INTERNATIONAL SEMINAR ON APPLICATIONS OF MATHEMATICS IN SCIENCE & TECHNOLOGY (ISAMST-2024)

An part of the second of the s

(HYBRID MODE)

(Celebration of National Mathematics Day-2024)

19-20 December 2024

Organized by

DEPARTMENT OF MATHEMATICS

GURU GHASIDAS VISHWAVIDYALAYA (A Central University), BILASPUR - 495009, INDIA

(NAAC A++ Accredited)

Report of the Seminar

The Department of Mathematics, Guru Ghasidas Vishwavidyalaya organized an "International Seminar on Applications of Mathematics in Science & Technology (ISAMST-2024)" in Hybrid mode on 19-20 December 2024 on celebration of National Mathematics Day-2024. It is known that the birthday of the great Indian mathematician Srinivasa Ramanujan was announced to be celebrated as National Mathematics Day by the Government of India in 2012.

On 13th **December**, 2024 the department organized Poster presentation, PPT presentation and Rangoli competition for the students, in which they showed lots of enthusiasm and student talent emerged. Mr. Sumit Yadav and Ms. Maithilee Tiwari won the first prize in the PPT presentation in which they presented views about Ramanujan's work. Even in rangoli students have displayed Mathematical ideas like magical square, Hardy's number etc. The winner of this competition is Komal Jaiswal and the group. In the Poster competition, our students flaunt the art of mathematics and exhibit their talent. Mr. Rishabh Barik won the first prize in the poster competition.

The seminar is organized on the occasion of the birth anniversary of the great Indian Mathematician Srinivasa Ramanujan. The objective of the Seminar is to bring the leading experts and young researchers from other countries and from different parts of India in a common platform to exchange their views on recent development of different areas of Mathematics and its applications. Moreover, the Seminar will stimulate and equip the researchers with important mathematical tools to handle practical challenges encountered in research. The seminar includes keynote addresses and plenary sessions from experts and the presentation of contributed papers.





Guru Ghasidas Vishwavidyalaya (A Central University Established by the Central Universities Act 2009 No. 25 of 2009) Koni, Bilaspur – 495009 (C.G.)

Thrust Areas of the seminar are History of Mathematics, Algebra, Fixed Point theory, Analysis, Differential Geometry, Cryptography and Information Security, Fractional Calculus, Fuzzy Logic, Integral Transform, Mathematical Modelling, Mathematical Biology, Mathematical Geoscience, Numerical Analysis, Soft Computing, Optimization Techniques, Mathematics in Finance and Economics. Targeted participants are Faculty Members, Industrial Person, Research Scholars and UG / PG Students.

The International Seminar was inaugurated at 09:30 am on 19th December, 2024 at the Hall No. 1, RAJAT JAYANTI SABHAGAR. Prof. Nilambari Dave, Former Vice Chancellor or Saurashtra University was the Chief Guest and Prof. Alok Kumar Chakrawal, Vice Chancellor, Guru Ghasidas Vishwavidyalaya (C.G.) presided over the inaugural ceremony. Prof. A.S. Ranadive, Registrar, Guru Ghasidas Vishwavidyalaya (C.G.), Prof. P. P. Murthy, Dean, School of Mathematical and Computational sciences, Prof. A. K. Thakur, Head, Department of Mathematics and Dr. Kankan Sarkar, Organizing Secretary were also present on the dais for the inaugural ceremony. The Seminar received an overwhelming response and 142 participants had registered for the seminar out of which 112 participants were outside Guru Ghasidas Vishwavidyalaya, Bilaspur. Total 122 papers were submitted for presentation in the seminar.

Key note speakers of the international seminar were Prof. Kamalmani Baral, OSF Saint Anthony Medical Center, Rockford, IL, USA and Prof. Rajendra Pant, University of Johannesburg, Auckland Park 2006, South Africa. Total 5 invited lectures were delivered by Prof. Arvind Kumar Sinha, NIT, Raipur, Prof. Dilip Kumar Jaiswal, SRM University, Lucknow, Dr. Subhas Khajanchi, Presidency University, Kolkata, Dr. Anand Kumar Tiwari, IIIT Allahabad and Prof. Sudhakar Kumar Chaubey, University of Technology and Applied Sciences-Shinas, Oman (Online Mode). There were six parallel session for online paper presentation and two offline session for paper presentation. The seminar broadcast through YouTube, Zoom Meeting and Google Meet.

