



INTERNATIONAL CONFERENCE
(IN THE MEMORY OF LATE PROFESSOR S. L. SINGH)
ON
NONLINEAR ANALYSIS AND APPLICATIONS (ICNAA 2024)
&
SYMPOSIUM ON ANCIENT INDIAN MATHEMATICS
May 10-12, 2024
Organised by
DEPARTMENT OF MATHEMATICS
Pt. L. M. S. Campus, Sridev Suman Uttarakhand University, Rishikesh-249201, Uttarakhand, India



About Professor S. L. Singh

Professor S. L. Singh (1942 – 2017) was one of the most renowned researchers in fixed point theory in the world. He did his Ph.D. in Mathematics in 1976 from Kumaun University, India. During his 47 years long career, he served different Indian and foreign universities. He had the longest association with Gurukula Kangri Vishwavidyalaya, Haridwar, India from 1985 till his retirement in 2004. After joining Gurukula Kangri Vishwavidyalaya, Prof. Singh was inclined towards old sciences. He has done remarkable work in the History of Mathematics and Indian (Vedic) Mathematics. He wrote two books on Vedic mathematics. One is “**Lilavati of Bhascaraarya**”, an English translation of the Lilavati book of Bhascaraarya (originally in Sanskrit). Another book is “**The Prosody of Pingala**”. Prof Singh had co-authored more than 230 research papers in Probabilistic Analysis, Topology, Operator Theory, Fractal Graphics, and History of Mathematics. He had supervised 30 Ph.D. Thesis. He initiated research on the history of ancient Indian Mathematics in Gurukula Kangri Vishwavidyalaya and supervised 3 Ph.D. thesis. More than half a dozen doctoral theses under his supervision have been presented through Hindi medium. At least a dozen of research articles have been published in various journals in Hindi.

University at a Glance

Sridev Suman Uttarakhand University was established as a State University of Uttarakhand, with the State Government notification No 270/XXXVI (3)/2012/48(1)/2012 dated 19th October 2012, following the amendment of the erstwhile Pt. Deen Dayal Upadhyay Uttarakhand Vishwavidyalaya Act in 2011. The university is nestled amidst the picturesque Himalayan ranges in Tehri Garhwal and has jurisdiction over seven districts, including Chamoli, Raudraprayag, Pauri, Tehri, Uttarkashi, Haridwar, and Dehradun in the Garhwal region of Uttarakhand. The university's Badshahithaul campus is strategically located between Chamba and New Tehri, offering a breathtaking view of the snow-capped Himalayas and the enchanting Bhagirathi Valley. With its location on the Delhi-Gangotri national highway, it enjoys seamless connectivity with major areas of the country, making it accessible to students and faculty members alike.

About Pt. Lalit Mohan Sharma Campus, Rishikesh

Pt. Lalit Mohan Sharma Campus, Rishikesh, the erstwhile autonomous college, one of the best academic institutions of the newly created Uttarakhand State catering to the academic needs of the western part of Uttarakhand, is the new campus of the University. The Government of Uttarakhand decided to convert the college into a campus of the university to justify the historical facts regarding the city as the name “Hrishikesh” which is a combination of two words Hrishik (senses) and esh (God or master) is the perfect place to gain the highest quality of knowledge through penance (hard work) and devotion. Set against the backdrop of the Himalayas and with the pristine Ganga flowing through it, the ancient town is a hub of many ancient and new temples, attracting thousands of pilgrims throughout the year. The popular belief of Hindu devotees is that performing austerities in the holy town and offering prayers in the holy temples bring the much-needed attainment of ‘Mukti’ or salvation. The city is well connected with buses, trains from major areas of the country, and Air (Dehradun Airport at Jolly Grant is nearly 21Kms from Rishikesh). Rishikesh is approximately 340 meters above sea level. The weather in Rishikesh remains generally excellent with temperatures varying between 24.8^o-39.1^oC in May. For details, one can visit www.uttarakhandtourism.gov.in.

About the Mathematics Department

Department of Mathematics caters to the needs of undergraduate and postgraduate students and boasts a distinguished faculty consisting of two professors, one associate professor, and one assistant professor. The faculty members are specialised in the areas of Nonlinear functional analysis, Biomathematics, Mathematical Modelling and Fixed Point Theory. The department also offers a Ph.D. program in Mathematics. Faculty members collaborate globally with colleagues from Turkey, Romania, Algeria, Iran, Saudi Arabia, Tanzania, Serbia, Spain, and different parts of India. Their research has taken them to destinations such as Senegal, Turkey, Nepal, Taiwan, Thailand, and the USA. This reflects the active involvement of the department in research, which strives to be recognised for excellence among academic institutions in India and abroad. Emphasizing ICT is crucial for enhancing educational capacity without compromising quality. Faculty members encourage students to utilize e-books, e-PG Pathshala for free postgraduate-level content, access 24*7 SWAYAMPARBHA for high-quality educational programs on TV, and engage in SWAYAM for Massive Open Online Courses. Additionally, students are motivated to enroll in NPTEL and Swayam Programs, aligning with the three cardinal principles of Education Policy—access, equity, and quality.

