Jeremy L. Smallwood

Dodge Family Prize Fellowship in Astrophysics
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EMPLOYMENT

Sept 2024 – Present	**Dodge Family Prize Fellowship in Astrophysics** University of Oklahoma, Norman, OK, USA
Oct 2022 – Sept 2024	**ASIAA Distingushed Postdoctoral Fellowship** Academia Sinica Institute of Astronomy and Astrophysics, Taipei, Taiwan
Dec 2021 – Sept 2022	**CASPER Postdoctoral Fellow** Baylor University, Waco, Texas, USA
Oct 2021 – Dec 2021	**NCTS Prize Postdoctoral Fellowship** National Center for Theoretical Science Physics Division, Taiwan

EDUCATION

Aug 2017 – May 2021	**PhD in Astronomy** University of Nevada, Las Vegas Supervised by Professor Rebecca Martin
Aug 2015 – Aug 2017	**MS in Astronomy** University of Nevada, Las Vegas
Aug 2010 – May 2015	**BA Astrophysics** Baylor University, Waco, Texas

AWARDS AND GRANTS

Sep 2024 - Present	Dodge Family Price Fellowship in Astrophysics Amount: $ 225,000 USD
Jan 2023 - Sep 2024	Outstanding Postdoctoral Fellowship Award from the Foundation for the Advancement of Outstanding Scholarship Amount: $ 20,000 USD
June 2023	Academia Sinica Grants for Young Scholars Attending International Academic Conferences Abroad
March 2022	UNLV Outstanding STEM Dissertation Award Awarded to the top graduate PhD dissertation at UNLV
Jan 2021 – May 2021	UNLV Research Assistant Fellowship

Aug 2016 – Jan 2021	UNLV Graduate Assistant Fellowship
Jan 2021	UNLV Golden Medallion Award Awarded to distinguished graduate students at UNLV
Summer 2020	UNLV Summer Research Scholarship Awarded to the top 10 graduate student researchers at UNLV
January 2020	UNLV Graduate Showcase Award Awarded to the top 5 graduate student researchers at UNLV
Aug 2019 – Aug 2020	Wolzinger Family Science Research Fellowship Awarded to the top STEM student at UNLV Amount: $ 10,000 USD
Aug 2017 – Aug 2018	NASA Nevada Space Grant Consortium Fellowship Awarded to the top 3 graduate researchers in Nevada Amount: $ 19,000 USD
March 2018	UNLV Outstanding STEM Thesis Award Awarded to the top graduate masters thesis at UNLV
Summer 2014	Baylor University NSF Summer Research Fellowship Center of Astrophysics, Space Physics, and Engineering Research

TEACHING EXPERIENCE

Jan 2025	Instructor for ASTR 1523 (Life in the Universe) Department of Physics and Astronomy, University of Oklahoma
Aug 2016 – May 2021	Astronomy Lab Instructor Department of Physics and Astronomy, University of Nevada, Las Vegas
Nov 2017	Guest Lecturer of Introductory Astronomy: the Solar System Department of Physics and Astronomy, University of Nevada, Las Vegas
Jan 2015 – May 2015	Teaching Assistant for Astronomy Laboratory Department of Physics, Baylor University
Jan 2015 – May 2015	Teaching Assistant for Physics of Sound and Acoustics Laboratory Department of Physics, Baylor University
Aug 2014 – Dec 2014	Teaching Assistant for Partial Differential Equations Department of Mathematics, Baylor University
Aug 2012 – May 2013	Supplemental Instructor in Chemistry Department of Chemistry, Baylor University

ACADEMIC SERVICE

May 2024 – Present	Peer review referee for *The Astrophysical Journal*
May 2021 – Present	Peer review referee for *Monthly Notices of the Royal Astronomical Society*
Sep 2020 – Present	Peer review referee for *Nature Astronomy*
July 2020 – Present	Peer review referee for *Planetary Science Journal*
Oct 2019 – Present	Peer review referee for *Astronomy & Astrophysics*
May 2022	Session chair for Architectures 2 at Exoplanets IV

