



13<sup>th</sup> AISSQ  
Conference



**Prof. Reinhard Genzel**  
*Nobel Laureate in Physics*

**Handbook**

*13<sup>th</sup> All India Students' Conference on*  
**Science & Spiritual Quest**

**December 28 - 29, 2024**

**School of Planning & Architecture, Vijayawada**

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Visionary

**Dr. T. D. Singh**

(His Holiness Bhaktisvarupa Damodara Swami)  
Founder Chairman, AISSQ Conference Series

Organized by:



Bhaktivedanta Institute  
Kolkata & Vijayawada

Collaboration with:  
(Honorary)



School of Planning &  
Architecture (SPA), Vijayawada





# *13<sup>th</sup> All India Students' Conference on* **Science & Spiritual Quest**

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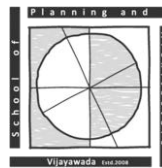


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**School of Planning & Architecture**  
Vijayawada

◆ I ◆



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13<sup>th</sup> AISSQ Conference

28-29 December 2024

# Science & Spiritual Quest

School of Planning and Architecture (SPA) Vijayawada, Andhra Pradesh, India

Special Lectures

Prof. Reinhard Genzel  
*Nobel Laureate in Physics*

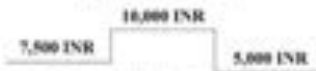
$$\Delta z \Delta p \geq \frac{\hbar}{4\pi}$$

### CONFERENCE TOPICS

- Physics, Cosmology & Beyond
- Life - Origin, Meaning & Purpose
- Mathematics, AI & Consciousness
- Mysteries of Ancient Indian Architectures
- Holistic Education and Human Excellence
- Indian Knowledge Systems
- Spirituality & Health ... and many more

### POSTER PRESENTATION

Cash prize & award



Poster's Abstract Submission by 22 November 2024

### SPEAKERS

- Prof. Reinhard Genzel, Nobel Laureate in Physics, Germany
- Prof. Hans Lijenström, SLU, Sweden
- Prof. Dr. Ramesh Srihonda, Director, SPA, Vijayawada
- Prof. Ramagopal Uppakuri, IIT Guwahat
- Prof. Ranjeev Repaka, IIT Dharwad
- Prof. Sandeep Kumar, IIT (BHU) Varanasi
- Dr. Debashis Khan, IIT (BHU) Varanasi ... and many more

### CONFERENCE HIGHLIGHTS

Interaction with Renowned Scholars, Panel Discussion, Poster Session, Cultural Program, Post-Conference Tour

### SCAN TO REGISTER

Registration Deadline: 15 December 2024



### ADVISORS

- Dr. R. P. Singh, Chairman, Board of Governors, IIT Bhubaneswar
- Prof. Kamal Kishore Pant, Director, IIT Roorkee
- Prof. B S Murty, Director, IIT Hyderabad
- Prof. Venkappayya R Desai, Director, IIT Dharwad
- Prof. Rajiv Prakash, Director, IIT BHilai
- Dr. C. Ramji Singh, Executive Director, AIMS, Kalyani ... and many more

Visionary  
**Dr. T. D. Singh**  
(His Holiness Bhaktisvarupa Damodara Swami)  
Founder Chairman, AISSQ Conference Series

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Bhaktivedanta Institute  
Kolkata & Vijayawada

Collaboration with  
(Honorary)



School of Planning & Architecture (SPA), Vijayawada

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Details: aissq.binstitute.org



◆ IV ◆



*" There can never be any real opposition between religion and science; for the one is the complement of the other. Every serious and reflective person realizes, (I think,) that the religious element in his nature must be recognized and cultivated, if all the powers of the human soul are to act together in perfect balance and harmony. And indeed it was not by accident that the greatest thinkers of all ages were deeply religious souls."*

— Prof. Max Planck  
*Nobel Prize in Physics*

◆ V ◆



◆ VI ◆





*D*edicated to

# AISSQ Conference Series Visionary

**Dr. T. D. Singh**

(His Holiness Bhaktisvarupa Damodara Swami)

(1937-2006)

*Scientist and Saint*

Founder Director, Bhaktivedanta Institute and  
Founder President, Vedanta and Science Educational  
Research Foundation



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• <b>Human Excellence through Holistic Education in HEI, India</b> Prof. Dr. Usha Rani, <i>VFSTR Deemed to be University, Vadlamudi, Andhra Pradesh</i>	
• <b>Holistic Education through the Distilled Essence of World Religions</b> Mr. Segar Millindar, <i>Former Asst. General Manager, Air India; Director, NVIERA     Bangalore &amp; Faculty, Department of Distance Education, Bhaktivedanta Institute     Kolkata, India</i>	
• <b>Embodiment of the Divine: Unpacking Sublime and Sainly Qualities</b> Prof. Ramjee Repaka, <i>Department of Mechanical, Materials and Aerospace Engineering,     IIT Dharwad</i>	
• <b>Ethics and Values - Exploration from Bhagavad Gita</b> Dr. Jayanarayan T. Tudu, <i>Assistant Professor, Department of Computer Science and     Engineering, IIT Tirupati</i>	
• <b>The Convergence of Science and Spirituality in Holistic Education</b> Prof. Dr. Gomatam Mohana Charyulu, <i>VFSTR Deemed to be University,     Vadlamudi, Andhra Pradesh</i>	
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Sai Sravanthi Avuladoddi, *B.Tech-4th year, Electronics and Communication Engineering, Vijaya Institute of Technology for Women, Vijayawada*
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## Welcome Address

Respected dignitaries, speakers, delegates, volunteers and supporters,

Namaskar, wish you a very good morning and welcome to the AISSQ conference!



Dr. T. D. Singh (His Holiness Bhaktisvarupa Damodara Swami), the founding Director of the Bhaktivedanta Institute, envisioned this conference series, the All India Students' Conference on Science and Spiritual Quest (AISSQ). He was concerned about the welfare of the students and was compassionate to their work pressure and obligations for academic excellence and career. While mother India is producing many brilliant students, Dr. Singh was moved many times by the extreme steps some students take under mental pressures and get addicted to unhealthy habits including modern day internet addictions. He felt that a balanced pursuit of scientific temper and spiritual wisdom will bring the best out of the students and make them a happy and noble citizen.

While science bestows us with the wonderful technological gifts to sustain the growing population of the planet, spirituality blesses us with wonderful gifts for a happy life and inner satisfaction. Science teaches us the mechanics of the action and reaction; spirituality teaches us the discrimination for a right action. Science helps us to keep our life running, spirituality teaches us what we should run for in our life. Her Excellency Smt. Pratibha Patil, the then President of India, while inaugurating our AISSQ conference in Delhi, wonderfully remarked, "Science helps us to transplant the heart, spirituality helps us to transform the heart." Both are important in our life. A beautiful interlaying of science and spirituality from the early part of life will give a solid foundation for the rest of the life to our students.

India is regarded as the land of spirituality. However, we should not forget the scientific contributions from ancient Indian traditions in the fields of Ayurveda, Astronomy,

architecture, metallurgy, chemistry, biodiversity, textiles, etc. The most important contribution of the Indian traditional wisdom is the science of Mind. In science and philosophy, we have been struggling for centuries to acknowledge the existence of the mind with unsolved problems like, mind-body problem, binding problem, etc. However, our ancient Indian traditions have mastered the science of mind and art of mind control. In this age of increasing anxiety and depression among the youths, such traditional wisdom would be a great blessing. Now time is ripe that we should, without hesitation, incorporate the ancient Indian models of mind into our serious scientific research and introduce mind control techniques like meditation, yoga, etc. into the curriculum of students before it is too late. The aim of this conference series is to give a glimpse into such science of mind and our inner world and inspire students with the wisdom and practice of mind discipline.

We hope this two-day conference will further enrich you all with scientific temper and spiritual wisdom for a happy and satisfied life in this critical time of India at the center of the global stage. We welcome all of you with our heartfelt gratitude, the delegates, speakers, guests, volunteers and the supporters including academic partners, volunteers, Directors, faculties, students from various Institutes, colleges and universities including but not limited to, IIT Nuzivedu, NRI Inst. Of Technology, Lingayya Institute of Technology, Aditya Group of Institutions, Vignan University, etc. We are also extremely grateful to the School of Planning and Architecture (SPA) management, faculty and students for collaborating with us to organize this conference at SPA. Have a nice conference and pleasant stay at Vijayawada. Thank you all for joining us in this conference.

Namaskar!

With gratitude,

**Vasudeva Rao**

Chairman, AISSQ Conference Series

President, Bhaktivedanta Institute

(Alumnus, IIT Kanpur)

## *Message from the Convener*

The true scientific endeavour is motivated by the desire to understand the innumerable facets of nature, from the behaviour of the subatomic particles inside the atom to the distant galaxies of our cosmos. This pursuit is merely reflected in many fields of knowledge, including physics, mathematics, chemistry, cosmology, life sciences, philosophy, and psychology. More mysteries are emerging than ever before as we gain more knowledge. Seeking the "fundamental reality" is the aim of both spiritual and scientific endeavours. While spiritualists refer to it as God, scientists refer to it as the "Absolute or Ultimate Reality." A person's whole existence becomes joyful when he or she gets the glimpse of such "fundamental reality", and by that such person also helps others in the society for their progressive journey.



