CHATRAPATHI SIVAJI TRI SATAJAYANTHI (CSTS)

GOVERNMENT KALASALA, JANGAREDDIGUDEM

ELURU DIST., A.P.



DEPARTMENT OF MATHEMATICS

NATIONAL WEBINAR ON MATHEMATICS

THEME: EXPLORING THE BEAUTY AND COMPLEXITY OF MATHEMATICAL STRUCTURES IN NATURE

MARCH 07th 2024

CHATRAPATHI SIVAJI TRI SATA JAYANTHI (CSTS)

GOVT. KALASALA



Enter to Learn - Leave to Serve

Jangareddigudem, Eluru Dist

Phone : 08821-225310, Visit us at :

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E-Mail: jangareddigudem.manatv@gmail.com

27-02-2024.

From: Dr.CH.Badari Narayana, Department of Mathematics.

To: The Principal, C.S.T.S Govt kalasala, Jangareddigudem.

Sub: Permission to Conduct National webinar on 07-03-2024-Request regarding.

Department of Mathematics is proposed to conduct a National Webinar On 07-03-2024. The invited speakers for the National Webinar On Mathematics are Dr.S.Durga Bhavani,University of Hyderabad, School of Computer and information sciences Dr.R.Radha University of Hyderabad School of Mathematics and Statistics. Hence I request you to permit me to conduct the above mentioned national webinar.

Thank You Sir,

Yours faithfully (Dr.CH.BADARI NARAYANA)

DEPARTMENT OF MATHEMATICS

Permitted

Principal CSTS Govt. Kalasala Jangareddigudem-534447 Eluru Dist.,A.P

NOTICE

It is proposed to conduct departmental staff meeting on 05-02-2024 at 4PM in the Department of Mathematics.

Agenda of the meeting: National Webinar, National Science Day Event, Student's tutorial, Conduction of Mid Exams etc.

1. Dr. CH. Badari Narayana, Lecturer in Mathematics,

CIBS

2. Dr. M. Madhu, Lecturer in Chemistry,

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3. Dr. K. Uttam Sagar, Lecturer in Commerce.

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CSTS Gov. Kalasala Jangareddigudem-534447 Eluru Dist. A.P

MEETING

Departmental meeting was held on 05-02-2024 at 4PM in the Department of Mathematics under the chairmanship of Dr. N. Prasad Babu, Principal of this college. And the following issues have been resolved.

- Resolved to organize a national webinar on the subject of mathematics, addressing timely topics and aiming to facilitate knowledge sharing and professional development among students with renowned experts.
- Also resolved to establish student tutorials, where undergraduate students from our college will teach mathematics subjects to intermediate (10+2) level students, with the aim of facilitating knowledge sharing and mutual benefit.
- Also Resolved to execute the conduction of mid-term examinations, adhering to maintaining integrity in assessment processes.

The following members are present and signed.

- 1. Dr. CH. Badari Narayana, Lecturer in Mathematics, CH21
- 2. Dr. M. Madhu, Lecturer in Chemistry, p.9-
- 3. Dr. K. Uttam Sagar, Lecturer in Commerce.

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Principal CSTS Govt. Kalasāla Jangareddigudem-534447 Eluru Dist.,A.P

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06-03-2024.

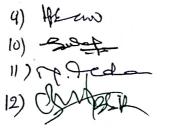
Department of Mathematics is going to conduct National Webinar On 07-03-2024in college seminar hall. In this regard I request all Teaching staff to participate in national webinar to support and make it a grand success.

Thank You Sir,

SIGNATURE OF THE DEPARTMENT I/C

SIGNATURE OF THE STAFF MEMBERS

2) 3) 4) 5



SIGNATURE OF THE PRINCIPAL

Principal CSTS Govt. Kalasala Jangareddigudem-534447 Eluru Dist., A.P

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NOTICE

05-03-2024

The Department of Mathematics is going to organize a National webinar on mathematics on 07-03-2024 from 10am onwards in seminar hall the invited speakers are going to deliver basic concepts of solid geometry and fractal geometry hence all the students are instructed to attend the seminar hall by sharp 10am.

