JSS Academy of Technical Education, Noida

DEPARTMENT OF MATHEMATICS

MATHEMATRIX

The Official Newsletter

Volume 3 : Issue 1

INDEX

THE INSTITUTE

VISION

JSS Academy of Technical Education, Noida aims to become an Institution of excellence in imparting quality Outcome Education that empowers the young generation with Knowledge, Skills, Research, Aptitude and Ethical values to solve Contemporary Challenging Problems.

MISSION

- Develop a platform for achieving a globally acceptable level of intellectual acumen and technological competence.
- Create an inspiring ambience that raises the motivation level for conducting quality research.
- Provide an environment for acquiring ethical values and a positive attitude.

ABOUT THE DEPARTMENT

VISION

To strive for excellence in mathematics and promote interdisciplinary collaborative research leading to futuristic solutions.

MISSION

- To empower students with mathematical knowledge that will enhance their problem-solving capability.
- To encourage faculty to engage in interdisciplinary research activity and scholarly writing.
- To give an exposure to real-world problems and methods of solving, using tools and techniques of mathematics.

The Mathematics Department at JSSATEN, Noida, established in 1998, is located in Academic Block-V with a team comprising 1 Professor, 1 Associate Professor, and 6 Assistant Professors, each holding a PhD in a distinct mathematics specialization.

Our faculty imparts mathematics education through regular and elective courses for undergraduates and postgraduates (B.Tech. and M.Tech.). The department's collective effort has led to consistently outstanding results. Several faculty members have authored six textbooks for students and educators, along with over 100 research papers published in reputable international and national journals/conferences. Over time, the department has played a significant role in nurturing a robust mathematical foundation for students, a fundamental requirement for producing successful engineers excelling in their professions, both in India and worldwide.

PRINCIPAL'S DESK

*"**Mathematics**: the elegant art of solving life's intricate puzzles, the language of the universe, and the key to understanding the world's hidden order."*

DR. AMARJEET SINGH
(B.Tech. , M.Tech. , Ph.D.)
PRINCIPAL
JSSATE, NOIDA

With the divine blessings of his holiness Jagadguru Dr. Sri Sri Shivarathri Deshikendra Mahaswamiji, JSS Academy of Technical Education, Noida (JSSATEN) is recognised as one of the leading technical institutions. JSSATEN's vision is to impart quality outcome-based education (OBE) that empowers the young generation with the knowledge, skills, research aptitude and ethical values to solve real-world challenging problems. I am delighted to know that the Department of Mathematics is bringing out yet another issue of their famous newsletter during the current semester.

The collection of information summed up in this issue has all the necessary steps to educate aspiring students about the world of mathematics and its vast dimensions & its applications. I hope that the students and the readers will benefit from such an endeavour by the Department of Mathematics at JSSATEN.

I congratulate Dr. Bhupender Parashar, HoD (Mathematics), Dr. Ranu Pandey, Editor, the entire team of the Department of Mathematics and all the students for bringing out the current digital newsletter edition of "MATHEMATRIX" and wish them a great success.

DEPARTMENT PILLARS

Engineering with Mathematics is everything and Engineering without Mathematics is nothing. The current issue has come up as a result of the enormous efforts, hard work, dedication and patience that's put in by our editorial team.

DR. BHUPENDER PARASHAR
ASSOCIATE PROFESSOR & HOD,
DEPARTMENT OF MATHEMATICS,
ALUMNI COORDINATOR , JSSATEN.

DR. Z.K.ANSARI
FIRST YEAR COORDINATOR
& PROFESSOR
DEPARTMENT OF MATHEMATICS

I'm delighted to contribute to Volume III, first Issue of the Mathematics Department newsletter. As the First Year Coordinator, I take pride in witnessing my colleagues and juniors' dedication to the department's growth and success.

"Mathematrix" aims to encourage creative thoughts, power of expressions and help students know the importance and value of mathematics. The newsletter will offer valuable insights into mathematical tools and techniques for Engineering/Management mathematics. We welcome B.Tech. first-year students for the 2023-24 session, wishing them success in their endeavors.

