DR. USHNISH SARKAR

Assistant Professor of Mathematics

BRIEF

I am an Assistant Professor in the Department of Mathematics under School of Sciences in Netaji Subhas Open University. My research area is Graph theory and Combinatorics.

CONTACT

DEPARTMENT: Mathematics

SCHOOL OF STUDIES: School of Sciences

DATE OF JOINING: 13th February, 2020

ADDRESS: School of Sciences, Netaji Subhas Open University, Jalpaiguri Regional Centre, Jalpaiguri- 735102, India

EMAIL: usarkar.sosci@wbnsou.ac.in

ACADEMIC QUALIFICATION

M. Sc., Ph.D.

TEACHING EXPERIENCE

Netaji Subhas Open University, Assistant Professor of Mathematics
13/02/2020–Till date

S. K. B. Polytechnic, Keshiary, Paschim Medinipur, Lecturer in Mathematics
02/04/2012–12/02/2020

AWARD AND FELLOWSHIP

Joint CSIR- UGC NET, December 2008
UGC Junior Research Fellowship

RESEARCH INTERESTS & EXPERIENCE

My research interest mainly lies in Graph theory and Combinatorics. I have published works on radio k- coloring problems and extremal problems on graphs. I also enjoy problems related to hypergraph theory and take great interest in combinatorial games.

ADMINISTRATIVE EXPERIENCE

1. Academic in Charge of the Personal Contact Programme (PCP) in Post-Graduate Mathematics Part-I & II held at Women's Christian College Study Centre (J-05) for January 2022 & 2021 batches of NSOU.
2. Member of the team for inspection of feasibility of running undergraduate programmes in Mathematics and Physics in Nabagram Hiralal Paul College Study Centre (C-04) of NSOU.
3. Organizing secretary of the NSOU Online Special Lecture Series in Mathematics, 2020-21.
4. External subject expert in Research Advisory Committee in the Department of Mathematics of Presidency University.
5. Reviewer of Palestine Journal of Mathematics (SCOPUS indexed), International Conference in Algebraic Graph Theory and Applications, (ICAGTA) 2020 organized by Presidency University, Kolkata and International Conference on

Mathematics and Computing (ICMC) 2023 organized by BITS Pilani K. K. Birla Goa Campus.

UG & PG TEACHING ASSIGNMENTS

1. Delivered courses on Abstract Algebra, Linear Algebra, Real Analysis in UG level.
2. Delivered courses on Graph Theory, Abstract Algebra, Linear Algebra, Real Analysis, Functional Analysis and Advanced Functional Analysis in PG level.
3. Taught courses on Graph Theory and Theory of Computation for Ph. D. course work.
4. Participated in examination related assignments.
5. Prepared class routines for UG, PG and Ph. D. course work.
6. Co- author of Self Learning Material for Modeling and Simulation (GE- MT- 41) [Unit 1-4]

NO. OF CANDIDATE AWARDED/ REGISTERED FOR PH.D.:

1 enrolled

MEMBERSHIP OF DIFFERENT COMMITTEES

1. Board of Studies of Department of Mathematics (Undergraduate), NSOU
2. Board of Studies of Department of Mathematics (Postgraduate), NSOU
3. Departmental Research Committee, NSOU
4. Students Grievance Redressal Committee, NSOU
5. Committee of E-office System, NSOU
6. External subject expert in Research Advisory Committee in the Department of Mathematics of Presidency University
7. Programme committee of International Conference in Algebraic Graph Theory and Applications, ICAGTA 2020 organized by Presidency University, Kolkata.

