



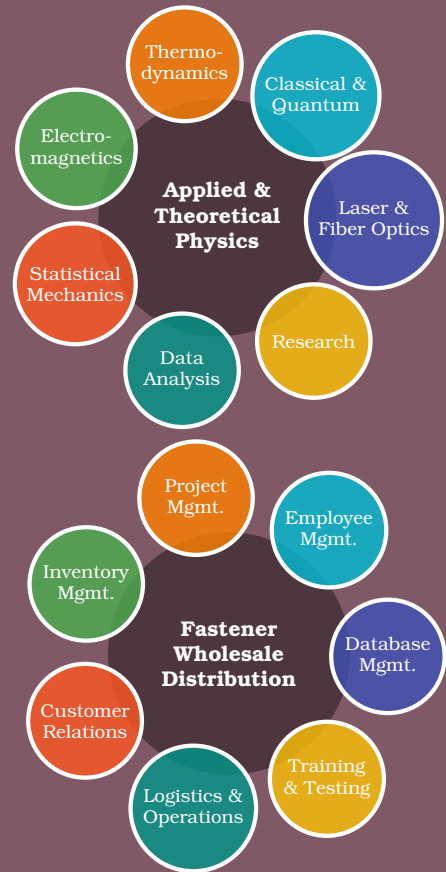
David Hannahs-Jackson

Physics Researcher · Teaching Assistant · COO · Small Business Consultant

I am driven, quick-learning, & detail-oriented with a plethora of skills and craft acquired outside my formal physics education seeking to become an active scientist in the global STEM community. I am an exceptional employee with over a decade of experience and research fellow that will be a positively contributing team member. I enjoy posing & answering difficult questions through holistic, innovative approaches.

jackson.dl314@gmail.com +1.509.954.1141 USA /David-Hannahs-Jackson /Hannahs-Jackson

SKILLS & TRAINING



TECH

Linux OS	● ● ● ● ●
Microsoft OS	● ● ● ● ●
MS Office Suite	● ● ● ● ●
Python	● ● ● ● ●
Matlab	● ● ● ● ●
LaTeX	● ● ● ● ●
BASH	● ● ● ● ●
C#	● ● ● ● ●
HTML 5	● ● ● ● ●
3D Modeling	● ● ● ● ●
Oscilloscope	● ● ● ● ●
Fiber Optics	● ● ● ● ●
Laser Optics	● ● ● ● ●

LANGUAGES

English	Native Tongue
German	Limited Working Proficiency
Spanish	Limited Working Proficiency

WORK EXPERIENCE



Oregon State University

Jun 2024
Oct 2022

Undergraduate Research Fellow (Remote)
OREGON STATE UNIVERSITY · Corvallis, OR, USA

Astrophysics | Gravitational galactic formation theory

- Continued Dr. Hadley's research into the dynamic process of galactic nebula development and the resulting gravitational coupling effect observed when a 3D resolved protostar is introduced under Newtonian gravity.
- Devised series of models (150+ variants) altering the geometric properties of the accretion disk, given a targeted region of parameter space. The simulated models' results were analyzed, visualized then presented live at OSU. Simulations ran on OSU's High Performance Cluster using a combination of BASH and Fortran.
- Created Python script to manage and analyze large dataset

/Hannahs-Jackson/Thesis_Grav_Sim.



Oregon State University

Jun 2024
Jun 2022

Undergraduate Teaching Assistant (Remote)
OREGON STATE UNIVERSITY | E-CAMPUS · Corvallis, OR, USA

Calculus-based physics intro series.

- Classical kinematics, forces, energy, electromagnetism, waves, optics, & circuits.
- Led student laboratory experiments and online meetings. Managed schedules, grading, & tutoring.
- Collaborated curriculum improvements through student-professor feedback.



KONTRABAND RETRO GAMES, LLC.

Dec 2021
Mar 2021

Small Business Consultant / Acting Manager
KONTRABAND RETRO GAMES, LLC. · Corvallis, OR, USA

New company launch optimization.

- Showroom floor layout, inventory database & management system, business & financial strategy, & accompanying operational procedures.



ACTION FASTENERS & SUPPLY, INC.

Dec 2017
Dec 2010

COO
ACTION FASTENERS & SUPPLY, INC. · Spokane Valley, WA, USA

- Distribution workflow management (15+ associates). Logistic strategy development. Office & warehouse optimization through concerted restructuring; realizing significant financial savings and improved efficiency.
- Implemented SQL server-based software system upgrade from UNIX leading to large-scale overhaul of processes, policies, and operations; resulting in increase of overall capacity & efficiency.
- Started at entry-level, gradually promoted into upper management.

Previous positions held:
Operations manager. Assistant Sales manager. External sales associate. Order fulfillment specialist. Warehouse associate.



SEARS & ROEBUCK, CO.