MENTORSHIP AND DEPARTMENTAL ACTIVITIES

July 2024 – Present	Mentoring three summer students from the "Summer School for Planet Formation and Protoplanetary Disks" China Center of Advanced Science and Technology Beijing, China
June 2023 – Present	Mentoring a summer student from the ASIAA Summer Student Program Academia Sinica, Institute of Astronomy and Astrophysics Taipei, Taiwan, R.O.C.
Aug 2019 – May 2021	Mentored an undergraduate student in research (planet habitability) and classes Department of Physics and Astronomy, University of Nevada, Las Vegas
Aug 2017 – May 2018	Organizer of the UNLV Astro Coffee and Journal Club Department of Physics and Astronomy, University of Nevada, Las Vegas

REFERRED PUBLICATIONS

Total: 19 Publications (15-first author) + 3 first author under review, 301 citations, h-index = 9. Statistics from ADS.

22. Shedding light on the origin of the broken misaligned circumtriple disk around GW Ori
Smallwood J. L., Lubow H. S., Martin R. G., ApJL, under revision

21. Circumbinary accretion as a diagnostic for binary–disc misalignment
Smallwood J. L., Li Y-P., Deng H., Franchini A., MNRAS, under revision

20. Observational Signatures of Dust Traffic Jams in Polar-aligning Circumbinary Disks
Smallwood J. L., Nealon R., Yen H-W., Pinte C., Longarini C., Aly H., Lin M-K., ApJL, under revision

19. Polar alignment of a dusty circumbinary disc – II. Application to 99 Herculis
Smallwood J. L., Lin M-K., Nealon R., Aly H., Longarini C., 2024, MNRAS, 534, 4018

18. Polar alignment of a dusty circumbinary disc – I. Dust ring formation
Smallwood J. L., Lin M-K., Aly H., Nealon R., Longarini C., 2024, MNRAS, 532, 1068

17. Formation of misaligned second-generation discs through flyby encounters
Smallwood J. L., Nealon R., Cuello N., Dong R., Booth R. A., 2024, MNRAS, 527, 2094 (citations = 3)

16. Formation of the warped debris disc around β Pictoris
Smallwood J. L., 2023c, MNRAS, 523, 3526 (citations = 2)

15. Exciting spiral arms in protoplanetary discs from flybys
Smallwood J. L., Yang C-C., Zhu Z., Martin R. G., Dong R., Cuello N., Isella A., 2023b, MNRAS, 521, 3500 (citations = 9)

14. Formation of polar circumstellar discs in binary star systems
Smallwood J. L., Martin R. G., Lubow H. S., 2023a MNRAS, 520, 2952 (citations = 8)

13. Polar alignment of a massive retrograde circumbinary disc around an eccentric binary
Abod C., Chen C., **Smallwood J. L.** et al., 2022, MNRAS, 517, 732 (citations = 6)

12. Accretion onto a binary from a polar circumbinary disc
Smallwood J. L., Lubow H. S., Martin R. G., 2022, MNRAS, 514, 1249 (citations = 7)

11. GW Ori: circumtriple rings and planets
Smallwood J. L., Nealon R., Chen C., Martin R. G., Bi J., Dong R., Pinte C., 2021c, MNRAS, 508, 392 (citations = 19)

10. On the role of resonances in polluting white dwarfs by asteroids
Smallwood J. L., Martin R. G., Livio M., Veras D., 2021b, MNRAS, 504, 3375 (citations = 15)

9. Sustained Kozai-Lidov oscillations in misaligned circumstellar gas discs
Smallwood J. L., Martin R. G., Lubow H. S., 2021a, ApJ, 907, L14 (citations = 15)

8. GW Ori: interations between a triple-star system and its circumtriple disk in action
Bi J., van der Marel N., Dong R., Muto T., Martin R. G., **Smallwood J. L.** et al., 2020, ApJ, 895, L18 (citations = 45)

