RUOYAN WANG

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EDUCATION

PhD Physics - University of Leicester 2020 - 2024
MSc Astronomy - Leiden University 2018 - 2020
BSc Physics (Astrophysics) - University of California, Santa Cruz 2013 - 2017

EXPERIENCE

Postgraduate Researcher Sep 2020 - Present
University of Leicester

Investigating Jupiter's auroral ionosphere and thermosphere
•Reducing and analyzing infrared emissions from Jupiter's upper atmosphere and calculating ion and neutral wind velocities, thermospheric temperature, and ion density.
•Providing a detailed comparison between the ionosphere and neutral atmosphere and a measure of the atmospheric coupling that drives Jupiter's aurora.

Laboratory Demonstrator Oct 2020 - Present
University of Leicester

•Teaching laboratory methods to students and providing helps to hands-on experiments.
•Evaluating students' performance on experiments and giving feedback to their lab notebooks.

Graduate Student Researcher Sep 2018 - Jun 2020
Leiden University

Cataloging and visualizing circumstellar disks
•Built an online web database to assemble a complete catalog of all observational and published results of scattered light imaging, with an interface for easy access and basic statistical analysis.
•Designed a 3D reconstruction of circumstellar disks from 2D data, which brings insight in the surface brightness and hence optical properties of dust grains.

Detecting transiting exoplanets near bright stars with MASCARA and TESS telescopes
•Data-mined TESS archive for candidates that MASCARA could capture, and analyzed the corresponding light curves for long-term variability and long-period planets.
•Modified data reduction method to eliminate the effects of local sidereal time and lunar saturation.
•Performed signal recovery tests to characterize data calibration and performance of MASCARA.

Undergraduate Student Researcher Jun 2016 - May 2018
University of California, Santa Cruz

Modeling atmospheres of brown dwarfs
•Ran models of brown dwarf atmospheres spanning a wide range of atmospheric metallicity, C/O ratios, and cloud properties, encompassing atmospheres of effective temperature and gravity.
•Analyzed expected temperature-pressure profiles and emergent spectra from an atmosphere in radiative-convective equilibrium.

MSI Undergraduate Tutor Sep 2016 - Dec 2016
University of California, Santa Cruz

•Held sessions for students to work with their peers and practice material from the course.
•Reviewed assignment problems and helped students to tackle them with effective learning strategies.

PRESENTATIONS

Annual Physical and Biological Science Summer Research Symposium Aug 2016 & 2017
University of California, Santa Cruz

231th Meeting of the American Astronomical Society Jan 2018
Washington, D.C., USA

INTERNSHIP/INDUSTRIAL TRAINING

China National Petroleum Corporation (CNPC) Jun 2014 - Aug 2014
Xining, China

•Learned about various equipment related to the automation process of the oil refinery.
•Involved in a geophysical survey for petroleum and natural gas exploitation and extraction.
•Processed and analyzed data acquired from artificial seismic waves for oil prospecting.

OUTREACH SERVICE

Gapper International Volunteering Aug 2015
Galle, Sri Lanka

•Helped design a passive sonar to listen to and record sea turtles during mating seasons, and also to observe their reactions to different melodies.

SCHOLARSHIP/HONOR/AWARD

Leiden University Excellence Scholarship (LExS) 2018
Granted a tuition waiver till statutory tuition fee for outstanding academic merit as a non-EU/EEA international student.

Undergraduate Dean's Honors 2013, 2015
Outstanding academic performace.

University of California Regents Scholarship 2013
The Regents Scholarship carries the highest honor awarded by the University of California, Santa Cruz to entering undergraduates. Awarded in recognition of outstanding academic achievements.

TECHNICAL SKILLS

Programming Languages
Python, JavaScript

Tools & Technologies
LaTex, Linux, Microsoft Office, Git, Django, Three.js, Bootstrap, Plotly, Markdown, HTML