhan, China
Feb 2022	Theoretical Astrophysics Center, UC Berkeley, Berkeley, CA
Feb 2022	Department of Physics, University of Alberta, Edmonton, Alberta, Canada
Dec 2021	Canadian Institute for Theoretical Astrophysics, Toronto, Canada
Nov 2021	Origins Seminar, University of Arizona, Tucson, AZ
Sep 2021	Department of Physics & Astronomy, University of British Columbia, Vancouver, Canada
Jun 2021	Kavli Institute of Astronomy and Astrophysics, Peking University, Beijing, China
Jan 2021	Department of Earth and Space Sciences, Southern University of Science and Technology, Shenzhen, Guangdong, China
Jan 2021	State Key Laboratory of Lunar and Planetary Sciences, The Macau University of Science and Technology, Macau, China
Aug 2020	Beijing Planetarium, Beijing, China
Aug 2020	School of Physics and Astronomy, Monash University, Melbourne, Vic, Australia
Feb 2020	Jet Propulsion Laboratory, Pasadena, CA
Dec 2019	Nanjing institute of Astronomical Optics & Technology, Nanjing, Jiangsu, China
Aug 2019	National Astronomical Observatory of China, Beijing, China
Aug 2019	Purple Mountain Observatory, Nanjing, Jiangsu, China
Jul 2019	Department of Astronomy, Xiamen University, Xiamen, Fujian, China
Jul 2019	Department of Astronomy, University of Science and Technology of China, Hefei, Anhui, China
Jun 2019	School of Physics & Astronomy, Sun Yat-Sen University, Zhuhai, Guangdong, China
Apr 2019	National Research Council, Herzberg Astronomy and Astrophysics, Victoria, BC, Canada
Mar 2019	Department of Physics and Astronomy, Washington State University, Pullman, WA
Mar 2019	Joint ALMA Observatory, Santiago, Chile
Mar 2019	Astronomy Department, the University of Chile / Chinese Academy of Sciences South America Center for Astronomy, Santiago, Chile
Jan 2019	Department of Physics and Astronomy, McMaster University, Hamilton, Canada
Dec 2018	School of Astronomy and Space Science, Nanjing University, Nanjing, China
Dec 2018	Institute of Astronomy and Astrophysics, Academia Sinica, Taipei, R.O.C.
Jan 2018	Department of Physics and Astronomy, UNLV, Las Vegas, NV
Nov 2017	Center for Astrophysics, Tsinghua University, Beijing, China
Feb 2017	Department of Physics and Astronomy, University of Toledo, Toledo, OH
Feb 2017	Department of Physics, The University of Texas at Dallas, Dallas, TX
Feb 2017	The Institute of Astronomy, University of Hawaii, Honolulu, HI
Feb 2017	Department of Physics and Astronomy, University of Victoria, Victoria, BC, Canada
Dec 2016	Department of Physics and Astronomy, Clemson University, Clemson, SC

Nov 2016	Department of Astronomy, UVa / NRAO Joint Colloquium, University of Virginia, Charlottesville, VA
Oct 2016	Center for Exoplanets and Habitable Worlds, Pennsylvania State University, State College, PA
Sep 2016	Steward Observatory / NOAO Joint Colloquium, Steward Observatory, Tucson, AZ
Aug 2016	Department of Astronomy, UIUC, Urbana, IL
Aug 2016	Institute of Astronomy and Astrophysics, Academia Sinica, Taipei, R.O.C.
May 2016	Kavli Institute of Astronomy and Astrophysics, Peking University, Beijing, China
Feb 2016	Small Scale Seminar, CfA/Harvard, Boston, MA
Feb 2016	Department of Astronomy, University of Florida, Gainesville, FL
Feb 2016	Department of Physics, University of Montreal, Montreal, Canada
Jan 2016	Department of Astronomy, UT Austin, Austin, TX
Apr 2015	Department of Astronomy, University of Florida, Gainesville, FL
Dec 2014	Institute of Astronomy and Astrophysics, Academia Sinica, Taipei, R.O.C.
Nov 2014	Shanghai Astronomical Observatory, Shanghai, China
Nov 2014	University of Science and Technology, Hefei, China
Jun 2013	Nanjing University, Nanjing, China
May 2013	Department of Astrophysical Sciences, Princeton University, Princeton, NJ

## Professional Activities and Services:

- Grant Review Panelists
  - NASA* Hubble Fellowship Selection Panel, *NASA* Theoretical and Computational Astrophysics Networks (TCAN), *NASA* Astrophysics Theory Program (ATP), *NASA* Exoplanets Research Program (XRP), *NASA* Earth and Space Science Fellowship, U.S. NSF Astronomy & Astrophysics Research Grant (AAG), Canada Natural Sciences and Engineering Research Council (NSERC) 2015 – present
- Telescope Time Allocation Committee (TAC) Members
  - JWST Cycle 3 (Member), 5 (Panel Vice Chair) 2020 – 2023
  - Canadian TAC (CanTAC) 2020
  - China Telescope Access Program 2020
  - Steward Observatory 2016 – 2018
- Canadian Astronomical Society
  - Awards Committee 2019 – 2022
  - Canadian Astronomical Society Computation and Data Committee 2022 – 2024
- Large-Telescope Advisory Roles
  - Chinese 14.5-Meter Telescope Science Advisory Committee 2025 – present
  - Thirty Meter Telescope (TMT) International Science Development Team (ISDT) 2018 – present
  - Square Kilometer Array (SKA) Cradle of Life Science Working Group (ISDT) 2022 – present