This edition is sure to inspire and motivate new first-year students. I'm delighted to join the Mathematics newsletter. I congratulate the entire editorial team of the Mathematics newsletter headed by the Head of the Department, Dr. Bhupender Parashar and Dr. Ranu Pandey for their excellent initiative. My good wishes are with the entire team of 'Mathematrix'.

EDITOR'S DESK

DR. RANU PANDEY
(EDITOR)
ASSISTANT PROFESSOR
DEPARTMENT OF MATHEMATICS
ranupandey@jssaten.ac.in

It's indeed a delightful moment to introduce the first issue (Volume III) of the Newsletter from the Department of Mathematics. This volume is packed with a diverse array of articles contributed by our experts current engineering under graduates, and a special write-up from our esteemed alumnus from batch 2015-19. In addition, this edition offers engaging puzzles, brain teasers, current affairs updates, and numerous opportunities within the field of mathematics. It also provides a glimpse of the activities that have taken place during this session.

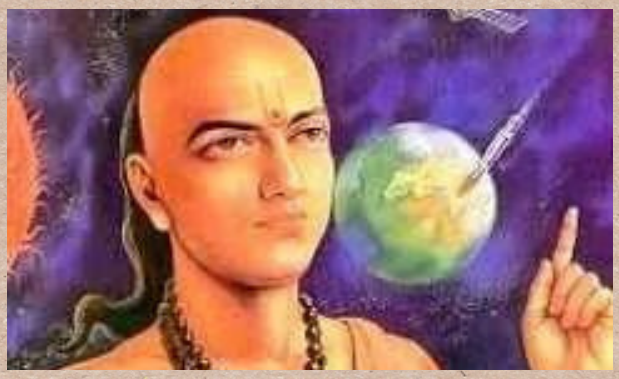
I want to extend my heartfelt appreciation to the dedicated team for their efforts in ensuring that this issue is released timely. I must mention the outstanding contributions of our new student volunteers - Harsh Jain (IT-4th year), Shagun Singh (EC-3rd year), and Somiya (IT-2nd year), for their exceptional ideas and for creating yet another excellent cover page for this edition.

Celebrating the newsletter launch, Mathematics is pivotal in global initiatives, including the G20. The mathematical concepts and insights shared in this newsletter contribute to global progress. I firmly believe that this issue of "Mathematrix" will prove to be a milestone for young engineers.

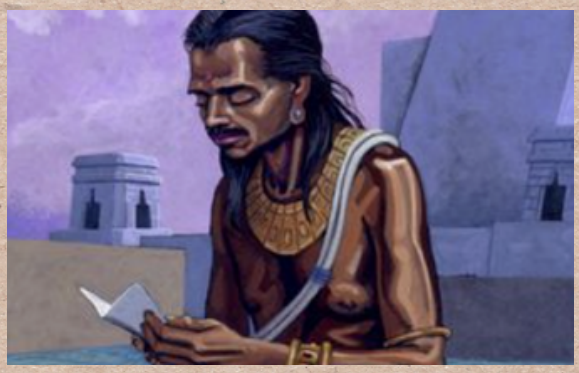
We look forward to receiving valuable feedback and suggestions from our readers, as this input will help us to improve and refine our future issues. Our aspiration is to strive for perfection and remain at the forefront of progress as time advances.

Wish you all a joyful learning & good luck !!

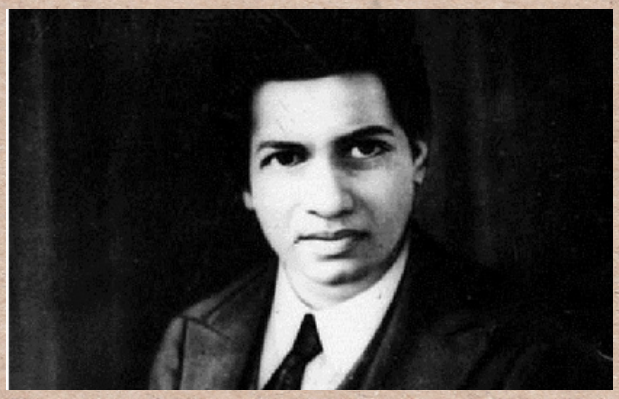
MATHEMATICAL HERITAGE OF INDIA



Aryabhata (c. 476-550 CE): Aryabhata was one of the earliest Indian mathematicians and astronomers. He wrote the "Aryabhatiya," a significant work in Indian mathematics, which included solutions to quadratic equations and the computation of pi.