In order to bring renowned scientists, philosophers, contemporary intellectuals, and spiritual leaders together for open discussion, Dr. T. D. Singh, also known as His Holiness Bhaktisvarupa Damodara Swami, the Founder Director of the Bhaktivedanta Institute, organized numerous conferences and seminars after realizing the need for a synthesis through dialogue between the leaders of scientific and spiritual traditions. Additionally, he directly engaged in a number of science-spirituality discussions with many well-known scientists, including several Nobel Laureates. In a modest effort to honour Dr. T. D. Singh's memory and his magnificent and ambitious goal of combining science and spirituality, the 13th All India Students' Conference on Science and Spiritual Quest (AISSQ-2024) is being planned. The goal of the current conference in the AISSQ series is to raise awareness among faculty, students, and others in general about the importance of properly understanding science and spirituality in order to better serve oneself and society.

The city of Vijayawada, situated on the banks of the Krishna River, is rich in Indian

culture and spiritual importance. Further, the location of School of Planning and Architecture, Vijayawada will improve our exploration by offering a calm and motivating backdrop. In order to provide a thorough and illuminating educational experience, the AISSQ - 2024 aims to combine traditional Indian wisdom with modern scientific understanding. Leading scholars will be available for participants to interact with, encouraging multidisciplinary cooperation and creative thinking. In a time when multidisciplinary knowledge is essential to scientific and technological advancements, this approach of synthesis between science and spirituality is predominantly relevant.

We believe that AISSQ - 2024 will foster fresh viewpoints, intellectual curiosity, and a greater comprehension of both the scientific and spiritual spheres. I wish you good luck on your exploration voyage at AISSQ - 2024.

**- Convener**  
AISSQ – 2024

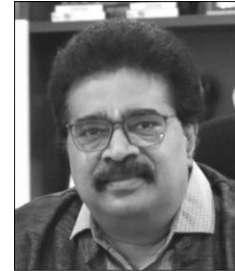




## *Message from the Director*

### *SPA Vijayawada*

It is with great pleasure that I extend my warm greetings and best wishes for the success of the 13th AISSQ Conference on Science and Spiritual Quest, to be held on December 28-29, 2024, at the School of Planning and Architecture, Vijayawada.



The theme of this two-day conference, focusing on the intersection of science, spirituality, and human excellence, is both timely and thought-provoking. It promises to explore a wide range of topics, including physics, cosmology, the origin of life, mathematics, artificial intelligence, architecture, holistic education, health, Indian knowledge systems, and spirituality. The diverse and stimulating discussions, led by eminent speakers of international repute, will undoubtedly contribute to enriching and understanding of these critical fields and their interconnections.

I commend the efforts of the Bhaktivedanta Institute, Kolkata & Vijayawada, in collaboration with SPA Vijayawada, for organizing such an important event. The platform created for intellectual exchange and the sharing of knowledge is an invaluable opportunity for researchers, practitioners, and students alike to learn and grow.

My best wishes to all the participants, speakers, and organizers for the conference, souvenir and for future endeavours that continue to bridge the world of science and spirituality for the greater good of humanity.

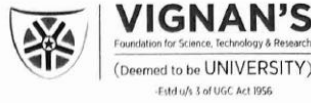
May this conference be a catalyst for further dialogue and exploration at the crossroads of science, spirituality, and human excellence.

Sincerely

**Prof. Dr. Ramesh Srikonda**

Director,

School of Planning and Architecture (SPA), Vijayawada



## *Message from the Vice-Chancellor*

### *Vignans' Foundation for Science & Technology*

It is with immense pride and passion that I extend my heartfelt congratulations and best wishes to the Bhakti Vedanta Institute and the School of Planning and Architecture, Vijayawada, for hosting the 13th All India Students' Conference on Science and Spiritual Quest (AISSQ-2024). This conference, marking the Bhakti Vedanta Institute's Golden Jubilee celebrations, is a profound initiative that resonates deeply with the intellectual and spiritual aspirations of our times.

The theme of AISSQ-2024—sprinted around life, consciousness, and cosmology—offers a rare and invaluable platform to explore the intricate areas of science and spirituality. In an age dominated by technological advancements and scientific breakthroughs, the question of meaning, purpose, and interconnectedness in human life has gained unprecedented significance. This conference stands as an ideal, inviting young minds and scholars to engage in a holistic understanding of reality that transcends disciplinary frontiers.

The merging of science and spirituality is not merely an academic exercise but a necessity for the holistic development of individuals and societies. While science provides the tools to interpret the material world, spirituality offers the wisdom to steer the complexities of human existence and consciousness. The synergy of these two domains can lead to transformative insights, addressing some of the most pressing challenges of our era, including ecological degradation, mental health crises, and societal fragmentation.

The exploration of consciousness, one of the central themes of this conference, holds profound implications for humanity. Consciousness, as the essence of human experience, has long intrigued philosophers, scientists, and spiritualists alike. By exploring into its complexities, we not only uncover the mysteries of human cognition but also the interdependence that binds all forms of life. This understanding has the potential to

adoptive empathy, inclusivity, and a shared sense of purpose in a world often divided by ideologies and material quests.

The conference also invites us to revisit the cosmological questions that have shaped human thought for ages. Questions about the origin, structure, and destiny of the universe are not just scientific curiosities but are deeply entwined with our existential studies. By integrating the insights of modern cosmology with the timeless wisdom of spiritual traditions, we can aspire to uncover truths that inspire admiration and guide humanity toward sustainable living in harmony with nature.

I urge the participants of AISSQ-2024 to approach these profound topics with an open mind and a spirit of inquiry. Let this conference serve as a repository for innovative ideas, critical discussions, and collaborative efforts. The interdisciplinary approach you adopt here can sow the seeds for innovative contributions that redesign our understanding of reality and the role of humanity within it.

As the Golden Jubilee of the Bhakti Vedanta Institute is being celebrated, let us also reflect on the continuing inheritance of this esteemed institution. For five decades, it has been a torchbearer in integrating the realms of science and spirituality, inspiring countless individuals to pursue knowledge with humility and purpose. This momentous is not just a celebration of past achievements but a call to envision a future where science and spirituality together illuminate the path to a more equitable, compassionate, and sustainable world.

On this occasion, I express my deepest appreciation to the organizers for their vision and dedication in bringing together students, scholars, and thought leaders for this significant event. To the participants, I extend my heartfelt wishes for fruitful discussions and enriching experiences. May this conference inspire us all to exceed the apparent dichotomy between science and spirituality and contribute meaningfully to the advancement of knowledge and the betterment of humanity.

Let us strive for a future where science and spirituality are not seen as adversaries but as complementary forces, working in unison to unveil the profound truths of existence and elevate the human spirit.

**Prof. P. Nagabhusan**

## *Message from the Director General*

**DR. PINNAMANENI SIDDHARTHA INSTITUTE OF MEDICAL  
SCIENCES & RESEARCH FOUNDATION**

CHINAOUTPALLI, GANNAVARAM MANDALAM, KRISHNA DIST., ANDHRA PRADESH

I am very delighted that the All India Conference on Science and Spiritual Quest is being jointly organized by the Bhaktivedanta Institute at Vijayawada on 28th & 29th Dec, 2024. The conference highlights are Interaction with renowned Scholars, Panel Discussions and Poster Sessions etc.

The purpose of this conference is to bring awareness among the students and youth of India about the importance of spirituality in this age of science and technology. The minds of not only students and youth but also people from all walks of life are being agitated by the misdirected use of the products of science and technology on a daily basis. Hence spirituality along with Science is the need of the hour. Therefore, the conference of this nature is of utmost importance in shaping the future of our nature in a positive way for the wellbeing of everyone.

I hope this Conference will inspire the students and young scholars to be champions in both science as well as spiritually and will transpire an inspiring message to the whole nation. I pray for the blessings of Lord Almighty Sri Venkateswara for this conference to be a great success.

- Dr. C. NAGESWARA RAO

## Acknowledgements

We are thankful that by the mercy of the Supreme Lord and blessings of the All India Students' Conference on Science and Spiritual Quest (AISSQ) visionary Dr. T. D. Singh and all the dedicated team members, the 13th AISSQ (AISSQ– 2024) is finally being organized at School of Planning and Architecture, Vijayawada, Andhra Pradesh. We express our deep gratitude to the honorable chief guest - Prof. Dr. Madhabananda Kar, Director of AIIMS, Mangalagiri, esteemed special guest - Dr Chadalawada Sudha, Founder, Sree Padmavathi Venkateswara Foundation and distinguished guests of honor - Dr. Ch. Nageswara Rao, Director General, Dr. Pinnamaneni Siddhartha Institute of Medical Sciences & Research Foundation; Dr. Amarendra Kumar Sandra. Director, Rajiv Gandhi University of Knowledge Technologies, Nuzvid; Dr. R. Venkata Rao, Chairman, NRI Institute of Technology (NRIIT), Agiripalli for kindly accepting our invitation to grace the event and share their profound words of wisdom. We would also deeply acknowledge all the esteemed speakers and session chairs for kindly accepting our invitation to share their profound wisdom.

