

FEDERICA CHITI

Astronomy PhD Candidate, University of Hawaii at Mānoa

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Education

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| Institute for Astronomy, University of Hawai‘i at Mānoa PhD, Astronomy — Advisor: Jennifer van Saders | 2023 - Present Honolulu, USA |
| Institute for Astronomy, University of Hawai‘i at Mānoa MSc, Astronomy | 2021 - 2023 Honolulu, USA |
| University of Dundee BSc (Hons), Physics with Astrophysics — Advisor: Aurora Sicilia-Aguilar | 2017 - 2021 Dundee, UK |

Research Experience

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| Graduate Research Assistant University of Hawai‘i at Mānoa <ul style="list-style-type: none">Project: Anchoring Rotational Evolutionary Models at the Fully Convective Boundaries using Wide Binary Systems | 2022-2023 Honolulu, USA |
| Graduate Researcher University of Hawai‘i at Mānoa <ul style="list-style-type: none">Project: IRTF/iSHELL High-resolution Spectroscopy of Protoplanetary Disks | 2021-2022 Honolulu, USA |
| Carnegie Vacation Scholar University of Pisa, University of Dundee <ul style="list-style-type: none">Project: Testing Spectrophotometry as a Tool for Hot Jupiters Transit Detection | 2020 Italy, UK |
| Cormarck Undergraduate Vacation Scholar University of Dundee <ul style="list-style-type: none">Project: Investigating the Effect of Electric Current in The Solar Corona through Magnetic Null Points of Stellar Magnetic Fields | 2019 Dundee, UK |
| Undergraduate DEBRA Researcher University of Dundee <ul style="list-style-type: none">Project: Cooling footwear technology for Pachyonychia Congenita Patients. | 2018 Dundee, UK |

Grants & Awards

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| NSF Astronomy and Astrophysics Research Grant, Collaborative Research Key Person | 2025 |
| Aloha Data: AI Hackathon for Hawai‘i’s Resilience, UH First Place | 2025 |
| Hannah Liebreich Merit Based Award for Excellence in Teaching, , UH | 2023 |
| East-West Center Fellowship | 2023 |
| Chambliss Astronomy Achievement Award, 241st AAS meeting, Seattle, WA Honorable Mention | 2023 |
| British Association 1939 Prize, UoD Top graduating undergraduate in the Faculty of Science & Engineering | 2021 |
| Peter Le Comber Prize, UoD Top graduating physics undergraduate | 2021 |
| James Durham Bursary, UoD Top junior physics student | 2020 |
| Winifred Mackie Smith Prize, UoD Top sophomore physics student | 2019 |
| Royal Society of Edinburgh Award Top RSE Cormarck Vacation Scholar | 2019 |
| Enterprise Challenge - Best Business Idea at UoD First Place | 2018 |
| School of Science & Engineering Award, UoD Top freshman physics student | 2018 |
| Rotary Club Outstanding Committment Award, Italy | 2017 |

Telescope Time

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| “Constraints on the Magnetic Morphology of K-dwarfs During Spin-Down Stalling” LBT (Co-PI, 16 hours) | 2025 |
| “Probing Surface Activity of K-dwarfs in the Hyades During Stalled Braking” CFHT/SPIRou (PI, 12 hours) | 2025 |
| “Probing the Magnetic Field Morphology of the Grand Minimum Star...” CFHT/ESPaDOnS, SPIRou (PI, 11 hours) | 2025 |
| “Organic Inventory of Protoplanetary Disks” NASA IRTF/iSHELL (Co-PI, 11.5 hours) | 2023 |

Publications

First Author

1. **Chiti F.**, van Saders J. L., Kochukhov O., Metcalfe T. S., Spectropolarimetric Constraints on the Maunder Minimum Analog HD 166620: Evidence for Weakened Magnetic Braking, 2026, Submitted to ApJL.
2. **Chiti F.**, Kochukhov O., van Saders J. L., Metcalfe T. S., [Zeeman Doppler Imaging of \$\tau\$ Ceti: The Weakest Magnetic Field Detected in a Sun-like Star](#), 2025, ApJL, 991, L13.
3. **Chiti F.**, van Saders J. L., Heintz T. M., Hermes J. J. et al., [Rotation at the Fully Convective Boundary: Insights from Wide WD + MS Binary Systems](#), 2024, ApJ, 977, 15.

Co-Author

1. Lee R., Dai F., Price E.M. et al. including **Chiti F.**, Revisiting the Exo-Mercury Candidate GJ 367 b with ESPRESSO and a Self-Consistent Tidal Distortion Model, 2025 (submitted to ApJ).
2. Pallister R., Wyper P.F., Pontin D. I. et al. including **Chiti F.** [Spatially Separated Electron and Proton Beams in a Simulated Solar Coronal Jet](#), 2021, ApJ, 923, 163.

Software

1. **Chiti F.**, [Null Finder](#), 2020, Zenodo.

Advising

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| Advisor , Reina Mae Lana HI STAR Research, Baldwin High School | June 2025 |
| Advisor , Lyngel Paguel HI STAR Research, Baldwin High School | June 2025 |
| Advisor , Anthony Phillips HI STAR Research, Montessori School of Maui | June 2025 |
| Advisor , Jahnea Ordoná Maunakea Scholars & NASA Earth System Project Award | October 2022 - May 2023 |

Teaching & Outreach

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| Graduate Teaching Assistant ASTR 300L/301 Observational Astronomy, University of Hawaii | 2021-2022 |
| Undergraduate Teaching Assistant PH21002 Introduction to Programming, University of Dundee | 2019-2021 |
| “Search for Habitable Worlds”, Public lecture, Da Shop Honolulu | September 2023 |
| Institute for Astronomy Open House, Honolulu | April 2022/23/25 |
| AstroDay at Prince Kuhio Plaza, Maunakea Observatories | May 2022/24 |
| Hawaii Geek Meet | September 2022 |

Service & Leadership

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| LOC Member, TESS/Kepler Asteroseismic Science Consortium, University of Hawaii | 2023 |
| Graduate Representative of the Undergraduate Students, University of Hawai‘i at Mānoa | 2022-2023 |
| Student Voice Support Officer, University of Dundee | 2019 - 2021 |

Talks

Invited Talks

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| “The Power and Puzzles of Stellar Rotation as a Chronometer”, Seminar at Uppsala University, Sweden | 2025 |
| “The Power and Puzzles of Stellar Rotation as a Chronometer”, Seminar at Stockholm University, Sweden | 2025 |

Contributed Talks

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| “The Impact of Magnetic Field Morphology on Stellar...”, Dissertation Proposal, University of Hawai‘i | September 2024 |
| “Stellar spin-down and Magnetic Activity at the Fully Convective...”, Cool Stars 22, University of San Diego | June 2024 |
| “Rotation at the Fully-Convective Boundary: New Insights from...”, TASC7 / KASC14, University of Hawai‘i | July 2023 |
| “Gyrochronology Challenges at the Fully-Convective Boundary:...”, University of Hawai‘i | May 2023 |
| “High-Resolution Infrared Spectroscopy of Organics...”, University of Hawai‘i | September 2022 |

Posters

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| “IRTF/iSHELL High-Resolution Spectroscopy of Organics in Protoplanetary Disks”, AAS 241, Seattle, WA | 2023 |
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Certifications

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| Fundamentals of Deep Learning, NVIDIA | 2025 |
| Applications of AI for Anomaly Detection, NVIDIA | 2025 |