

CURRICULUM – VITAE

Name: Dr. PRAKASH MUKHERJEE

Designation: State Aided College Teacher

Department Name: Department of Mathematics

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Address: Hijli College, Department of Mathematics, Hijli Co-Operative Society, Kharagpur-721306.

Exam qualified: GATE(2009) (All India Rank: 272)



RESEARCH AREA/AREAS OF INTEREST:

General Topology, Fuzzy Topology, Special functions, Medical Image Processing.

TEACHING INTEREST:

Real Analysis, Differential Equation, Abstract Algebra, Linear Algebra, General Topology.

PUBLISHED PAPERS

1. A Note on Fuzzy Soft Semi Open Sets and Fuzzy Soft Semi Continuous Functions (with R.P. Chakraborty and P.K. Gain), *The Journal of Fuzzy Mathematics*, **22(4) (2014), 973-989 (ISSN: 1066-8950)**
http://maths.swjtu.edu.cn/xsky/Fuzzy_Mathematics/Instructions.htm
2. On generalised fuzzy soft topological spaces (with R.P. Chakraborty), *African Journal of Mathematics and Computer Science Research*, **8(1) (2015), 1-11 (ISSN: 2006-9731)**
<http://www.academicjournals.org/AJMCSR>

3. On some decompositions of fuzzy soft continuity (with R.P. Chakraborty and P.K. Gain), *Journal of New Theory*, **4(2015)**, 39-52 (ISSN: 2149-1402) <http://www.Newtheory.org>
4. Fuzzy soft θ –closure operator in fuzzy soft topological spaces (with R.P. Chakraborty and C. Park), *Electronic Journal of Mathematical Analysis and Applications*, **3(2) (2015)**, 227-236 (ISSN: 2090-729) <http://fcag-egypt.com/Journals/EJMAA/>
5. On fuzzy soft Bitopological spaces (with C. Park), *Mathematics and Computer Sciences Journal*, **10(7) (2015)**, 2-9. (ISSN: 2515-5512) <http://www.oaspjournal.org/ai7/index.html>
6. On fuzzy soft δ – open sets and fuzzy soft δ – continuity (with R.P. Chakraborty and C. Park), *Annals of Fuzzy Mathematics and Informatics* **11(2)(2016)**, 327-340 (ISSN: 2093-9310) <http://www.afmi.or.kr>
7. Some operators on generalised fuzzy soft topological spaces, *Journal of New Results in Science* **9(2015)**, 57-65 (ISSN: 1304-7981) <http://dergipark.gov.tr/jnrs>
8. Intuitionistic Fuzzy Almost Compact Sets In Intuitionistic Fuzzy Topological Spaces (M.N.Mukherjee and Sumita Das(Basu)), *An. Univ. Oradea fasc. Math.* 26(2019) (ISSN: 1221-1265) http://arhiva-stiinte.uoradea.ro/en/auofm/auofm_contents.htm
9. On Some Structural Properties of Fuzzy Soft Topological Spaces (with P.K. Gain, R.P. Chakraborty and M. Pal), *Intern. J. Fuzzy Mathematical Archive*, **1(2013)**, 1-15 (ISSN: 2320 –3242), www.researchmathsci.org
10. Sgf-closed sets in a fuzzy topological space endowed with a fuzzy stack, *Scientific Studies and Research. Series Mathematics and Informatics (SSRSMI)*, **30 (1) (2020)**, 119 – 134 (ISSN: 2457-497X), <http://pubs.ub.ro/scssm/>
11. A brief study on barriers towards Inclusive Education in India: For the visually challenged students (with Mafuza Yasmin and Azra Abidi), *Journal of Studies in Social Sciences and Humanities*, **6(2020)**, 210-221(ISSN: 2413-9270) <http://www.jssshonline.com/>
12. A new type of fuzzy covering property for fuzzy topological spaces (with M. N. Mukherjee and Sumita Das(Basu)), *Jordan Journal of Mathematics and Statistics (JJMS)* **14(2), (2021)**, 197 - 220 (ISSN: 2075 -7905) <http://journals.yu.edu.jo/jjms/> (I.F: 0.3, ESCI, Scopus.)
13. Fuzzy stack and its application, *Advances and Applications in Mathematical Sciences* **20 (9), (2021)**, 2015-2030 (ISSN: 0974-6803) <http://www.mililink.com/> (I.F:0.2, ESCI.)
14. Grammatical Fireworks Algorithm Method for Breast Lesion Segmentation in DCE-MR Images (With Dipak Kr. Patra, and Sukumar Mondal), *International Journal of Innovative Technology and Exploring Engineering (IJITEE)* **10(7), (2021)** (ISSN: 2278-3075) <https://www.ijitee.org/> (Scopus.)

