

Sabiruddin Molla, PhD [Applied Mathematics]

Assistant Professor [Mathematics Method]

Postgraduate Department of Education

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Research Interest: (i) Astrophysics & Cosmology;
(ii) Math Education

Teaching Experience: More than 6 years and 8 months.

Institute	Position held	Date of Joining	Date of Leaving
St. Xavier's College (Autonomous), Kolkata	Assistant Professor	03.01.2019	

Education:**I. Academic Details (Qualifications (Block-1)):**

Degree	College / University/ Institute	Subject	Year of Passing	Division
PhD	Jadavpur University	Astrophysics and Cosmology	2022	
M.Ed.	University of Calcutta [Alipore Campus]		2017	1 st
B.Ed.	University of Calcutta [Alipore Campus]	Mathematics method	2015	1 st
M.Sc.	University of Calcutta [Ballygunge Science College]	Pure Mathematics	2013	1 st
B.Sc.	University of Calcutta	Mathematics Honours	2011	1 st

II. Academic Details (Qualifications (Block-2)):

Sl. No.	Exam Passed	University/Institution	Year of passing	Subject
1	NET with JRF	CSIR	June 2016	Mathematical Science
3	JAM (AIR 186)	IIT	2010	Mathematics (MA)

Dissertation Details:

- (i) Visual Cryptography using Linear Algebra [M.Sc. dissertation]
- (ii) Exploring the college student's opinion to overcome Mathematics Anxiety at 10+2 level. [M.Ed. dissertation]

PhD Thesis: “*Study of some Cosmological and Astrophysical phenomena in general relativity and modified theories of gravity.*” submitted in January 2022 and defended in August 2022 under the guidance of Prof. Farook Rahaman.

Research Publications:

Sl. No.	Title of the Paper published in the Journal & DOI	Year of Publication	Name of the publisher in case of a Journal	Status of the Journal
1	Gravitational Lensing, precession of periapsis and time delay due to wormhole in quintessence polytropic spacetime DOI: 10.1142/S021773231950264X	2019	Modern Physics Letters A, 34 (2019), No. 32, 1950264	World Scientific Publishing (International)
2	Gravitational collapse of an interacting vacuum energy density with an anisotropic fluid DOI: 10.1016/j.dark.2019.100291	2019	Physics of the Dark Universe, 24 (2019), 100291	ScienceDirect (ELSEVIER)
3	Strong lensing of a regular black hole with an electrodynamics source DOI : 10.1007/s10714-018-2375-3	2018	General Relativity and Gravitation, 50 (2018), No.5, 1-18	Springer
4	Dilaton-Axion Black Hole under the Solar System Tests DOI: 10.1016/j.newast.2020.101494	2021	New Astronomy, 83 (2021), 101494	ScienceDirect (ELSEVIER)
5	Solar system tests in constraining parameters of dyon black holes DOI: 10.1140/epjc/s10052-018-6442-4	19 November 2018	Eur. Phys. J. C, 78 (2018), No. 11, 1-6	Springer
6	Evolution of axial perturbations in space-time of a non-rotating uncharged primordial black hole https://doi.org/10.1007/s10714-024-03309-6	22 October 2024	<i>Gen Relativ Gravit</i> 56 , 130 (2024)	Springer
7	Beyond Belief: A Scientific Inquiry into the Myths and Looms of Hindu Rituals. <i>Educational Administration: Theory and Practice</i> , 30(5), 5670–5681. https://doi.org/10.53555/kuvey.v30i5.3393	2024	<i>Educational Administration : Theory and Practice</i> , 30(5), 5670–5681.	Scopus

Conference Presentation:

[1] **Molla, S. (2022).** Solar system tests in constraining parameters of dyon black holes (Paper presentation). 1st International Conference on Recent Advances in Mathematical Sciences and Interdisciplinary Areas (RAMSIA-2022), GLA University, Mathura (U.P.), India, Department of Mathematics.