SIGNATURE OF THE DEPARTMENT I/C

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SIGNATURE OF THE PRINCIPAL

Principal CSTS Govt. Kalasala Jangareddigudem-534447 Eluru Dist.,A.P

Objectives:

- 1. To Explore Fractal Geometry: The webinar aimed to introduce participants to the concept of fractal geometry and its relevance in understanding natural forms. By showcasing classical fractals like the Sierpinski carpet, Cantor set, and Mandelbrot set, the objective was to elucidate how fractals represent the intricate patterns observed in nature.
- 2. To Understand the Link between Fractals and Nature: Through discussions led by Professor S. Durga Bhavani madam, participants were encouraged to explore the connection between fractal geometry and natural phenomena. By examining how space-filling curves relate to contemporary DNA fractal structures, attendees gained insights into the application of mathematical principles in biological sciences.
- 3. **To Provide Insights into Solid Geometry:** The webinar aimed to offer participants a comprehensive overview of solid geometry, led by Professor R. Radha madam. The objective was to equip attendees with fundamental equations governing geometric shapes and techniques for evaluating their surface areas and volumes.
- 4. **To Foster Knowledge Sharing and Engagement:** Through interactive sessions and discussions, the webinar sought to create an environment conducive to knowledge sharing and engagement. Participants were encouraged to actively participate in the sessions, ask questions, and contribute to vibrant discussions.
- 5. **To Promote Appreciation for Mathematical Structures in Nature:** Ultimately, the webinar aimed to foster a deeper appreciation for the beauty and complexity of mathematical structures found in nature. By exploring fractal and solid geometry, participants were encouraged to recognize the ubiquitous presence of mathematical principles in the world around them.



CSTS GOVERNMENT KALASALA JANGAREDDIGUDEM



DEPARTMENT OF MATHEMATICS

NATIONAL WEBINAR ON MATHEMATICS

THEME: EXPLORING THE BEAUTY AND COMPLEXITY OF MATHEMATICAL STRUCTURES IN NATURE

RESOURCE PERSONS

Prof. S. Durga Bhavani School of Computer and Information Sciences School of Mathematics and Statistics University of Hyderabad Topic: Fractal Geometry: Mathematics of Nature

Prof. R. Radha University of Hyderabad **Topic:** Solid Geometry-Overview

Abstract: Discover fractal geometry's portrayal of natural forms like the Sierpinski carpet, Cantor set, and Mandelbrot set. Uncover the connection between space-filling curves and contemporary DNA fractal structures. Explore fundamental equations governing geometric shapes and techniques for assessing their surface areas and volumes.



National Webinar on Mathematics

Date: March 7th, 2024

Theme: Exploring the Beauty and Complexity of Mathematical Structures in Nature. **Conducted by:** CSTS Government Degree Kalasala, Jangareddigudem.

Introduction: The National Webinar on Mathematics, organized by the Department of Mathematics at the University of Hyderabad, aimed to delve into the intricate and captivating realm of mathematical structures found in nature. With esteemed resource persons leading the discussions, the webinar provided participants with invaluable insights into fractal geometry and solid geometry.

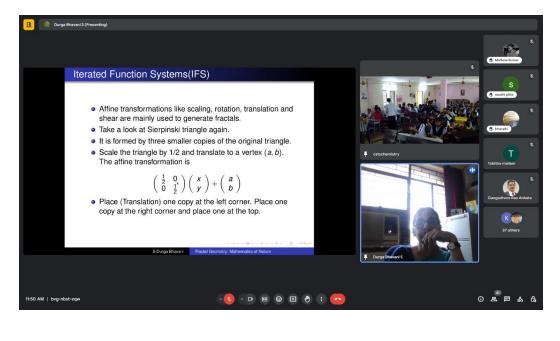
Resource Persons and Topics:

Prof. S. Durga Bhavani madam

Affiliation: School of Computer and Information Sciences, University of Hyderabad

Topic: Fractal Geometry: Mathematics of Nature

Professor Bhavani madam began her session by introducing participants to the concept of fractal geometry and its significance in understanding natural forms. She elaborated on classical fractals such as the Sierpinski carpet, Cantor set, and Mandelbrot set, showcasing their intricate patterns and self-similar properties. Through visual aids and interactive examples, participants gained a deeper understanding of how fractal geometry reflects the complexity and beauty of nature. Furthermore, Professor Bhavani highlighted the fascinating link between space-filling curves and modern DNA fractal structures, shedding light on recent discoveries in genetics and biophysics. Attendees were engaged in discussions exploring the mathematical principles underlying these phenomena and their applications in various fields.