- Organizing Committee Co-Chair, Summer School in Protoplanetary Disks and Planet Formation, Beijing, China 2022, 2024
- Journal Referees  
Nature, The Astrophysical Journal, The Astrophysical Journal Letter, Monthly Notices of the Royal Astronomical Society, Astronomy and Astrophysics, Publications of the Astronomical Society of the Pacific, and Astrophysics and Space Science 2012 – present
- External Reviewers  
Swiss National Science Foundation (SNSF), NASA Postdoctoral Fellowship Program (NPP), NASA Earth and Space Science Fellowship, NASA Exoplanets Research Program (ERP), Czech Science Foundation, Chilean National Science and Technology Commission, Canadian Space Agency, China-Chile Joint Research Fund, Chinese Telescope Access Program, Fonds de Recherche du Québec (Canada), Hong Kong Research Grants Council, Los Alamos National Laboratory Directed Research and Development, Canadian Natural Sciences and Engineering Research Council (NSERC), Austrian Science Fund (FWF) 2014 – present
- Conference Scientific Organizing Committee
  - “ALMA Proposal Workshop”, Beijing, China 2025
  - “The 7<sup>th</sup> Youth Forum of Planetary Science”, Huangshan, China 2025
  - “Gas Accretion in Planet formation (GAP)”, Heidelberg, Germany 2025
  - “Science workshop for synergy of Subaru/SCEXAO and ALMA”, online 2022
  - “New Horizons in Planetary Systems”, Victoria, Canada 2019
  - “Aspen Center for Physics Summary Program: Unveiling the Physics of Protoplanet Formation: Connecting Theory to Observations”, Aspen, USA 2017
  - “TIARA Workshop on Astrobiology”, Taipei, R.O.C. 2015
- Seminar Organizer
  - CIPS Seminar, Astronomy Department, UC Berkeley 2013-2016
  - Wunch Seminar, Astrophysics Department, Princeton University 2012-2013
  - Thursday Seminar, Astrophysics Department, Princeton University 2009-2010
- Lead guest editor, Advance in Astronomy 2014
- Member, 2nd “International Summer Institute of Astrophysical Modeling”, KIAA, Beijing 2011

## Departmental and University Services

- Career Development Committee, KIAA, PKU 2024 –
- Colloquium Committee, KIAA, PKU 2024 –
- Faculty Association Council, UVic 2020 – 2024
- Program Management Team, Astronomy Research Center (ARC), UVic 2020 – 2024
- Graduate Committee, UVic 2019 – 2024
- Colloquium Committee (Co-chair), UVic 2019 – 2024
- Strategic Planning Committee, UVic 2019 – 2024
- Graduate Student Award Committee, UVic 2018 – 2019

## Conferences Oral Presentations

- Oct 2025 第三届机器学习在天文中应用会议, Yichang, Hubei, China
- Aug 2025 Scientific Workshop on the 14.5-Meter Optical and Infrared Telescope System (14.5 米光学红外望远镜系统科学研讨会), Beijing, China
- May 2025 AI-Driven Astronomy, Changchun, China
- Jan 2025 Circumplanetary Disks and Satellite Formation III, Kyoto, Japan
- Nov 2024 High Precision Astrometry Post-Gaia, Nanjing, China
- Oct 2024 Annual Meeting of the Chinese Astronomical Society, Hangzhou, Zhejiang
- May 2023 New Eyes on the Universe: SKA and ngVLA, Vancouver, Canada
- Nov 2022 Disks and Planets across ESO Facilities, Munich, Germany
- Jan 2022 East Asian ALMA Science Workshop, Online
- Sep 2021 Planet-forming Disks: From Surveys to Answers, Leiden, The Netherland
- Jun 2021 Canada Planet Discussion Day, Online Conference
- May 2019 New Horizons in Planetary Systems, Victoria, BC, Canada
- June 2018 Astrophysical Frontiers in the Next Decade and Beyond, Portland, OR
- May 2018 Canadian Astronomical Society 2018, Victoria, BC, Canada
- Aug 2017 EXOCLIPSE 2017: Exploring New Worlds in the Shade, Boise, ID
- Mar 2017 Formation and Dynamical Evolution of Exoplanets, Aspen, CO
- Nov 2016 High Contrast Imaging in Space, STScI, Baltimore, MD
- July 2016 European Week of Astronomy and Space Science 2016, Athens, Greek
- Dec 2015 Extreme Solar Systems III, The Big Island, HI
- Sep 2015 Bay Area Exoplanet Meeting, SETI Institute, Mountain View, CA
- Aug 2015 Dynamical problems in Extrasolar planets science, IAU GA FM1, Honolulu, HI
- July 2015 Disc Dynamics & Planet Formation, Larnaca, Cyprus
- Mar 2015 Star and Planet Formation in the Southwest, Tucson, AZ
- Jun 2014 Cross-Strait Astrophysics Symposium, Taipei, R.O.C.
- Apr 2013 2013 Transformational Science with ALMA Conference, The Big Island, Hawaii
- Jan 2013 221<sup>st</sup> AAS Meeting, Long Beach, CA
- Aug 2012 IAU Symposium 293, Beijing, China
- Jun 2012 Origins of stars and their planetary systems, McMaster University, Hamilton, Canada
- Oct 2011 The 2nd SEEDS General Workshop, Max Planck Institute for Astronomy, Heidelberg, Germany
- Jun 2011 The International Summer Institute for Modeling in Astrophysics, Kavli Institute for Astronomy and Astrophysics, Peking University, Beijing, China
- Mar 2011 The Formation of the Milky Way: The SEGUE perspective, The Ohio State University, Columbus, OH
- Feb 2011 East Asian Young Astronomers Meeting 2011, Jeju, South Korea
- Jun 2010 The Frontier on Interstellar Medium ----- 40th Anniversary on the Discovery of CO in ISM, Kavli Institute for Astronomy and Astrophysics, Peking University, Beijing, China
- May 2010 KIAA-DoA-NAOC Joint Program on Dynamics of Astrophysical Disks, Kavli

