

Personal Profile

❖ **Name:** Dr. Sagarika Mandal

❖ **Contact:** Department of Physics,
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❖ Academic Position:

- **SACT-1**, Dept. of Physics, Bankura Zilla Saradamani Mahila Mahavidyapith, Bankura, West Bengal, India.

❖ Research Interests:

- **Nonlinear optics.**
- **Optical Computing.**
- **optical soliton.**

❖ Education:

- **M.Sc. (2015, Indian School of Mines, Dhanbad).**
- **B.Ed. (2017, Burdwan University).**
- **Ph. D. (2025, Bankura University).**

❖ Research Publications:

1. Mandal, S., & Sinha, A. (2022). An analytical approach of soliton-based binary code suppression and recovery by proper using of electro-optic modulator and Michelson interferometer. *Journal of Optics*, 51(2), 500-504.

2. Rajowar, C., Mandal, S., & Sinha, A. (2022). Some study on dark and bright optical solitons in a real system with periodically distributed dispersion and nonlinearity. *Optoelectronics Letters*, 18(10), 635-640.
3. Mandal, S., & Sinha, A. (2023). A novel security scheme for developing 6×6 switch in WDM network to reduce crosstalk. *Journal of Optics*, 52(4), 2248-2252.
4. Mandal, S., Rajowar, C., & Sinha, A. (2023). A study on dark bright soliton conversion and its application in periodically distributed optical fibre. *Pramana*, 97(4), 184.
5. Mukherjee, C., Mandal, S., & Sinha, A. (2024). An Analytical Approach to Realize Hypersecant Optical Soliton Pulse Based HALF-ADDER. *Proceedings of the National Academy of Sciences, India Section A: Physical Sciences*, 94(2), 269-278.
6. Mandal, S., & Sinha, A. (2024). A theoretical analysis of soliton pair conversion with variable coefficients in all optical communication. *Pramana*, 98(3), 99.
7. Mandal, S., Layek, M., & Sinha, A. (2025). Chirped solitary pulse for nonlinear Schrödinger equation with fifth order nonlinearity. *Journal of Optics*.
8. Sahoo, S., Roy, A. D., & Mandal, S. (2014). Photon: Mass less or Massive?. *ARPN Journal of Science and Technology*, 4(7), 413-417.

❖ Conferences/ Invited Presentations/Workshops/Others:

1. Poster Presentation on “A security scheme for developing WDM network to reduce crosstalk through optical fibre” in International Conference on “Sustainability: Integrated and Scientific Approach” organized by University of Mumbai, India during 4th August to 6th August 2022.
2. Presented a paper entitled “Binary conversion for all optical communication system” in Regional Conference on “5th Regional Science & Technology Congress 2022-2023” organized by Bankura University, Bankura, India during 9th January to 10th January 2023.
3. Presented a paper entitled “A study on conversion of soliton pulse and its application” in National Seminar on “Recent Advances in Theoretical and Applied Physics-2023” held at Department of Physics, Saldiha College, Saldiha, Bankura, W.B. on 10th October, 2023.
4. Presented a paper entitled “Chirped solitary pulse with higher order nonlinearity” in International Conference on “natural sciences and engineering for sustainable development -2024” held at Kazi Nazrul University, W.B. during 6th March to 7th March, 2024.

5. Participate in the one-day workshop on “CBCS and syllabi of Bengali, History, Music & Physics Departments” organized by the IQAC of BZSMM on 29th March, 2019.
6. Participate in Webinar on “Evolution of Quantum Theory” by Prof. Ajay Ghatak organized by the Department of Pure & Applied Physics, Guru Ghasidas Central University, Bilaspur, India on 11th September, 2020.
7. Participate in International Webinar on “Basic and Advanced Physics-2020” organized by Department of Physics, Bankura University, W.B. on 24th to 27th August, 2020.
8. Participate in one day International Webinar on “Nano Science and its applications” organized by the Dept. of Physics, Bankura Christian College, Bankura, W.B. on 19th October, 2020.
9. Participate in one day National Webinar on “A Pathway for quality assurance” organized by Bankura Zilla Saradamani Mahila Mahavidyapith, Nutanchati, Bankura on 12th July, 2020.
10. Participate in National Workshop on “NAAC Awareness Programme for Assessment and Accreditation” organized by Bankura University, Bankura, W.B. on 24th to 27th August, 2020.