We would like to specially thank Dr. Ramesh Srikonda, Director, School of Planning and Architecture, Vijayawada for hosting the conference at the School of Planning and Architecture (SPA), Vijayawada and special thanks to Dr. Srinivas, Head, Dept. of Architecture and all the staff of School of Planning and Architecture, Vijayawada who has helped the conference in various capacities. We as well express gratitude to Dr. (Major) M V Bhimeswar, Principal, Dr. Pinnamaneni Siddhartha Institute of Medical Sciences and Research Foundation, Chinna Avutupalli and Dr.Kancharla Sudhakar, Principal, Government Siddhartha Medical College, Vijayawada; for encouraging us to organize pre-conference seminars in their institutes, respectively. Our heartfelt thanks go to all the local organizing committee of the conference - Prof. Ramgopal Uppaluri, IIT Guwahati; Sri G.Srinivas (Gokul), Sri Krishna Mishra Das, Sri K.V Raghuram; Sri G.Yadu Vamsi Krishna; Dr. Ch. Bharath, NRI Hospital; Sri A. Muralidhar; Smt K. Dasami; Smt A. Jayalakshmi; Sri B. Shyamal Rao; Sri A. Narahari; Sri K. Venkateswara Rao; Sri P.Ramanayya; Sri A.Chandra Sekhar; Sri V. Muralidhar, Sri E. Kondal Rao and many others who have put immense time, heart, energy and above all, their pure loving service for the conference.

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The assistance rendered by the members coming from different parts of the country and all the members of the Bhaktivedanta Institute are beyond imagination. Without their dedication, and full support, this conference would not have been possible. Our sincere thanks to all of you for your wonderful dedication. We gratefully acknowledge the good wishes and prayers from friends, well-wishers, community of Dr. T. D. Singh's family without whose blessings, we could not have thought about this conference.

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We are indebted to Dr. T. D. Singh (H. H. Bhaktisvarupa Damodara Swami), a pioneer of science and spirituality dialogue, Founder Director of the Bhaktivedanta Institute, who has guided us immensely for organizing the conference for the benefit of humanity. Our deep gratitude to Srila A. C. Bhaktivedanta Swami Prabhupada, a visionary saint for the modern age and the Founder Acarya of the Bhaktivedanta Institute - for giving us this wonderful platform and vision.

Words are limited but feelings of heart are beyond what our minds and hands can grasp. We sincerely thank each and every individual, whether your name is mentioned or not, from the unlimited depth of our hearts. May good thoughts come from all directions. May everyone be happy.

Sarve jana sukhino bhavantu!

In the service of the Supreme Lord and your good self,

### **Organizing Committee**

AISSQ - 2024



# Schedule - AISSQ 2024

## Day 1: Saturday, December 28, 2024

09:00 am – 10:55 am	Inaugural Ceremony
10:55 am – 11:00 am	Group Photo with all Conference Participants
11:00 am – 11:15 am	Break
<b>Session 1: Science and Spirituality: An Overview</b> Session Chair: TBD	
11:15 am – 11:50 pm	<b>Foundations of a New Science: A confluence of Science and Spiritual Quest</b> <b>Sri K. Vasudeva Rao</b> , Alumnus IIT Kanpur, President, Bhaktivedanta Institute, Kolkata
11:50 am – 12:00 pm	Q & A
12:00 pm - 12:35 pm	<b>Curiosity Beyond Bounds: 50 years of Bhaktivedanta Institute's Journey into the Foundational Questions of Life and Universe</b> <b>Sri Varun Agarwal</b> , Alumnus IIT Kanpur, Director, Bhaktivedanta Institute, Kolkata
12:35 pm - 12:45 pm	Q & A
12:45pm – 02:00 pm	Lunch Break
<b>Session 2: Holistic Education and Human Excellence</b> Session Chair: Prof. Ramagopal Uppaluri, IIT Guwahati, India	
02:00 pm - 02:15 pm	<b>Human Excellence through Holistic Education in HEI, India</b> <b>Prof. Dr. Usha Rani</b> , VFSTR Deemed to be University, Vadlamudi, Andhra Pradesh



02:15 pm - 02:30 pm	<p><b>Holistic Education through the Distilled Essence of World Religions</b>  <b>Mr. Segar Millindar</b>, Former Asst. General Manager, Air India; Director, NVIERA Bangalore &amp; Faculty, Department of Distance Education, Bhaktivedanta Institute Kolkata, India</p>
02:30 pm - 02:45 pm	<p><b>Embodiment of the Divine: Unpacking Sublime and Sainly Qualities</b>  <b>Prof. Ramjee Repaka</b>, IIT Dharwad, India</p>
02:45 pm - 03:00 pm	<p><b>Ethics and Values - Exploration from Bhagavad Gita</b>  <b>Dr. Jayanarayana Tudu</b>, IIT Tirupati, India</p>
03:00 pm - 03:15 pm	<p><b>The Convergence of Science and Spirituality in Holistic Education</b>  <b>Prof. Dr. Gomatam Mohana Charyulu</b>, VFSTR Deemed to be University, Vadlamudi, Andhra Pradesh</p>
03:15 pm - 03:20 pm	Break
<p><b>Session 3: Mathematics, AI and Consciousness</b>  Session Chair: TBD</p>	
03:20 pm - 03:40 pm	<p><b>Unlocking Inspiration: From Mechanistic Models to Higher Dimensions of Reality</b>  <b>Sri Sushant Sharma</b>, Alumnus IIT Guwahati, Bhaktivedanta Institute Kolkata</p>
03:40 pm - 03:45 pm	Q & A
03:45 pm - 04:05 pm	<p><b>On the Mathematical Modelling of Origin of Life and Consciousness</b>  <b>Dr. Debashis Khan</b>, IIT (BHU) Varanasi</p>
04:05 pm - 04:10 pm	Q & A
04:10 pm - 04:50 pm	<p><b>Man, Mind, and Meaning on Neuroscience, Consciousness and Some Implications for Spiritual Experience</b>  <b>Prof. Hans Liljenstrom</b>, SLU, Sweden</p>

04:50 pm - 05:00 pm	Q & A
05:00 pm - 05:10 pm	Break
<b>Session 4: Curiosity: Questions by Students</b>	
05:10 pm - 05:50 pm	<b>Panelists:</b> Prof. P. K. Singh, IIT (BHU) Varanasi, India Prof. Ramgopal Uppaluri, IIT Guwahati, India Prof. Ramjee Repaka, IIT Dharwad, India Mr. Segar Millindar, Former Asst. General Manager, Air India HH Nilambar Krishna Swami, Bhaktivedanta Institute, Kolkata
05:50 pm - 06:00 pm	Break
06:00 pm - 06:45 pm	<b>Galaxies and Black Holes: A 40-Year Journey</b> <b>Prof. Reinhard Genzel</b> , Nobel Laureate in Physics, Max Planck Institute for Extraterrestrial Physics (MPE), Garching, Germany
06:45 pm - 07:00 pm	Q & A
07:00 pm - 08:00 pm	Cultural Program
08:00 pm – 09:00 pm	Dinner

## Day 2: Sunday, December 29, 2024

<b>Session 5: Spirituality and Health</b>	
Session Chair: Dr. Bharat, Professor and Consultant incharge, Critical Care, NRI Medical College and Hospitals, Chinakakani, Guntur	
09:30 am - 09:45 am	<b>Spiritual Practices and their influence on the Health and Wellness of a Person</b> <b>Prof. R. Ramakrishna</b> , NRI Medical College, Chinnakakani, Guntur, Andhra Pradesh

09:45 am - 09:50 am	Q & A
09:50 am - 10:05 am	<b>Role of Spirituality in Epigenetics</b> <b>Prof. Shiva Prabodh</b> , NRI Medical College, Chinnakakani, Guntur, Andhra Pradesh
10:05 am - 10:10 am	Q & A
10:10 am - 10:25 am	<b>Spirituality &amp; Mental Health</b> <b>Prof. T.V. Pavan Kumar</b> , NRI Academy of Sciences, Mangalagiri. Andhra Pradesh
10:25 am - 10:30 am	Q & A
10:30 am - 10:45 am	<b>Social Maladies and Spiritual Remedies</b> <b>Dr. G. Srinivasa Rao</b> , Sri Krishna Hospital, Narasaraopet, Andhra Pradesh
10:45 am - 10:50 am	Q & A
10:50 am – 11:00 am	Break
<b>Session 6: Indian Knowledge System: Mysteries of Ancient Indian Architectures</b> Session Chair and Keynote Speaker: Prof. Dr. Ramesh Srikonda, Director, School of Planning and Architecture, Vijayawada	
11:00 am - 11:25 am	<b>Architecture and Spirituality</b> <b>Prof. Dr. Ramesh Srikonda</b> , Director, School of Planning and Architecture, Vijayawada
11:25 am - 11:40 am	<b>Spiritual Symbolism in Architecture</b> <b>Dr. Nagaraju Kaja</b> , School of Planning and Architecture, Vijayawada
11:40 am - 11:55 am	<b>Sanctuaries of the Divine: Sacred Groves and Nature in Spiritual Traditions</b> <b>Dr. M. Banu Chitra</b> , School of Planning and Architecture, Vijayawada
11:55 am - 12:00 pm	Q & A