Brahmagupta (c. 598-668 CE): Brahmagupta was another ancient Indian mathematician who made contributions to algebra and arithmetic. He is known for his work "Brahmasphutasiddhanta," which dealt with various mathematical topics.



Srinivasa Ramanujan (1887-1920): Srinivasa Ramanujan is perhaps the most famous Indian mathematician. His work in number theory, particularly on properties of partition functions and modular forms, is highly regarded. His mathematical insights have had a lasting impact on the field.

C. R. Rao (1920-2021): Calyampudi Radhakrishna Rao was an Indian statistician who made significant contributions to statistical theory and its applications. He is known for his work in multivariate analysis and experimental design.

Shakuntala Devi (1929-2013): Although more popularly known as the "human computer" rather than a mathematician, Shakuntala Devi was known for her exceptional mental calculation skills and mathematical prowess. She could perform complex mathematical calculations mentally with remarkable speed.

NEWS OF THE DEPARTMENT

PUBLICATIONS/PATENTS

- Dr. Z. K. Ansari published paper "**Fluorescence Study of Ho3+/Yb3+ Ions Codoped Bismuth- Boro-Tellurite Glasses**", International Conference on Advanced Technologies in Chemical, Construction and Mechanical Sciences, from 09-10 Feb. 2023 held in KPR Institute of Engineering and Technology, Coimbatore, Tamil Naidu.

- Dr. Z. K. Ansari published the paper entitled "**Common Fixed-Point Theorems for Two Pair of Weakly Compatible Mappings in Modified Intuitionistic Fuzzy Metric Space**", International Journal on Emerging Technologies, Vol. 14 (1), pp: 30-35, April 2023.

- Dr. Z. K. Ansari published the paper entitled "**Fixed Point Theorems in Complete Metric Spaces for Weakly Compatible Mappings**", International Journal on Emerging Technologies, Vol. 14 (1), pp: 16-22, April 2023.

- Dr. Bhupender Parashar published the patent on "**Development of eco-friendly and sustainable concrete using imperial smelting furnace slag, construction and demolition waste, waste marble powder and metakaolin**" with application no. 202311000421, Date of file :03/01/23, publication date - 13/01/23, *http://ipindia.nic.in/index.htm*.

- Dr. Bhupender Parashar published the patent on "**Development of eco-friendly concrete using industrial waste such as flyash, imperial smelting furnace slag, stone dust, hooked steel fibre**" with application no. 202311000219, Date of file: 03/01/23, publication date - 13/01/23, *http://ipindia.nic.in/index.htm*.

- Dr. Bhupender Parashar, Dr. Vinita Khemchandani and Dr. Ranu Pandey published the patent on "**A Lagrange and Poisson Distribution Based Method Controlled with Artificial Neural Network for Various Utilities**" with application No. 202311004609, Date of file: 24/01/2023, publication date: 10/02/23.

NEWS OF THE DEPARTMENT

FACULTY DEVELOPMENT PROGRAMS/ SEMINARS/ WORKSHOPS

- Dr. Bhupender Parashar attended one-week online workshop on "**Advance Statistical Data Analysis using SPSS**" organised by Uttar Pradesh University of Medical Sciences, Etawah, UP from 20-27 th January 2023.

- Dr. Vinita Khemchandani and Dr. Ranu Pandey completed one-week FDP on "**Curriculum Design and Evaluation**" conducted by Education and Educational Management Department from 24-28 th April 2023 at NITTTR, Chandigarh.

- Dr. Shalini Singh, Dr. Anushri Verma, Dr. Vinita Khemchandani and Dr. Ranu Pandey attended two days online NAAC sponsored National Seminar on "**Role of NAAC in Quality Enhancement in Higher Educational Institutions**", organized by Internal Quality Assurance Cell (IQAC) from 28 – 29 th April 2023 at IMS Engineering College, Ghaziabad, Uttar Pradesh, India.