Young Scientist Awards

There will be two Young Scientist Awards, one in the category of Nonlinear Analysis and another in the category of Ancient Indian Mathematics, for outstanding oral presentations. The candidates up to the age of 35 years on 1st January 2024 will be eligible for the Young Scientist Awards. The candidates who wish to be considered for the Young Scientist Awards should indicate on the top of the paper “For Consideration of Young Scientists Award” and send their abstracts and full-length papers to the Organizing Secretary by 15 April 2024. The papers will be reviewed by the screening committee to decide the selection of papers for presentation in the Award Sessions. The candidate must produce an appropriate document for proof of age at the time of registration.

Organizing Committee

Chief Patron and Chairman:

Prof. N. K. Joshi
Hon'ble Vice-Chancellor
Sridev Suman Uttarakhand University,
Badshahithaul, Tehri Garhwal

Co-Chairman:

Prof. M. S. Rawat
Campus Director, Pt. L. M. S. Campus Rishikesh

Prof. G. K. Dhingra

Dean, Faculty of Science, Pt. L. M. S. Campus Rishikesh

Convener:

Prof. Anita Tomar

Head

Department of Mathematics

Pt. L. M. S. Campus Rishikesh

Email: anitatmr@yahoo.com

Mob: +91-9410361825

Organizing Secretaries:

Prof. Dipa Sharma

Dr. Gaurav Varshney

Department of Mathematics

Pt. L. M. S. Campus Rishikesh

Advisory Committee

H. Ansari, South Africa

Thabet Abdeljawad, Saudi Arabia

R.P. Aggarwal, USA

GVR Babu, India

J. C. Bansal, India

Cristian Chifu, Romania

Y. J. Cho, Korea

Renu Chugh, India

S.G. Dani, India

R. C. Dimri, India

Andrea Fulga, Romania

Lilliana Guran, Romania

Krzysztof Gdawiec, Poland

U. C. Gairola, India

Shiv Kumar Gupta, India

Mohammad Imdad, India

M. C. Joshi, India

Kanhaiya Jha, Nepal

Yasunori Kimura, Japan

Erdal Karapinar, Turkey

Santosh Kumar, India

Nihal Tas, Turkey

Mukesh Kumar, India

V. K. Katiyar, India

S.A. Katre, India

Janusz Matkowski, Poland

Vinod Mishra, India

S. N. Mishra, India

Juan Martínez-Moreno, Spain

Eberhard Malkowsky, Serbia

Rale M Nikolić, Serbia

Nihal Yilmaz Özgür, Turkey

H.C. Pathak, India

B.C. Prasannakumara, India

Adrian Petrusel, Romania

R. P. Pant, India

Rajendra Pant, South Africa

Ariana Pitea, Romania

Mamta Rani, India

Vladimir Rakočević, Serbia

Mohd. Sajid, Saudi Arabia

R. Subramaniam, India

D. R. Sahu, India

Sanjeev Kumar, India

Important Information

Deadline for Early Bird Registration : March 31, 2024

Registration fees from participants:-

- India & SAARC countries : Rs.2500
- India & SAARC countries (spot registration) : Rs.3000
- Foreign Delegates : \$200
- Foreign Delegates (spot registration) : \$250
- Students with fellowship : Rs. 1500/-
- Students with fellowship (spot registration) : Rs. 2000/-
- Non-stipendiary students : Rs. 800/-
- Non-stipendiary students (spot registration) : Rs. 1000/-

Registration fee can be paid online

- Account Name: Pt. LMS Sridev Suman Uttarakhand University Campus Rishikesh
- Account Number: 7646392913
- IFSC Code: IDIB000R639
- Bank Name: Indian Bank

Registration Link- <https://forms.gle/8LEY9KECHHKqTrPq8>

For any queries, please feel free to contact the Organizing Committee:

Prof. Anita Tomar : +91-9410361825

Prof. Dipa Sharma : +91-9412937353

Dr. Gaurav Varshney: +91-9917290065

About the Conference

This conference is dedicated to the exploration of Nonlinear Analysis and the profound heritage of Ancient Indian Mathematics. It serves as a platform for knowledge exchange among esteemed academicians and researchers, emphasising the practical application of mathematical techniques to address real-world challenges. Encompassing Nonlinear Analysis, Pure and Applied Mathematics, the conference provides a global platform for emerging researchers to showcase insights, fostering cross-disciplinary dialogues on the relevance of Ancient Indian Mathematics. Notably, the inclusion of the International Day for Women in Mathematics on May 12 underscores the commitment to diversity. This conference aims to offer a distinctive opportunity for participants to engage with global mathematicians and evaluate the latest developments, innovative ideas, and methods in these crucial and dynamic domains.