09:45 am - 09:50 am	Q & A
12:00 pm – 01:00 pm	<p><b>Poster Presentation</b></p> <p><b>Chairman (Evaluation):</b> Dr. Hare Krishna Mohanta, BITS, Pilani, Rajasthan, India</p> <p><b>Chairman (Organization):</b> Mr. Prabhakar Ballapalle, Senior Technologist, Western Digital, Bangalore</p> <p><b>Coordinator:</b> Dr. Roshan Tiwari, Research Scientist, Bhaktivedanta Institute, Kolkata</p>
01:00 pm – 02:00 pm	Lunch Break
<p><b>Session 7: Vedanta and Science</b></p> <p>Session Chair: TBD</p>	
02:00 pm - 2:20 pm	<p><b>Scientific Temper and Spiritual Wisdom for Balanced Growth</b></p> <p><b>Mr. Prabhakar Ballapalle</b>, Senior Technologist, Western Digital, Bangalore</p>
02:20 pm - 02:40 pm	<p><b>Conservation of Conscious Experience: Scientific and Vedantic Perspectives</b></p> <p><b>Dr. Roshan Tiwari</b>, Research Scientist, Bhaktivedanta Institute, Kolkata</p>
02:40 pm - 03:00 pm	<p><b>Origin of life: Scientific and Vedantic perspectives</b></p> <p><b>Dr. Sasi Kumar Kotagiri</b>, MD Anderson Cancer Center, Texas, USA</p>
03:00 pm - 03:10 pm	Q & A
<p><b>Session 8: Young Minds Speak</b></p> <p>Coordinators: Prof. Ramjee Repaka, IIT Dharwad &amp; Dr. Dheeraj Dube, IIT Mandi</p>	
03:10 pm – 03:20 pm	<p><b>Zero, Infinity, and Beyond: How Ancient Indian Mathematics Shaped Modern Concepts</b></p> <p><b>Mr. Rajesh Pandit</b>, IISER Kolkata</p>
03:20 pm – 03:30 pm	<p><b>Ancient Indian Architecture: Bridging Heritage, Science, and Innovation</b></p> <p><b>Ms. Yerrolla Monalisa</b>, IIT Bhubaneswar</p>

03:30 pm – 03:40 pm	<b>Life comes from Life (An attempt by Mathematical Formulation) Mr. Yogesh Tambe, IIT Bhubaneshwar</b>
03:40 pm – 03:50 pm	<b>The Mysteries of Ancient Indian Architecture Ar. V Sanmukha Teja, IIT Bhubneshwar</b>
03:50 pm – 04:00 pm	<b>Exploring the Boundaries of Science &amp; Beyond Integrating Vedantic insights to Understand Consciousness, Matter, and the Ultimate Reality Mr. Vamsi, Bhaktivedanta Institute, Vijayawada</b>
04:00 pm – 04:10 pm	Q & A
04:10 pm – 04:25 pm	Prize Giving Ceremony for Winners of the Poster Presentation
04:25 pm – 08:00 pm	Sight-seeing Tour to Local Places
08:00 pm – 09:00 pm	Dinner



# Abstracts & Bio-datas of Speakers

## Day - 1

### Session 1: Science and Spirituality: An Overview

#### 1.1. Foundations of a New Science: A confluence of Science and Spiritual Quest

Sri Vasudeva Rao, *President, Bhaktivedanta Institute, Kolkata (Alumnus IIT Kanpur)*

Science has made tremendous progress by limiting itself exclusively to the objective aspect of reality and carefully avoiding the subjective part of reality including our 'self' experience. There was a historical reason to do so. Religion dominated and claimed authority over all knowledge dismissing scientific theories contradicting religion. Later, the scene has been reversed, science dominated and claimed authority over all knowledge dismissing religion as simply an act of 'faith'. However, with the advent of the quantum physics, the beliefs and foundations of science were shaken. Science that rejected concepts of religion like soul and God terming them as supernatural, had to resort to supernatural Schrodinger's wave equation, a wave which no one knows what it means and where it exists physically. However, science can be very useful tool to distinguish spirituality from superstition. These are some indications for science and spirituality to collaborate for the best interest of both.

"Two things fill the mind with ever-increasing wonder and awe, the more often and the more intensely the mind of thought is drawn to them: the starry heavens above me and the moral law within me," exclaimed Immanuel Kant in the 18th century. Today, after two centuries of extraordinary progress in science, we are still wondering about the same topics, 'origin and structure of universe', and 'what is life, consciousness and meaning?' though we have tremendously improved our knowledge of universe and life. Origin of universe and physical constants is not yet resolved satisfactorily. The origin of first living cell is still a mystery. We are far from addressing the hard problem of consciousness. It appears that science is either unable or unwilling to deal with our inner nature, our inner world of feelings of ethics, morality and responsibility. Some brilliant scientists including the founding fathers of science as well as Nobel Laureates have hinted that we need a new science.

This new science could be realized in bringing new fields of study within science as well as amending the way we do our science today. Dr. T. D. Singh remarked that spirituality should be a partner in new science. In this paper we present some important areas of research where this collaboration can be incorporated in a meaningful way.

Vasudeva Rao (also known as His Holiness Bhaktisvarupa Vrajapati Swami) obtained his M.Tech. (Computer Science, 1998) from IIT Kanpur, India. After a brief tenure of working as a software professional, he decided to significantly contribute himself to the science spirituality interface under the able leadership and vision of Dr. T. D. Singh, the Founder Director of the Bhaktivedanta Institute.

Presently, His Holiness is the President of Bhaktivedanta Institute and actively promotes discussion on science and spirituality. He is also the Editor of Bhaktivedanta Institute's reputed annual journal, *Savijnanam – Scientific Exploration for a Spiritual Paradigm* and travels widely across India and abroad. His deep interest in the foundations of mathematics, fundamentals of computer science and logic and its relation to nature of reality as well as ancient Indian texts led him to interact and meet renowned scholars at Harvard, Princeton, ETH, Stanford, and MIT. He has delivered several talks on topics at the interface of science and spirituality.

## 1.2. Curiosity Beyond Bounds: 50 years of Bhaktivedanta Institute's Journey into the Foundational Questions of Life and Universe

Sri Varun Agarwal, *Director, Bhaktivedanta Institute, Kolkata (Alumnus IIT Kanpur)*

Modern science has made a great breakthrough in various disciplines of knowledge in the last 400 years since the time of Newton and Galileo, whether it is in cosmology, medicine, life sciences, or computers. Thanks to the curiosity of thoughtful men on our wonderful planet. However, each scientific discovery simultaneously unravelled many more questions too. These questions included 'foundational questions' in every discipline - the fundamental questions which questioned the very limits of modern science itself. Max Planck, being astonished by these foundation questions, wrote, "Where is Science Going?" Heisenberg turned towards philosophy and wrote "Physics and Philosophy" and similarly Wolfgang Pauli turned from Physics to

Psychology. Hermann Weyl, the renowned mathematician turned towards the study of Mind from mathematics (see his writings, 'Mind and Nature'). What are these questions which challenged and turned the minds of greatest thinkers from science to philosophy and spirituality? The present lecture will attempt to highlight 50 of those foundational questions which have pushed modern science and renowned thinkers towards the limitations of modern science. And thus, the need of bringing in wisdom from ancient traditions to handle these foundational questions along with modern scientific know-how. The lecture will also attempt to present a glimpse into 50 years of hard work of the Bhaktivedanta Institute. The Institute, whose very emblem is based on curiosity (athato brahma 'jijnasa') made immense selfless contributions to humanity by raising and igniting these foundational questions of life and universe among intelligentia, beginning from tireless works of its Founder Director, Dr. T.D. Singh, the pioneer of science-spirituality synthesis. Curious? Welcome then!

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Varun Agarwal (also known as His Holiness Bhaktisvarupa Vrajendrakumar Swami) graduated from the prestigious Indian Institute of Technology Kanpur (IIT Kanpur), India obtaining his B.Tech in Aerospace Engineering (1999). He worked on a project of solar-powered aircraft and was ranked first in his entire department. However, his longing for something deeper about life which always bothered him finally culminated in meeting the illustrious scientist-saint Dr. T. D. Singh (His Holiness Bhaktisvarupa Damodara Swami), the Founder Director of the Bhaktivedanta Institute.

Under his guidance, he began studying ancient Vedantic wisdom, dedicating himself completely for the cause of helping humanity through the interface of scientific temper and spiritual wisdom. He is currently serving as the Director of the Bhaktivedanta Institute, Kolkata, India. Besides his various involvements, he frequently travels across India & abroad and interacts with scientists and scholars all over the world including world-renowned universities of Harvard, Princeton, ETH and Stanford to MIT. He is also the Editor of Bhaktivedanta Institute's reputed science and spirituality journal, Savijanam.



## Session 2: Holistic Education and Human Excellence

### 2.1. Human Excellence through Holistic Education in HEI, India

Prof. Dr. Usha Rani, *VFSTR Deemed to be University, Vadlamudi, Andhra Pradesh*

Holistic education is a pedagogy that goes beyond the conventional teacher centric, content only academic approaches, which stresses the development of the full person mind, body, and spirit and encompasses social, emotional, physical, and spiritual growth. At present, Industry 4.0, resulted in automation emphasizes the inculcation of new skills and data handling techniques and capabilities. Proposed NEP 2020 by the government, nurturing aspired students for an overall growth in students cultivating skilled individuals who are adept in critical thinking and conceptual understanding.