Institute for Astronomy and Astrophysics, Peking University, Beijing, China

## Seminars

- Mar 2017 Lunch Talk, KIAA, Peking University, Beijing, China
- Jul 2016 Seminar, Carnegie DTM, D.C.
- Jul 2016 Planet and Star Formation Seminar, ESO, Garching, Germany
- May 2016 Seminar, University of Amsterdam, Amsterdam, The Netherland
- Apr 2016 Seminar, ETH Zurich, Zurich, Switzerland
- Apr 2016 Astrochem Seminar, Leiden University, Leiden, The Netherland
- Sep 2015 CIPS seminar, UC Berkeley, Berkeley, CA
- Sep 2014 Center for Integrative Planetary Science Seminar, Berkeley, CA
- Jan 2014 Seminar, Shanghai Astronomical Observatory, Shanghai, China
- Jan 2014 Computational Astrophysics Seminar, Institute of Astronomy and Astrophysics, Academia Sinica, Taipei, R.O.C.
- Jan 2014 Lunch Talk, Institute of Astronomy and Astrophysics, Academia Sinica, Taipei, R.O.C.
- Dec 2013 Lunch Talk, University of Wisconsin-Madison, Madison, WI
- Sep 2013 Lunch Talk, Kavli Institute, Peking University, Beijing, China
- May 2013 NASA Goddard Extrasolar Planets Seminar, Goddard Space Flight Center, Greenbelt, MD
- Nov 2012 Star and Planet Formation Seminar, Space Telescope Science Institute, Baltimore, MD
- Oct 2012 Lunch Talk, Infrared Processing and Analysis Center, Caltech, Pasadena, CA
- Oct 2012 Journal Club Talk, UC Los Angeles, Los Angeles, CA
- Oct 2012 FLASH Talk, UC Santa Cruz, Santa Cruz, CA
- Oct 2012 Planet and Star Formation Seminar, UC Berkeley, Berkeley, CA
- Oct 2012 Seminar, University of Hawaii, Honolulu, HI
- Sep 2012 Radio and Geoastronomy (RG) Lunch Talk, Harvard-Smithsonian Center for Astrophysics, Boston, MA
- Sep 2012 Wunch Talk, Princeton University, Princeton, NJ
- Jun 2012 Journal Club Talk, University of Michigan, Ann Arbor, MI
- Jun 2012 Seminar, Canadian Institute for Theoretical Astrophysics, Toronto, Canada
- Oct 2011 Planet and Star Formation Lunch talk, Max Planck Institute for Astronomy, Heidelberg, Germany
- Jul 2011 Lunch talk, Kavli Institute of Astronomy and Astrophysics, Peking University, Beijing, China
- Jun 2011 Seminar, Shanghai Astronomical Observatory, Shanghai, China
- Mar 2011 Wunch Talk, Princeton University, Princeton, NJ
- Jan 2009 Geophysical and Astrophysical Fluid Dynamics Seminar, UC Santa Cruz, Santa Cruz, CA

**Public Outreach Activities (selected)**

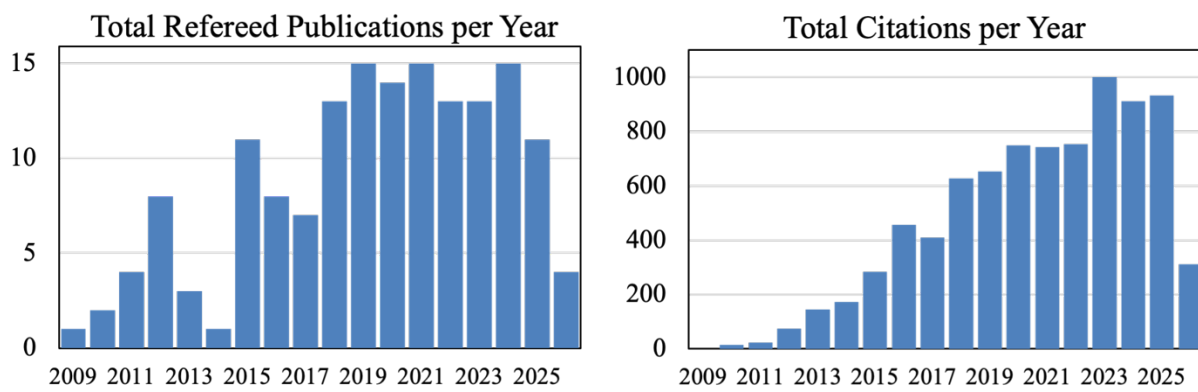
- Night With a Prof, University of Victoria 2021
- Lecture in Science and Humanity, Sun Yat-Sen University, Zhuhai, Guangdong, China 2021
- Quirks & Quarks, CBC radio science news program 2021
- Planet Formation & Telescope Tech w/ Dr. Ruobing Dong, interview by prof-talks.com 2019
- Public Talk, Astronomy Day, Royal BC Museum, Victoria, Canada 2019, 2022
- Interviewed in the talk show *Hubble Hangout*, hosted by NASA 2015
- Volunteer, Cal Day at UC Berkeley 2015
- Volunteer, Astronomy Day at the California Academy of Sciences, San Francisco 2015
- Translation of the English website of the *Citizen Science* project *Disk Detective* into Chinese 2014

## Refereed Publications

<https://www.ruobingdong.com/publications>

### Statistics (NASA ADS, March 2026)

- Total publications: **158**
  - Citations: **8300+**
  - Papers with 100+ citations: **22**
  - *h*-index: **53**
- Lead or corresponding author publications: **60**
  - Citations: **3900+**
  - Papers with 100+ citations: **13**



*Authorship practice:* In roughly 50% of my refereed papers, I am among the first three authors. In astronomy, author order generally reflects contribution. In projects led by my advisees, the advisee is typically the first author and a corresponding author, and I am listed as an additional corresponding author to indicate shared responsibility for the work.

