

Abdullah Alshaffi

<https://abdullahalshaffi1.github.io/abdullahalshaffi.github.io/#>
<https://github.com/AbdullahAlshaffi1>
aalshaffi@umassd.edu

Education	<i>Master of Science in Physics</i> Sep 2019 - May 2022 (University of Massachusetts Dartmouth, Dartmouth, Massachusetts)
	<i>Bachelor of Science in Astronomy, Mathematics</i> Aug. 2010 - April 2015 King Abdulaziz University, Jeddah, Saudi Arabia
Publications	<i>Super-Chandrasekhar mass Type Ia supernova event from the double-degenerate channel, A Alshaffi, R Fisher, B Roy, M Ferrari, S Yoshida In Preparation.</i>
Talks & Summer Schools	<ul style="list-style-type: none">• IVC astrostatistics and machine learning summer school 2021
Awards and Honors	Sponsorships' Management King Abdulaziz university Saudi Arabia. 2017 - 2027 <ul style="list-style-type: none">• Full fund scholarship from the Kingdom of Saudi Arabia to cover tuition costs and living expenses incurred during studies for an English course, master's, and Ph.D. in the field of physics and astronomy.
Experience	<i>Teaching Assistant in the Astronomy Department at King Abdulaziz University.</i> 2016 - 2017 <ul style="list-style-type: none">• Astronomy 201 Lab.• General Astronomy (Assistant Instructor)
Skills	<ul style="list-style-type: none">• Programming languages: Python, Mathematica, Fortran, and C++.• Operating systems: Mac OS, Linux, Windows.• Software: adaptive mesh refinement code FLASH, Torch, SuperNu, LaTeX, MESA, Git, and OriginLab.• TACC Stampede2 supercomputer, and Carnie supercomputer• Observing:<ul style="list-style-type: none">– Set up 8 & 6 inch telescopes with tracking (MEADE).– SSP-5 Photomultiplier UBV– Coronado H-Alpha Solar Telescopes– Planetarium at King Abdulaziz University– ST-2000XM CCD Camera
Research Experiences	<i>Super-Chandrasekhar mass Type Ia supernova event from the double-degenerate channel.</i> University of Massachusetts Dartmouth Mentored by Prof. Robert Fisher. <ul style="list-style-type: none">– I led a research effort to explore the possibility that superluminous SNe Ia may originate from differentially-rotating carbon-oxygen white dwarf mergers. I start working on hydrodynamical runs using the data provided by our collaborator Yoshida at the University of Tokyo, using the adaptive

mesh refinement code FLASH. I then follow FLASH runs with nucleosynthesis and radiation transport. The radiation transport results will help me compare the synthetic spectra of the rotating mergers against superluminous SNe Ia events such as SNLS-03D3bb and sub-Chandrasekhar and near-Chandrasekhar white dwarf models.

Relevant Coursework	<p>Physics: Classical Mechanics, Electromagnetism, Quantum Mechanics, Statistical Mechanics and Thermal Physics, General Relativity, Mathematical Physics.</p> <p>Astronomy: Stellar Radiate, Stellar Interior, Computer Applications in Astronomy, Variable & Binary Stars, Celestial Mechanics, Solar Physics, Galaxies.</p> <p>Mathematics: Calculus, Differential Equations, Linear Algebra, Complex Analysis, Real Analysis.</p>		
Languages	<p>Arabic (Native)</p> <p>English (Advanced)</p>		
Outreach	<p><i>Member of astronomical activity</i> at King Abdulaziz University.</p> <p><i>Presenting lessons and presentations</i> using Planetarium at King Abdulaziz University for students visiting from schools.</p> <p><i>Volunteer in Space Week.</i></p>	2012 - 2015	2013
Extracurricular Activities	<p><i>Backpacking</i></p> <ul style="list-style-type: none"> • I love hiking, especially those that require hard effort. Also, I like camping in the forests and deserts. 		