- Dr. Shalini Singh and Dr. Anushri Verma completed one week FDP on "**Presentation Skills for Effective Instruction Delivery**" conducted by Education and Educational Management Department from 15-19 th May 2023 at NITTTR, Chandigarh.

- Dr. Bhupender Parashar completed two-week online FDP on "**Experience with Research Methodology on Statistical Programming in R**" organised by Research foundation of India & RFI-CARE from 20-29 th May 2023.

ACHIEVEMENT

- Under Dr. Z. K. Ansari as a supervisor, the candidate Mr. Ajay Kumar Singh awarded Ph.D. degree from MADHYANCHAL PROFESSIONAL UNIVERSITY, BHOPAL (M.P.) in February 2023.

WORDS OF ALUMNUS

Vaibhav Kargeti - ECE Branch (2015-19)

Vaibhav Kargeti
SDE (DevOps)
Brightly, A Siemens Company
vaibhavkargeti@gmail.com

My journey in the world of technology began as a curious teenager, fascinated by the intricate world of Mathematics.

Hi, I'm Vaibhav Kargeti, and this is my journey.

I took my first step into the realm of Electronics and Communication engineering at JSSATE, Noida, where I spent four transformative years from 2015 to 2019.

My journey, marked by the fascinating world of mathematics, has been a constant thread weaving through my life. I am an electronics engineer, and my mathematical odyssey began in the classrooms of my school, where the subject not only intrigued me but also found practical applications in my daily life.

Guided by exceptional teachers who made mathematics seem easy and understandable, I found joy in unraveling the complexities of the subject. Beyond the confines of the classroom, I discovered how mathematics permeates various aspects of life, from calculating the throwing angle of a basketball to determining the probability of winning a toss in a match. These real-life applications made mathematics more than just a subject; it became a tool for solving problems and understanding the world around me.

Professionally, as an electronics engineer, I feel mathematics is an indispensable companion.

Whether it's intricate calculations or the intricacies of designing and coding, mathematics is the foundation of my work.

WORDS OF ALUMNUS

In the realm of coding and data engineering, its applications are limitless, allowing me to build robust and efficient systems.

Upon graduating from JSSATE, I embarked on my professional journey with Hughes Network Systems, a renowned technology company.

Working at Hughes was a transformative experience that exposed me to cutting-edge technologies and real-world applications of my academic learnings. The dynamic work culture and collaborative environment at Hughes nurtured my skills and instilled in me a sense of responsibility.

Continuing my journey , my path led me to Siemens AG, where I found myself working with the Brightly Software product. This opportunity allowed me to not only apply the knowledge gained during my academic years but also exposed me to the fast-paced and ever-evolving landscape of the tech industry. From my days at Hughes to the present, mathematics has been the constant companion, guiding me through the intricate paths of problem-solving and innovation. As I look ahead, I am certain that mathematics will continue to be an integral part of my journey, unraveling new possibilities and opening doors to innovative solution. As I navigate the challenges and embrace the opportunities that come my way, I am grateful for the solid foundation laid by my education and the continuous support of mentors who fueled my passion for Mathematics. The journey is ongoing, and with each line of code written and every project undertaken, I find myself evolving, learning, and contributing to the ever-expanding world of technology. I want to express my heartfelt gratitude to the Mathematics Department at JSSATE Noida for being the catalyst in my journey. The amalgamation of academic learning, professional experiences, and the support of mentors has shaped me into the professional I am today. The department not only provided education but also encouraged a spirit of inquiry and innovation that continues to drive me forward.

GUEST COLUMN

UNDERSTANDING THE UNIVERSE WITH MATHEMATICS
Unlocking the Secrets of Cosmos

by

Shibesh Kumar Jas Pacif, Ph.D.

