DR. SOUMEN NANDI

Designation: Associate Professor of Computer Science

BRIEF

CONTACT

DEPARTMENT:
Computer Science

SCHOOL OF STUDIES:
School of Sciences

DATE OF JOINING:
11th October, 2022

ADDRESS:
School of Sciences, Durgapur
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Burdwan-713214

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ACADEMIC QUALIFICATION

Ph.D.

TEACHING EXPERIENCE

Netaji Subhas Open University, Associate Professor of Computer Science
11.10.2022 – till date

Institute of Engineering & Management Kolkata, Professor in the Department of Basic Science & Humanities
01.02.2019 – 30.09.2022

BITS-Pilani, Hyderabad Campus, Visiting Faculty in the Department of Computer Science, and Information systems
05.01.2018 – 31.12.2018

Bengal Institute of Technology (Techno India), Assistant Professor in the Department of MCA
01.11.2006 – 31.07.2012

Malda College, Malda, Lecturer in the Department of Computer Science & Application
01.07.2002 – 31.08.2006

AWARD & FELLOWSHIP

Best presentation award, DST-JSPS workshop on Discrete Mathematics & Its Applications, University of Tokyo, Japan, 2013.

Best problem-solving award, Summer School in Geometry and Data Structures, University of Waterloo, Ontario, Canada, 2013.

Junior Research Fellow, Indian Statistical Institute, Kolkata, 2012 – 2014

Senior Research Fellow, Indian Statistical Institute, Kolkata, 2014 - 2017

RESEARCH INTERESTS & EXPERIENCE

Graph Homomorphism, **Graph Coloring**, **Graph Labeling**, and **Computational Geometry** (10 years research experience, 2012 – till date)

UG & PG TEACHING ASSIGNMENTS

"Programming for problem solving" (B.Tech.), "Design and Analysis of Algorithms" (B.Tech. CSE (AIML)), "Data Structures & Algorithms" (B.Tech. CSE (AIML)), "Formal Languages & Automata Theory" (B.Tech. CSE (AIML)), "Design Thinking & Innovations" (B.Tech.), *Institute of Engineering & Management*, Kolkata (India), 2019 – 2022.

"Theory of Computations" (B.Tech.), "Advanced Algorithm and Complexity" (MTech.), *Computer Science*, BITS Pilani, Hyderabad Campus (India), 2018 – 2019.

"Design and Analysis of Algorithms", "Data Structures and Algorithms", "C Programming Lab", *B.Tech. (computer science)*, BITS Pilani, Hyderabad Campus (India) 2018 – 2019.

"Discrete Mathematics", *B.Stat.*, with Prof. Sandip Das, Indian statistical Institute, Kolkata (India) **"Discrete Mathematics"**, *B.Stat.*, with Prof. Sandip Das, Indian Statistical Institute, Kolkata (India) 2016 - 2017.

"Data & File Structures", *MTech. (computer science) and PhD students*, with Prof. Sandip Das, Indian Statistical Institute, Kolkata (India) 2014 - 2016.

"Computational Geometry", *MTech. (computer science) and PhD students*, with Prof. S. C. Nandy, Indian Statistical Institute, Kolkata (India) 2013 - 2014.

"Data & File Structures", "Design and Analysis of Algorithm", "Engineering Mathematics", "Discrete Mathematics", "Computer Graphics", Programming in C", *M.C.A. (computer Application) and B. Tech. students*, Bengal Institute of Technology, Techno India Group, Kolkata (India) 2006 – 2012.

"Data & File Structures", "Design and Analysis of Algorithm", "Engineering Mathematics", "Discrete Mathematics", "Computer Graphics", "Assembly Language Programming (8085)" "Programming in C", *B.Sc. and B.C.A. students*, Department of Computer Sc. & Application, Malda College, Malda (India) 2002 - 2006.

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

2 students registered with Co-supervisor Prof. Sagnik Sen, IIT Dharwad, Karnataka.

