



Memo No. SoSci/2702

Date: 10.04.2023

### **Report of the National Seminar on “Introduction to Combinatorics and its applications” organized by School of Sciences, NSOU on 27-03-2023**

As approved by the Hon’ble Vice-Chancellor vide memo no. SoSci/2649 dated 03.03.2023, the School of Sciences, Netaji Subhas Open University, organized a one-day **National Seminar entitled “Introduction to Combinatorics and its applications”** on 27-03-2023 at Subhas Chandra Sabhaghar, NSOU HQ, DD 26, Sector I, Salt Lake, Kolkata- 700064. Faculties and officers of the University attended the programme. The programme was conducted in blended mode.

At the outset **Dr. Soumen Nandi**, Associate Professor of Computer Science, NSOU welcomed all the dignitaries and said about the motivation of the National Seminar and also said why this topic is relevant in the present scenario. **Prof. Kajal De, Hon’ble Vice Chancellor, Diamond Harbour Women’s University & Former Director, School of Sciences, NSOU**, inaugurated the seminar and gave the inaugural address. In her words, she said the importance of combinatorics in today’s society.

**Prof. Sandip Das, Professor in Advanced Computing & Microelectronics Unit, Indian Statistical Institute, Kolkata**, delivered the keynote address in the seminar. Prof. Das gave a beautiful insight of combinatorics in geometry on the topic of **Erdos-Szekeres Problems**.

**Dr. Bibhas Guha**, Officer-in-Charge, School of Sciences, NSOU, in his presidential address, said the importance of collaboration within the departments under the School of Sciences. Finally, the official Vote of thanks was delivered by **Dr. Ushnish Sarkar**, Assistant Professor of Mathematics, NSOU and the inaugural session was ended with thanks.

**Dr. Sagnik Sen, Assistant Professor in Mathematics, IIT Dharwad, Karnataka** delivered the invited talk on Graph Homomorphism and its applications. Dr. Sen also gave an insight about the graph database of Facebook as a case study of graph homomorphism.

**Padma Shri Prof. Bimal Kumar Roy, Professor, Indian Statistical Institute, Kolkata** delivered his lecture on Combinatorics in Cryptography. Prof. Roy introduced the idea of Combinatorial Block Design and basic ideas of key management. In his words, he also said about the application of block design and Key Predistribution.



# NETAJI SUBHAS OPEN UNIVERSITY

## SCHOOL OF SCIENCES

H.Q.: DD-26, Salt Lake, Sector-I, Kolkata – 700 064

City Campus: K-2, Bidhannagar Fire Station, Sector- V, Salt Lake, Kolkata-700 091

Kalyani Campus: First Floor, Academic Building, Kalyani Ghoshpara, Kalyani 741235

Website: [www.wbnsou.ac.in](http://www.wbnsou.ac.in)

### Technical Session- I:

This technical session was chaired by **Dr. Usnish Sarkar**. Three researchers presented their papers in this session. The name of the researchers and their topic of presentation are as follows:

1. **Title:** A Review on Centrality Measures in Social Networks and Their Applications.

Author: **Shaikh Ibrahim Abdullah** (Netaji Subhas Open University), Sovan Samanta (Tamralipta Mahavidyalaya), and Kajal De (Diamond Harbour Women's University).

2. **Title:** A Family of Tetravalent Half-arc-transitive Graphs.

Author: **Sucharita Biswas**, (Presidency University).

3. **Title:** A new topology on IL-algebra.

Authors: **Safiqul Islam** (Taki Government College), Dhananjay Mandal (University of Calcutta) and Jayanta Sen (Government General Degree College, Singur).

### Technical Session II:

There was another technical session for paper presentation. This session was chaired by **Dr. Soumen Nandi**. Two researchers presented their paper in this session. The name of the researchers with their topic of presentation are as follows:

1. **Title:** Active Adversaries in Hierarchical Secret Sharing

Author: **Jyotirmoy Pramanik** (Taki Government College)

2. **Title:** On Locatability of Square of Some Paths

Author: **Rahul Das** & Ushnish Sarkar, (Netaji Subhas Open University)

The entire seminar was concluded by **Mr. Mrinal Nath**, Assistant Professor of Computer Science, NSOU through the valedictory Session.



**Prof. Bimal Kumar Roy with participants**



# NETAJI SUBHAS OPEN UNIVERSITY

## SCHOOL OF SCIENCES

H.Q.: DD-26, Salt Lake, Sector-I, Kolkata – 700 064

City Campus: K-2, Bidhannagar Fire Station, Sector- V, Salt Lake, Kolkata-700 091

Kalyani Campus: First Floor, Academic Building, Kalyani Ghoshpara, Kalyani 741235

Website: [www.wbnsou.ac.in](http://www.wbnsou.ac.in)



Felicitation of Dr. Bibhas Guha by Mr. Rahul Das



Speech being delivered by Prof. Kajal De



# NETAJI SUBHAS OPEN UNIVERSITY

## SCHOOL OF SCIENCES

H.Q.: DD-26, Salt Lake, Sector-I, Kolkata – 700 064

City Campus: K-2, Bidhannagar Fire Station, Sector- V, Salt Lake, Kolkata-700 091

Kalyani Campus: First Floor, Academic Building, Kalyani Ghoshpara, Kalyani 741235

Website: [www.wbnsou.ac.in](http://www.wbnsou.ac.in)



**Felicitation of Prof. Sandip Das by Mr. Mrinal Nath**



**Speech being delivered by Dr. Soumen Nandi**



**Felicitation of Prof. Kajal De by Dr. Chandan Mandal**

-----  
**Dr. Soumen Nandi**  
**Organizing Secretary (National Seminar)**  
**Assoc. Prof. of Comp. Sc.**  
**School of Sciences, NSOU**

-----  
*Bibhas Guha*  
-----  
**Dr. Bibhas Guha**  
**Officer-in-Charge**  
**School of Sciences, NSOU**