Professor & Director, Pacif Institute of Cosmology and Selfology (PICS)
Sagara, Sambalpur, Odisha, India

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In the vast expanse of this physical universe, where galaxies twirl and stars are born and die, planets form and destroy, and life goes on, one constant force emerges as the key to deciphering its mysteries: mathematics. The beauty of the cosmos, the functioning of galaxies and the behaviour of subatomic particles can all be understood and modelled with the help of mathematical concepts and equations. This article explores the importance of mathematics in understanding and modelling the universe, the specific mathematical tools employed in this endeavour, and the profound benefits that both students and humanity reap from this cosmic exploration. Some nice quotes on Mathematics:

"Mathematics is the Language with which God has written the universe."
~ Galileo Galilei

"Pure mathematics is, in its way, the poetry of logical ideas."
~ Albert Einstein

Importance of Mathematics in Modelling the Universe

The universe is a complex and awe-inspiring place, and understanding its intricat workings requires a language that transcends borders, cultures, and even human languages. Mathematics serves as this universal language, offering a systematic way to describe, analyse, and predict the behaviours of the cosmos. Here are some of the key reasons why mathematics is essential in this quest:

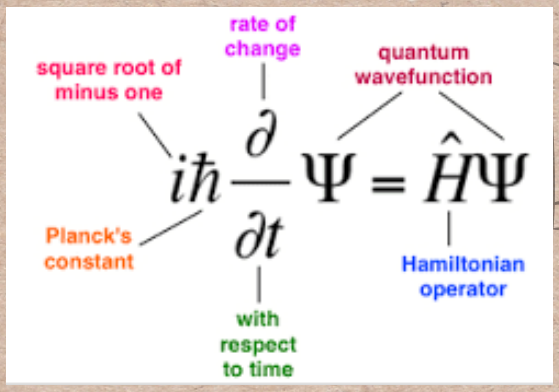
GUEST COLUMN

1. **Precision and Consistency:** Mathematics provides a framework for precise and consistent descriptions of natural phenomena. When scientists attempt to make sense of the universe, they rely on mathematical equations to express their ideas clearly and unambiguously.
2. **Predictive Power:** Mathematics enables scientists to make predictions about the behaviour of celestial bodies, the evolution of galaxies, and the outcome of physical processes. These predictions often lead to groundbreaking discoveries and the confirmation of theoretical models.
3. **Quantitative Understanding:** Mathematics allows scientists to quantify various phenomena in the universe. Whether it is measuring the distance to stars, calculating the mass of a black hole, or describing the dynamics of an expanding universe, mathematics provides the tools to quantify and understand these phenomena.
4. **Modelling Complex** Systems: The universe is a complex system with countless interacting components. Mathematical models can capture these complexities and help researchers explore how different elements of the universe are interconnected.

Mathematics Used in Understanding the Universe

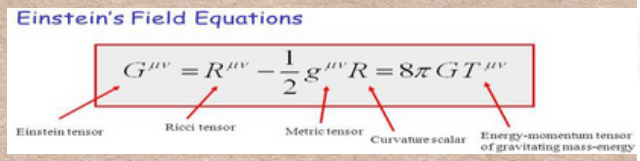
Mathematics plays an integral role in numerous aspects of understanding the universe. Here are some of the key mathematical tools and concepts employed:

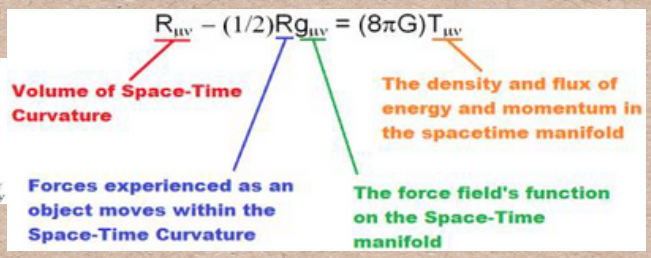
1. **Calculus:** The mathematics of change, calculus, is vital for understanding motion and change in the universe. It is used to describe the orbits of planets, the expansion of the universe, and the behaviour of cosmic rays. Example: Hubble's Law, a fundamental equation in cosmology, relates the expansion rate of the universe; $v = H0d$ Where v the recessional velocity of galaxies is, $H0$ the Hubble's constant, and d the distance to galaxies.
2. **Differential Equations**: These equations describe how physical quantities change with respect to time or space. They are extensively used in modelling the behaviour of particles, fields, and waves in the cosmos. Example-1: Schrödinger's equation in quantum mechanics is a prime example, describing how the quantum state of a system changes with time;