MEMBERSHIP OF PROFESSIONAL BODIES

Calcutta Mathematical Society

ELIGIBILITY TEST CLEARED (NET/SET/GATE etc.):

Sl. No.	Details
1.	Joint CSIR- UGC NET, December 2008

CO-CURRICULAR ACTIVITIES / EXPERIENCE

Sl. No.	Details
1.	Fond of playing chess

RESEARCH PROJECTS:

Sl. No.	Name of the Project	Funding Agency	Period	Grant Mobilized	Outcome
1	An investigation of some combinatorial and extremal properties of radio k- coloring problem of graphs	NSOU	One year	Rs 1,10000/-	2022-Ongoing

DETAILS OF PUBLICATIONS (BOOKS/ EDITED VOLUME / RESEARCH PAPERS/REVIEW): [Last 10 Year]

Sl. No.	Title of the paper vol. No., Issue No., Page No, Year	Publisher	Year of publication	ISSN/ ISBN
1	On characterizing radio k-coloring problem by path covering problem; Discrete Mathematics; 338, 615-620 (with Avishek Adhikari)	Elsevier	2015	0012-365X
2	On relationship between Hamiltonian path and holes in L(3,2,1)-coloring of minimum span; Discrete Applied Mathematics; 222, 227-234 (with Avishek Adhikari)	Elsevier	2017	0166-218X
3	A new graph parameter and a construction of larger graph without increasing radio k-chromatic number; Journal of Combinatorial Optimization; 33,1365-1377 (with Avishek Adhikari)	Springer	2017	1382-6905
4.	On the Universality and Extremality of Graphs with a Distance Constrained Colouring; Annals of Combinatorics; 26, 643–671 (with Kaushik Majumder)	Springer	2022	0218-0006
5.	The chapter "Hole: an emerging character in the story of radio k-coloring problem" in book "Mathematical and Statistical Applications in Life Sciences and Engineering"; pp 3- 41 (with Avishek Adhikari)	Springer	2017	978-981-10- 5369-6

PAPERS PRESENTED AT SEMINARS, CONFERENCES, WORKSHOPS, ETC.: [Last 10 Year]

Sl. No.	Title of Paper/ Lecture	Organizing Institute	Conference, Seminar, workshop etc	Role (Paper presenter/ invited talk/ chairperson)	International (Within Country)/ International (Abroad)/National
1	L(3,2,1) Labelling and Hamiltonian Path	Institute for Mathematics, Bioinformatics, Information Technology and Computer Science (IMBIC)	International Conference on Mathematical Sciences for Advancement of science and Technology (MSAST) 2013	Paper presenter	International (within country)
2	On Characterization of L(3,2,1)- coloring Problem in terms of holes	Institute for Mathematics, Bioinformatics, Information Technology and Computer Science (IMBIC)	International Conference on Mathematical Sciences for Advancement of science and Technology (MSAST) 2015	Paper presenter	International (within country)
3	Hole: An Emerging Character in the Story of Radio k- Coloring Problem	Institute for Mathematics, Bioinformatics, Information Technology and Computer Science (IMBIC)	International Conference on Mathematical Sciences for Advancement of science and	Paper presenter	International (within country)

			Technology (MSAST) 2016		

PROGRAMMES COORDINATED/ ORGANISED AS CONVENER / ORGANISING SECRETARY AT NETAJI SUBHAS OPEN UNIVERSITY: [Last 5 Year]

Sl. No.	Progamme Name	Sponsored by	Period
1	NSOU Online Special Lecture Series in Mathematics, 2020-21	School of Sciences, NSOU	2020-21

RESEARCH GUIDANCE:

Sl. No.	Year	University	Name of Student	Year of Award	Topic
1	2022	Netaji Subhas Open University	Rahul Das	Ongoing	Graph theory and combinatorics

INVITED LECTURE: [Last 5 Year]

Sl. No.	Topic	Date	Venue	National/International
1	Extremalities in coloring and distance constrained coloring of graphs	27/06/2022	Acharya B. N. Seal College, Coochbehar, WB (Delivered online)	Departmental webinar

TUTORIALS / PRACTICAL / PROJECT SUPERVISION & FIELD WORK: [Last 5 Year]

Sl. No.	Type of Work	Related Programme	Year
1	Online e- Tutorial classes (on Functional Analysis)	PGMT (Post Graduate Mathematics, NSOU)	2022

Declaration: *I hereby declare that the details furnished above are all true to the best of my knowledge.*

Urmish Sarkar
25/11/2022

Signature
Date