TOPICS OF INTEREST

Topics of interest include but not limited to, the following areas

NONLINEAR ANALYSIS AND APPLICATIONS

- Nonlinear Differential Equations
- Nonlinear Functional Analysis
- Nonlinear Control Theory
- Nonlinear Partial Differential Equations
- Nonlinear Optimization
- Nonlinear Dynamical Systems
- Chaos Theory and Applications
- Nonlinear Mathematical Modelling
- Nonlinear Waves and Solitons
- Nonlinear Mechanics and Solid Mechanics
- Nonlinear Analysis in Biology and Medicine
- Nonlinear Analysis in Engineering Applications
- Nonlinear Analysis in Economics and Finance
- Nonlinear Analysis in Data Science and Machine Learning
- Nonlinear Analysis in Climate Science and Environmental Modelling
- Nonlinear Analysis in Image Processing and Computer Vision
- Nonlinear Analysis in Quantum Mechanics and Quantum Computing
- Nonlinear Analysis in Social Sciences and Humanities Numerical Methods for Nonlinear Problems
- Applications of Nonlinear Analysis in Industry
- Fixed point theory and its applications Operator theory.

OBJECTIVES

ICNAA 2024

- Share knowledge and foster collaboration in nonlinear analysis.
- Address challenges and promote real-world applications.
- Inspire innovation and global cooperation.
- Facilitate the publication of research papers and findings to contribute to the academic community.
- Highlight real-world applications of nonlinear analysis in various domains, from engineering to biology.
- Promote international cooperation and a global perspective on nonlinear analysis.

SYMPOSIUM ON ANCIENT INDIAN MATHEMATICS

- Contributions of Ancient Indian Mathematicians
- Vedic Mathematics and Its Principles
- Aryabhata and His Mathematical Works
- Brahmagupta and the Concept of Zero
- Kerala School of Mathematics
- Geometry and Trigonometry in Ancient India
- The Use of Infinite Series and Limits in Ancient Indian Mathematics
- Algebraic Contributions of Ancient Indian Mathematicians
- Number Systems and Decimal Notation in Ancient India
- Sanskrit Mathematical Texts and Manuscripts
- Influence of Ancient Indian Mathematics on Modern Mathematics
- Indian Mathematical Instruments and Techniques
- Mathematical Practices in Ancient India
- Ethnomathematics and Cultural Aspects of Indian Mathematics
- Translations and Preservation of Ancient Indian Mathematical Texts
- Challenges in Studying and Preserving Ancient Indian Mathematical Heritage
- Comparative Studies of Indian Mathematics with Other Ancient Traditions
- Mathematical Puzzles and Recreational Mathematics in Ancient India
- Modern Research and Scholarship in the History of Ancient Indian Mathematics
- Contributions of Ancient Indian Mathematicians.

OBJECTIVES

SYMPOSIUM

- Preserve, Celebrate and Explore the rich heritage of Indian mathematics.
- Investigate historical influences and cultural significance.
- Inspire research and cross-cultural appreciation.
- Provide insights into the ancient Indian mathematical education system and its impact on modern education.
- Investigate the influence of ancient Indian mathematics on the global mathematics and its relationships to other ancient mathematical traditions.
- Demonstrate the modern-day relevance and applications of ancient Indian mathematical concepts.
- Inspire scholars and mathematicians with the historical achievements and innovations in Indian mathematics.

Note:

- Registration charges cover a free conference kit, lunch and beverages during the conference.
- Please note that the Organizing Committee is unable to provide accommodation assistance.
- Cultural programs and sightseeing tours for participants may be arranged to nearby tourist spots.

Important Dates

Deadline for Submission of Abstract and Full-length Paper:

April 10, 2024

Notification of Acceptance: April 15, 2024

Early-bird Registration: April 15, 2024

Proceedings of the conference & Symposium:

Proceedings of the conference & symposium will be published in Journal indexed in Scopus and Web of Science. The instructions and format for the full-length paper will be sent after the acceptance of the paper.