[2] **Molla, S. (2020).** Dilaton-axion Black Hole in the solar System. (Paper presentation). International Conference on Analysis, Algebra, combinatorics and their application (ICAACA 2020), Jadavpur University, Department of Mathematics.

[3] **Molla, S. (2018).** Strong lensing of a regular black hole with an electrodynamics source (Paper presentation). International Conference on Mathematical Analysis and Application in Modeling (ICMAAM 2018), Jadavpur University, Department of Mathematics.

[4] **Molla, S. (2024).** Grading System of Schools and Higher Education Institutions in India: A Comprehensive Overview (Paper presentation). International Conference on Multidisciplinary Research 3.0 (ICMR 3.0) organized by Tamilnadu Teacher Education University & Shree Ramakrishna B.T. College.

[5] **Molla, S. (2025, May 29).** *A study on the impact of cultural prejudice on social dynamism in a multicultural classroom* [Paper presentation]. International Conference, Aliah University, Kolkata, India.

[6] **Molla, S. (2025, March 29).** *A revisit of some popular conjectures in number theory through the lens of the Conjecture Quest Method (CQM): A pedagogical perspective* [Paper presentation]. International Conference (within country), Department of Mathematics, GLA University, Mathura, Uttar Pradesh, India.

Book Chapter:

[1] **Molla, S. (2023).** Mixed Methods Research: An Overview of Designs and Applications. In Thakur, N. and Saha, R. (Ed.). Iterative International Publishers, Michigan, USA, Volume 1, pp 8-25, ISBN 978-1-68576-441-8.

[2] **Molla, S. (2023).** Techno-Pedagogical Competencies: A Pre-requisite for 21st Century Teaching in Higher Education. In Swami Urjitananda, & R. Al Farabi (Eds.). ICT@teaching, (pp. 42-48). Ramakrishna Mission Sikshanamandira, ISBN: 978-93-95666-22-0.

[3] **Molla, S. (2024).** Grading system of schools and higher education institutions in India: A comprehensive overview. In P. C. Naga Subramani, V. Sharmila, A. Mondal, S. M. Ghosh, & S. R. Sarkar (Eds.), *Convergence of thought: An anthology of diverse research* (pp. 285–298). Red'Shine Publication Pvt. Ltd. <https://doi.org/10.25215/9358798203> (ISBN: 978-93-5879-820-3)

Resource Person:

- Delivered a lecture on “**Techno-Pedagogical Competencies: A Pre-requisite for 21st Century Teaching in Higher Education**” held on January 19, 2023, at Ramakrishna Mission Sikshanamandira, Belur Math, Howrah, India.

Chair Person:

- Participated and chaired a session in the “International Conference on Multidisciplinary Research 3.0 (ICMR 3.0)” organized by Tamilnadu Teacher Education University & Shree Ramakrishna B.T. College and Organization of Multidisciplinary Research on 29th & 30th May, 2024.

Workshop:

- Participated the Teachers' Enrichment Workshop on **Groups and Geometry** from June 5 to June 10, 2023 in the department of Mathematics, St. Xavier's College, Kolkata.
- Participated in the Workshop on **Digitalization for Archives, Digital Preservation, and Metadata Standards** organized by the Centre for Studies in Social Sciences Calcutta (CSSSC) at Kolkata, West Bengal, from April 16–17, 2024.
- Participated in the Workshop on NEP-2020 entitled “**Good Academic Research Practices / Academic Research Integrity**” conducted by UGC-HRDC, Jadavpur University on 25th June 2022.
- Participated in the Workshop on NEP-2020 entitled “**Educational Framework for Global Citizenship in HE**” conducted by UGC-HRDC, Jadavpur University on 23rd June 2022.
- Participated in the Workshop on NEP-2020 entitled “**Multidisciplinarity**” conducted by UGC-HRDC, Jadavpur University on 20th June 2022.

Dissertation Guide:

Course	No. of students guided and completed	Year
MA in Education	2	2025
MA in Education	3	2024
MA in Education	4	2023