Human excellence is indeed the right prescription for the Indian youth today who wish to succeed in a modern, competitive and global skill environment without losing inner poise and the intrinsic joy of life. It helps the youth to unfold their hidden potentialities and achieve excellence in every field of life. At present India facing many challenges such as the population density, resources crunch, climate change, pollution, poverty, hunger and prejudice, prevalent diseases, discrimination against women and girls etc. India needs to concentrate on the development through social, economic, and environmental sustainability which requires the creativity, knowledge, technology, and financial resources of the entire population. Human excellence through holistic education in higher education India. This can be achieved through a mission which needs to impart knowledge about Indian culture, ethics, values and spiritual principles to the youth by employing a scientific and rational approach.

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Dr. Usha Rani Nelakuditi is a Professor in the Department of Electronics and Communication Engineering (ECE) and the Dean of the School of Electronics and Communication Engineering (SEECE) at VFSTR (Deemed to be University), Guntur,

Andhra Pradesh. With 24 years of teaching experience, she has contributed extensively to academics, research, and administration in engineering and technology. She holds a Ph.D. in Medical Imaging from JNTU, Anantapur (2013), an M.Tech in Digital Systems and Computer Electronics (2004), and obtained a B.E. in Electronics and Instrumentation Engineering (1993) from KITS Warangal. Her research focuses on Communication Systems, VLSI design, Image Processing, Machine Learning, Deep Learning, Reconfigurable Logic, and Drones. She has supervised 28 M.Tech theses and 9 Ph.D. dissertations in areas such as VLSI, Embedded Systems, and Networking.

She played a key role in the establishment of a Centre of Excellence in collaboration with Keysight Technologies. Her academic contributions include over 62 research papers in reputed international journals and 3 patents. She is a senior member of the Institute of Electrical and Electronics Engineers (IEEE) and a life member of both the Indian Society for Technical Education (ISTE) and the Biomedical Engineering Society of India (BMESI). She has served in various administrative roles, including Head of Department and Dean of Training and Placement. Her efforts have been recognized with the Best Alumni Award from KITS Warangal in 2018.

## 2.2. Holistic Education through the Distilled Essence of World Religions

Mr. Millindar Segar, *Aviation & IT Expert, Fly 91, Goa and Faculty, Department of Education, Bhaktivedanta Institute, Kolkata*

The modern education system, while advancing rapidly in science, technology, and innovation, faces significant challenges due to its neglect of spiritual education. Emphasizing material success and cognitive skills, it often overlooks the cultivation of values such as empathy, integrity, mindfulness, and a sense of purpose. This imbalance has contributed to rising stress levels, mental health issues, and a decline in ethical behavior among students and professionals.

The absence of spiritual education creates a gap in holistic development, leaving individuals ill-equipped to address deeper existential questions or navigate moral dilemmas. It fosters a fragmented worldview, prioritizing competition over collaboration and materialism over inner fulfilment. The integration of spiritual education does not imply adherence to specific religious doctrines but rather emphasizes universal principles like compassion, self-awareness, and interconnectedness.

By reintroducing spiritual dimensions into curricula, education can nurture well-rounded individuals capable of balancing intellect with inner wisdom, thus promoting a more harmonious and sustainable society. Addressing this challenge requires a paradigm shift that recognizes spiritual education as a critical component of personal and societal well-being.

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Mr. Millindar is an Engineer by profession. He completed his engineering in Electrical and electronics from UVCE Bangalore and also holds a Master degree in Bioinformatics and an MBA. Post his engineering, he worked for the national carrier Air India for 25 years before he took voluntary retirement in 2015 as Asst General Manager. Later he had short stints in various startups, and partnership companies before he settled down as an aviation consultant. He also has 15 years working experience in IT consultancy, solution development and operations. Currently he is freelancing as aviation and IT expert at Fly 91, Goa. He held a position as COO in VAUTECH, a drone services company and is one of the Board of Directors of NVIERA Technologies, a Block chain-based products and solution providing company based out of Bengaluru.

He is a student of Dr T.D Singh, a visionary saint and scientist and a pioneer in synthesis of science and Spirituality and study of consciousness within science. Inspired by the works of Dr T D Singh, Mr Millindar got initiated into the Bhaktivedanta tradition by Dr T D Singh and has conducted many seminars, lectures, workshops on various topics in science and spirituality. Presently he is serving as a senior faculty member in the department of distance education at Bhaktivedanta Institute, Kolkata. Under his aegis, in the Bhaktivedanta Institute, with strong emphasis upon the application of the philosophy and spirituality, many short courses such as personal excellence and professional excellence have been delivered as online courses.

### **2.3. Embodiment of the Divine: Unpacking Sublime and Sainly Qualities**

Prof. Ramjee Repaka, *Department of Mechanical, Materials and Aerospace Engineering, IIT Dharwad*

This work delves into the concept of sublime and saintly qualities, examining the intersection of human excellence and spiritual transcendence. Through a

multidisciplinary lens, drawing from theology, philosophy, and psychology, this study investigates the characteristics that distinguish individuals with sublime and saintly qualities, viz., as compassion, humility, tolerance, simplicity, generosity, empathy, patience, etc.

By analyzing the lives and teachings of revered spiritual leaders and philosophers, this research aims to identify the essential traits and practices that cultivate these extraordinary qualities. Furthermore, it explores how embodying sublime and saintly qualities can transform individual lives, foster a sense of community and social responsibility, and ultimately contribute to the greater good.

This work provides a foundation for further inquiry into the nature of human excellence and spiritual growth, inviting readers to contemplate the profound impact of sublime and saintly qualities on personal and collective transformation.

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Dr. Ramjee Repaka is a Professor in the Department of Mechanical, Materials and Aerospace Engineering at IIT Dharwad. He received his Bachelor's degree in Mechanical Engineering from Andhra University, Masters degree in Mechanical Engineering from Jadavpur University, Kolkata and Ph.D. in Mechanical Engineering from IIT Kharagpur. He worked as Assistant Professor in the Department of Mechanical Engineering at NIT Rourkela and Associate Professor in the Department of Mechanical Engineering at IIT Ropar before joining IIT Dharwad.

Dr Ramjee Repaka is also an Associate Editor for ASME Journal of Engineering and Science in Medical Diagnostics and Therapy, Guest Editor for a special issue on Minimally Invasive Thermal Therapies of ASME Journal of Engineering and Science in Medical Diagnostics and Therapy, Editorial Board Member of Electromagnetic Biology and Medicine and Guest Associate Editor, Diagnostic and Therapeutic Devices, Frontiers in Medical Technology. Dr Ramjee has published 75+ articles in journals of international repute and international conferences, and 3 Indian patents were granted. His research areas include Heat Transfer, Applied Thermal Engineering, Bioheat Transfer, Cancer Diagnosis and Therapy (RFA and MWA), Biofluid Mechanics, Refrigeration and Air Conditioning, Thermal Management of Electric Vehicles.

## 2.4. Ethics and Values - Exploration from Bhagavad Gita

Dr. Jayanarayan T. Tudu, *Assistant Professor, Department of Computer Science and Engineering, IIT Tirupati*

Ethics and values are the foundation for well-being of any entity either individual or collective. In this talk we will present those values and ethics that as individuals and society that we need to practice and nurture. It will be intriguing to note that the foundational ethical principles based on spiritual values revealed in Bhagavad Gita are as it is applicable in contemporary society. Though society seems like it is evolving (or could be devolving as well), it is important to set the reference line from the book of wisdom in order to guide ourselves as individuals and society. The talk will particularly emphasize upon the importance and relevance of such values in student as well as professional spheres of life.

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Dr. Jaynarayan T. Tudu is currently working for IIT Tirupati as Assistant professor in the department of Computer Science and Engineering. He has completed MS and PhD from IISc Bangalore in Computer Science in the year 2010 and 2016 respectively. He does research in Dependable and Secure Processor, Machine Learning Hardware, Science and Spirituality and Consciousness. Currently he is leading the India Semiconductor Mission of Govt of India for system level tests research. He has been associated with Bhaktivedanta Institute Kolkata and in various humble capacities, he contributed to the advancement of synthesis of science and spirituality.

## 2.5. The Convergence of Science and Spirituality in Holistic Education

Prof. Dr. Gomatam Mohana Charyulu, *VFSTR Deemed to be University, Vadlamudi, Andhra Pradesh*

This paper explores the integration of scientific and spiritual paradigms in education to cultivate human excellence. The Indian knowledge system, with its emphasis on holistic growth, offers a profound framework. Texts like the Upanishads and Bhagavad Gita highlight self-realization and inner wisdom, while modern science emphasizes evidence-based reasoning and technological progress. Bridging these two realms, holistic education seeks to cultivate intellectual, emotional, and spiritual proportions of learners. The paper examines into pedagogical approaches that incorporate meditation, mindfulness, and scientific inquiry, promoting critical

thinking, compassion, and flexibility. By coordinating science and spirituality, education can transcend materialism and inculcate a sense of purpose.

**Keywords:** Integration, Science, Spirituality, holistic growth, Indian concept.

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Dr. Gomatam Mohana Charyulu, a distinguished trilingual scholar from South India, currently serves as Professor of English in the Department of English, Indian and Foreign Languages, School of Applied Sciences and Humanities, VFSTR Deemed to be University, Vadlamudi, Guntur, Andhra Pradesh, India. He earned his Doctor of Philosophy for his thesis titled "A Study of Concepts: New English Criticism in the Light of Indian Poetics."