Sponsors of the "International Seminar on Applications of Mathematics in Science & Technology (ISAMST-2024)":

- (1) Guru Ghasidas Vishwavidyalaya, Bilaspur
- (2) Chhattisgarh Council of Science & Technology
- (3) HDFC Bank
- (4) Punjab National Bank
- (5) Bank of India
- (6) Bank of Baroda

गुरु घासीदास विश्वविद्यालय (केन्रीय विश्वविद्यालय अधिनयम 2009 क्र. 25 के अंतर्गत स्थापित केन्नीय विश्वविद्यालय) कोनी, बिलासपुर - 495009 (छ.ग.)



Guru Ghasidas Vishwavidyalaya (A Central University Established by the Central Universities Act 2009 No. 25 of 2009) Koni, Bilaspur – 495009 (C.G.)

Photographs of the seminar:

















गुरू घासीदास विश्वविद्यालय (केन्रीय विश्वविद्यालय अधिनयम 2009 क्र. 25 के अंतर्का स्थापित केन्रीय विश्वविद्यालय) कोनी, बिलासपुर - 495009 (छ.ग.)



Guru Ghasidas Vishwavidyalaya (A Central University Established by the Central Universities Act 2009 No. 25 of 2009) Koni, Bilaspur – 495009 (C.G.)













& man

Dr. Kankan Sarkar Organizing Secretary ISAMST-2024 Prof. A. K. Thakur Convenor ISAMST-2024

INTERNATIONAL SEMINAR

APPLICATIONS OF MATHEMATICS IN SCIENCE & TECHNOLOGY

Registration Form

1. Name (Capital Letters)	:
2. Gender	:
3. Designation	:
4. Institution	:
5. Afliation	:
6. Corresponding Address	:
7. Mobile Number	:
8. WhatsApp Number	:
9. E-mail ID	:
10. Title of the Paper	:
11. Details of Payment	:
DD Number / Transaction ID	:
Mode of Payment	:
Amount	:
Date of Payment	:

Date: Place:

Signature of the Applicant

Address for Correspondence

Prof. A. K. Thakur

Convener **Department of Mathematics** Guru Ghasidas Vishwavidyalaya Bilaspur, Chhattisgarh



⋈ hodmathsggv@gmail.com

Dr. Kankan Sarkar

Organizing Secretary Department of Mathematics Guru Ghasidas Vishwavidyalaya Bilaspur, Chhattisgarh

+91-9733207160 kankan.math@gmail.com⊠



Chief Patron Alok Kumar Chakrawa

Hon'ble Vice-Chancellor Guru Ghasidas Vishwavidyalaya Bilaspur, Chhattisgarh

Prof. Abhav S. Ranadive

Guru Ghasidas Vishwavidyalaya Bilaspur, Chhattisgarh





rof. P. P. Murthy

Dean, Sos -Mathematical & Computational Sciences Guru Ghasidas Vishwavidyalaya Bilaspur, Chhattisgarh

Convener

Head, Department of Mathematics Guru Ghasidas Vishwavidyalaya Bilaspur, Chhattisgarh





Organizing Secretary

ir. Kankan Sarkar

Associate Professor, Department of Mathematics Guru Ghasidas Vishwavidyalaya Bilaspur, Chhattisgarh

Coordinators

Treasurer

Dr. J. P. Jaiswal **Dr. Dhananjay Gopal** Dr. Manish Kumar Gupta Mr. Rajesh Batra

Organizing Committee

Dr. Manish Kumar Gupta

Dr. Braj Bhushan Chaturvedi

Dr. Koti N. V. V. Vara Prasad

Mr. Chandra Prakash Dhuri

Dr. Uma Devi Patel

Dr. Santosh Verma

Dr. Brijendra Paswan

Mr. Hapka Surendra

Dr. Sankirtan Sardar

Dr. Amar Pandey











Celebration of National Mathematics Day-2024

INTERNATIONAL SEMINAR

APPLICATIONS OF MATHEMATICS IN SCIENCE & TECHNOLOGY (HYBRID MODE)

December 19-20, 2024

Department of Mathematics 🚖

Guru Ghasidas Vishwavidyalaya (A Central University) Bilaspur, Chhattisgarh, India



https://sites.google.com/view/isamst2024

About the University

Guru Ghasidas Vishwavidyalaya (GGV), situated in Bilaspur, Chhattisgarh, India, was established in 1983 and is named in the honor of Guru Ghasidas, a revered saint of the Satnami community. GGV was upgraded to Central University in the year 2009 by Government of India. GGV is a distinguished member of both the Association of Indian Universities and the Association of Commonwealth Universities. The university has achieved significant accolades, including an A++ accreditation, a Times Higher Education World University Ranking in the 401-501 range, and recognition as a Category-I university by the University Grants Commission (UGC). Dedicated to providing higher education opportunities to the underserved regions of central India, GGV offers an extensive array of undergraduate, postgraduate, and doctoral programs across various disciplines such as arts, science, commerce, engineering, and technology. Renowned for its commitment to academic excellence and research, GGV cultivates a dynamic learning environment with stateof-the-art facilities, a diverse student population, and an emphasis on holistic development.

