

Annual Symposium on
Foundations of Mathematics and Spirituality
Numbers, Nature and Reality
Where Mathematics Meets Consciousness, and Equations Touch Eternity

Background & Rationale

Mathematics has, for millennia, stood not only as the language through which we describe the cosmos, but as a gateway to questions that reach beyond the visible world. The ancient Pythagoreans saw number as the underlying principle of all existence. In the Indian tradition, mathematicians and philosophers contemplated zero and infinity alongside the idea of Brahman, weaving numerical insight with metaphysical depth. Gottfried Wilhelm Leibniz discerned echoes of the divine within the simplicity of binary. Across nature, patterns of number quietly reveal themselves from the spirals governed by Fibonacci sequences to the subtle presence of irrational ratios in organic forms.

In the modern academy, mathematics is often approached as a rigorous and formal discipline offering a strong foundation from which we are now uniquely positioned to further explore its deeper philosophical and spiritual dimensions.

This Annual Symposium on the Foundations of Mathematics and Spirituality (FMS) seeks to renew that connection, with this year's special focus on number theory the most elemental and mysterious branch of mathematics. Bringing together mathematicians, philosophers, research scholars, and cognitive scientists, the symposium is guided by a shared conviction: that the study of numbers is not merely an abstract pursuit, but a window into profound questions about reality, consciousness, and being.

By exploring the hidden structures within number theory and their manifestations in the natural and cognitive worlds, we ask: what do numbers reveal about the fabric of existence? And what does our ability to understand them suggest about the nature of the mind that seeks to know? Does it also point towards a divine hand in the universe?

Objectives of the Symposium

- ◆ To create a sustained interdisciplinary forum where mathematicians, philosophers, cognitive scientists, and contemplatives engage as genuine intellectual peers rather than as guests in each other's territory.
- ◆ To examine foundational mathematical concepts — imaginary numbers, transcendental numbers, infinity, zero — through the dual lenses of rigorous mathematics and the philosophy of consciousness.
- ◆ To investigate whether the human capacity to conceive of the infinite, the imaginary, and the transcendental reveals something fundamental about the nature of mind itself.

- ◆ To explore the manifold ways in which number appears in nature — as pattern, proportion, symmetry, and law — and what this pervasive and amazing mathematical order implies about the structure of reality and intelligence in the universe.
- ◆ To produce interdisciplinary proceedings that seed future research at the confluence of mathematics, philosophy of mind, and spiritual insights.

Proposed Session Topics

The symposium is organised around six core sessions, each pairing a rigorous mathematical concept with a broader philosophical or spiritual dimension. Each session combines a keynote address with a structured open-floor discussion.

#	Topics
I	Numbers and the Search for the Divine
II	Biography of i , π , and ∞
III	Imaginary Numbers and the Horizon of Human Imagination
IV	" i " vs. "I" : The Algebra of Consciousness
V	Transcendental Numbers and Transcendence
VI	Numbers, Mind, and Consciousness

Target Participants

This symposium is designed to be genuinely and generatively interdisciplinary. We extend a warm invitation to participants from the following communities, while welcoming all who find themselves drawn to the questions at its heart:

- ◆ Mathematicians and mathematics educators with an interest in the philosophical and aesthetic foundations of their discipline.
- ◆ Philosophers of mathematics, philosophy of mind, and metaphysics.
- ◆ Cognitive scientists and consciousness researchers working on the mathematical structures of experience.
- ◆ Physicists working on the foundations of quantum mechanics, cosmology, and the mathematical structure of nature.
- ◆ Graduate and doctoral students seeking interdisciplinary perspectives and scholarly community.

About Previous FMS

Our **First Annual Symposium on Foundations of Mathematics and Spirituality**, organized by the Bhaktivedanta Institute, Kolkata in collaboration with NIT Patna, marked a significant milestone in

fostering interdisciplinary dialogue between mathematics, philosophy, and spirituality. The symposium brought together distinguished mathematicians, scientists, philosophers, educators, and students from across India and abroad to explore fundamental questions concerning the nature of mathematical truth, infinity, logic, consciousness, and reality. Among the highlights were the lecture by **Prof. Om Prakash (Department of Mathematics, IIT Patna)** on *"Emergence of Basic Set Theory from the Science of Consciousness"* and the keynote presentation by **Prof. Henk Barendregt (Radboud University, Netherlands)** on *"Infinity in Mathematics and Meditation."* Through thought-provoking lectures, and interactive sessions, the event created a vibrant platform for meaningful intellectual exchange.