Dr. Charyulu has presented over 100 research papers on English Language Teaching and Comparative Literature at various national and international conferences. His scholarly contributions include 109 research articles published in prestigious journals indexed in SCOPUS, Web of Science, and UGC CARE. He is also a regular columnist for English and Telugu daily newspapers, writing extensively on social, cultural, and literary topics.

As a mentor, Dr. Charyulu has guided 14 scholars to the successful completion of their doctoral degrees. In addition to heading the Department of English, he holds multiple academic and administrative roles within the university, reflecting his dedication to education and scholarship.

## Session 3: Mathematics, AI and Consciousness

### 3.1. Unlocking Inspiration: From Mechanistic Models to Higher Dimensions of Reality

Sri Sushant Sharma, *Bhaktivedanta Institute Kolkata*

Modern scientists primarily acquire knowledge through the hypothetico-deductive method, a systematic process wherein hypotheses are formulated and subsequently validated or rejected based on experimental observations. This approach rigorously tests a hypothesis against empirical evidence, and those that fail to align with observations are discarded. While this process effectively explains the progression of knowledge after a hypothesis is formulated, it raises a profound and often overlooked question: What precedes the hypothesis? Specifically, where does a hypothesis originate, and what serves as the source of inspiration for scientific inquiry?

The pre-hypothesis phase offers an intriguing area for exploration, focusing on the origins of hypotheses and the mechanisms that inspire them. Mechanistic approaches, which rely on observable phenomena, logical reasoning, and pattern recognition, are often used to understand this process. While these approaches have been foundational to scientific progress, they exhibit significant limitations, particularly in addressing the creative and intuitive aspects of hypothesis generation. Mechanistic frameworks often fail to explain how profound insights or groundbreaking ideas emerge, suggesting that inspiration may stem from dimensions beyond purely logical or empirical reasoning.

To address these gaps, the Vedic model provides an alternative paradigm for understanding the source of inspiration. Unlike mechanistic approaches, the Vedic model incorporates non-mechanistic and mystic components, suggesting that inspiration may originate from higher dimensions of reality that transcend ordinary human perception. Drawing from ancient wisdom, this model emphasizes intuition, inner realization, and a connection to a universal consciousness as key drivers of creative insight.

By juxtaposing mechanistic approaches with the Vedic perspective, a broader understanding of how hypotheses are born and what inspires scientific inquiry can

be achieved. The discussion highlights the interplay between empirical science and metaphysical thought, ultimately suggesting that a holistic approach—integrating both mechanistic and non-mechanistic elements—may provide a more comprehensive framework for understanding the origins of scientific inspiration.

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Sushant Sharma is a B.Tech graduate in Computer Science and Engineering from IIT Guwahati. He has a rich experience of over 15 years as an IT Professional, working with well known organizations such as CATS-pvt Ltd, TCS, Techmahindra and Roamware. After his meeting with Dr. T. D. Singh, in 2000, he developed a keen interest in the domain of synthesis of science and spirituality. Under the mentorship of Dr. Singh and his students, Sushant has been exploring the studies at the interface of foundations of computer science, mathematics and consciousness, and consequently has been delivering many talks in various conferences, seminars and workshops organized by Bhaktivedanta Institute. His study interests include foundations of set theory and computer science, Godel's incompleteness theorems and Vedanta. In 2016, he joined Bhaktivedanta Institute as full time scholar and dedicated member, and served in many crucial roles in various events and publications of Bhaktivedanta Institute. Currently, he is serving as Director of Cognitive Studies and Fine arts of Bhaktivedanta Institute and also the Director of Bhaktivedanta Institute Study center, Kalyani.

### 3.2. On the Mathematical Modelling of Origin of Life and Consciousness

Dr. Debashis Khan, *Associate Professor, Department of Mechanical Engineering, IIT (BHU) Varanasi, India*

In the field of biological evolution, the Darwinian theory of natural selection is widely accepted and it has deeply penetrated through the educational system. This theory states that variation must exist in a population of organisms and the fittest members of the population competing for resources have a selective advantage while others are eliminated. Over the years, extensive research works have been carried out by several researchers from different areas in order to justify the reliability of the natural selection and the random mutation-based Neo-Darwinism concept. When ideas are based on observations, Darwinian theory is valid, however, troubles arise when extrapolations are made outside the range of observations, i.e. Darwinian



theory is correct in a limited sense. So, it becomes natural to determine how far the theory is valid, and why beyond a certain point it becomes invalid. In the present work, an attempt has been made to illustrate the above-mentioned issue with the help of Fred Hoyle's mathematical theory. Also, in this work, a further attempt has been made to look into whether consciousness is computable or not. Initially, a review of Tononi's theory of consciousness as integrated information is done. Also, the previous theory of Griffith meant for formalizations of integrated information based on information loss has been looked into. Since lossy integration would necessitate continuous damage to existing memories, it is more natural to frame consciousness as a lossless integrative process. Recently several authors have proposed this concept of lossless integrative process and provided a formalization of it using algorithmic information theory. It has also been proved in recent times that complete lossless integration requires non-computable functions. Their results imply that if unitary consciousness exists, it cannot be modelled computationally.

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Dr. Debashis Khan received his Ph.D. degree in Mechanical Engineering from the Indian Institute of Technology Kharagpur in 2007. Later he joined as an assistant professor in the Department of Mechanical Engineering at the Indian Institute of Technology (BHU) Varanasi. Now, he is working as an associate professor in the same department. His research interests include analytical and computational methods in Engineering and Science, Solid Mechanics, Fracture Mechanics, Damage Mechanics, Continuum Mechanics and Finite Deformation Plasticity. He was visiting researchers at University of North Texas, USA and University of Groningen, Netherlands. He is a member of American Society of Mechanical Engineers and Indian Society for Theoretical and Applied Mechanics. He has completed several sponsored research projects and consultancy works. He has numerous research publications in international journals of repute. His interests also expand over mathematical formulation of evolutionary systems and their exploration in the origin of life and consciousness which led him to work at the interface of science and spirituality in collaboration with Bhaktivedanta institute, Kolkata.

### **3.3. Man, Mind, and Meaning on Neuroscience, Consciousness and Some Implications for Spiritual Experience**

Prof. Hans Liljenstrom, *SLU, Sweden*

Consciousness has fascinated scientists, philosophers, and spiritual practitioners for centuries. Despite advances in science, many questions remain: What is the nature of

consciousness? How does it relate to the brain? Can the brain provide us with the experience of being an independent self, and what does that mean for our suffering, ambitions, and existence within a broader context? What does our reflective sense of self entail, and how is it influenced by time? These questions are explored through science, philosophy, and contemplative studies in an effort to deepen our understanding of man, mind, and meaning in a complex world.

This presentation explores the interplay between scientific perspectives, existential questions, and the search for meaning in life. We will examine how traditional science, rooted in reductionism and determinism, has shaped our understanding of the universe and ourselves, often negating free will, agency, and purpose. Contrasting views, such as holistic interpretations and alternative theories of consciousness, are presented, emphasizing the limitations of current scientific paradigms in addressing existential concerns. The presentation calls for a broader understanding of science that integrates subjective experience and embraces the complexity of life, fostering hope, connection, and purpose in a challenging world.

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Hans Liljenström (born in 1956) received his MSc in Engineering Physics in 1982 and PhD in Theoretical Physics in 1987 at the Royal Institute of Technology (KTH), Stockholm, Sweden. He spent a postdoc period with Prof. John Hopfield at Caltech, 1989-90, developing computational models of the olfactory cortex. In the 1990' he had a position as an associate professor in Theoretical Biophysics at KTH, and is since 2001 a full professor in Theoretical Biology and Biophysics at the Dept. of Energy and Technology, SLU, Uppsala, Sweden. Liljenström is also the founding director of Agora for Biosystems, an international research center administered by the Sigtuna Foundation. His research interests include mathematical modeling of biological systems and processes at the cellular, network, and macroscopic system levels, in particular complex dynamics, including oscillations and chaos, as well as the link between neural and mental processes. Lately, his work is focusing on neurocomputational models of decision making, with relevance to consciousness and volition. In 2019-2023, he was the PI of an international Templeton-Fetzer project on the Neurophilosophy of Free Will. He has been working and publishing in the field of cognitive neurodynamics for 35 years, and organized a great number of conferences and workshops, including the First International Conference on the Neuroscience of Free Will in Sigtuna, Sweden, in 2017, and the Agora Conference on Panpsychism and Non-local Consciousness in 2024. He has all the time also been involved in numerous dialogues between science and religion/spirituality.

## Session 4: Curiosity: Questions by Students

### Special Lecture

#### 4.1. Galaxies and Black Holes: A 40-Year Journey

Prof. Dr. Reinhard Genzel, *Nobel Laureate in Physics, Max Planck Institute for Extraterrestrial Physics (MPE), Garching, Germany*

More than one hundred years ago, Albert Einstein published his Theory of General Relativity (GR). One year later, Karl Schwarzschild solved the GR equations for a non-rotating, spherical mass distribution; if this mass is sufficiently compact, even light cannot escape from within the so-called event horizon, and there is a mass singularity at the center. The theoretical concept of a 'black hole' was born, and was refined in the next decades by the work of Penrose, Wheeler, Kerr, Hawking and many others. First indirect evidence for the existence of such black holes in our Universe came from observations of compact X-ray binaries and distant luminous quasars. I will discuss the forty-year journey, which my colleagues and I have been undertaking to study the mass distribution in the Center of our Milky Way from ever more precise, long term studies of the motions of gas and stars as test particles of space time. These studies show the existence of a four million solar mass object, which must be a single massive black hole, beyond any reasonable doubt.