CO-CURRICULAR ACTIVITIES / EXPERIENCE

Sl. No.	Details
1.	**Research meet, Prof. Florent Foucaud**, *University of Clermont Auvergne, France*, July - August, 2022, Funded by IFCAM Project.

2.	**Research meet**, *Bordeaux University, University of Paris, University of Clermont Auvergne, & University of Claude Bernard Lyon 1, France*, October - December, 2021, Funded by IFCAM Project.
3.	**HOSIGRA–AGRAHO research meet (online)**, *Séte, France*, May, 2020.
4.	**AGRAHO–HOSIGRA research meet**, *Indian Statistical Institute Kolkata & Ramakrishna Mission Vivekananda Educational and Research Institute Belur & Institute of Engineering & Management Kolkata*, February, 2020.
5.	**HOSIGRA–AGRAHO research meet**, *Séte, France*, April, 2019, Funded by HOSIGRA.
6.	**AGRAHO–HOSIGRA research meet**, *Indian Statistical Institute Kolkata & Ramakrishna Mission Vivekananda Educational and Research Institute Belur & Institute of Engineering & Management Kolkata*, January, 2019.
7.	Research visit, **IIT Dharwad, Karnataka (India)**, *April 2019*, funded by SGNF project (PI: Sagnik Sen).
8.	Research visit, **Indian Institute of Science, Bangalore (India)**, *Feb. 2017.*
9.	Research visit, **Indian Statistical Institute, Bangalore (India)**, *Jul. 2016*.
10.	Research visit, **Chennai Mathematical Institute, Chennai (India)**, *Apr. 2015*, Funded by **CMI**.
11.	External Examiner, **MSc Computer Science thesis presentation**, *Held on 8th June, 2018 at Ramakrishna Mission Vivekananda Educational and Research Institute*, Howrah, West Bengal (India).
12.	External Examiner, **M Tech Computer Science thesis presentation**, *Held on 2022 at IIT Dharwad*, Karnataka (India).
13.	Reviewed/reviewing articles, ***DM** (Discrete Mathematics), **DAM** (Discrete Applied Mathematics), **CALDAM** (Conference on Algorithms and Discrete Applied Mathematics)*.
14.	Convenor (Steering Committee) & PC member, **International Conference on Emerging Trends in Mathematical Sciences & Computing (IEMSC–20, IEMSC-21)**.

RESEARCH PROJECTS:

Sl. No.	Name of the Project	Funding Agency	Period	Grant Mobilized	Outcome
1.	"Graph theoretic model of Channel Assignment Problem (CAP) in wireless network" (NBHM/RP-8 (2020)/Fresh)	NBHM, Department of Atomic Energy, Govt. of India	2022 – 2025	18 Lakhs (Approx.)	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 clique numbers of colored mixed graphs**, *D. Chakraborty, S. Das, S. Nandi, D. Roy and S. Sen*, Discrete Applied Mathematics, 324: 29 – 40.	Elsevier	2023	0166-218X ISSN
2.	**On the signed chromatic number of some classes of graphs**, *J. Bensmail, S. Das, S. Nandi, T. Pierron, S. Sen, É. Sopena*, Discrete Mathematics, 345(2): 112664.	Elsevier	2022	0012-365X ISSN
3.	**Pushable chromatic number of graphs with degree constraints**, *J. Bensmail, S. Das, S. Nandi, S. Paul, T. Pierron, S. Sen, É. Sopena*, Discrete Mathematics, 344(1): 112151.	Elsevier	2021	0012-365X ISSN
4.	**Enumeration of edge-critical underlying absolute planar cliques for signed graphs**, *J. Bensmail, S. Nandi, M. Roy, S. Sen*, Australasian Journal of Combinatorics, 77: 117-135.	The University of Queensland, Combinatorial Mathematics Society of Australasia	2020	1034-4942 ISSN
5.	**Efficient Algorithm for Computing the Triangle Maximizing the Length of Its Smallest Side Inside a Convex Polygon**, *S. Sadhu, S. Roy, S. Nandi, S. C. Nandy, and S. Roy*, Int. J. Found. Comput. Sci., 31(4): 421-443.	World Scientific	2020	0129-0541 ISSN