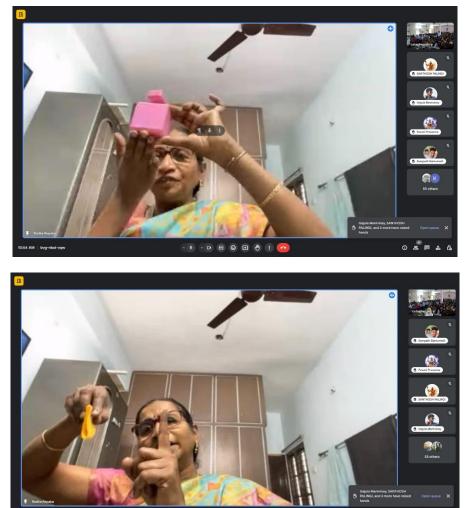


Prof. R. Radha madam

Affiliation: School of Mathematics and Statistics, University of Hyderabad

Topic: Solid Geometry Overview

Professor Radha madam's session provided participants with a comprehensive overview of solid geometry, focusing on fundamental equations governing geometric shapes and methods for evaluating their surface areas and volumes. Beginning with a discussion on basic geometric shapes such as lines, planes, spheres, cylinders, and cones, Professor Radha guided attendees through the mathematical principles underlying these shapes' properties. Through illustrative examples and problem-solving exercises, participants gained practical insights into calculating surface areas and volumes of various solids. Professor Radha emphasized the importance of solid geometry in diverse fields such as architecture, engineering, and physics, showcasing its relevance and applicability in real-world scenarios.



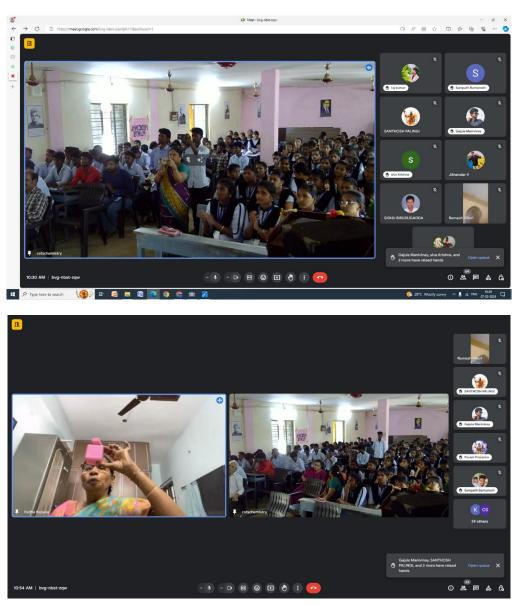
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Abstract Overview:

The webinar abstract set the stage for participants, offering a glimpse into the rich and diverse topics covered during the sessions. From exploring fractal geometry's portrayal of natural

forms to delving into the intricacies of solid geometry, participants were presented with a multifaceted journey through mathematical structures in nature.



Registration and Participation:

The webinar witnessed enthusiastic participation from 523 registered participants, who joined the sessions online through the Google Meet platform. Participants from across the country eagerly engaged with the resource persons, contributing to vibrant discussions and knowledge sharing.

S.No	College	No. of
		Responses
1.	CSTS Government Kalasa, Jangareddigudem	109
2.	Sri Durga Malleswara Siddhartha Mahila Kalasala, Vijayawada	189
3.	Pingle Govt. Degree College (A), Hanmakonda	01
4.	Pithapur Rajah's Government College (A), Kakinada	04
5.	Dr. Lakireddy Hanimireddy Govt. Degree College, Mylavaram	17

6.	AP Model School, Puroshothapatnam, Ichapuram	01
7.	Pavitra Degree College, Bachupeta, Machilipatnam	11
8.	Government Degree Arts College, Rajamundry	26
9.	GDC Avanigadda	41
10.	Government Degree College, Kamavarapukota	03
11.	Sri Ramachandra Degree College, Jangareddigudem	08
12.	SKR Government College for women, Rajamundry	08
13.	Rayalaseema University	01
14.	SKR & SKR Govt. Degree College for women(A), Kadapa	01
15.	Yogi Vemana University, Kadapa	01
16.	Sri ABR Government Degree College, Repalle	01
17.	Adikavi Nannya University, Rajamundry	04
18.	VKR College Gannavaram	02
19.	KSN Government Degree College, Ananthapur	01
20.	VKR College, Kesarapalli	13
21.	JNTU GV, Vizianagram	02
22.	Hindu College Guntur	01
23.	KBN College, Vijayawada	01
24.	Aditya Degree College for Women	01
25.	SSR Degree College, Machilipatnam	01
26.	DRG GDC, Tadepalligudem	11
27.	Sri Y.N. College, Narsapur, Westgodavari	13
28.	DVR & Dr. HS MIC College of Technology, Kanchikacharla	11
29.	Krishna University	05
30.	Degree College, Antarvedigudem	01
31.	GDC Peramullapuram	01
32.	Sri Venkateswara University, Tirupathi	06
33.	GITAM University, Vizag	10
34.	RSR Engineering College	01
35.	MVS Govt. Arts & Science Degree College (A), Mahububanagar	01
36.	JNTU Hyderabad	01
37.	Avanthi institute of engineering and Technology, bhogapuram,	01
	Vizianagram	
38.	RGUKT-VALLEY	03
39.	Sri Venkateswara University, Tirupathi	04
40.	KRU Dr. MR Apparow College of PG Studies, Nuzvid	01
41.	Sri DNR GDC (W), Palakol	01
42.	Madanapalle Institute of Technology and Science, Madanapalle	01
43.	Sasi Institute of technology and engineering, Tadepalligudem	03
44.	St. Joseph's College for Women (A)	01