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**Professor Dr. Reinhard Genzel** is a distinguished astrophysicist and Nobel Laureate, serving as one of the Directors at the Max Planck Institute for Extraterrestrial Physics (MPE) in Garching, Germany. He has held the position of Honorary Professor of Physics at Ludwig-Maximilian University (LMU) in Munich since 1989. Between 1998 and 2016, he was a Professor in the Department of Physics and Astronomy at the University of California, Berkeley. In 2017, he was appointed Professor of the Graduate School at UC Berkeley.

Prof. Genzel earned his PhD in physics and astronomy in 1978 from the University of Bonn, with a dissertation in radio astronomy conducted at the Max Planck Institute for Radio Astronomy (MPIfR). From 1978 to 1980, he was a Postdoctoral Fellow at the Harvard-Smithsonian Center for Astrophysics, where he specialized in very long baseline interferometry (VLBI) and mid-infrared studies of galactic star-forming regions. Subsequently, as a Miller Fellow at UC Berkeley (1980–1982), he focused on

far-infrared spectroscopy. He later joined UC Berkeley's Physics Department as an Associate Professor in 1981 and became a Full Professor in 1985, leading pioneering research in infrared and submillimeter astrophysics and studies of the interstellar medium.

Prof. Genzel's research spans multiple domains in astrophysics, including: The astrophysics of galactic nuclei and massive black holes, Star formation and galaxy dynamics and Observational and experimental infrared, submillimeter, and millimeter astronomy.

In 1986, Prof. Genzel returned to Germany as a Director at MPE, where he established a world-class research group focusing on the Galactic Center, active galactic nuclei, and star formation in distant galaxies using cutting-edge infrared instrumentation developed at the institute. Genzel is renowned for his work on the Galactic Center, specifically tracking stellar orbits around Sagittarius A\*, leading to the discovery of a supermassive compact object—a black hole. His studies provided pivotal confirmations of general relativity and insights into the dynamics of galactic nuclei.

#### **Awards and Honors:**

Prof. Genzel's contributions have been recognized with numerous prestigious awards, including:

- Nobel Prize in Physics (2020) (shared with Andrea Ghez) for the discovery of a supermassive compact object at the center of the Milky Way.
- Gottfried Wilhelm Leibniz Prize (1990), the most prestigious German research award.
- Shaw Prize in Astronomy (2008) for his contributions to the study of massive black holes and galaxy formation.
- Crafoord Prize in Astronomy (2012) for research on black holes and galaxy evolution.
- Herschel Medal of the Royal Astronomical Society (2014) for outstanding contributions to observational astronomy.
- Memberships in esteemed organizations, including the National Academy of Sciences (USA), the Royal Society (UK), and the Pontifical Academy of Sciences.

Genzel continues his work as a director at MPE and as an Honorary Professor at Ludwig Maximilian University in Munich. He is celebrated for fostering large-scale, collaborative research projects and mentoring generations of astrophysicists.



## Day - 2

### Session 5: Spirituality and Health

#### 5.1. Spiritual Practices and their influence on the Health and Wellness of a Person

Prof. R. Ramakrishna, *NRI Medical College, Chinnakakani, Andhra Pradesh*

Health encompasses physical, mental, social, and emotional well-being. It essentially extends beyond the absence of disease or infirmity. Spirituality, a broad concept, involves seeking happiness beyond material possessions. It as well delineates into the meaning, and purpose in life, and connection to something greater than oneself. It can be expressed through various practices like meditation, prayer, mindfulness, yoga, dance, art, music, and nature. These practices have been shown to improve well-being, quality of life, and physical health.

Simultaneously spiritual practices reduce stress, anxiety, depression, inflammation, and aging. Spirituality has also been linked to improved heart health, cancer management, and overall resilience. Numerous examples demonstrate the positive impact of spirituality in the lifestyle of notable personalities. Through an incorporation of spirituality into daily life, individuals can cultivate a deeper sense of purpose, connection, and well-being. All these ultimately lead to a more fulfilling and healthy life.

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Dr. R. Ramakrishna is a senior Professor and Head of the Department of Pulmonary Medicine at NRI Medical College in Chinnakakani, Guntur District, Andhra Pradesh. Born on January 1, 1961, he holds an MBBS degree from Andhra Medical College, Visakhapatnam (1983) and an MD in TB and Respiratory Diseases from the same institution (1987). With over 35 years of clinical experience, he has worked as a specialist chest physician in Libya and Guntur, and has been a Professor of Pulmonology since 2013. He has guided 35 MD students and published 48 research articles in national and international journals. Additionally, he has produced 620 YouTube videos on various subjects and stories in Telugu, and holds various administrative positions in educational institutions.



## 5.2. Role of Spirituality in Epigenetics

Prof. V. Siva Prabodh, *NRI Medical College, Chinakakani, Andhra Pradesh*

Spirituality, a broad and multifaceted concept, refers to a sense of connection to something greater than oneself. It often involves the seeking of meaning, purpose, and inner peace. The role of spirituality in epigenetics, an emerging and interdisciplinary area of research, explores how spiritual practices and experiences might influence gene expression and overall health. Spiritual practices like meditation, prayer, and mindfulness can modulate cellular processes related to health and disease through mechanisms such as DNA methylation, histone modification, and microRNA regulation, influence upon gene expression, stress regulation, emotional well-being, and resilience. Spiritual experiences often elicit positive emotions. These have been associated with changes in gene expression and especially in genes that are involved in the immune system, stress regulation, and inflammation. Furthermore, spirituality might play a role in fostering resilience, buffering against the negative epigenetic effects of trauma, and thereby promotes a holistic approach to health. This emphasizes upon the mind-body connection, self-awareness, and balance, and ultimately leads to improved outcomes in terms of overall health and longevity.

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Dr. V. Siva Prabodh is the Principal, Professor, and Head of the Department of Biochemistry at NRI Medical College in Chinakakani, Guntur district, Andhra Pradesh. He holds an MBBS degree from Siddhartha Medical College in Vijayawada and an MD in Biochemistry from Kurnool Medical College. Dr. Prabodh has completed an Advanced Course in Medical Education (ACME) at St. John's Medical College in Bangalore. With extensive academic experience, he has served as Principal, Vice-Principal, and Coordinator of the Medical Education Unit at NRI Medical College. Dr. Prabodh has also held various positions, including Chairman of the Institutional Ethics Committee and Member of the Board of Studies for PhD and PG studies. He has organized several conferences, workshops, and CMEs, and has delivered numerous guest lectures. Dr. Prabodh has published 42 research papers and is a reviewer for eight peer-reviewed medical journals. He is also the President of the AP Association of Medical Biochemists of India (AMBI) and General Secretary of the AP Medical Educators Association.

### 5.3. Spirituality & Mental Health

Prof. T. V. Pavan Kumar, *NRI Academy of Sciences, Mangalagiri*

Spirituality and mental health are interrelated. This short commentary looks at the current perspectives on the relationship between spirituality and mental health and factors connected with the two. A few basic concepts regarding the definition and scope of spirituality and religion are discussed. This is followed by an elucidation of the positive benefits of spirituality. This is followed by few studies that demonstrate that spirituality benefits mental health. “OM” chanting is an ancient technique of Indian meditation. OM chanting is associated with an experience of relaxation, changes in autonomic balance and deactivation of limbic brain regions. While functional localization is important, how brain regions interact with each other has been shown to underlie various brain functions. OM chanting and a control condition in a block design is found that significantly reduce outputs from insula, anterior cingulate and orbitofrontal cortices in the subject meditating on the OM. The reduced outputs from these areas to the limbic area amygdala is noteworthy. The modulation of brain regions involved in emotion processing and implicated in major depressive disorder (MDD) enhances the potential of the OM chanting for the MDD treatment.

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Dr. T.V. Pavan Kumar is a Professor and Head of the Department of Psychiatry at NRI Academy of Sciences in Mangalagiri. He holds an MBBS degree from Deccan Medical College in Hyderabad, a DA degree from Osmania Medical College in Hyderabad, and an MD in Psychiatry from S.V.S Medical College in Mahaboobnagar. With 1 international and 15 national journal publications to his credit, Dr. Kumar also serves as an Executive Committee Member of the Indian Psychiatric Society’s AP state branch. His areas of interest include neuro-modulation, ketamine in psychiatric illness, and law and psychiatry.

### 5.4. Social Maladies and Spiritual Remedies

Dr. Gonuguntla Srinivasa Rao, *Sri Krishna Hospital, Narasaraopet, Andhra Pradesh*

We’re familiar with physical diseases like diabetes, cancer, and obesity, but there are also social maladies that affect individuals and communities, mirroring physical diseases. For instance, accumulating excessive wealth can be likened to “pocket obesity” or “financial obesity” with more severe consequences than physical obesity.