The overwhelming participation (**around 170 participants**) and enthusiastic response from the academic community highlighted the growing interest in integrating rigorous mathematical inquiry with insights from the Indian Knowledge System and Vedāntic philosophy. The symposium featured diverse themes, including set theory and karma, mathematical models of consciousness, Vedānta logic, and the philosophical significance of infinity, demonstrating the potential for productive engagement between modern mathematics and spiritual traditions. Participants appreciated the event's unique approach to examining foundational questions from both scientific and spiritual perspectives, leading to stimulating discussions and new collaborative opportunities. Building upon the success of this inaugural event, we are delighted to present the next edition of the symposium, continuing our mission to inspire deeper exploration of the foundations of mathematics and their broader philosophical and spiritual implications.

Previous Speakers & Contributions

- ◆ **Prof. William D. Phillips (Nobel Laureate in Physics, NIST, Maryland, USA)**, delivered a lecture on January 10, 2024, as part of the 'My Journey of Discovery' lecture series organized by Bhaktivedanta Institute (BI) Kolkata.
- ◆ **Prof. David J. Wineland (Nobel Laureate in Physics, NIST, Colorado, USA)**, delivered a lecture on November 17, 2024, as part of the 'My Journey of Discovery' lecture series organized by BI Kolkata.
- ◆ **Prof. J. N. Srivastava (Statistician, Colorado State University, USA)** has contributed a series of articles in the Institute's prestigious Journal, **Savijnanam** (Volume 1 & 2)- Scientific Exploration for a Spiritual Paradigm on "Life comes from Life". This article series presents the **mathematical frameworks of various scientific and spiritual theories of the origin & evolution of Life**, critically validating them for universality.
- ◆ **Prof. Henk Barendregt, Emeritus Professor, Foundations of Mathematics and Computer Science, Radboud University, Netherlands**, delivered a lecture on September 06, 2025, as part of the first 'Annual Symposium on Foundations of Mathematics and Spirituality', organized by BI Kolkata in collaboration of Mathematics and Computation Department, NIT Patna.
- ◆ **Prof. Om Prakash, Distinguished Professor, Department of Mathematics, IIT Patna, India**, delivered a lecture on September 06, 2025, as part of the first 'Annual Symposium on Foundations of Mathematics and Spirituality', organized by BI Kolkata in collaboration of Mathematics and Computation Department, NIT Patna.
- ◆ **Prof. Sandeep Kumar, Distinguished Professor, Department of Mechanical Engineering, IIT BHU, Varanasi, India**, delivered a lecture on September 06, 2025, as part of the first 'Annual Symposium on Foundations of Mathematics and Spirituality', organized by BI Kolkata in collaboration of Mathematics and Computation Department, NIT Patna.

- ◆ **Prof. Manohar Lal Kaushik, Distinguished Academic, School of Computer and Information Sciences, IGNOU, New Delhi, India**, delivered a lecture on September 06, 2025, as part of the first 'Annual Symposium on Foundations of Mathematics and Spirituality', organized by BI Kolkata in collaboration of Mathematics and Computation Department, NIT Patna.
- ◆ All India Students' Conference on Science and Spiritual Quest (AISSQ-2018) themed '**Mathematics and Reality**' held at **Indian Institute of Technology (IIT) Bhubaneswar**, to explore the deepest mysteries of the nature of Reality through Mathematics. This event brought together many mathematicians and scholars.
- ◆ A major volume on **Mathematics and Reality** has been published, featuring insights from some of the greatest mathematicians of all time as well as thoughts by some brilliant minds belonging to current era.
- ◆ Our journals and proceedings of AISSQ featuring mathematicians' articles including **Field Medallist, Enrico Bombieri**.

