Personal Profile

Name	Dr. Abhijit Sinha	
Designation	Assistant Professor	 Photo
Date of birth	18-12-1974	
Educational qualification	M.Sc. B.Ed. Ph.D..M.A.(Education).	
Permanent address	At- Hanspukur, P.O.- Midnapur, Dist.-PaschimMidnapur, Pin-721101	
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Date of joining this institution	02-12-2008	
Past services	H.S. School, From 02-01-2001 to 01-12-2008,	
Areas of teaching	Solid StatePhysics, Statistical Mechanics, Complex Number , Matrix, Sound,Quantum Physics,	
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FACULTY DEVELOPMENTPROGRAMME

a) 92th Orientation Programme, conducted by the Academic Staff College, The Calcutta University from 26th December 2011 to 21st January, 2012, Sponsored by UGC.

b)Refresher Course in "Analytical Instruments', Techniques and Applications", conducted by the Academic Staff College, The Jadavpur University , from 25thFebruary to 16th March, 2013.

c) Refresher Course in, "Environmental Studies", conducted by ASC , the SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI,FROM 06TH November to 25 th November , 2017.

d) Refresher Course in, "Recent Themes in Women's Studies: Relevance of a Multidisciplinary Approach". Conducted by Women's Studies Centre, Vidyasagar University, Midnapur, West Bengal, from 06th February to26th February, 2019.

RESEARCH JOURNALPUBLICATION (NATIONAL AND INTERNATIONAL)

International:

1. Mukherjee, Chinmoy; Sinha, Abhijit, "Design of a comparator by using soliton in all optical communication system", Optical and Quantum Electronics,55 (10), Article number: 906 , 2nd August,2023.http://dx.doi.org/10.1007/s11082-023-05079-y; Impact factor: 3.0 (2022). Publisher:Springer Science+Business Media. ISSN: 0306-8919 (print); 1572-817X (web).
2. Rajowar, Chakradhar; Sinha, Abhijit; "A new study on integrated chirped solitary waves in an asymmetrical optical fibre", Indian Journal of Physics, 97(9),pp.2765-2769, Published: August, 2023, http://dx.doi.org/10.1007/s12648-023-02643-w , Impact factor:2.0 (2022), Publisher:Springer IndiaCo-publication with theIndian Association for the Cultivation of Science, Jadavpur, Kolkata, India, Electronic ISSN 0974-9845,Print ISSN:0973-1458.
3. Rajowar, Chakradhar; Sinha, Abhijit; "Soliton in an Inhomogeneous Highly Dispersive Media with Cubic-Quintic-Septic-Nonical Nonlinearity Law", Journal of Applied Nonlinear Dynamics,*12(3) (2023) 571--578 | Published on : 1st July , 2023DOI:10.5890/JAND.2023.09.010* , Publisher L&H Scientific Publishing,ISSN:2164-6457 (print),ISSN:2164-6473 (online).
4. Sinha, Abhijit; Rajowar, Chakradhar ;"Study on chirped dark, bright solitons conversion and the effect of intermodal dispersion, self-frequency shift, and self-steepening effect on the chirping of bright, dark, and kink solitary waves", Journal of Nonlinear Optical Physics & Materials, Published:16th June 2023,http://dx.doi.org/10.1142/S021886352350073X ,Impact factor: 2.7(2022), Publisher: World Scientific Publishing Company,Online ISSN: 1793-6624,Print ISSN: 0218-8635
5. Mandal, Sagarika;Sinha, Abhijit; "A novel security scheme for developing 6 × 6 switch in WDM network to reduce crosstalk", Journal of Optics, Published : 08th April,2023,https://doi.org/10.1007/s12596-023-01163-4 , Impact factor: 1.8(2022), Publisher: Optical Society of India with Springer Nature, Electronic ISSN: 0974-6900, Print ISSN: 0972-8821.

6. Rajowar, C., Mandal, S. & Sinha, A. ; "Some study on dark and bright optical solitons in a real system with periodically distributed dispersion and nonlinearity". *Optoelectron. Lett.* 18, 635–640 (2022). Published 18th October, 2022. https://doi.org/10.1007/s11801-022-2075-9, Impact factor: 0.9(2022), Publisher: Springer with Tianjin University of Technology, Electronic ISSN: 1993-5013; Print ISSN: 1673-1905.
7. Mukherjee, Chinmoy; Sinha, Abhijit, "A new theoretical approach to design HOSP-based subtractor", Journal of Optics, Vol. 52(1),254–260 (2023),Published: 13th

May,2022,https://doi.org/10.1007/s12596-022-00871-7,Impact factor: 1.8(2022),Publisher: Optical Society of India with Springer Nature, Electronic ISSN: 0974-6900, Print ISSN: 0972-8821.