### Refereed Journal Articles: Lead Author – 27

1. *A Likely Flyby of Binary Protostar Z CMa Caught in Action*  
**Ruobing Dong**, Hanyu Baobab Liu, Nicolás Cuello, Christophe Pinte, Péter Ábrahám, Eduard Vorobyov, Jun Hashimoto, Ágnes Kóspál, Eugene Chiang, Michihiro Takami, Lei Chen, Michael Dunham, Misato Fukagawa, Joel Green, Yasuhiro Hasegawa, Thomas Henning, Yaroslav Pavlyuchenkov, Tae-Soo Pyo and Motohide Tamura, **2022**, *Nature Astronomy*, 6, 331
2. *Observational Signatures of Planets in Protoplanetary Disks: Planet-induced Line Broadening in Gaps*  
**Ruobing Dong**, Sheng-yuan Liu & Jeffrey Fung, **2019**, *ApJ*, 870, 72
3. *Multiple Disk Gaps and Rings Generated by a Single Super-Earth. II. Spacings, Depths, and Number of Gaps, with Application to Real Systems*  
**Ruobing Dong**, Shengtai Li, Eugene Chiang & Hui Li, **2018**, *ApJ*, 866, 110
4. *Spiral Arms in Disks: Planets or Gravitational Instability?*

- Ruobing Dong**, Joan R. Najita & Sean Brittain, **2018**, **ApJ**, 862, 103
5. *The Eccentric Cavity, Triple Rings, Two-Armed Spirals, and Double Clumps of the MWC 758 Disk*  
**Ruobing Dong**, Sheng-yuan Liu, Josh Eisner, Sean Andrews, Jeffrey Fung, Zhaohuan Zhu, Eugene Chiang, Jun Hashimoto, Hanyu Baobab Liu, Simon Casassus, Thomas Esposito, Yasuhiro Hasegawa, Takayuki Muto, Yaroslav Pavlyuchenkov, David Wilner, Eiji Akiyama, Motohide Tamura, and John Wisniewski, **2018**, **ApJ**, 860, 124
  6. *Multiple Disk Gaps and Rings Generated by a Single Super-Earth*  
**Ruobing Dong**, Shengtai Li, Eugene Chiang & Hui Li, **2017**, **ApJ**, 843, 127
  7. *The Sizes and Depletions of the Dust and Gas Cavities in the Transitional Disk J160421.7-213028*  
**Ruobing Dong**, Nienke van der Marel, Jun Hashimoto, Eugene Chiang, Eiji Akiyama, Hanyu Baobab Liu, Takayuki Muto, Gillian R. Knapp, Takashi Tsukagoshi, Joanna Brown, Simon Bruderer, Shin Koyamatsu, Tomoyuki Kudo, Nagayoshi Ohashi, Evan Rich, Mayama Satoshi, Michihiro Takami, John Wisniewski, Yi Yang, Zhaohuan Zhu, and Motohide Tamura, **2017**, **ApJ**, 836, 201
  8. *What is the Mass of a Gap-Opening Planet?*  
**Ruobing Dong** & Jeffrey Fung, **2017**, **ApJ**, 835, 146
  9. *How Bright are Planet-Induced Spiral Arms in Scattered Light?*  
**Ruobing Dong** & Jeffrey Fung, **2017**, **ApJ**, 835, 38
  10. *How Spirals and Gaps Driven by Companions in Protoplanetary Disks Appear in Scattered Light at Arbitrary Viewing Angles*  
**Ruobing Dong**, Eugene Chiang & Jeffrey Fung, **2016**, **ApJ**, 826, 75
  11. *Stability and Occurrence Rate Constraints on the Planetary Sculpting Hypothesis for Transitional Disks*  
**Ruobing Dong** & Rebekah I. Dawson, **2016**, **ApJ**, 825, 77
  12. *Signatures of Gravitational Instability in Resolved Images of Protostellar Disks*  
**Ruobing Dong**, Eduard Vorobyov, Yaroslav Pavlyuchenkov, Eugene Chiang & Hanyu Liu, **2016**, **ApJ**, 823, 141
  13. *An M Dwarf Companion and Its Induced Spiral Arms in the HD 100453 Protoplanetary Disk*  
**Ruobing Dong**, Zhaohuan Zhu, Jeffrey Fung, Roman Rafikov, Eugene Chiang, & Kevin Wagner, **2016**, **ApJ Letters**, 816L, 12
  14. *Spiral Arms in Gravitationally Unstable Protoplanetary Disks as Imaged in Scattered Light*  
**Ruobing Dong**, Cassandra Hall, Ken Rice & Eugene Chiang, **2015**, **ApJ Letters**, 812L, 32
  15. *The Effects of Self-Shadowing by a Puffed-up Inner Rim in Scattered Light Images of Protoplanetary Disks*  
**Ruobing Dong** **2015**, **ApJ**, 810, 6
  16. *Observational Signatures of Planets in Protoplanetary Disks: Spiral Arms Observed in Scattered Light Imaging Can be Induced by Planets*  
**Ruobing Dong**, Zhaohuan Zhu, Roman Rafikov & James Stone, **2015**, **ApJ Letters**, 809L, 5
  17. *Observational Signatures of Planets in Protoplanetary Disks I: Gaps Opened by Single and Multiple Young Planets in Disks*  
**Ruobing Dong**, Zhaohuan Zhu, & Barbara Whitney, **2015**, **ApJ**, 809, 93