6.	**Erratum to "On oriented cliques with respect to push operation, [Discrete Appl. Math. 232 (2017) 50-63],** *J. Bensmail, S. Nandi, S. Sen* Discrete Applied Mathematics 258: 276-278.	Elsevier	2019	0166-218X ISSN
7.	**Two-center of the Convex Hull of a Point Set: Dynamic Model, and Restricted Streaming Model**, *S. Sadhu, S. Roy, S. Nandi, A. Maheshwari, and S. C. Nandy*, Fundamenta Informaticae, 161: 1–21.	IOS Press	2019	0169-2968 ISSN
8.	**On oriented cliques with respect to push operation**, *J. Bensmail, S. Nandi and S. Sen*, Discrete Applied Mathematics, 232: 50–63.	Elsevier	2017	0166-218X ISSN
9.	**A lower bound technique for radio k-coloring**, *S. Das, S. C. Ghosh, S. Nandi and S. Sen*, Discrete Mathematics, 340(5): 855–861 (2017).	Elsevier	2017	0012-365X ISSN
10.	**Optimal L$(3, 2, 1)$-labeling of triangular lattice.**, *S. Das, S. C. Ghosh and S. Nandi*, Discrete Applied Mathematics, 228: 32–40.	Elsevier	2017	0166-218X ISSN
11.	**On L$(k, k-1, \ldots, 1)$-labeling of triangular lattice.**, *S. Das, S. C. Ghosh, S. Nandi and S. Sen*, Electronic Notes in Discrete Mathematics, 48: 281-288 (2015).	Elsevier	2015	1571-0653 ISSN
12.	**Retailers optimal pricing and economic order quantity in stock and price sensitive demand environment**, *S. Panda, S. Saha and S. Nandi*, International Journal of Operational Research, 15(4): 406-423 (2012).	Inderscience	2012	1745-7645 ISSN
13.	**New bounds and constructions for neighbor-locating colorings of graphs,** Dipayan Chakraborty, Florent Foucaud, Soumen Nandi, Sagnik Sen, & D K Supraja, CALDAM 2023 (Accepted).	Springer	2023	TBA
14.	**On radio k-coloring of the power of the infinite path,** Tapas Das, Tuomo Lehtilä, Soumen Nandi, Sagnik Sen, & D K Supraja, ICGT 2022.	ICGT_2022_booklet	2022	NA
15.	**On Relative Clique Number of Triangle-Free Planar Colored Mixed Graphs,** Soumen Nandi, Sagnik Sen, & S. Taruni, IWOKA 2022: 439 – 450.	Springer	2022	978-3-031-06677-1 ISBN
16.	**The Relative Oriented Clique Number of Triangle-Free Planar Graphs Is 10**, *Soura Sena Das, Soumen Nandi, & Sagnik Sen*, CALDAM 2020: 260 - 266.	Springer	2020	978-3-030-39218-5 ISBN
17.	**The relative signed clique number of planar graphs is** 8, *Sandip Das, Soumen Nandi, Sagnik Sen and Ritesh Seth*, CALDAM 2019: 245 – 253.	Springer	2019	978-3-030-11508-1 ISBN
18.	**On oriented L$(p, 1)$-labeling**, *Sandip Das, Soumen Nandi and Sagnik Sen*, CALDAM 2018: 274-282.	Springer	2018	978-3-319-74179-6 ISBN
19.	**On chromatic number of colored mixed graphs**, *Sandip Das, Soumen Nandi and Sagnik Sen*, CALDAM 2017: 130-140.	Springer	2017	978-3-319-53006-2 ISBN
20.	**Computing the triangle maximizing the length of its smallest side inside a convex polygon.**, *Sasanka Roy, Suchismita Roy, Soumen Nandi, Subhas C. Nandy and Sanjib Sadhu*, ICCSA (2) 2017: 509-524.	Springer	2017	978-3-319-62394-8 ISBN
21.	**On L$(k, k-1, \ldots, 1)$ labeling of triangular lattice**, *Sandip Das, Sasthi C. Ghosh, Soumen Nandi and Sagnik Sen*, IWOGL 2014.	Elsevier	2014	1571-0653 ISSN
22.	**Efficient channel assignment for cellular networks modeled as honeycomb grid.**, *Mohit Agrawal, Sandip Das, Sasthi C. Ghosh, Nitish Panigrahy and Soumen Nandi*, ICTCS 2014: 183-295.	CEUR-WS	2014	1613 – 0073 ISSN

