



Society Activity Report 2020-21

Mathematics Society

-Workshops, Lectures, and symposiums: Symposium

Under the aegis of IQAC, the Department of Mathematics together with the Mathematics society organised a 2-day online Symposium on the topic 'Real-Life Applications of Abstract Mathematical Concepts' on 9 and 10 April 2021. The symposium was open for undergraduate students from all over the world. We invited Prof. Shobha Bagai (Cluster Innovation Centre), Prof. T.V. Vijay Kumar (JNU), Dr. Amit Kulshrestha (IISER-Mohali), and Prof. Anupam Saikia (IIT-Guwahati) to share their expertise and knowledge with the students.

NAAC
Assessment
and
Accreditation 2021



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UNDER THE AEGIS OF INTERNAL QUALITY ASSURANCE CELL (IQAC)

The Department of Mathematics

in association with

The Mathematics Society

St. Stephen's College
University of Delhi

Presents

SYMPOSIUM 2021

On

Real-Life Applications of Abstract Mathematical Concepts

SPEAKERS



Prof. Anupam Saikia
Department Of Mathematics
IIT Guwahati
9th April, 3PM-4PM
Topic: Elliptic Curve Cryptography



Prof. T.V. Vijay Kumar
School of Computer & Systems Sciences
Jawaharlal Nehru University
9th April, 4PM-5PM
Topic: Machine Learning & Application

9th-10th April 2021



Dr. Amit Kulshrestha
Department of Mathematical Sciences
IISER Mohali
10th April, 3PM-4PM
Topic: Abstraction in Mathematics: Is it
really needed?



Prof. Shobha Bagai
Cluster Innovation Center
University of Delhi
10th April, 4PM-5PM
Topic: Application of Group theory in the
solution of Rubik's Cube

Convener: **Dr. Jaspreet Kaur**

Media Partner: UCampus

In case of any queries, contact

Athak: +91-9012772655

Riya: +91- 8171602440

Vedanshi: +91-7827643249



ST. STEPHEN'S COLLEGE



This is to certify that
John Rayven DC. Surio from College of Science
was a participant in the online symposium on
Real Life Applications of Abstract Mathematical Concepts
organized by
The Department of Mathematics and The Mathematics Society
in collaboration with
The Internal Quality Assurance Cell
St. Stephen's College, Delhi
on the 9th and 10th of April 2021

Dr. Jaspreet Kaur
Convener

Dr. Sonia Davar
Head of the Department

Prof. John Varghese
Principal

-Competitions

Bezerka

In the odd semester, the first online event organized by the society was Bezerka. It was held on 10-11 October. It was open to students from all across India and saw a participation of 800+ people. In the event, participants were made to solve mathematical puzzles like Sudoku and along with questions testing their logical reasoning.

Mathopolis

The next event was Mathopolis, one of the most famous events of our society. This online quiz, in collaboration with the Quiz Club of St. Stephen's College was organized on 7-8 November. There was a turnout of 500+ participants quizzing on everything to do with Mathematics from Leibniz to Lebesgue, from Galois to Game Theory.

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THE MATHEMATICS SOCIETY
ST. STEPHEN'S COLLEGE

BEZERKA

PUZZLE SOLVING COMPETITION

Participation in teams of two, lone wolves are welcome
CASH PRIZES WORTH UPTO 15K
LINK TO REGISTER
<http://tiny.cc/Bezerka>
10-11th OCT | 4PM

JOSEPH: 7736649437 PRAKASH: 8650670181 VEDANSHI: 7827643249

THE MATHEMATICS SOCIETY
ST. STEPHEN'S COLLEGE
IN COLLAB WITH
THE QUIZ CLUB
PRESENTS

MATHOPOLIS

Test your knowledge and memory of maths
with this exhilarating open quiz
CASH PRIZES WORTH UPTO 1.5K
Teams of two/Lone wolves are allowed
7-8th NOV | 4pm

ATHAK: 9012772655 JOSEPH: 7736649437 SHAYANAK: 9910098690



Alohomora

In order to make the online year more interesting, we came up with the idea of Alohomora, an online room simulation game, based on the famous novel series 'Harry Potter' by J.K Rowling. It was the first event that witnessed a participation of 1000+ from all over the country. The participants had to solve mathematical puzzles based on logical reasoning, sequences, pattern identification etc. in order to win. This event also marked the end of the odd semester.

The Mathematics Society
St. Stephen's College
Presents
Alohomora
An Escape Simulation Event

It's our choices that show what we truly are, far more than our abilities

Stories . Levels . Choices

Date: 18 November 2020
Time: 4:00 pm
Register at: <https://tinyurl.com/y4yfezoc>

Cash Prizes worth 1.5k to be won

Bhanu: +91 9808986615 · Jatin: +91 8955926704 · Prakash: +91 8650670181





Treasure Hunt

Our most awaited event, Treasure Hunt was put together on 4 February 2021, and this was the first event for the even semester. It required students to solve puzzles, mathematical riddles etc. to reach their desired destinations. We incorporated a murder mystery to make it more interesting and were able to get a turnout of 1100+ students from all over the world.

The Mathematics Society
St. Stephen's College
Presents
TREASURE HUNT
Do you have what it takes to be a sleuth?
4th February | 5 PM
CASH PRIZES UPTO 3K TO BE WON!
REGISTER NOW!
<https://tinyurl.com/TreasureHunt2021>
Media Partner: U Campus
Esha - 9999800380 Jatin - 8955926704 Riya - 8171602440

Integration

The annual fest of our society, Integration' 21 was held from 22-26 February. Multiple events and competitions were conducted during the course of these 5 days. Some of the events that took place include Mathopolis 2.0, Sicilian Feud, Guesstimate, and Shakh-i-Mat Arena.