18. *X-ray Properties of Intermediate-mass Black Holes in Active Galaxies. III. Spectral Energy Distribution and Possible Evidence for Intrinsically X-ray-weak AGNs*  
**Ruobing Dong**, Jenny E. Greene, & Luis C. Ho, **2012**, **ApJ**, 761, 73
19. *The Structure of Pre-transitional Protoplanetary Disks I: Radiative Transfer Modeling of the Disk+Cavity in the PDS 70 system*  
**Ruobing Dong**, Jun Hashimoto, Roman Rafikov, Zhaohuan Zhu, Barbara Whitney, Tomoyuki Kudo, Takayuki Muto, Timothy Brant Brandt, Melissa K. McClure, John Wisniewski, Lyu Abe, Wolfgang Brandner, Joseph Carson, Sebastian Egner, Markus Feldt, Miwa Goto, Carol A. Grady, Olivier Guyon, Yutaka Hayano, Masahiko Hayashi, Saeko Hayashi, Thomas Henning, Klaus W. Hodapp, Miki Ishii, Masanori Iye, Markus Janson, Ryo Kandori, Gillian R. Knapp, Nobuyuki Kusakabe, Masayuki Kuzuhara, Jungmi Kwon, Taro Matsuo, Michael W. McElwain, Shoken Miyama, Jun-Ichi Morino, Amaya Moro-Martín, Tetsuo Nishimura, Tae-Soo Pyo, Eugene Serabyn, Hiroshi Suto, Ryuji Suzuki, Michihiro Takami, Naruhisa Takato, Hiroshi Terada, Christian Thalmann, Daigo Tomono, Edwin L. Turner, Masahiro Watanabe, Toru Yamada, Hideki Takami, Tomonori Usuda, Motohide Tamura, **2012**, **ApJ**, 760, 111
20. *The Missing Cavities in the SEEDS Polarized Scattered Light Images of Transitional Protoplanetary Disks: A Generic Disk Model*  
**Ruobing Dong**, Roman Rafikov, Zhaohuan Zhu, Lee Hartmann, Barbara Whitney, Timothy Brant Brandt, Takayuki Muto, Jun Hashimoto, Carol A. Grady, Katherine B. Follette, Masayuki Kuzuhara, Ryoko Tani, Yoichi Itoh, Christian Thalmann, John Wisniewski, Satoshi Mayama, Markus Janson, Lyu Abe, Wolfgang Brandner, Joseph Carson, Sebastian Egner, Markus Feldt, Miwa Goto, Olivier Guyon, Yutaka Hayano, Masahiko Hayashi, Saeko Hayashi, Thomas Henning, Klaus W. Hodapp, Motohiko Honda, Shu-ichiro Inutsuka, Miki Ishii, Masanori Iye, Ryo Kandori, Gillian R. Knapp, Tomoyuki Kudo, Nobuyuki Kusakabe, Taro Matsuo, Michael W. McElwain, Shoken Miyama, Jun-Ichi Morino, Amaya Moro-Martín, Tetsuo Nishimura, Tae-Soo Pyo, Hiroshi Suto, Ryuji Suzuki, Michihiro Takami, Naruhisa Takato, Hiroshi Terada, Daigo Tomono, Edwin L. Turner, Masahiro Watanabe, Toru Yamada, Hideki Takami, Tomonori Usuda, Motohide Tamura, **2012**, **ApJ**, 750, 161
21. *Density Waves Excited by Low-Mass Planets in Protoplanetary Disks II: High-Resolution Simulations of the Nonlinear Regime*  
**Ruobing Dong**, Roman R. Rafikov & James M. Stone, **2011**, **ApJ**, 741, 57
22. *Density Waves Excited by Low-Mass Planets in Protoplanetary Disks I: Linear Regime*  
**Ruobing Dong**, Roman Rafikov, James Stone & Cristobal Petrovich, **2011**, **ApJ**, 741, 56
23. *Investigation of the Errors in Sloan Digital Sky Survey Proper-motion Measurements Using Samples of Quasars*  
**Ruobing Dong**, James Gunn, Gillian Knapp, Constance Rockosi & Michael Blanton, **2011**, **AJ**, 142, 116
24. *Ha and Free-Free Emission from the Warm Ionized Medium*  
**Ruobing Dong** & B.T. Draine, **2011**, **ApJ**, 727, 35
25. *Dusty Disks Around White Dwarfs I: Origin of Debris Disks*  
**Ruobing Dong**, Yan Wang, D.N.C. Lin & X.-W. Liu, **2010**, **ApJ**, 715, 1036
26. *A Systematic Search for X-Ray Cavities in the Hot Gas of Galaxy Groups*  
**Ruobing Dong**, Jesper Rasmussen & John Mulchaey, **2010**, **ApJ**, 712, 883
27. *Buoyant Bubbles in Intracluster Gas: Effects of Magnetic Fields and Anisotropic Viscosity*

**Ruobing Dong** & James Stone 2009, *ApJ*, 704, 1309

## Refereed Journal Articles: Corresponding Author – 32

(Advisee Status: **US** = Undergraduate Student / **RA** = Research Assistant / **GS** = Graduate Student / **PDF** = Postdoc)

28. *Multi-wavelength ALMA Imaging of HD 34282: Dust-trapping Signatures of a Vortex Candidate*  
Xiaoyi Ma (GS), Fangyuan Yu, **Ruobing Dong**, Kiyooki Doi, Akimasa Kataoka, Haiyu Baobab Liu, Feng Long, Takahiro Ueda, Huojun Li, Nienke van der Marel, Agnes Kospal, **2026, ApJ**, in press
29. *Time-variable Scattered Light in Herbig Disks Observed with Subaru/SCEXAO*  
Camryn Mullin (GS), Miles Lucas, **Ruobing Dong**, Jun Hashimoto, Haochang Jiang, Doug Johnstone, Kellen Lawson, Sean Brittain, Olivier Guyon, Tomoyuki Kudo, Julien Lozier, Joan Najita, He Sun, Motohide Tamura, Kevin Wagner, **2026, AJ**, 171, 241
30. *Neural Networks as Surrogate Solvers for Time-Dependent Accretion Disk Dynamics*  
Shunyu Mao (GS), Weiqi Wang (PDF), Sifan Wang, **Ruobing Dong**, Lu Lu, Kwang Moo Yi, Paris Perdikaris, Andrea Isella, Sebastien Fabbro, Lile Wang, **2025, ApJ Letters**, 992L, 20
31. *Multi-wavelength Constraints on Dust Dynamics and Size Evolution in Protoplanetary Disk Rings. I. Method*  
Linhan Yang (GS), Ya-Ping Li, **Ruobing Dong**, Kiyooki Doi, Haiyu Baobab Liu, and Pinghui Huang **2025, ApJ**, 989, 176
32. *Leaky Dust Traps in Planet-Embedded Protoplanetary Disks*  
Pinghui Huang (PDF), Fangyuan Yu, Eve Lee, **Ruobing Dong**, Xue-ning Bai, **2025, ApJ**, 988, 94
33. *Mapping the merging zone of late infall in the AB Aur planet-forming system*  
Jessica Speedie (GS), **Ruobing Dong**, Richard Teague, Dominique Segura-Cox, Jaime E. Pineda, Josh Calcino, Cristiano Longarini, Cassandra Hall, Ya-Wen Tang, Jun Hashimoto, Teresa Paneque-Carreño, Giuseppe Lodato, and Benedetta Veronesi, **2025, ApJ Letters**, 981, 30
34. *Vortex-Induced Rings and Gaps within Protoplanetary Disks*  
Xiaoyi Ma (GS), Pinghui Huang, Cong Yu, and **Ruobing Dong**, **2025, ApJ**, 979, 244
35. *Disk2Planet: A Robust and Automated Machine Learning Tool for Parameter Inference in Disk-Planet Systems*  
Shunyu Mao (GS), **Ruobing Dong**, Kwang Moo Yi, Lu Lu, Sifan Wang, and Paris Perdikaris, **2024, ApJ**, 976, 200
36. *Mind the kinematics simulation of planet-disk interactions: time evolution and numerical resolution*  
Kan Chen (GS) & **Ruobing Dong** **2024, ApJ**, 976, 49
37. *Gravitational instability in a planet-forming disk*  
Jessica Speedie (GS), **Ruobing Dong**, Cassandra Hall, Cristiano Longarini, Benedetta Veronesi, Teresa Paneque-Carreño, Giuseppe Lodato, Ya-Wen Tang, Richard Teague & Jun Hashimoto, **2024, Nature**, 633, 58