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.	"On coloring of mixed graph"	Indo-German Pre-Conference School on Algorithms and Combinatorics (CALDAM-2017), *BITS-Pilani, K K Birla Goa Campus, Goa*.	Conference	Paper presenter	International (Within Country)
2.	"Radio-k coloring of graphs"	International Workshop on Graph Labelings (IWOGL-2014), *Kalasalingam University, Madurai, India*.	Workshop	Paper presenter	International (Within Country)
3.	"Efficient channel assignment for cellular networks modeled as honeycomb grid"	Italian Conference on Theoretical Computer Science (ICTCS 2014), *University of Perugia, Perugia, Italy*.	Conference	Paper presenter	International (Abroad)
4.	"Graph labeling"	DST-JSPS workshop on Discrete Mathematics & Its Applications, (2013) *University of Tokyo, Japan*.	Workshop	Paper presenter	International (Abroad)

RESEARCH GUIDANCE:

Sl. No.	Year	University	Name of Student	Year of Award	Topic
1.	Pursuing	IIT Dharwad	Taruni S		Graph Homomorphism
2.	Pursuing	IIT Dharwad (Funded by NBHM at NSOU)	Supraja D K		Constraint Coloring
3.	Pursuing	Kalyani University	Dipanwita Saha		Graph Labeling
4.	Pursued	Under NBHM Project	Som Sindhu Banerjee	Feb 2022 – Jan 2023	Channel Assignment Problem

INVITED LECTURE: [Last 5 Year]

Sl. No.	Topic	Date	Venue	National/International
1.	Brussels Sprout game	December 2020	Ramakrishna Mission Residential College, Narendrapur	National
2.	Randomized Algorithm: An Overview	September 2020	Raja N L Khan Women's College, Paschim Medinipur	National
3.	Graph Homomorphisms	February 2020	Ramakrishna Mission Vivekananda Educational and Research Institute, Belur Math	International
4.	Randomized Algorithm: An Overview	July 2020	Maheshtala College, Kolkata	National
5.	Distance Constrained Graph Labeling	April 2019	LaBRI, University of Bordeaux, France	International
6.	Indo-Italian Pre-Conference School on Algorithms and Combinatorics	February 2019	IIT Kharagpur, India	International

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

Sl. No.	Type of Work	Related Programme	Year
1.	Master thesis of Mr. Subham Bhattacharjee with Prof. Sagnik Sen, Ramakrishna Mission Vivekananda Educational and Research Institute	M.Sc in Computer Science	2021
2.	Master thesis of Mr. Soura Sena Das with Prof. Sagnik Sen, Ramakrishna	M.Sc in Computer Science	2019

	Mission Vivekananda Educational and Research Institute		
3.	Master thesis of Mr. Susobhan Bandopadhyay with Prof. Sagnik Sen, Ramakrishna Mission Vivekananda Educational and Research Institute	**M.Sc in Computer Science**	**2019**
4.	Master thesis of Mr. Ritesh Seth with Prof. Sagnik Sen, Ramakrishna Mission Vivekananda Educational and Research Institute	**M.Sc in Computer Science**	**2019**

Declaration: I hereby declare that all the information given above is true and correct to the best of my knowledge.

Signature: *Soumen Nandi*

Date: 28.02.2023