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THE MATHEMATICS SOCIETY
ST. STEPHEN'S COLLEGE

Presents

INTEGRATION'21

*While the world differentiates
We integrate*

Cash Prizes upto 10K to be won!

Mathopolis 2.0 22 February	Shakh i Mat Arena 23 February
Guesstimate 21 & 25 February	Sicilian Feud 22 & 24 February

Media Partner: U-Campus

ATHAK 9012772655 JATIN 8955926704 RPYA 8171602440

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ST. STEPHEN'S COLLEGE
IN COLLAB WITH
THE QUIZ CLUB
PRESENTS

MATHOPOLIS 2.0

A NUMBERS QUIZ!!!

INTEGRATION 2021

CASH PRIZES WORTH UPTO 1.5K
TEAM OF TWO/LONE WOLVES ARE ALLOWED

22 FEBRUARY | 2:30 PM

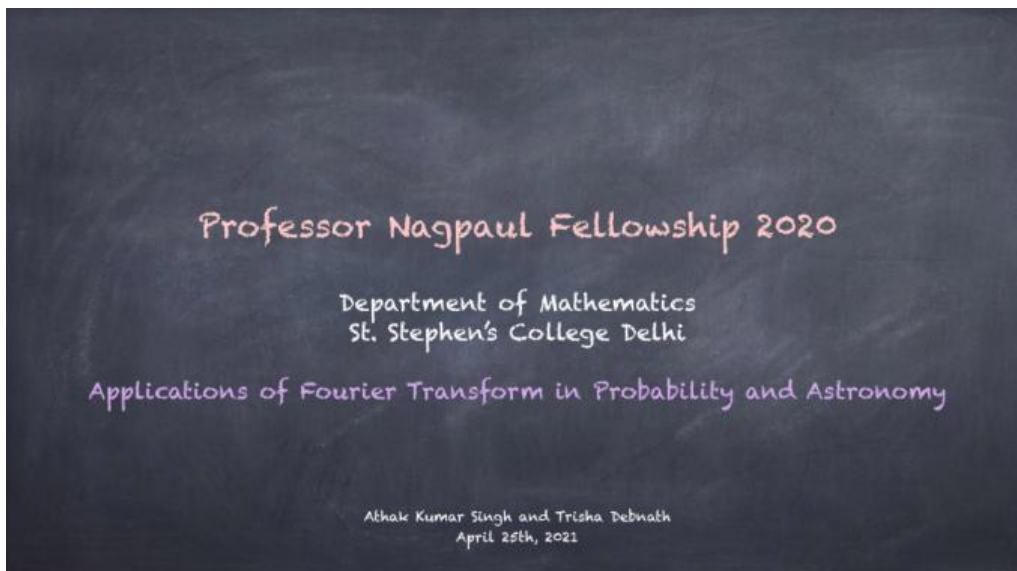
MEDIA PARTNER: U-Campus



-Other:

Professor 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 six 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 presentation was held on 25 April. 18 students participated and presented their research on a variety of topics, ranging from Application of Abstract Mathematical Structures to Study of COVID-19 using R.



Editorial Board

This year we also established our society's Editorial Board, *When Epsilon Met Delta* to expand our social media presence. Till now, we have covered various topics including stories about great mathematicians, astonishing numbers and weekly quizzes. Our follower count on social media has taken a big leap in the year 2020-21.

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THE MATHEMATICS SOCIETY

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INTRODUCES

THE EDITORIAL BOARD

**WHEN ϵ EPSILON
MET δ DELTA**



Fun and Maths do exist together, want to know how? π

STAY TUNED!

#NumbersRuleTheUniverse

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When Epsilon Met δ

The Editorial Board

CALL FOR ENTRIES

Send your original articles on any topic that you can relate to Mathematics and get them published on our blog!

Explore the realms of Physics, Finance, Business, Economics and what not! No word limit!

MAIL US THE ARTICLE AT:
mathsocssc.edboard@gmail.com

ATHAK: 9012772655 BHANU: 9808986615 ESHA: 9999800380 RIYA: 8171602440

What's new IN THE WORLD OF MATHEMATICS?

More healthy diets on the way!

A recent research from Chalmers University of Technology, Sweden shows how a newly developed mathematical model for the interaction of bacteria in the gut could help design new probiotics and specially tailored diets to prevent diseases. According to Jens Nielsen, the lead researcher, the model is useful to deal with diseases related to intestinal bacteria, which plays an important role in determining health. The accuracy of the model was verified through two earlier clinical studies, one involving Swedish infants, and the other concerning adults in Finland with obesity.

The predictions made with the help of the model corresponded with the measurements of health indicators incorporated in the study. Moreover, the model proved reliable in predicting multiple variables, including how a switch from liquid to solid food in the Swedish infants affected their intestinal bacterial composition and how the obese adults' intestinal bacteria changed after a move to a more restricted diet.

Bacterial growth and functioning depends upon an individual's diet, interactions with other bacteria already present in the gut and interaction with the host. Thus, adding bacteria or making dietary changes will affect the intestinal composition and subsequently, the interactions of the added bacteria with the intestinal microbiome. 'The model we have developed is unique because it accounts for all these variables. It

combines data on the individual bacteria as well as how they interact. It also includes data on how food travels through the gastrointestinal tract and affects the bacteria along the way in its calculations. The latter can be measured by examining blood samples and looking at metabolites, the end products that are formed when bacteria break down different types of food,' says Jens Nielsen.