38. *JWST/NIRCam Imaging of Young Stellar Objects III: Detailed Imaging of the Nebular Environment Around the HL Tau Disk*  
Camryn Mullin (GS), **Ruobing Dong**, Jarron Leisenring, Gabriele Cugno, Thomas Greene, Doug Johnstone, Michael R. Meyer, Kevin R. Wagner, Schuyler G. Wolff, Martha Boyer, Scott Horner, Klaus Hodapp, Don McCarthy, George Rieke, Marcia Rieke, and Erick Young, **2024, AJ**, 167, 183
39. *Shadowing in the protoplanetary disk of ZZ Tau IRS with HST*  
Jun Hashimoto, **Ruobing Dong**, Takayuki Muto, Haiyu Baobab Liu and Yuka Terada, **2024, AJ**, 167, 75
40. *The dependence of the structure of planet-opened gaps in protoplanetary disks on radiative cooling*  
Minghao Zhang (US), Pinghui Huang (PDF) & **Ruobing Dong 2024, ApJ**, 961, 86
41. *Direct images and spectroscopy of a giant protoplanet driving spiral arms in MWC 758*  
Kevin Wagner, Jordan Stone, Andrew Skemer, Steve Ertel, **Ruobing Dong**, Dániel Apai, Eckhart Spalding, Jarron Leisenring, Michael Sitko, Kaitlin Kratter, Travis Barman, Mark Marley, Brittany Miles, Anthony Boccaletti, Korash Assani, Ammar Bayyari, Taichi Uyama, Charles E. Woodward, Phil Hinz, Zackery Briesemeister, Kellen Lawson, François Ménard, Eric Pantin, Ray W. Russell, Michael Skrutskie & John Wisniewski, **2023, Nature Astronomy**, 7, 1208.
42. *PPDONet: Deep Operator Networks for Fast Prediction of Steady-State Solutions in Disk-Planet Systems*  
Shunyuan Mao (GS), **Ruobing Dong**, Lu Lu, Kwang Moo Yi, Sifan Wang, and Paris Perdikaris, **2023, ApJ Letters**, 950L, 12
43. *Gap-opening Planets Make Dust Rings Wider*  
Jiaqing Bi (GS), Min-Kai Lin & **Ruobing Dong 2023, ApJ**, 942, 80
44. *Testing velocity kinks as a planet-detection method: Do velocity kinks in surface gas emission trace planetary spiral wakes in the midplane continuum?*  
Jessica Speedie (GS) & **Ruobing Dong 2022, ApJ Letters**, 940, L43
45. *The Appearance of Vortices in Protoplanetary Disks in Near-Infrared Scattered Light*  
Metea Marr (US) & **Ruobing Dong 2022, ApJ**, 930, 80
46. *Observing planet-driven dust spirals with ALMA*  
Jessica Speedie (GS), Richard A. Booth & **Ruobing Dong 2022, ApJ**, 930, 40
47. *CI Tau: A controlled experiment in disk-planet interaction*  
Dhruv Muley (RA) & **Ruobing Dong 2021, ApJ Letters**, 921, L34
48. *Observational Signatures of Planets in Protoplanetary Disks: Temperature structures in spiral arms*  
Dhruv Muley (RA), **Ruobing Dong** & Jeffrey Fung, 2021, **AJ**, 162, 129
49. *An asymmetric dust ring around a very low mass star ZZ Tau IRS*  
Jun Hashimoto, **Ruobing Dong** & Takayuki Muto, **2021, AJ**, 161, 264
50. *Puffed up Edges of Planet-opened Gaps in Protoplanetary Disks. I. hydrodynamic simulations*  
Jiaqing Bi (GS), Min-kai Lin & **Ruobing Dong, 2021, ApJ**, 912, 107
51. *On the diversity of asymmetries in gapped protoplanetary disks*  
Nienke van der Marel (PDF), Til Birnstiel, Antonio Garufi, Enrico Ragusa, Valentin Christiaens, Daniel J. Price, Steph Sallum, Dhruv Muley, Logan Francis, and **Ruobing Dong**,