S.No	Responses	No. of Responses
1.	Students	436
2.	Scholars	5
3.	Faculty	82

S.No	Stream of Study	No. of Responses
1	B.A.	41
2.	B.Com.	21
3.	B.Sc.	387
4.	Others	74

Conclusion:

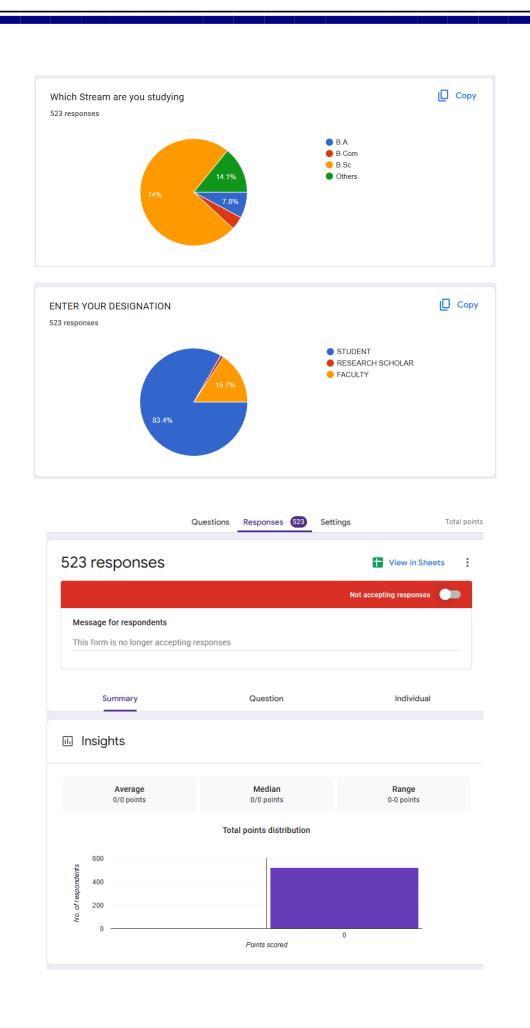
The National Webinar on Mathematics proved to be a resounding success, providing participants with a deeper appreciation and understanding of mathematical structures in nature. Through insightful presentations by esteemed resource persons and active participation from attendees, the webinar fostered a spirit of exploration and discovery in the realm of mathematics. As the event concluded, participants left with newfound knowledge, inspired to further explore the beauty and complexity of mathematical structures in nature.



Acknowledgments:

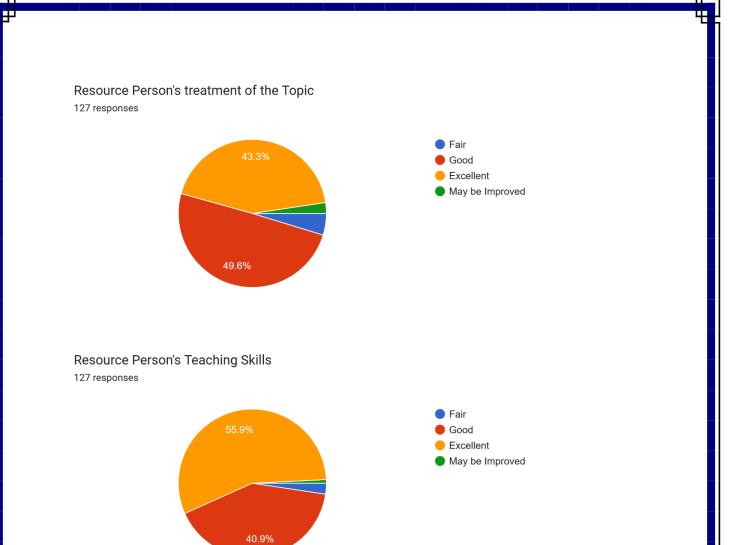
The organizers extend their heartfelt gratitude to the resource persons, Professor S. Durga Bhavani madam and Professor R. Radha madam, for their invaluable contributions to the webinar. Special thanks to Dr. CH. Badari Narayana sir for coordinating the program and ensuring its smooth execution. The unwavering support of Dr. N. Prasad Babu sir, the Principal of the CSTS Government Degree kalasala, Jangareddigudem is also acknowledged with gratitude.