15. Breast DCE-MRI segmentation for lesion detection by multi-level thresholding using student psychological based optimization (With Dipak Kr. Patra, Tapas Si and Sukumar Mondal), **Biomedical Signal Processing and Control** **69** (2021) 102925, (ISSN: 1746-8094) <https://doi.org/10.1016/j.bspc.2021.102925> (I.F: 5.076, SCIE, Scopus.)
16. Magnetic Resonance Image of Breast Segmentation by Multi-Level Thresholding Using Moth-Flame Optimization and Whale Optimization Algorithms (With Dipak Kr. Patra, Tapas Si and Sukumar Mondal), **Pattern Recognition and Image Analysis** **32**(1) (2022), (ISSN: 1054-6618) <https://link.springer.com/article/10.1134/S1054661822010060> (I.F: 1.2, ESCI, Scopus.)
17. Breast DCE-MRI segmentation for lesion detection using Chimp Optimization Algorithm (With Tapas Si, Dipak Kr. Patra and Sukumar Mondal), **Expert Systems With Applications** **204** (2022), (ISSN: 0957-4174) <https://doi.org/10.1016/j.eswa.2022.117481> (I.F: 8.66, SCIE, Scopus.)
18. Segmentation of breast lesion in DCE-MRI by multi-level thresholding using sine cosine algorithm with quasi opposition-based learning (With Tapas Si, Dipak Kr. Patra and Sukumar Mondal), **Pattern Analysis and Applications** **26** (2023), (ISSN: 1433-7541), <https://doi.org/10.1007/s10044-022-01099-8> (I.F: 2.3, SCIE, Scopus.)
19. Breast lesion detection from MRI images using quasi-oppositional slime mould algorithm (With Dipak Kr. Patra, Tapas Si and Sukumar Mondal), **Multimedia Tools and Applications** **82** (2023), (ISSN: 1380-7501), <https://doi.org/10.1007/s11042-023-14329-w> (I.F: 2.5, SCIE, Scopus.)
20. A Generalization of a Result on Generating Functions of Modified Laguerre Polynomial by Using the Notion of Partial Quasilinear Generating Function (With Amartya Chongdar), **Bol. Soc. Paran. Mat.** (ISSN-0037-8712), [doi:10.5269/bspm.63347](https://doi.org/10.5269/bspm.63347) (I.F: 0.6, Scopus.)

CONFERENCE PAPERS

1. Tapas Si, Dipak Kumar Patra, Sukumar Mondal and Prakash Mukherjee, Breast Lesion Segmentation in DCE-MRI using Multi-Objective Clustering with NSGA-II, **2022 International Conference on Innovative Trends in Information Technology (ICITIIT)**, IEEE, <https://ieeexplore.ieee.org/document/9744148>
2. Dipak Kumar Patra, Tapas Si, Sukumar Mondal and Prakash Mukherjee, Breast DCE-MRI segmentation for lesion detection by multilevel thresholding using Arithmetic Optimization Algorithm, **Evolution in Computational Intelligence**, Springer -Smart

Innovation, Systems and Technologies Series, 2022.

https://link.springer.com/chapter/10.1007/978-981-16-6616-2_31

COMMUNICATED PAPERS

1. On generating functions of modified Gegenbauer polynomials (With Amartya Chongdar).
2. On the unification of a class of trilateral generating relations with Tchebycheff polynomials by group-theoretic method (With Amartya Chongdar and Kalipada Samanta).