- 2021, AJ**, 161, 33
52. *GW Ori, Interactions Between a Triple-star System and its Circumtriple Disk in Action*  
Jiaqing Bi (GS), Nienke van der Marel (PDF), **Ruobing Dong**, Takayuki Muto, Rebecca G. Martin, Jeremy L. Smallwood, Jun Hashimoto, Haoyu Baobab Liu, Hideko Nomura, Yasuhiro Hasegawa, Michihiro Takami, Mihoko Konishi, Munetake Momose, Kazuhiro D. Kanagawa, Akimasa Kataoka, Tomohiro Ono, Michael L. Sitko, Sanemichi Z. Takahashi, Kengo Tomida, and Takashi Tsukagoshi, **2020, ApJ Letters**, 851, L18
  53. *Protoplanetary Disk Rings and Gaps Across Ages and Luminosities*  
Nienke van der Marel, **Ruobing Dong**, James di Francesco, Jonathan P. Williams, and John Tobin, **2019, ApJ**, 872, 112
  54. *A Decade of MWC 758 Disk Images, Where Are the Spiral-arm-driving Planets?*  
Bin Ren (GS), **Ruobing Dong**, Thomas M. Esposito, Laurent Pueyo, John H. Debes, Charles A. Poteet, Élodie Choquet, Myriam Benisty, Eugene Chiang, Carol A. Grady, Dean C. Hines, Glenn Schneider, and Rémi Soummer, **2018, ApJ Letters**, 857, 9
  55. *Inferring Planet Mass from Spiral Structure*  
Jeffrey Fung & **Ruobing Dong**, **2015, ApJ Letters**, 815L, 21
  56. *The Structure of Spiral Shocks Excited by Planetary-mass Companions*  
Zhaohuan Zhu, **Ruobing Dong**, James Stone, Roman Rafikov, **2015, ApJ**, 813, 88
  57. *Shallow Cavities in Multiple-Planet Systems*  
Paul C. Duffell & **Ruobing Dong**, **2015, ApJ**, 802, 42
  58. *Dust Filtration by Planet-Induced Gap Edges: Implications for Transitional Disks*  
Zhaohuan Zhu, Richard P. Nelson, **Ruobing Dong**, Catherine Espaillat, and Lee Hartmann, **2012, ApJ**, 755, 6
  59. *Polarimetric Imaging of Large Cavity Structures in the Pre-Transitional Protoplanetary Disk around PDS 70, Observations of the disk*  
Jun Hashimoto, **Ruobing Dong**, Tomoyuki Kudo, Motohiko Honda, Melissa K. McClure, Zhaohuan Zhu, Takayuki Muto, John Wisniewski, Lyu Abe, Wolfgang Brandner, Timothy Brant Brandt, Joseph Carson, Sebastian Egner, Markus Feldt, Misato Fukagawa, Miwa Goto, Carol A. Grady, Olivier Guyon, Yutaka Hayano, Masahiko Hayashi, Saeko Hayashi, Thomas Henning, Klaus W. Hodapp, Miki Ishii, Masanori Iye, Markus Janson, Ryo Kandori, Gillian R. Knapp, Nobuyuki Kusakabe, Masayuki Kuzuhara, Jungmi Kwon, Taro Matsuo, Satoshi Mayama, Michael W. McElwain, Shoken Miyama, Jun-Ichi Morino, Amaya Moro-Martín, Tetsuo Nishimura, Tae-Soo Pyo, Gordon Serabyn, Taketoshi Suenaga, Hiroshi Suto, Ryuji Suzuki, Yasuhiro Takahashi, Michihiro Takami, Naruhisa Takato, Hiroshi Terada, Christian Thalmann, Daigo Tomono, Edwin L. Turner, Masahiro Watanabe, Toru Yamada, Hideki Takami, Tomonori Usuda, Motohide Tamura, **2012, ApJ Letters**, 758, 19

## Refereed Journal Articles: Contributing Author – 96

(Author list is abbreviated at the 10<sup>th</sup> author if there are more than 10 authors.)

60. *Adsorption of volatiles on dust grains in protoplanetary disks*  
Lile Wang, Feng Long, Haifeng Yang, **Ruobing Dong**, Shenzhen Xu, **2026, ApJ**, in press
61. *Probing Dust in the MWC 480 Disk from Millimeter to Centimeter Wavelengths*

- Yangfan Shi, Feng Long, Enrique Macías, Gregory J. Herczeg, Paola Pinilla, Sean M. Andrews, David J. Wilner, Haochang Jiang, **Ruobing Dong**, Richard Teague, et al., **2026**, **ApJ**, in press
62. *ALMA 873  $\mu\text{m}$  Polarization Observations of the PDS 70 Disk*  
Hauyu Baobab Liu, Kiyooki Doi, Simon Casassus, Akimasa Kataoka, **Ruobing Dong**, Jun Hashimoto, and Philipp Weber, **2026**, **A&A**, in press
63. *Dynamical Analysis of the HD 169142 Planet-Forming Disk: Twelve Years of High-Contrast Polarimetry*  
Miles Lucas, Michael Bottom, **Ruobing Dong**, Myriam Benisty, Mario Flock, Maria Vincent, Jonathan Williams, Kyohoon Ahn, Thayne Currie, Vincent Deo, et al., **2025**, **AJ**, 170, 278
64. *VLT/MUSE Detection of the AB Aurigae b Protoplanet with H $\alpha$  Spectroscopy*  
Thayne Currie, Jun Hashimoto, Yuhiko Aoyama, **Ruobing Dong**, Misato Fukagawa, Takayuki Muto, Erica Dykes, Mona El Morsy, Motohide Tamura, **2025**, **ApJ Letters**, 990L, 42
65. *JVLA Measurement of Grain Size in the Compact Dust Ring around Class I Protostar WL 17*  
Jun Hashimoto, Hauyu Baobab Liu, **Ruobing Dong**, Beibei Liu, and Takayuki Muto, **2025**, **AJ**, 170, 156
66. *Predictions of Dust Continuum Emission from a Potential Circumplanetary Disk: A Case Study of the Planet Candidate AB Aurigae b*  
Yuhito Shibaïke, Jun Hashimoto, **Ruobing Dong**, Christoph Mordasini, Misato Fukagawa, and Takayuki Muto, **2025**, **ApJ**, 979, 24
67. *Asymmetric dust accumulation of the PDS 70 disk revealed by ALMA Band 3 observations*  
Dori Blakely, Doug Johnstone, Gabriele Cugno, Anand Sivaramakrishnan, Peter Tuthill, **Ruobing Dong**, Benjamin J. S. Pope, Loic Albert, Max Charles, Rachel A. Cooper, et al., **2025**, **AJ**, 169, 137
68. *Asymmetric dust accumulation of the PDS 70 disk revealed by ALMA Band 3 observations*  
Kiyooki Doi, Akimasa Kataoka, Hauyu Baobab Liu, Tomohiro C. Yoshida, Myriam Benisty, **Ruobing Dong**, Yoshihide Yamato, and Jun Hashimoto, **2024**, **ApJ Letters**, 974, 25
69. *First JVLA Radio Observation on PDS 70*  
Hauyu Baobab Liu, Simon Casassus, **Ruobing Dong**, Kiyooki Doi, Jun Hashimoto, and Takayuki Muto, **2024**, **ApJ**, 972, 163
70. *Observational characteristics of circum-planetary-mass-object disks in the era of James Webb Space Telescope*  
Xilei Sun, Pinghui Huang, **Ruobing Dong** & Shang-Fei Liu, **2024**, **ApJ**, 972, 25
71. *Forming localized dust concentrations in a dust ring? A case study on DM Tau*  
Hauyu Baobab Liu, Takayuki Muto, Mihoko Konishi, Chia-Ying Chung, Jun Hashimoto, Kiyooki Doi, **Ruobing Dong**, Tomoyuki Kudo, Yasuhiro Hasegawa, Yuka Terada, et al., **2024**, **A&A**, 685, 18
72. *JWST/NIRCam Imaging of Young Stellar Objects. II. Deep Constraints on Giant Planets and a Planet Candidate Outside of the Spiral Disk Around SAO 206462*  
Gabriele Cugno, Jarron Leisenring, Kevin Wagner, Camryn Mullin, **Ruobing Dong**, Thomas Greene, Doug Johnstone, Michael R. Meyer, Schuyler G. Wolff, Charles Beichman, et al., **2024**, **AJ**, 167, 182