GUEST COLUMN

3. **Geometry**: Geometry is crucial for understanding the structure of the universe. NonEuclidean geometries are used to describe the curvature of spacetime in Einstein's theory of general relativity. Example: The metric tensor in general relativity, represented by $g\mu v$ encodes the geometry of spacetime and is crucial in Einstein's field equations, which also describes the dynamics of the universe;





4. **Statistics:** Statistics and probability theory are essential for analysing data from telescopes and experiments, identifying patterns, and making predictions about the universe's behaviour. The Drake Equation, used to estimate the number of active, communicative extraterrestrial civilizations in the Milky Way, includes probabilistic factors.
5. **Algebra and Linear Algebra:** These branches of mathematics are fundamental for solving equations and representing physical systems using matrices and vectors. In quantum mechanics, the state of a quantum system is often represented as a vector, and the operators as matrices.

Benefits to Students and Humanity

The marriage of mathematics and cosmology not only expands our understanding of the universe but also has profound benefits for both students and humanity as a whole:

1. **Educational Growth:** The pursuit of mathematical solutions to cosmic mysteries encourages students to explore, learn, and develop problem-solving skills that can be applied to various other fields.
2. **Technological Advancements:** The quest to unravel the universe has led to the development of cutting-edge technologies like the Hubble Space Telescope, particle accelerators, and supercomputers, which have wide-ranging applications in medicine, communication, and more..

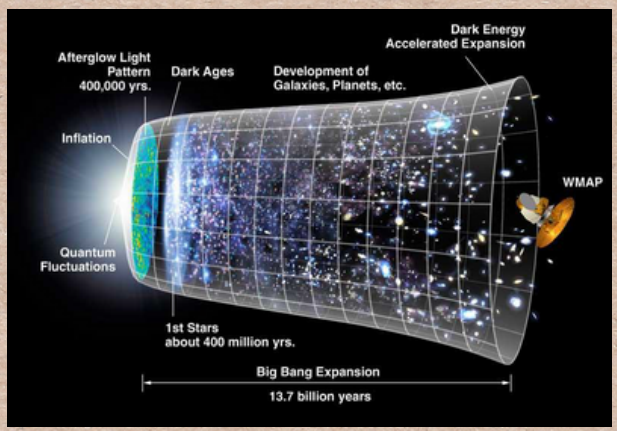
GUEST COLUMN

3. **Innovative Discoveries:** Our understanding of the universe has yielded groundbreaking discoveries, such as the cosmic microwave background radiation, the Higgs boson, gravitational waves, and Black hole imaging. These findings reshape our knowledge of the universe and often have practical applications.
4. **Inspiration and Wonder:** The study of the cosmos through mathematics inspires awe and wonder. It stimulates human imagination, encouraging us to ponder our place in the universe and our responsibility to protect and explore it.
5. **Development of Scientific Temper:** Advancements in the field of mathematical sciences not only expand human knowledge but also liberate us from the constraints of dogmatism, fatalism, superstitions, and erroneous beliefs that have plagued humanity for centuries. The discipline of mathematical logic inherently nurtures a scientific mindset among students.

In conclusion, mathematics is the compass that guides our exploration of the universe's mysteries. From the motion of celestial bodies to the fundamental forces that govern the cosmos, mathematics is our trusted tool for making sense of the universe's intricacies. As we venture further into the cosmos, it is this mathematical language that will continue to unlock its secrets, shape our understanding of the universe, and inspire future generations to reach for the stars.

Shibesh Kumar Jas Pacif, PhD
Professor & Director, Pacif Institute of Cosmology and Selfology (PICS)
Sagara, Sambalpur, Odisha, India

"Mathematics is the language of the universe. All other languages are invented just to communicate while mathematics is discovered." ~ Shibesh Kumar



The Big Bang Theory: A Mathematical elegance

Describe the origin, evolution, structure formation, present state, and the fate of the physical universe very well and explains some astrophysical observations.

