

Education & Employment

University of Hawaii at Manoa Institute for Astronomy

Ph.D. in Astronomy, 3.94/4.0

Moffet Field, CA

Bay Area Environmental Research Institute

Summer 2018

Research Associate
University of Washington

Seattle, WA

Honolulu, HI 2018 – Present

Bachelor of Science in Physics & Astronomy, 3.47/4.0 | Astronomy 3.78/4.0

2014 - 2018

UW Dean's List - SP16, WI17, SP17 | Astronomy Honors

Research

Interests: Solar & Stellar Physics – Solar Magnetic Fields – Stellar Evolution

Constraining Angular Momentum Loss Mechanisms in Subgiant Stars

Honolulu, HI

Dr. Jennifer van Saders & Dr. Jamie Tayar
Analyzing how different angular momentum loss models fare for stars on the subgiant branch.

Analyzing flow different angular momentum loss models fare for stars on

Honolulu. HI

Electric Current Neutralization in Solar Active Regions *Dr. Xudong Sun*

Winter 2019 - Present

Autumn 2019 - Present

• Studying the relationship between current distribution and flare production in solar active regions.

Lockheed Martin Solar and Astrophysics Lab

Palo Alto, CA Summer 2018

Dr. Sanjiv Tiwari & Dr. Bart de Pontieu

Studying the evolution of solar coronal plumes with the Interface Region Imaging Spectrograph (IRIS).

Seattle, WA
Autumn 2017 – Spring 2018

Astronomy Undergraduate Engineering Group

Developing a solar telescope for use in introductory astronomy courses.

University of Alabama in Huntsville/NASA MSFC Heliophysics REU

Dr. Sanjiv Tiwari

Huntsville, AL Summer 2017

• Studying the magnetic origins of solar coronal plumes.

Cataclysmic Variable Spectroscopy

Seattle, WA

Prof. Paula Szkody

Solar Telescope

Spring 2017 - Winter 2018

o Collected and reduced several Cataclysmic Variable (CV) targets and developed a CV catalog.

Little-Studied Open Clusters Project

Seattle, WA

Prof. Ana Larson

Spring 2016 - Winter 2017

• Cataloged open cluster properties and assisted in development of cluster membership analysis program.

Awards and Honors

NSF Graduate Research Fellowship Program: Honorable Mention

April 2018

American Geophysical Union (AGU) Fall Meeting Outstanding Student Paper Award:

December 2017

UW Astronomy Baer Undergraduate Prize for Excellence in Research:

Spring 2017

Teaching

Astronomy Course Teaching Assistant: TA for UH undergraduate astronomy courses

Autumn 2018 - Spring 2019

Astronomy Course Grader: Grader for undergraduate astronomy core series

Autumn 2017 - Spring 2018

Introductory Physics Tutorial Instructor: Tutorial TA for UW introductory physics series

Winter 2017 - Spring 2018

Committees

UH Institute for Astronomy Graduate Admissions Committee: Graduate Student Representative

Spring 2019

Volunteer Service and Outreach

Scientist: Skype a Scientist

Autumn 2019 - Present

Presenter: Stars Above Hawaii Stargazing Tours

Spring 2019 - Present

Author: Astrobites, astrobites.org/author/eavallone

Winter 2019 - Present

Volunteer: UH Institute for Astronomy Outreach

Autumn 2018 - Present Autumn 2018 - Present

Pen-Pal: Letters to a Pre-Scientist

Spring 2016 – Spring 2018

Volunteer: Theodor Jacobsen Observatory

Spring 2016 - Spring 2018

Presenter: UW Planetarium, UW Mobile Planetarium

Secretary, President: UW League of Astronomers

Spring 2016 - Spring 2018

Mentorship

Maunakea Scholars Program:Graduate Student MentorAutumn 2018 - PresentResearch Mentor:Co-advising high school student with Dr. Xudong SunSpring 2019 - Present

Technical Skills

Languages: Python | IDL | Mathematica | LaTeX | Bash | UNIX | R

Software: Microsoft Office | Wordpress

Telescope Operations: Observed 4+ nights at APO 3.5m, MRO 0.75m, DAO 1.83m

Workshops

Preparing for DKIST: Image processing and Time Series: Northridge, CA

Preparing for DKIST: An Introduction to Ground Based Data: Boulder, CO

UCAR CPAESS Heliophysics Summer School: Boulder, CO

Summer 2019

Summer 2019

Presentations

American Astronomical Society Winter Meeting: Poster

January 2020

• Astrobites: Blogging Astronomy Research and Beyond

American Astronomical Society Winter Meeting: Poster

January 2020

Electric Current Neutralization in Solar Active Regions and its Relation to Magnetic Shear and Eruptive Activity
 American Geophysical Union Fall Meeting: Poster

December 2019

Electric Current Neutralization in Solar Active Regions and its Relation to Magnetic Shear and Eruptive Activity
 SHINE Conference: Poster

Electric Current Neutralization in Solar Active Regions and its Relation to Magnetic Shear and Eruptive Activity
 Lockheed Martin Solar and Astrophysics Lab: Seminar

July 2018

o The Magnetic Origins and Spectroscopic Properties of Coronal Plumes

UW Undergraduate Research Symposium: Poster

May 2018

O Adapting an Amateur Solar Telescope for use as a Lecture, Research, and Public Outreach Tool

Stanford University Solar Observatories Group: Seminar

March 2018

o Critical Magnetic Field Strengths for Unipolar Solar Coronal Plumes in Quiet Regions and Coronal Holes?

American Geophysical Union Fall Meeting: Poster

December 2017

o Critical Magnetic Field Strengths for Unipolar Solar Coronal Plumes in Quiet Regions and Coronal Holes?

UW Undergraduate Research Symposium: Poster

May 2017

• MW Open Cluster Metallicities + Membership Assignment

Theodor Jacobsen Observatory: Public Outreach Talk | The Sun: Our Home Star

May 2017

2018

UW Planetarium: Universe Tours Spring 2016 – Spring 2018

Publications

Critical magnetic field strengths for unipolar solar coronal plumes in quiet regions and coronal holes?:

o Avallone, E. A., Tiwari, S. K., Panesar, N. K., Moore, R. L., Winebarger, A. 2018, ApJ, 861, 111

References available upon request.