

Christopher D. Gilbert

Curriculum Vitae

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RESEARCH

“Demonstrating the Causation of Gravity for Subluminal Velocities.”

This undergraduate project sought to demonstrate, using Einstein’s Field Equation and the Shwartzchild Metric, that for velocities much lower than the speed of light, which is the realm of human experience, the cause of gravity is the warping of time, not the curvature of space.

“Visualization of Merging Black Holes in Virtual Reality.”

This graduate project seeks to develop coding to create a module capable of streamlining the process of importing 3D simulation data of binary black hole mergers into a VR environment.

WORK EXPERIENCE

SEPT 2020 – DEC 2021 (PT)

University of Massachusetts Dartmouth *Graduate Teaching Assistant (Physics)*

Courses include: Physics I, Classical Mechanics Lab; and Physics II, Electricity and Magnetism Lab. As a Teaching Assistant, I was responsible for helping science, engineering, and non-science majors conduct and understand laboratory experiments, grading labs and homework assignments, as well as setting up, breaking down, and organizing lab equipment.

SEPT 2017 – DEC 2019 (PT)

University of Massachusetts Dartmouth *Learning Assistant (Physics)*

Courses include: Intro Astronomy; Stars, Planets, and the Search for Extraterrestrial Life; Physics I; and Physics II. As a Learning Assistant, I was responsible for helping non-science majors with in-class activities, and grading work sheets from in-class activities.

JUN – JULY 2019, 2020, 2021 (PT)

Brown School of Professional Studies *Teaching Assistant, Summer At Brown Program*

As a Teacher’s Assistant for Dr. Renuka Rajapakse’s four week, high school level course on Using Smart Phone Technology for Physics, I assisted with laboratory setup and execution, helping students with difficult problems, guidance for team research projects, and I taught lessons in Python programming for physics. During 2020 and 2021, I was responsible for maintaining virtual python lessons, grading programming assignments, and offering feedback for improving codes.

SEPT 2015 – APRIL 2017 (PT)

Community College of Rhode Island, Knight Campus *Peer Tutor/ Student Leader/ Interim Lab Tech*

As Peer Tutor for both Solar System and Stellar System Astronomy courses taught by Professor Brendan Britton, I conducted group tutoring sessions with an average of ten to twenty students, using a Socratic classroom style environment to coax them into a better understanding of

EDUCATION

- 2020 – 2022 **Masters of Science**
Physics, currently pursuing
University of Massachusetts, Dartmouth
- 2017 – 2020 **Bachelor of Science**
MAGNA CUM LAUDE, 3.66 GPA
Physics, concentration in Astrophysics
University of Massachusetts, Dartmouth
- 2012 – 2017 **Associates of Science**
HIGHEST HONORS, HONORS PROG., 3.80 GPA
Science, Physics
Community College of Rhode Island

MILITARY SERVICE

United States Air Force (April 1997 – Dec 1997)
Medical Discharge under Honorable Conditions.
While my time in the service was brief, the core values of the Air Force, honor, integrity, and excellence in all I do, have stayed with me ever since.

AWARDS

- 2019 **Professor John Dowd Scholarship**
University of Massachusetts, Dartmouth
- 2019 **Professor George Leung Scholarship**
University of Massachusetts, Dartmouth
- 2019 **Scholastic Achievement Award – Physics**
University of Massachusetts, Dartmouth

COMPUTER SKILLS

- BEGINNER Fortran, Github, Ubuntu
Adobe Photoshop
ArcGIS, MESA Star
- INTERMEDIATE Python, L^AT_EX
Microsoft Windows
Jupiter Notebooks
- PRIOR (RUSTY) C++, Turbo Pascal, DOS

COMMUNICATION SKILLS

- EXPERT Persuasion, Public Speaking,
Conflict Resolution, Negotiation,
Active Listening, Improvisation,
Non-verbal Cues, Building Rapport,
Volume and Clarity, Writing

the math and concepts in the science of Astronomy. I was selected by my supervisor as a Student Leader for New Student Orientations to answer questions and provide a student perspective to incoming freshman. During the Spring semester, 2017, I served as the Interim Lab Technician for the Physics Department, where my responsibilities included: setting up and breaking down experiments for Physics, Astronomy, Geology, and Oceanography courses; Test, calibrate, repair, clean, organize, and make suggestions for purchasing lab equipment.

1998 – 2015

Previous Work Experience

Various Commission Sales and Customer Service Positions

I have over seventeen years of experience in commission sales and customer service. A more complete resume of these positions can be provided upon request, however I will highlight a few here. From 2006 to 2010 I was a Customer Sales/Retention Representative and Subject Matter Training Expert at Cox Communications, where I was ranked number one in the New England region for three years. As a part time furniture salesman at Cardi's Furniture from 2002 to 2005, I was known for outselling most full time associates. During my time as an automotive salesman from 1999 to 2001 I learned the value of honesty and integrity in an industry often void of either. Throughout my career in sales, I mastered the art of persuasion and gained valuable skills such as public speaking, communication of various concepts, and improvisation under pressure.

REFERENCES

Dr. Gaurav Khanna

POSITION Professor
EMPLOYER Department of Physics
University of Massachusetts, Dartmouth
EMAIL gkhanna@umassd.edu
PHONE (508)910-6605 (Work)

Dr. Renuka Rajapakser

POSITION Full time Lecturer
EMPLOYER Department of Physics
University of Massachusetts, Dartmouth
EMAIL rrajapakse@umassd.edu
PHONE (508)999-8360 (Work)

Dr. Jay Wang

POSITION Professor / Chairperson
EMPLOYER Department of Physics
University of Massachusetts, Dartmouth
EMAIL jwang@umassd.edu
PHONE (508)999-9136 (Work)

Prof. Brendan Britton

POSITION Associate Professor
EMPLOYER Department of Physics
Community College of Rhode Island
EMAIL bbritton@ccri.edu
PHONE (401)825-2259 (Work)

EXPERIENCED Classroom Instruction, Socratic Method, Interpersonal Relation, Humor, Simplification, Motivation,

TRAITS

Detail Oriented

I believe attention to detail provides better success and greater efficiency than seeking the easiest path. Whether repeating a mundane task or solving an intricate problem, skipping small steps or ignoring trivial information can lead to errors, mask solutions, and, in some environments, have dangerous implications.

Creative Thinker

With a vivid imagination, I am keen on conceiving ideas that may have never been thought of before. This trait has helped me with visualizing concepts, as well as presenting possible solutions to problems that may be labelled 'Outside the Box'.

Integrity

I believe deeply in personal, professional, and institutional integrity as the foundation for conveying confidence and maintaining trust. At a time when the world needs scientific understanding and acceptance more than ever, it is our integrity which will provide the strongest protection of our credibility.

ORGANIZATIONS

Astronomy Club (2016 – 2017)

Founding President
Community College of Rhode Island

Phi Theta Kappa (2015 – Present)

National Two Year College Honors Society
Community College of Rhode Island

Society of Physics Students (2017 – Present)

Secretary – 2019/2020
University of Massachusetts, Dartmouth

American Physical Society (2019 – Present)

Student Member
University of Massachusetts, Dartmouth