73. *JWST / NIRCам Imaging of Young Stellar Objects. I. Constraints on Planets Exterior to The Spiral Disk Around MWC 758*  
Kevin Wagner, Jarron Leisenring, Gabriele Cugno, Camryn Mullin, **Ruobing Dong**, Schuyler G. Wolff, Thomas Greene, Doug Johnstone, Michael R. Meyer, Charles Beichman, et al., **2024, AJ**, 167, 181
74. *A Companion in V1247 Ori Supported by Spiral Arm Pattern Motion*  
Bin Ren, Chen Xie, Myriam Benisty, **Ruobing Dong**, Jaehan Bae, Tomas Stolker, Rob G. van Holstein, John H. Debes, Antonio Garufi, Christian Ginski, et al., **2024, A&A**, 681, L2
75. *A Uniform Analysis of Debris Disks with the Gemini Planet Imager I: An Empirical Search for Perturbations from Planetary Companions in Polarized Light Images*  
Katie A. Crotts, Brenda C. Matthews, Gaspard Duchêne, Thomas M. Esposito, **Ruobing Dong**, Justin Hom, Rebecca Oppenheimer, Malena Rice, Schuyler G. Wolff, Christine H. Chen, et al., **2024, ApJ**, 961, 245
76. *Formation of misaligned second-generation discs through flyby encounters*  
Jeremy L. Smallwood, Rebecca Nealon, Nicolás Cuello, **Ruobing Dong** & Richard A. Booth, **2024, MNRAS**, 527, 2094
77. *Evolution of the Planetary Obliquity: The Eccentric Kozai-Lidov Mechanism Coupled*  
Xiumin Huang, Jianghui Ji, Shangfei Liu, **Ruobing Dong** & Su Wang, **2023, ApJ**, 956, 45
78. *Centimeter-sized Grains in the Compact Dust Ring around Very Low Mass Star CIDA 1*  
Jun Hashimoto, Haoyu Liu, **Ruobing Dong**, Beibei Liu, Takayuki Muto, and Yuka Terada, **2023, AJ**, 166, 186
79. *Chemical footprints of giant planet formation. Role of planet accretion in shaping the C/O ratio of protoplanetary disks*  
Haochang Jiang, Yu Wang, Chris W. Ormel, Sebastiaan Krijt, **Ruobing Dong** **2023, A&A**, 678, 33
80. *Dynamical detection of a companion driving a spiral arm in a protoplanetary disk*  
Chen Xie, Bin Ren, **Ruobing Dong**, Élodie Choquet, Arthur Vigan, Jean-François Gonzalez, Kevin Wagner, Taotao Fang, and Maria Giulia Ubeira-Gabellini, **2023, A&A**, 675L, 1
81. *Distinguishing Magnetized Disc Winds from Turbulent Viscosity through Substructure Morphology in Planet-forming Discs*  
Wu, Yin hao; Chen, Yi-Xian; Jiang, Haochang; **Dong, Ruobing**, Enrique Maias, Min-Kai Lin, Giovanni P. Rosotti, Vardan Elbakyan, **2023, MNRAS**, 523, 2630
82. *Exciting spiral arms in protoplanetary discs from flybys*  
J.L. Smallwood, C. Yang, Z. Zhu, R.G. Martin, **R. Dong**, Nicolás Cuello and Andrea Isella, **2023, MNRAS**, 521, 3500
83. *Multiple Rings and Asymmetric Structures in the Disk of SR 21*  
Y. Yang, H.B. Liu, T. Muto, J. Hashimoto, **R. Dong**, K. Kanagawa, M. Momose, E. Akiyama, Y. Hasegawa, T. TSukagoshi, et al. **2023, ApJ**, 948, 110
84. *The ALMA view of MP Mus (PDS 66): a protoplanetary disk with no visible gaps down to 4 au scales*  
A. Ribas, E. Macías, P. Weber, S. Pérez, N. Cuello, **R. Dong**, A. Aguayo, C. Cáceres, J. Carpenter, W. R. F. Dent, I. de Gregorio-Monsalvo, et al., **2023, A&A**, 673, 77
85. *ALMA Band 6 high-resolution observations of the transitional disk around SY Cha*  
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*Protoplanetary Disks*

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