7. Asteroid belt survival through stellar evolution: dependence on the stellar mass
Martin R. G., Livio M., **Smallwood J. L.**, Chen C., 2020, MNRAS, 494, L17 (citations = 9)

6. Formation of the polar debris disc around 99 Herculis
Smallwood J. L., Franchini A., Chen C., Becerril E., Lubow S. H., Yang C-C., Martin R. G., MNRAS, 2020, MNRAS, 494, 487 (citations = 28)

5. Alignment of a circumbinary disc around an eccentric binary with application to KH 15D
Smallwood J. L., Lubow S. H., Franchini A., Martin R. G., 2019b, MNRAS, 486, 2919 (citations = 35)

4. Investigation of the asteroid collision model for the repeating fast radio bursts
Smallwood J. L., Martin R. G., Zhang B., 2019a, MNRAS, 485, 1367 (citations = 22)

3. Late delivery of nitrogen to Earth
Chen C., **Smallwood J. L.**, Martin R. G., Livio M., 2019, AJ, 157, 80 (citations = 3)

2. White dwarf pollution by asteroids from secular resonances
Smallwood J. L., Martin R. G., Livio M., Lubow S. H., 2018b, MNRAS, 480, 57 (citations = 58)

1. Asteroid impacts on terrestrial planets: The effects of super–Earths and the role of the ν_6 resonance
Smallwood J. L., Martin R. G., Lepp S., Livio M., 2018a, MNRAS, 473, 295 (citations = 17)

PROFESSIONAL DEVELOPMENT AND SUMMER SCHOOLS

March 2023	Research Collaboration with Dr. Ruobing Dong University of Victoria, Victoria, Canada – Visited Dr. Dong during a two week stay to increase my capabilities of comparing hydrodynamical simulations to observations
Jan 2019 – Mar 2019	Research Collaboration with Dr. Daniel Price Monash University, Melbourne, Australia – Visited Dr. Price during a two month stay to increase my capabilities of hydrodynamical simulations and gave a talking tour throughout Australia.
Jun 2017 – July 2017	Tsung-Dao Lee Institute (TDLI) Summer School in Computational Astrophysics Minhang Campus of Shanghai Jiao Tong University in Shanghai, China – Summer school on astrophysical fluid dynamics lectured by Dr. Daniel Price.

PRESENTATIONS AND CONFERENCES

Invited Talks

Oct 2024	Lunch talk at the University of Oklahoma Norman, Oklahoma
Sep 2024	Seminar Talk at National Taiwan Normal University Taipei, Taiwan, R.O.C.
Sep 2024	Seminar Talk at Academia Sinica, Institute of Astronomy and Astrophysics Taipei, Taiwan, R.O.C.
Aug 2024	Seminar Talk at Tsinghua University Beijing, China
May 2024	50 years of Binaries and Disks: Lubow@75 Las Vegas, USA
Mar 2024	Simulating Physics in Celestial Ecosystem (SPICE): Star, Disk, and Planet Formation Sendai, Japan
Feb 2024	Joint Franco-Australian 5th Phantom+MCFOST Users Workshop 2024 Melbourne, Australia
Dec 2023	Seminar talk at the Southern University of Science and Technology Shenzhen, China
Dec 2023	Seminar talk at the Shanghai Astronomical Observatory Shanghai, China
Dec 2023	Seminar talk at the Chiense University of Hong Kong Hong Kong
Dec 2023	Seminar talk at HKU Laboratory of Space Research Hong Kong

