

THE MATHEMATICS SOCIETY

ANNUAL REPORT 2022-2023

The Mathematics Society is one of the college's oldest and most active societies. We work hard to ensure that students continue to thrive in the multifaceted community of Mathematics and can channel their enthusiasm for the subject.

We host a variety of events, from fun Mathematical quizzes to National Level Workshops on Game Theory, from Seminars and Fellowships to a National Level Annual Fest - Integration, which attracts a large number of students from across India.

As the academic year comes to an end, we look back upon the variety of events that were a tremendous success among math enthusiasts.

Bezerka:

The first event of the odd semester was the inter college math quiz Bezerka which was held from 22nd September 2022 with the final round on 24th September 2022. With 310 registrations, the final round hosted in the Rudra Lawns saw the finalists battle for the first position by answering a variety of mathematical, logical and reasoning questions.

SB Mathur Lecture Series:

After a gap of two years, we organized the Professor S.B. Mathur lecture series, consisting of two engaging lectures presented by learned academicians. The event, held on 17th-18th October 2022, was open to both Stephanians and outsiders (remotely) and saw a registration count of more than 50 students.

On the first day of the event, Dr. Amber Habib delivered a lecture on the topic "History in the Mathematics Classrooms". In her lecture, Dr. Habib emphasized the need to make mathematics classrooms interesting and active by interconnecting the subjects taught in schools.

On the second day of the event, Dr. Amitabha Tripathi delivered a lecture on the topic "Solved and Unsolved Problems in Number Theory". Dr. Tripathi introduced students to many of the interesting results in number theory, focusing on the work of contemporary mathematicians.

Prof. Nagpaul Fellowship:

The Professor Nagpaul Fellowship started in the month of October. It is a collaboration between a group of students and a teacher where they work together to produce a research paper on a topic in Mathematics. The fellowship started seven years ago and is one of the most prestigious fellowships in college. Over the years, it has nurtured budding researchers in the college. St. Stephen's College is well known for undergraduate research and the Professor Nagpaul Fellowship aims at providing the students with just that. It not only provides mathematically motivated students an opportunity to develop an interest in

research, but also provides students who are just intrigued by the subject a chance to nurture their interest. This year the presentations were conducted in offline mode on 18th April 2023. 22 students participated and presented their research on a variety of topics, ranging from Functional Analysis to Algebra of QR codes.

Social Initiative - Anantata:

In November 2022, the society organized a social initiative program Anantata to empower and foster enthusiasm for mathematics and logic among children in collaboration with Evening Classes. With a participation of around 20 kids, the event aimed to encourage the kids to explore their interests and overcome their anxieties and fears associated with math through various logical games and activities.

Orientation:

On 17th November 2022, an orientation was held in the seminar room. In which we briefed the first year's about the society and the events held by us. It also included games and interactive sessions which was altogether made successful with the participation of around 30 first year students.

MathSoc Open:

In association with the World Cubing Association, we organised MathSoc Open, a national cubing competition on the 14th and 15th of January, 2023. The event marked the resumption of the competition after a break of three years and saw enthusiastic participation from cubers across the country.

The competition comprised various events, including 3x3 cube, 2x2 cube, 4x4 cube, 5x5 cube, Pyraminx, Megaminx and Skewb. Participants competed against each other, and the winners were awarded prizes and certificates.

The event was a grand success, with over 100 participants, including experienced cubers and beginners, showcasing their skills and enjoying the thrill of competition.

Integration:

The annual fest Integration kicked off from 6th February till 8th February 2023. This year we had 5 major events under its banner:

1. The Inaugural Talk by Dr. Arjun Behri and Mr. Prashant Rajput on 6th February
2. The annual Guesstimate on 6th February with around 220 registrations from all over India.
3. Shakh I Mat Arena, a 50-player Swiss Blitz tournament with 50 players held on 7th February, 2023.
4. Math Me If You Can, an inter college with questions from Mathematics and Trivia. It garnered almost 140 registration and the final round was held on 7th February 2023.
5. The Annual Treasure Hunt was held on 8th February with more than 225 registrations from many different colleges.

Integration culminates in a variety of mathematical experiences for participants so that they develop enthusiasm and curiosity for the subject and get the opportunity to look at it from a completely different perspective.

Workshop on Game Theory and Optimisation:

Under the aegis of IQAC, the society conducted a highly successful offline workshop on Optimization and Game theory in collaboration with the Department of Mathematics and Centre for Economic Research.

Held on 10th, 11th, and 12th April 2023, the workshop attracted more than 60 undergraduate students interested in exploring the basics of game theory and optimization.

Eminent mathematicians and economists from leading institutions delivered lectures and conducted tutorial and practical sessions on a wide range of topics related to game theory and optimization. The following professors were the key speakers this year:

- Prof. Anurava Sen (Indian Statistical Institute)
- Prof. C. S. Lalitha (Department of Mathematics, DU)
- Dr. Jyotirmoy Bhattacharya (Ambedkar University)
- Dr. Vandana Khaitan Gupta (Department of Operational Research, DU)
- Dr. Dipti Dubey (Shiv Nadar University)

The workshop provided students with a comprehensive overview of the opportunities available to game theorists and optimization enthusiasts in the modern digital era.

Editorial Board:

Throughout the year, the editorial board of the society, When Epsilon Met Delta remained active with frequent updates across our various social media platforms. Our monthly newsletter, Convergence, saw the addition of a new section dedicated entirely to pure mathematics. Furthermore, our team resumed blogging on our website, providing readers with insightful articles and timely updates on the latest news and research within the field. By consistently sharing content on LinkedIn and Instagram, we were able to grow our following and increase engagement with our audience. Beyond our online presence, we also established a reading group for individuals interested in exploring mathematical concepts in greater depth, as well as a problem-solving group designed to help math enthusiasts refine their skills.

Submission Date: 30th April 2023