CONFERENCE/ SEMINAR/WORKSHOP

Title of the Seminar/Conference/Workshop	Year	Role	Held at and organizer
Safe and Environment Friendly Food Additives & Dyes	2012	Acted	Hijli College, Kharagpur Paschim Medinipur-721306
Recent Trends in Information Technology	2015	Acted	Hijli College, Kharagpur, Paschim Medinipur-721306
School on Analysis and Topology	2016	Participated	Indian Statistical Institute, North- East Centre, Tezpur, Assam.
Publishing Connect Workshop	2016	Participated	Gauhati University, Guwahati, Assam.
Advances and Applications of Contemporary Mathematics	2017	Paper presenter	Department of Mathematics K. K. Das College, Kolkata in collaboration with Dinabandhu Andrews College, Kolkata.
Advances Level of Mathematical Science	2017	Paper presenter	Department of Mathematics, Raja N. L. Khan Womens college and Chandrakona Vidyasagar Mahavidyalaya
Recent Advances in Mathematics and its Applications (RAMA-2017)	2017	Participated	Department of Pure Mathematics, University of Calcutta, Kolkata.
One-day Symposium on CBCS UG Syllabus of Mathematics	2018	Participated	Department of Applied Mathematics with Oceanology and Computer Programming,

			Vidyasagar University, Midnapore.
Recent Advances in Mathematics and its Applications (RAMA-2019)	2019	Participated	Department of Pure Mathematics, University of Calcutta, Kolkata.
1 st Research Scholar Day	2019	Attend	Department of Applied Mathematics with Oceanology and Computer Programming, Vidyasagar University, Midnapore.
One Day International Seminar on “Higher Education in 21 st Century: Issues and Challenges”	2019	Participated	Dept. of Education in collaboration With NSS Unit-I, Hijli College Paschim Medinipur-721306.
Recent Advances in Mathematics and its Applications (RAMA-2020)	2020	Participated	Department of Pure Mathematics, University of Calcutta, Kolkata.

ATTEND WEBINAR

1. Two days’ international symposium on “Topology and Its Interaction with Other Fields of Mathematics” jointly organized by the Department of Mathematics, Bangabasi Evening College and the Department of Mathematics, Gurudas College, **dated 22-23 June, 2020.**
2. National Webinar on “The Role of Mathematical Modeling in COVID 19 Pandemic Response: Main Challenges”, organized by Department of Mathematics in collaboration with IQAC, Vijaygarh Jyotish Ray College, Kolkata on **22nd June, 2020.**
3. International Webinar on ‘Ramification of some precautions for controlling disease under the global sustainable supply chain management’ jointly organized by the Department of Mathematics and the IQAC, Narasinha Dutt College, dated **3rd July, 2020.**
4. “Virtual workshop on pure mathematics” organized by the Department of Pure Mathematics, University of Calcutta, dated **September 21-25, 2020.**
5. “Ergodic correspondence and combinatorics” by the Abel Prize Laureate-2020, Prof. Hillel Furstenberg, organized by the Department of Mathematics, Gujarat University, dated **November 5, 2020.**
6. 26TH INTERNATIONAL CONFERENCE OF INTERNATIONAL ACADEMY OF PHYSICAL SCIENCES on ADVANCES IN ALGEBRA AND ANALYSIS held at

MARWADI UNIVERSITY, RAJKOT, GUJARAT, INDIA during **December 18-20, 2020.**

EDUCATIONAL QUALIFICATION:

<u>Degree Name</u>	<u>Institute</u>	<u>year of passing/awarded</u>
Ph.D.	University of Calcutta, Kolkata, India	2021
Title of the Ph.D. Thesis: On Some Emblematic Aspects Of Topology In Fuzzy Perspective		

REFERENCES

Prof. (Dr.) M. N. Mukherjee

Professor(Retd.)

Department of Pure Mathematics

University of Calcutta

Dr. Dhananjoy Mandal,

Associate Professor

Department of Pure Mathematics

University of Calcutta

DECLARATION: -

I do hereby declare that the details furnished by me are true to the best of my knowledge and belief.

PLACE: Kharagpur

DATE: 15/03/2023

Prakash Mukherjee

SIGNATURE