We believe that with the support of Department of Mathematics, IIT Bhubaneswar, we can make this symposium a grand success and contribute significantly to the mathematical and philosophical communities. We look forward to a meeting with the Director to discuss this in detail and outline the next steps for organizing the event.

Expected Outcomes

- ◆ A peer-reviewed symposium proceedings volume, published by a reputable academic press, collecting revised and expanded versions of all keynote addresses and selected papers.
- ◆ A concise public-facing summary document distilling the symposium's key insights for broader educational and cultural dissemination.
- ◆ The establishment of an ongoing interdisciplinary working group on mathematics, nature, and consciousness, with a programme of future events and collaborative publications.
- ◆ Seed proposals for interdisciplinary research projects and collaborative grant applications emerging from connections made at the symposium.
- ◆ A statement of intent — a brief, publicly available declaration articulating the value and necessity of dialogue between mathematical and contemplative traditions.

Tentative Date, Venue, Collaboration Format

- ◆ Date: 26th Sept, 2026
- ◆ Venue: IIT BBSR
- ◆ Organised by Bhaktivedanta Institute, Kolkata in collaboration with Department of Mathematics, IIT BBSR.

Closing Note

Numbers are not neutral. They carry the weight of human wonder. The natural world is saturated with mathematical order — and that order has, in every civilisation, prompted not only calculation but contemplation. When we ask why π appears in the formula for a circle, in the distribution of prime

numbers, and in the quantum mechanical description of the hydrogen atom, we are not asking a merely technical question. We are asking what kind of universe this is.

This symposium begins from that conviction, and it extends an open invitation to all who feel — as Leibniz once wrote — that music is the hidden arithmetic exercise of a soul unconscious that it is calculating. Come and calculate, openly, together. Bring your rigour and your wonder. Both are necessary. Neither is sufficient alone.

About Bhaktivedanta Institute

Bhaktivedanta Institute is a research and educational non-profit organization dedicated to exploring the relationship between science and spirituality. The institute actively promotes **research, conducts seminars, and timely brings out publications on topics such as consciousness studies, and the origin of life**. It aims to bridge the gap between **modern science and ancient spiritual wisdom**, promoting a holistic understanding of reality. The Institute collaborates with scientists, scholars, and spiritual leaders worldwide and organizes **Workshops, Nobel Laureate Lectures, and Conferences to engage students, researchers, and the general public**. It has published over 50+ thought provoking books and papers on the interface of science and spirituality, featuring articles from 25+ Nobel Laureates and world-renowned thinkers. The institute also actively engages with universities and academic institutions to promote dialogue between science and spirituality. **BI continues to be a leading centre for integrating ancient spiritual wisdom with scientific research, inspiring deeper inquiries into life's ultimate meaning and purpose.**

For further details please visit: www.binstitute.org

"The book of nature is written in the language of mathematics." — Galileo Galilei

Note on Registration, Sponsorship, and Logistical Requirements

Registration Fee

To encourage maximum student participation, the registration fee has been kept nominal:

- **Students of the Host Institute:** ₹100 per participant
- **Students from Other Institutes:** ₹200 per participant

Venue Requirements from the Host Institute

The organizing committee kindly requests the host institute to provide:

- One conference hall with a seating capacity of approximately **150 participants**.
- Basic audiovisual facilities (projector, screen, sound system, and microphones) required for the presentations and discussions.

Hospitality

Lunch will be provided to all registered participants during the symposium.

Sponsorship and Financial Support

The **Bhaktivedanta Institute** is a non-profit research and educational organization that functions primarily through voluntary donations. Except for the venue and basic infrastructure support requested from the host institute, **all remaining organizational expenses**—including symposium management, invited speakers' arrangements, hospitality, publicity, conference materials, and other related expenditures—will be borne by the Bhaktivedanta Institute.

We sincerely look forward to collaborating with the host institute to organize a meaningful and successful symposium that promotes interdisciplinary dialogue and academic excellence.

Convenor:

Dr. Debashis Khan

Department of Mechanical Engineering, IIT (BHU)

Organizing Secretary:

Rajesh Pandit

(Alumnus, IISER Kolkata, Mathematics & Statistics)