8. Mandal, Sagarika;Sinha, Abhijit; "An analytical approach of soliton-based binary code suppression and recovery by proper using of electro-optic modulator and Michelson interferometer",Journal of Optics, Vol. 51(2),500–504 (2022), Published :14th January, 2022, https://doi.org/10.1007/s12596-021-00797-6 ,Impact factor: 1.8(2022), Publisher: Optical Society of India with Springer Nature, Electronic ISSN: 0974-6900, Print ISSN: 0972-8821.
9. Kuladeep Roy Chowdhury, Abhijit Sinha, and Sourangshu Mukhopadhyay "An all-optical comparison scheme between two multi-bit data with optical nonlinear material",Chinese Optics Letters, 6(9), 2008,693-696, Impact factor: 3.5(2022), OPTICA Publishing Group, ISSN:1671-7694.
10. Kuila P.;SinhaA.;Mukhopadhyay S. "An all-optical remote controlled X-Nor logic using soliton pulse", Optoelectronics Letters, 4(5):365-368(2008), http://dx.doi.org/10.1007/s11801-008-8061-z ,Impact factor: 0.9(2022), Publisher: Springer with Tianjin University of Technology, Electronic ISSN: 1993-5013; Print ISSN: 1673-1905.
11. Kuila P.;SinhaA.;Mukhopadhyay S. "An all-optical method of conducting some logic operations by interaction of two modulated gaussion pulses", Journal of Optics,35(4):197-206,http://dx.doi.org/10.1007/BF03354810 , Impact factor: 1.8(2022), Publisher: Optical Society of India with Springer Nature, Electronic ISSN: 0974-6900, Print ISSN: 0972-8821.
12. Kuila P.;SinhaA.;BhowmikH.;MukhopadhyayS.,"Theoretical study of using an amplitude modulation scheme with an electro-optic modulator for generation of the proper power shape function of an optical soliton pulse in a nonlinear waveguide", Optical Engineering, 45(4), 2006, 045002-045005, http://dx.doi.org/10.1117/1.2190947 ,Impact factor: 1.352(2022),, Publisher: SPIE.
13. Sinha A.;Mukhopadhyay S ; "A study on the considering of the non-linear phenomenon of refractive index in material dispersion",Journal of Optics, 34(3),2005,140-144,Impact factor: 1.8(2022),Electronic ISSN: 0974-6900, Print ISSN: 0972-8821.Publisher: Optical Society of India with Springer Nature.https://doi.org/10.1007/BF03354784
14. Sinha A.;BhowmikH.;KuilaP.;Mukhopadhyay S. ;"New method of controlling the power of a Gaussian optical pulse through an electro-optic modulator and a nonlinear waveguide for generation of solitons", Optical Engineering,44(6),2005,065003-065003-6, Impact factor: 1.352(2022),, Publisher: SPIE.,https://doi.org/10.1117/1.1921207.
15. Sinha A.;Mukhopadhyay S ; "Effect of higher order non-linearity in frequency variation of self-phase modulation in optical fiber communication", Chinese Optics Letters, 2(9),2004, 500-502, Impact factor: 3.5(2022), OPTICA Publishing Group, ISSN:1671-7694.

16. Mukhopadhyay, Sourangshu and Sinha, Abhijit, et.all, “Optical soliton in the field of communication since inception”, Journal of Physical Science Vol. 9 [2003-2004],1-9,Vidyasagar University.
17. Mukhopadhyay, Sourangshu and Sinha, Abhijit, et.all, “SOLITON-SOLITON INTERACTION IN LONG DISTANCE REMOTE CABLE SWITCHING”, Journal of Physical Science Vol. 8, 2003, 5-13.,Vidyasagar University.

National:

1. Rajowar, Chakradhar; Sinha, Abhijit; “A Security Scheme by using dark-bright solition conversion for long distance communication”, The International journal of analytical and experimental modal analysis, Volume XI, Issue XII, December/2019, 2840-2844, ISSN NO: 0886-9367, https://app.box.com/s/cxjrl4usgrwuj07imi0sj2ljjfr99q4h .

2. Sinha,Abhijit; “A theoretical approach of an all- optical EX-OR logic for long distance communication using HOSP”, Journal of Applied Science and Computations,5(12),2768-2773,(2018),Publisher: Institute of Applied Science and Computations,UGC Approved:41238, ISSN Online Number: 1076-5131.https://app.box.com/s/36yuooforsbgcti9azdcdrugqg4uvcv6.

3. MoumitaDutta, Tultul Chowdhury, RajkumarMaiti, FatikBaran Mandal, Abhijit Sinha and Prithiraj Karak; “A preliminary report on "knowledge, attitude, and practice" on "human immunodeficiency virus" among the students of a college in Bankura”, International Journal of Green Pharmacy,July-Sept, 2018(Suppl), s665-s669, Publisher:BRNSS Publication Hub.
4. Sinha, Abhijit; “E-Waste: A Growing Challenge for Waste Management and Environmental Sustainability in India”,Journal of Advances and Scholarly Researches in Allied Education,15(11),721-724, 2018, http://ignited.in/I/a/232121 ,Publisher:Ignited Minds Journals.E-ISSN: 2230-7540.

