

Shah Ali Haider Shanto

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RESEARCH INTEREST

I am deeply interested in using observations and simulations to study galaxy evolution. My most recent research experience involves the study of the density wave pattern speed of Galaxy M83 using simulation data.

EDUCATION - GPA 3.65

Stony Brook University	Stony Brook, NY
<i>Bachelor of Science in Physics</i>	<i>August 2018 - Present</i>
<i>Bachelor of Science in Astronomy and Planetary Sciences</i>	<i>August 2018 - Present</i>

RESEARCH EXPERIENCE

Undergraduate Research	Summer 2021
<i>Exploring The Tremaine Weinberg Method to Determine The Density Wave Pattern Speed of the M83</i>	
<i>Stony Brook University, Dr. Jin Koda</i>	
<ul style="list-style-type: none">Studied simulation data of Galaxy M83 and compared with CO emissions.Used python and DS9 to find the pattern speed of the galaxy.Plotted density and velocity graphs using stellar and gas simulation data.Determined pattern speed of the galaxy using Tremaine Weinberg method.	

PRESENTATIONS

'There Is Still Hope ?'- Presentation on Trappist-1 System	Fall 2021
Stony Brook University, NY	

RELEVANT COURSEWORK

COSMOLOGY	FALL 2021
GALAXIES	SPRING 2021
QUANTUM MECHANICS	SPRING 2021
THERMODYNAMICS	SPRING 2021
ELECTROMAGNETISM	FALL 2020
CLASSICAL MECHANICS	FALL 2020
STARS AND RADIATION	FALL 2020

TECHNICAL SKILLS

Languages: Python/Jupyter, Fortran, C/C++, Matlab, Mathematica, Html5, CSS, Javascript

Operating Systems: macOS, Windows, LINUX

Software: Latex, DS9/IRAF, Git

Observing: Performed Photometry and Spectroscopy using Mount Stony Brook Observatory's 14-inch telescope

PROFESSIONAL MEMBERSHIP

American Astronomical Society (AAS)

WORK EXPERIENCE

Physics Lab Assistant

August 2020-Present

Physics Department, Stony Brook University

- Manage upper-division physics labs especially during off-hours of supervisor
- Set up and dismantle lab equipment.
- Distribute extra equipment to graduate teaching assistants and help them with any extra information regarding the experiment or equipment.
- Sort lab equipment and report broken apparatus.
- Fix broken/faulty equipment.

Social Media Intern

August 2020-December 2020

Stony Brook University

- Make posters and illustrations for the official Stony Brook University Instagram account.
- Research on latest Social Media additions such as Twitter Fleets, Instagram Reels and Tiktok FYP, etc
- Attend events around campus and take photos to post on social media.

Business Intern

Summer 2019

Ultra Washing and Dyeing Ltd

- Co-managed around 200 employees in the washing and dyeing industry.
- Make a website for the industry
- Sort an algorithm to maximize profit from minimal resources.

OUTREACH

Photojournalism

March 2020- present

SBU STATESMEN

- Take photo pitches for Stony Brook University's Official Newspaper
- One of my most prestigious photographs can be found in this article:
<https://www.sbstatesman.com/2021/04/06/students-can-schedule-appointment-for-johnson-johnson-covid-19-vaccine/>

EXTRACURRICULAR ACTIVITIES

Hiking

SBU ENVIRONMENT CLUB

- Go on weekly hikes on local national parks and beaches.
- Participate in clean-ups.

OTHER INFORMATION

LinkedIn : <https://www.linkedin.com/in/shah-ali-haider-shanto-6892a6203/>