Mar 2011
July 2008

Internal Sales Associate
SEARS & ROEBUCK, CO. · Spokane Valley, WA, USA

Brand central commissioned sales. Formerly electronics part-commissioned sales.

- Customer service & follow up technical support with CRM utilization and customer networking. Cashier & cash-handling experience managing multiple registers. Department display setup and show-floor presentation upkeep. Self-guided product knowledge. Established time management and interpersonal communication skills.

INTERESTS & EXPERTISE

Research & Development

Nano Materials Science

Astrophysics

Chemistry

Energy Sustainability & Storage

Relativity Theory

Electromagnetic Theory

Optical Physics

Nuclear Physics

Quantum Physics

Data Analysis & Visualization

Logistics & Operations

All-Medium Maker

Retro Video Games

Coffee

GOALS



Continued personal and professional growth.



Pursue scientific discovery through theoretical and applied research.



Actively influence scientific understanding for the betterment of all.



Participate in the STEM community in the astrophysics, material science, quantum particle, or similar field.

PHILOSOPHY

Inspirations that have guided my journey as a scientist.

“ You cannot make a plan of action until you know both where you want to go and where you currently are. ”
– Nate Riggins | Business Mentor

“ The important thing is not to stop questioning. Curiosity has its own reason for existing. One cannot help but be in awe when he contemplates the mysteries of eternity, of life, of the marvelous structure of reality. It is enough if one tries merely to comprehend a little of this mystery every day. ”
– Albert Einstein

“ To learn to succeed, you must first learn to fail. ”
– Michael Jordan

“ Plan For What It is Difficult While It is Easy, Do What is Great While It is Small. ”
– Sun Tzu

“ You cannot fix what you cannot face. ”
– James Baldwin

PUBLICATIONS

Jun 2024



Coupling Effects for Self-Gravitating Polytropic Star-Disk Systems I
Spatially Resolved Star Modeling: A Linear Analysis

OREGON STATE UNIVERSITY SCHOLARS ARCHIVE

Abstract: A numerical analysis was conducted upon a series of protostellar star-disk systems using a 1st order perturbation method to evaluate the self-gravitating coupling effects that a spatially resolved protostar core and its accretion disk have upon one another. The system's geometric features were parameterized according to the inner and outer edge of the accretion disk along the rotational plane and the polar and equatorial radii of the protostar core. Additionally, the mass ratio of the protostar core and its accretion disk was parameterized. A series of computational models were run for a series of disk variants and cross analyzed with a series of star variants to explore how those parameters effected the likely dominant system pattern and modal type. The system's energy distribution between rotational kinetic energy and gravitational potential energy was found to be strongly correlated to the parameters of the protostar core while the location of the perturbation's radius of corotation strongly depended upon both its azimuthal symmetry number and the accretion disk's geometric parameters.

ir.library.oregonstate.edu/concern/undergraduate_thesis_or_projects/5425kk74k

FORMAL EDUCATION

2024
2020



Bachelor's of Science | Physics

OREGON STATE UNIVERSITY · Corvallis, OR, USA

- General physics studies emphasizing astrophysics, theoretical mechanics, optics, chemistry, & sustainability.
- Pursued undergraduate research in theoretical astrophysics, published on OSU's Scholars Archive.

2019
2008



Associate in Arts | DTA

COMMUNITY COLLEGES OF SPOKANE · Spokane, WA, USA

- Completed degree intermittently while working full time.
- Early studies focused on core education, business, and economics.
 - Later studies broadened mathematical and scientific foundations.

AFFILIATIONS

May 2024



Physicists Coalition for Nuclear Threat Reduction

GLOBAL | USA

Participation: New member & advocate undergoing learning workshops.
Mission Statement: The Physicists Coalition for Nuclear Threat Reduction works to reduce the threats from nuclear weapons by mobilizing advocacy within the physical sciences communities in the United States and internationally... We also call for fulfillment of the long-standing international obligation to achieve nuclear disarmament.

Jul 2024



American Physical Society

COLLEGE PARK, MD, USA

Participation: Early career member investigating leading research in fields of interest.
Mission Statement: APS advances physics by fostering a vibrant, inclusive, and global community dedicated to science and society.

REFERENCES

Academic

Dr. Kathryn Hadley - Undergraduate Research Advisor
✉ kathryn.hadley@oregonstate.edu

Dr. Jeffrey Hazboun - Professor
✉ jeffrey.hazboun@oregonstate.edu

Dr. Heidi Schellman - Professor
✉ Heidi.Schellman@oregonstate.edu

Professional

Louis Peyron - Colleague & Past Manager
✉ lrpeyron@gmail.com ☎ +1.509.999.6646

Rob Saty - Colleague & Past Co-Manager
✉ epidemiology206@gmail.com ☎ +1.509.475.5629