MATHEMATICS' CONTEMPORARY RELEVANCE

Mathematics plays a crucial role in ISRO's (Indian Space Research Organisation) recent missions, as it does in all space missions. Some key areas where mathematics is applied in ISRO missions include:

Trajectory Calculations: Mathematicians and engineers use mathematical models to calculate precise trajectories for launch vehicles and spacecraft. These calculations are essential for ensuring that the spacecraft reaches its intended orbit or destination.

Orbital Mechanics: Mathematics, particularly calculus and differential equations, is used to predict and adjust the orbits of satellites and spacecraft. This is critical for maintaining their positions, rendezvous, and docking.

Navigation and Guidance: Mathematical algorithms are employed for onboard navigation and guidance systems. They help the spacecraft make adjustments during its journey to reach the target accurately.

Propulsion Systems: Mathematical models are used to optimize propulsion systems, such as rocket engines, to ensure efficient fuel consumption and safe travel in space.

Data Analysis: Mathematics is used extensively to process and analyse the data received from spacecraft and satellites. This data helps scientists and engineers make decisions during the mission.

Risk Assessment: Probability and statistics play a role in assessing and mitigating risks associated with space missions, including the likelihood of success and potential failure scenarios.

Communication: Mathematical techniques are used in designing communication systems that enable data transmission between Earth and spacecraft, even over vast distances.

Remote Sensing: Image processing and data interpretation, often involving mathematical algorithms, are used to extract valuable information from remote sensing satellites.

STUDENT'S COLUMN

"Mathematics is the elegant poetry of logical ideas, where every equation tells a story waiting to be unraveled."

In the world of numbers, we find our way,
Mathematics, where beauty holds its sway.
Equations dance and patterns they reveal,
Infinite wonders that numbers conceal.

From Pythagoras to Euler's grace,
Math's elegance, we all embrace.
It's the language of science, a universal key,
Unlocking the secrets of the world, you see.

Geometry's shapes, so perfectly designed,
Calculus charts the changing, finite line.
Statistics reveals the data's tale,
In math, our understanding will prevail.

So, let us celebrate this numeric art,
A symphony of logic from the start.
In the realm of math, we find our place,
A world of wonder, a boundless space.

INTRIGUING FACTS

Φ

Golden Ratio: The Golden Ratio, often denoted by the Greek letter phi (Φ), is approximately equal to 1.6180339887. It appears in various natural phenomena, art, and architecture, such as the proportions of the Parthenon in Athens and the arrangement of seeds in a sunflower.

Math in Music: Music is inherently mathematical. Rhythms, scales, and harmonies can be analyzed using mathematical principles. For example, the octave is a 2:1 frequency ratio, and chords are based on mathematical relationships.

Ancient Origins: India has a long and ancient tradition of mathematics dating back to the Vedic period, with mathematical texts known as the Sulbasutras. These texts contain geometric principles used in the construction of altars for Vedic rituals.

Invention of Zero: The concept of zero (0) as a numeral, as well as its use as a placeholder in positional notation, is believed to have originated in India. This was a groundbreaking development that had a profound impact on mathematics and science.

0

Bhaskara II: Bhaskara II, also known as Bhaskaracharya, was a prominent Indian mathematician and astronomer from the 12th century. He made important contributions to algebra and is known for his work on indeterminate equations.

STAR PERFORMERS

SR.NO.	ROLL NO.	NAME	EXT MARKS (70)
1.	22CS050	Sneha Jain	69
2.	22CS053	Hritik Raheja	69
3.	22CS107	Shrey Agarwal	69
4.	22EC116	Ruhani Singh	69
5.	22CS010	Ashish Kumar	68
6.	22CS128	Sumukh Mishra	68
7.	22AIML028	Shikhar Varshney	68
8.	22AIML031	Karuna Nidhan Singh	68
9.	22IT005	Kanak Goel	68
10.	22EC039	Abhijay Yadav	68
11.	22AIML006	Yuvraj Singh	67
12.	22IT035	Mohit Negi	67
13.	22IT086	Anukrit Srivastava	67
14.	22EC120	Ayushi Agarwal	67
15.	22CS025	Sankalp Saxena	66