5. Sinha, Abhijit;“A theoretical investigation of the change of the width of Gaussian pulse after propagating a long distance through an optical fiber due to its inherent character”, Wesleyan Journal of Research, Vol. 10,(2017),

6. Mukherjee, Chinmoy; Sinha, Abhijit,“A Theoritical Study of an All Optical Digital Comparator by using Hyper Secant Soliton Pulse”, Conference Proceedings, Revisiting Strategies For Sustainable Development, 13-14thJune, 2020, Pages 289-296.BanwarilalBhalotia College, Asansol, W.B.

BOOKS / BOOK CHAPTERS / MONOGRAPHS

1. Book:'A Studies on Optical Soliton', written by **Dr. Abhijit Sinha**, Published on ;January, 2020, Published with InSc Publication House(IPH), Selfypage Developers Pvt. Ltd., Chikkamagaluru, Karnataka, with ISBN: 978-1-954461-58-1.

2. **Book Chapter: '**Effect of higher order non-linearity in optical soliton based communication system', written by Dr. Abhijit Sinha, published on the book, "Physical, Chemical and Biological sciences: Emerging trends and milestones in 2020", **Published on 2020**,Published by Virudhunagar Hindu Nadars' SenthikumaraNadar College, Virudhunagar-626001, Tamilnadu with page no. 193-203, with ISBN: 978-81-942052-9-6.

3. **Book Chapter: "Optical Soliton in Ultra-high Speed Communication",** written by Dr. Abhijit Sinha and Chakradhar Rajowar, published on the book, "Recent Advances in Arts,Science and Social Sciences", **Published on JULY 2021**,Published by Virudhunagar Hindu Nadars' SenthikumaraNadar College, Virudhunagar-626001, Tamilnadu with page no. 87-97, with ISBN: 978-81-951746-3-8.

POPULAR ARTICLES

PAPER PRESENTATION/ PARTICIPATION: CONFERENCES/SEMINARS /SYMPOSIA /WORKSHOPS

Title of the Seminar/Conference/Workshop	**Title of the Paper**	**Sponsoring Agency**	**Name of the Host Institution**	**Date(s)**
1. Recent Trends In Advanced Functional Materials	An analytic approach to realize all-optical HOSP based Comparator	RUSA 2.0 Component 8	Midnapore College (Autonomous)	13-14th January, 2020.
2. EnvironmentalEducation-A need of the day	E-waste and its impact on environment	UGC	Bankura Zila Saradamani Mahila Mahavidyalaya and Bankura Christian College	23-24th September, 2016
3. Role of basic sciences in translational research applied on biological	Some studies of security scheme in long	Science and Engineering Research	Midnapore City College	5-6th February, 2018

sciences and human health	distance optical communication by using Soliton and its impact on environment.	Board(SERB), DST, Govt. of India.		
4. Enviromentchange:Adaptation challenges by sustainable development	Wastewater- A threat on environment and its Treatment	Department of Biotechnology, Govt. of India and Indian Council of Medical Research, Govt. of India.	Midnapore City College	13-14th July, 2018
5. Future India: Science &TEchnology	Renewable Sources of Energy: Developments and Perspectives in India	Indian Science Congress Association, Kolkata Chapter and Department of medical laboratory technology, Paramedical college, Durgapur.	Paramedical college, Durgapur	26th September,2018
6. TraditionalKnowledge and Practice in Eastern India.	Practice of Traditional knowledgetowards energy resource	Dept. of Higher Education, Science and Technology and Biotechnology, Govt. of West Bengal	Bankura Christian College	15th March, 2018

RESEARCH PROJECTS

- Name of the Research Project: "Some studies of security scheme in long distance optical communication by using Soliton pair".
- Funded by: UGC
- Amount sanctioned: INR 2,20,000/-
- Memo No. and Date: Ref: Vide the Project No. PSW-005/14-15 (ERO), ID No. WB1-007, Dt.02/02/2015
- Date of Completion: March, 2017

RESEARCH GUIDANCE

1. Name of the candidate: **Chakradhar Rajowar**

- Registration No: BKU/Ph.D./PHYS-03/2018-19/7-20
- Date of Registration: 19/03/2019
- Area of Research: "Security Analysis by using Dark and Bright Soliton-pair-Conversion and their Applications in Optical Communications".
- Ongoing.

2. Name of the Candidate: **Chinmoy Mukherjee**

- **Registration** no. : BKU/Ph.D./PHYS-01/2018-19/7-20
- Date of Registration: 19/03/2019
- Area of Research: " Some alternative studies on Soliton based all-optical logical operations and their applications in communication".
- Ongoing

3. Name of the Candidate: **Sagarika Mandal**

- Registration no.:: BKU/Ph.D./PHYS-05/2019-20/7-20
- Date of Registration: 20/02/2020
- Area of Research: " Enhancement of Security Scheme in All Optical Long Distance Communication by Proper Soliton Generation".
- Ongoing

AWARD/RECOGNITION/MEMBER OF BOARD OF STUDIES/ACADEMIC ACTIVITIES

1. UGBS member of Bankura University since 2020.
2. UGBS member of Raja NarendraLal Khan Women's College(Autonomous)since 2022.
3. Life Member of Journal, Wesleyan Journal of Research.

COMMUNITY WORK/SOCIAL ACTIVITY

ANY OTHER