Dec 2023	Seminar talk at the University of Oklahoma Norman, Oklahoma
Nov 2023	Seminar talk at the University of Alabama Tuscaloosa, Alabama
Nov 2023	Seminar talk at the Univestiy of Nevada, Las Vegas Las Vegas, Nevada
April 2023	Seminar talk at National Central University Taoyuan, Taiwan
March 2023	Seminar talk at Dominion Astrophysical Observatory Victoria, Canada
March 2023	Seminar talk at National Taiwan Normal University Taipei, Taiwan
Sept 2022	Coffee talk at University of Cambridge Cambridge, UK
Sept 2022	Seminar talk at University of Warwick Warwick, UK
Sept 2022	Seminar talk at University of St. Andrews St. Andrews, UK
Sept 2022	Seminar talk at University of Edinburgh Edinburgh, UK
Dec 2021	Seminar talk at ASIAA (virtual) Taipei, Taiwan
Sept 2021	Seminar talk at University of Texas, San Antonio San Antonio, Texas
Sept 2021	Seminar talk at University of Florida Gainsville, Florida
Sept 2021	Seminar talk at Rice University Houston, Texas
June 2021	Baylor CASPER Colloquium Baylor University, Waco, Texas
March 2019	Seminar talk at the University of Southern Queensland (USQ) Toowoomba, Australia
Feb 2019	Seminar talk at the University of New South Wales (UNSW)

Sydney, Australia

Feb 2019 — Seminar talk at the Australian National Institute for Theoretical Astrophysics (ANITA)
Swinburne University, Melbourne, Australia

Nov 2018 — Baylor University Homecoming Physics Talk
Baylor University, Waco, Texas

Contributed Talks

July 2024 — EAS 2024: Stars, discs & planets: dynamics & evolution in multiple systems
Sendai, Japan

Dec 2023 — Exoplanets & Planet Formation Workshop (poster)
Yanqing, Beijing, China

July 2023 — Asia Oceania Geosciences Society 20^{th} Annual Meeting
Singapore

July 2023 — European Astronomical Society Annual Meeting
Krakow, Poland

May 2023 — The inner disk of young stars: accretion, ejection, and planet formation (poster)
IESC, Cargese, Corsica, France

April 2023 — Protostar and Planets VII (poster)
Kyoto, Japan

Feb 2023 — East-Asian ALMA Science Workshop 2023
New Taipei City, Taiwan

Nov 2022 — Taiwanese Theoretical Astrophysics Workshop II
Taipei, Taiwan

Sept 2022 — Planet and binary formation in gravitationally unstable protoplanetary discs in the high-resolution era
Leicester, UK

Aug 2022 — NCTS-ASIAA Workshop: Stars, Planets, and Formosa
Taipei, Taiwan

July 2022 — European Astronomical Society Annual Meeting
Valencia, Spain

May 2022 — Exoplanets IV (poster)
Las Vegas, Nevada

March 2022 — Lunar and Planetary Science Conference (poster)
Houston, Texas

Dec 2021	NCTS Annual Theory Meeting (talk, virtual) Taipei, Taiwan
March 2018	SPF2: Star and Planet Formation in the Southwest (poster) Biosphere 2, Oracle, Arizona
June 2017	Masters Defense Secular Resonances during Main-sequence and Post-main Sequence Planetary System Dynamics Department of Physics and Astronomy, University of Nevada, Las Vegas
April 2017	UNLV Journal Club Talk Department of Physics and Astronomy, University of Nevada, Las Vegas
May 2015	Undergraduate Thesis Defense Photophoresis: Potential Mechanism for Sorting Material in a Protoplanetary Disk Baylor University, Waco, Texas
March 2015	Lunar and Planetary Conference (poster) Woodlands, Texas
Nov 2014	Undergraduate Research Symposium (poster) Baylor University, Waco, Texas
Oct 2014	Texas Astronomy Undergraduate Research Symposium University of Texas, Austin

COMPUTER SKILLS

- MATLAB, Mathematica, FORTRAN, Shell scripts : Fluent
- Python : Good

PRESS RELEASES

Sep 2017	New Scientist Article link
Sep 2021	The New York Times Article link
Sep 2021	IFL Science Article link
Oct 2021	Las Vegas Review Journal Article link
Oct 2021	New Scientist Article link
Oct 2021	Fox 5 News

Article link

Oct 2021 Italian National Institute of Astrophysics Journal
Article link