STAR PERFORMERS

SR.NO.	ROLL NO.	NAME	EXT MARKS (70)
16	22CS147	Arpan Jaiswal	66
17	22AIML015	Rohit Pandey	66
18	22CS027	Anusha Agarwal	65
19	22CS066	Vansh Bharadwaj	65
20.	22CS089	Riya Agarwal	65
21.	22CS097	Ansh Agarwal	65
22.	22CS146	Dhruv Gupta	65
23.	22AIML034	Akhilesh Yadav	65
24.	22CS096	Arbaz Ali	64
25.	22IT024	Iti Singh	64
26.	22IT033	Mohit Kumar	64
27	22IT046	Pulak Jakhmola	64
28..	22Ec030	Gaurav Mehta	64
29.	22AIML003	Mohd Faiz	63
30.	22AIML030	Muskan Jaiswal	63
31.	22EE048	Priyanshu Varshney	63

STAR PERFORMERS

SR.NO.	ROLL NO.	NAME	BRANCH	EXT MARKS(100)
1.	2100911540045	Yash	CSDS	99
2.	2100911540008	Anmol Bansal	CSDS	97
3.	2200910130017	Akshay Goel	IT	96
4.	2200910210024	Nikita Negi	CSDS	95
5.	2200910130128	Pranshu Joshi	IT	94
6.	2100911540045	Shalindra Rajput	CSDS	94
7.	2100911530031	Naincy	AIML	92
8.	2100911530024	Kumar Kartikey Pandey	AIML	92
9.	2100911540010	Anurag Patel	CSDS	91
10.	2200910210031	Satyam Singh	CSDS	91
11.	2100910310077	Koyal Biswas	EC	90

MATH-E-MAGIC

- Using only addition, add eight 8s to get the number 1,000.
- I am an odd number. Take away one letter, and I become even. What number am I?
- I am a three-digit number. My tens digit is five more than my one's digit, and my hundred digit is eight less than my tens digit. What am I?
- Jane is twice as old as John, and John is three years older than Sally. If the sum of their ages is 42, how old is Jane?
- If Radha is the 50th fastest and slowest runner in her school, how many students are there in her school?
- Complete the series 1,6,13,22,33,..

ANSWERS:

- *888 + 88 + 8 + 8 + 8 = 1,000.*
- *Seven (remove the 's' and you get "even")*
- *193 (1 is 8 less than 9, and 9 is 5 more than 4)*
- *Jane is 18 years old*
- *99 students*
- *Pattern is +5, +7, +9, +11*
  So the next number will be +13
  33+13 = 46

THE TEAM

DR. BHUPENDER PARASHAR
ASSOCIATE PROFESSOR & HOD,
DEPARTMENT OF MATHEMATICS, ALUMNI
COORDINATOR, JSSATEN.

DR. RANU PANDEY
(EDITOR)
ASSISTANT PROFESSOR
DEPARTMENT OF MATHEMATICS

STUDENT VOLUNTEERS

As we set sail on this mathematical adventure, I extend my warmest wishes to all our readers. May this newsletter serve as a beacon of inspiration and a compass guiding maths enthusiasts on their unique journeys. I'd also like to take a moment to express my deep gratitude to Dr. Ranu Pandey Ma'am to give me the chance to work on the newsletter. In the end, I'd like to thank Shagun and Somiya for their tireless effort and dedication .

HARSH JAIN
(BTech IT 4th year)
Core Team Member- JSS Photography & Films Club
0607harshjain@gmail.com

So, as we embark on this mathematical journey, I offer this newsletter my best wishes for luck, inspiration, and boundless success. May this be an incredible resource and a source of inspiration for maths enthusiasts everywhere. I also want to take a moment to express my heartfelt appreciation for the team's hard work, dedication, and collaboration in creating this newsletter.

SHAGUN SNGH
(BTech EC 3rd year)
20shagun02@gmail.com

I want to highlight the crucial role of our Mathematics newsletter in fostering a sense of academic community and knowledge sharing. Keep up the fantastic work, and together, we'll continue to make an invaluable resource for our department. Thank you for unwavering guidance.

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