

# Mohammad Abu Taher Chowdhury

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Google Scholar Profile: <https://scholar.google.com/citations?hl=en&user=52g5ZvIAAAAJ>

Webpage: <https://matc-thaier.github.io/thaier.github.io/index.html>

## EDUCATION

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| 1. <b>Rensselaer Polytechnic Institute</b><br>Doctor of Philosophy in Physics<br>Expected Graduation date:<br>December, 2027 | 3. <b>Shahjalal University of Science and Technology</b><br>MS in Physics<br>Graduation Date - June, 2015        |
| 2. <b>University of Texas at Rio Grande Valley</b><br>MS in Physics<br>Graduation Date: December, 2022                       | 4. <b>Shahjalal University of Science and Technology</b><br>B.Sc. in Physics<br>Graduation Date - December, 2013 |

## RESEARCH INTEREST:

- |                       |                 |
|-----------------------|-----------------|
| 1. Galaxy Formation   | 3. Astrophysics |
| 2. General relativity | 4. Big Data     |

## TEACHING AND RESEARCH EXPERIENCE:

1. **Graduate Research Assistant** in the Rensselaer Polytechnic Institute from June, 2024 to present.
2. **Graduate Teaching Assistant** in the Rensselaer Polytechnic Institute from September, 2023 to May, 2024.
3. **Graduate Research Assistant** in the Rensselaer Polytechnic Institute from June, 2023 to August, 2023.
4. **Graduate Teaching Assistant** in the Rensselaer Polytechnic Institute from January, 2023 to May, 2023.
5. **Graduate Teaching Assistant (PGRA)** in the University of Texas at Rio Grande Valley from September, 2022 to December, 2022.
6. **Graduate Assistant** in the University of Texas at Rio Grande Valley in Micro-credentials project from June, 2022 to August, 2022.
7. **Graduate Teaching Assistant (PGRA)** in the University of Texas at Rio Grande Valley from January, 2022 to May, 2022.
8. **Presidential Graduate Research Assistant (PGRA)** in the University of Texas at Rio Grande Valley from January, 2021 to December, 2021.

9. **Lab Faculty** in the Department of Mathematics and Natural sciences in the BRAC University at Dhaka, Bangladesh from January, 2018 to December, 2020
10. **Lecturer** in the Department of Physics in the Universal College at Sylhet, Bangladesh from August, 2016 to December, 2017
11. **Graduate Research Assistant** in PP & PDC Research Laboratory in Bangladesh Council of Scientific and Industrial Research (BCSIR) at Dhaka, Bangladesh from July, 2015 to July 2016.
12. **Student Research Assistant** in the Department of Physics in the Shahjalal University of Science and Technology from June, 2014 to June, 2015.

#### MAJOR AWARDS AND HONORS:

1. Presidential Graduate Research Assistant, UTRGV, USA (2021-2022)
2. Ministry of education Fellowship, Bangladesh (2014)

#### MAJOR TECHNICAL EXPERIENCES:

- High Performance Computing (HPC)
- Latex
- Competent knowledge in programming: (MATLAB, Python)

#### CURRENT RESEARCH PROJECT:

1. Galaxy formation using scalar field dark matter/ fuzzy dark matter.

#### PEER REVIEWED JOURNAL/PAPER PUBLICATION:

[1] Soumya D. Mohanty, **Mohammad Abu Taher Chowdhury**, “Glitch subtraction from gravitational wave data using adaptive spline fitting”, 2023 *Class. Quantum Grav.* 40 125001 (<https://iopscience.iop.org/article/10.1088/1361-6382/acd0fe/meta> )

[2] **Mohammad Abu Taher Chowdhury**, “Advancements in Glitch Subtraction Systems for Enhancing Gravitational Wave Data Analysis: A Brief Review”, 2024 arxiv:preprint (<https://arxiv.org/abs/2406.01318>)

[3] **Mohammad Abu Taher Chowdhury**, Shumsun Naher Begum, “Influence of Yttrium(Y) on properties of Lanthanum Cobalt Oxides(LaCoO<sub>3</sub>)”, 2024 arxiv:preprint (<https://doi.org/10.48550/arXiv.2408.15798>)

### Conference Proceedings:

1. **Mohammad Abu Thaher Chowdhury**, Soumya D. Mohanty, "Application of adaptive spline fitting and wavelet based method on Glitches in gravitational wave data," American Physical Society (APS) meeting, Rice University, Houston, Texas, USA, Oct. 13-15, 2022.
2. Thomas Cruz, **Mohammad Abu Thaher Chowdhury**, Soumya D. Mohanty (presenter), "Data-driven data-fitting: Adaptive spline fitting and its applications," poster, Texas Advanced Computing Center (TACC) Symposium for Texas Researchers (TACCSTER 2021), Virtual, Sep. 23-24, 2021. URI: <https://hdl.handle.net/2152/89587>

### THESIS DETAILS:

1. **Mohammad A. T. Chowdhury**, " Glitch estimation and removal using adaptive spline fitting and wavelet shrinkage on the gravitational wave data" The University of Texas Rio Grande Valley ProQuest Dissertations Publishing, 2022. 29398022  
(<https://www.proquest.com/openview/7f68a2c9fc2972f4eb08e0d1a8fcbd2e/1?pq-origsite=gscholar&cbl=18750&diss=y> )

### LEADERSHIP EXPERIENCE:

1. Working as the **General Secretary** in **Astronomy Club** from January, 2022 to December, 2022.
2. Worked as the **Organizer and Trainer** in **SUST Career Club** from August, 2013 to June, 2015.