The success of the webinar would not have been possible without the active participation and enthusiasm of the attendees. The organizers express their sincere appreciation to all participants for their engagement and contribution to the event's success.

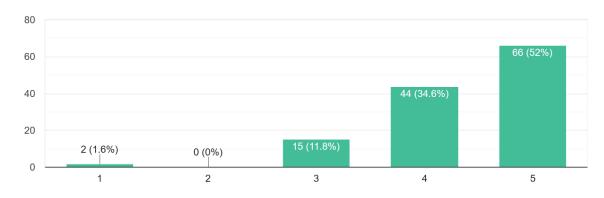


At the conclusion of the National Webinar in Mathematics, participant certificates were distributed to attendees who actively engaged with the event by submitting their feedback analysis. This initiative not only recognized the contributions of participants but also encouraged them to provide valuable insights, fostering a collaborative learning environment within the mathematics community. The Questions asked in the feedback link are analyzed as follows.

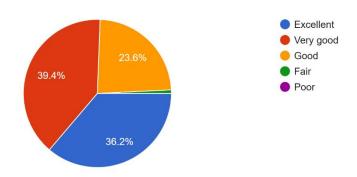
Program was well planned within the time slot 127 responses Yes 🛑 No Did the Webinar met your expectations? 127 responses Yes 🕨 No 96.1% **Resource Persons Communicated properly?** 127 responses Yes No 🛛 98.4%



How would you rate the conference on 5 scale rating? 127 responses



Overall Feedback about the Conference 127 responses



VIDEO LINKS

Video 1

https://drive.google.com/file/d/1OjZHE2G1wDjR828c1RjhXLpVNGEgObT-/view?usp=drive_link

Video 2

https://drive.google.com/file/d/17y_03t1khd9Q-oaSP-bnYVOm7BoIeI9/view?usp=drive_link

Video 3

https://drive.google.com/file/d/1AR_6r7_TsQZFYwRl4DmUccJogicSVdii/view?usp=dri ve_link

Video 4

https://drive.google.com/file/d/113G_F7Mctc2cRnKKqtvcAK83ACKPRdZ/view?usp=drive_link

Video 5

https://drive.google.com/file/d/1hj-soIH7Oo3NUTaskEE-mk3yY49MZta/view?usp=drive_link

Video 6

https://drive.google.com/file/d/1OhraQFEv5pkEToLh6-U8iogUVRz53baA/view?usp=drive_link



CSTS GOVT. KALASALA

Jangareddigudem, Eluru District, AP. (Affiliated to Adikavi Nannaya University)

PARTICIPATION CERTIFICATE



This is to certify that Dr. RUDRA RAVI KUMAR PALEGARI From RGUKT-R.K. VALLEY has Participated in the National Webinar on **"Exploring the Beauty and Complexity of Mathematical Structures in Nature**" organized by the Department of Mathematics held on 07th March 2024.





Convener

Principal



CSTS GOVT. KALASALA

Jangareddigudem, Eluru District, AP. (Affiliated to Adikavi Nannaya University)

PARTICIPATION CERTIFICATE



This is to certify that Mr./Mrs./Ms./Dr. K Likhitha From SDMSMK VIJAYAWADA has Participated in the National Webinar on "Exploring the Beauty and Complexity of Mathematical Structures in Nature" organized by the Department of Mathematics held on 07th March 2024.



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Principal

NATIONAL WEBINA	R ON 'Exploring the
Beauty and Complexity o	F Malte matical
Structures in Nature	1)
DATE: 07.03.2024	Resource persons
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No. of Students Attended:	HCU, HYDERABAD

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