About the Department

The Department Mathematics started functioning in the year 1989. It has established itself as an excellent center for research and teaching in Algebra, Numerical Analysis, Topology, Analysis, Approximation Theory, Geometry, Cryptography, PDE, Fixed Point Theory, Fractional Calculus, Fuzzy Analysis and Mathematical Modeling under the active participation and guidance of dedicated faculty members. The Department regularly revises and upgrades curriculum (UG/PG and Ph.D.) by introducing many new aspects of Mathematics.

The faculty members of the Department have the record of pursuing and completing collaborative/interactive research work with many eminent mathematicians of the country and other parts of the world.

About the Bilaspur City

Bilaspur is situated on the bank of river Arpa which has its own history in the holy books. The state capital Raipur is 111 kilometers from Bilaspur. It is the second largest city in Chhattisgarh and is known as NYAYADHANI because of the High Court of the state (largest High Court of Asia) being situated here. The South East Central Railway (SECR) Zone and South-Eastern Coal Fields Limited (SECL) have their Headquarters in this city. The city is surrounded by many historical places and temples; Siddha Peeth Maa Mahamaya at Ratanpur and Amarkantak which is the origin of river Narmada, life line river of Madhya Pradesh. Bilasa Devi Kevat Airport Bilaspur is the nearest airport to connect Bilaspur.

About the Seminar

This seminar is organized on the occasion of the birth anniversary of the great Indian Mathematician Srinivasa Ramanujan. The objective of the Seminar is to bring the leading experts and young researchers from other countries and from different parts of India in a common platform to exchange their views on recent development of different areas of Mathematics and its applications. Moreover, the Seminar will stimulate and equip the researchers with important mathematical tools to handle practical challenges encountered in research. The seminar includes keynote addresses and plenary sessions from experts and the presentation of contributed papers.

Thurst Areas

- History of Mathematics
- ❖ Algebra
- **:** Fixed Point Theory
- Analysis
- Differential Geometry
- Cryptography and Information Security
- Fractional Calculus
- **❖** Fuzzy Logic
- Integral Transform
- **❖** Mathematical Modelling
- **❖** Mathematical Biology
- * Mathematical Geoscience
- **❖** Numerical Analysis
- **❖** Soft Computing
- Optimization Techniques
- **Mathematics in Finance and Economics.**

Targeted Participants

- ***** Faculty Members
- Industrial Person
- ***** Research Scholars
- UG / PG Students

Accommodation

Accommodation will be provided in the University Guest House/Hostel (as per availability) on payment basis.

No T.A. /D.A. will be provided to the participants by the organizing committee.

Registration Process

Registration Link: https://forms.gle/akYeVVPF6GBnRC5j8



Bank Details

A/c Holder Name : Registrar Guru Ghasidas University Bilaspur

Bank Account No. : 37137162271

Bank Name : State Bank of India IFSC Code : SBIN0018879

Note: Payment through cheque is not acceptable.

Registration Fee	Upto Dec. 10, 2024	After Dec. 10, 2024
Students (UG/PG)	₹ 1000	₹ 1000
Research Scholar	₹ 1500	₹ 1700
Faculty Members/ Industrial Person	₹ 2000	₹ 2200
Foreign Delegets	\$ 100	\$ 125

Important Dates

Abstract/ Full Paper Submission (Last Date) : 10.12.2024 Confirmation of Presentation : 14.12.2024

Paper Submission

Kindly submit the Abstract/Full Paper to the following link https://sites.google.com/view/isamst2024

For more details visit → ∰ https://new.ggu.ac.in/













INTERNATIONAL SEMINAR APPLICATIONS OF **APPLICATIONS OF MATHEMATICS IN SCIENCE & TECHNOLOGY**

(ISAMST-2024) (HYBRID MODE)

Abstract Book

(Celebration of National Mathematics Day-2024) 19-20 December 2024



ORGANIZED BY

DEPARTMENT OF MATHEMATICS

(DST-FIST Sponsored)

GURU GHASIDAS VISHWAVIDYALAYA

(A Central University) BILASPUR 495009, C.G.