Similarly, social and behavioral disorders in communities' parallel bodily diseases. Unfortunately, many social diseases are perceived as desirable in modern society, encouraging their spread. This article draws parallels between physical and social diseases, and explores spiritual remedies from Vedic literature to provide insight and help to rescue society from these evil disorders.

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Dr. Gonuguntla Srinivasa Rao is a renowned General and Laparoscopic Surgeon at Sri Krishna Hospital in Narasaraopet, Andhra Pradesh. He holds an impressive array of professional qualifications, including MBBS from Rangaraya Medical College, MS (Gen. Surg) from JIPMER, MRCS (General Surgery) from the UK, and Diplomate in Laparoscopic Surgery from France. While medicine is his profession, spiritual inquiry is his instinct, and he has delivered several talks and published articles on the intersection of spirituality and science, including topics such as Quantum Physics, Advaita, and Karma Yoga. He has also written extensively on contemporary social issues in leading Telugu dailies Eenadu, Andhra Jyothi and maintains a blog ([www.sciencevstruth.org](http://www.sciencevstruth.org)), which explores the relationship between science and philosophy.



## Session 6: Indian Knowledge System: Mysteries of Ancient Indian Architectures

### 6.1. Architecture and Spirituality

Prof. Dr. Ramesh Srikonda, *Director, School of Planning and Architecture, Vijayawada*

Architecture and spiritual spaces have been intertwined for centuries, reflecting the cultural, philosophical, and religious beliefs of various societies. Here are some key aspects such as Sacred Geometry and Symbolism which covers Many spiritual spaces incorporate geometric patterns and shapes, like mandalas, circles, and spirals, which represent the interconnectedness of the universe and the divine, whereas the symbolism emphasises Architectural elements, such as arches, domes, and spires, often carry symbolic meanings, like the connection between heaven and earth or the aspiration for spiritual growth.

The Spiritual Architectural Styles elaborates the Buddhist architecture Temples, like the Borobudur and the Kiyomizu-dera, incorporate elements of nature, such as water and stone, and feature intricate carvings and statues, representing the path to enlightenment. The Hindu architecture covers Temples, like the Khajuraho and the Meenakshi Amman, display vibrant sculptures, intricate carvings, and complex geometric patterns, reflecting the diversity and richness of Hindu mythology and philosophy.

Spiritual architecture as a concept encompasses the spaces with a focus on the five senses and an overall sense of being. Whether as a space to worship, sacrifice, contemplate, or simply exist, spiritual architecture provides a physical space for metaphysical purposes. Sacral architecture (also known as sacred architecture or religious architecture) is a religious architectural practice concerned with the design and construction of places of worship or sacred or intentional space, such as stupas, and temples etc.,

Tradition may have evolved the culture, but both revolve through ingenuity of a cyclic feedback to a stage where the ritualistic social behaviors have transcended to grace the architectural forms and spaces to a status of psychological belongingness, where religious culture is evident while cherished tradition is inherent. Sacral architecture of spaces in a religious precinct shall reverberate the ethos of the cultural

background associated to its' own evolution. The calculations of respective cosmic math and mapping to the spiritual spaces with progressive segregation shall sustain not only invocation of benevolent actuality for devotees but also psychological metamorphosis.

The old temples still serve as one of the most significant pilgrimage sites. The design is composed of a simple approach that also encourages focus on the honest reflection of oneself and preaches anti-materialistic values. Traditional architecture is always accompanied with a set of rules and principles.

Ancient Indian treatises on architecture and town planning, such as the Manasara, Mayamatham, Vastu Shastra and Sthapadya Veda ,silpashastra etc., offer comprehensive guidelines on the design and construction of temples, houses, buildings, cities, and settlements.

Emphasize harmony with nature, spatial order, and cosmic principles in shaping human habitats. Sacred groves are forest fragments of varying sizes, which are communally protected and which usually have a significant religious connotation for the protecting community spirituality.

A case study indicates that post built forms of Kāśī Viśvanātha Dhāma shall mature to a state where the representation of Rudra, multiplicity in forms of Āḍi-Viśveśvara, to internal self of deity (Ātman) in a devotee on immersion to the ultimate. The path across Kāśī Viśvanātha Dhāma shall be treated with appropriate architectural details and supportive facilities to get devotees through an engagement of progressive accession of spirituality.

The devotee traversing through these experiences of architectural spaces shall transform into a state of knowledge and pure cognition. Finally, there is something invisible, omnipresent and omnipotent, transcribed by sages among Hindu theology, duly associated to Āḍi-Viśveśvara as the inner realisation of devotee in perception of being, and the universal appeal as psychological attention of self (Ātman) and belongingness. The rendition of shapeless (Nirākāra) in Śivapurāṇa 8.35.106 also concurs with Nirākāra Śiva in Advaita Vidānta and of which is nothing but the form of pure consciousness, the breathing deity inside oneself.

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Dr. Ramesh Srikonda was born on Aug 26th, 1960 in Andhra Pradesh, India. He obtained his Bachelor's Degree in Architecture in 1982 with first class distinction from JN Technological University, Hyderabad, AP. He completed his Post-

Graduation in Town and Country Planning from Anna University, Madras with first class in 1984. He also holds a Post-Graduate Diploma in Ecology and Environment from the Institute of Ecology and Environment, Delhi.

Dr. Srikonda conducted extensive research on "Energy Conservation Studies in Buildings through Components / Materials and Space Conditioning Options" at IIT Delhi, which is crucial for energy saving, conserving fossil fuels, and addressing climate change. He earned his Doctorate (Ph.D.) from the Indian Institute of Technology, Delhi.

He joined the Central Government Service through UPSC – Central Architectural Services (CAS) in 1985 (Central PWD) and served in various capacities, including Deputy Architect, Architect, Regional Architect, Senior Architect, Chief Architect, and Director of Planning, and additionally held the position of Director (Slum & JJ) for the Government of India.

In 2010, he joined the Department of Architecture at the School of Planning and Architecture, Vijayawada, where he served as Head of the Department of Architecture, Head of the Department of Planning, Dean of Studies, Chief Warden, Vigilance Officer, among other roles. In September 2022, he was appointed Director of the School. Dr. Srikonda played a key role in the development of the Post-Graduate Programme M.Arch (Sustainable Architecture), a unique program in the region addressing contemporary issues of climate change and energy crises.

He has published numerous technical papers in reputed international journals and presented at various national and international conferences. He is credited with leading several research and consultancy projects, including works for the Government of Andhra Pradesh through the Institutional Consultancy Cell of SPA Vijayawada.

## 6.2. Spiritual Symbolism in Architecture

Dr. Nagaraju Kaja, *Dept of Architecture, School of Planning and Architecture, Vijayawada*

Spirituality is derived from the word "spirit" or the concept of the existence of an inner self. Spirituality is about the search for meaning in life and feeling a deep sense of aliveness. It has been a part of our civilization for a long time and has been interlinked with Architecture as well. Spirituality in architecture is the use of design to create spaces that can evoke a sense of transcendence, harmony, and divine

presence. Different architectural styles utilize specific motifs and designs that reflect the spiritual beliefs of their cultures, such as domes representing the heavens or spires symbolizing aspiration toward God. Spirituality is derived from the word “spirit” or the concept of the existence of an inner self which is interpreted in many ways by different people, associating it with place of worship, personal relationship with God or natural surroundings and art. Spirituality is about the search for meaning in life and feeling a deep sense of aliveness. It has been a part of our civilization for a long time and has been interlinked with Architecture as well.

There are some of the elements and principles like light form, shape and design which can be associated with spirituality in architecture. India has the oldest civilization with a diverse culture of several religions and historical antecedents, all coexisting in discreet geographical regions. Even the history of architecture is concerned more with religious building than any other type because they have been the most expressive, most important and most Influential buildings in any community. Spiritual upliftment, peace and happiness have been the cherished goals of man since times immemorial. With the passage of time different religions have emerged and devised various ways of reaching the unreached, of communication with almighty and of elevating their spirit. This paper will focus on the study of architectural character for their symbolic significance towards spiritualism.

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Nagaraju Kaja is an Architect with specialization in Construction Management and Sustainable Architecture having more than 20 years of multidisciplinary experience in the fields of Architecture and construction both in academics and Industry. As an architect he was involved in the design and execution of various architectural and interior designing projects. He has acquired Bachelor of Architecture from School of Planning and Architecture, JNTU, Hyderabad, Master of Engineering (Construction Engineering and Management) from University College of Engineering, Osmania University, Hyderabad and holds a PG Diploma in Environment and Sustainable Development (PGDESD) from IGNOU, New Delhi. His Ph D thesis is on ‘Evaluation thermal comfort in naturally ventilated classrooms of higher education in hot and humid climate’.

He has been working in School of Planning and Architecture, Vijayawada (SPAV), an institute of National Importance, MHRD, Govt of India since 2009. He is involved in various academic and administrative responsibilities in the School. He is a member of various Academic committees like Board of Studies, JNTU Kakinada, Expert committees of Council of Architecture and jury member for various institutes like NIT, Trichy, NIT Calicut, SPA Bhopal, GITAM University and ANU to name a few.

He is the recipient of a prestigious ICCU-UNESCO fellowship for a study program by the Ministry of cultural affairs, govt of Japan. He was the coordinator for the International Project Building Inclusive Communities (BInUCom), an Erasmus Plus project funded by the European Union. He has travelled to many countries and attended various conferences and other academic programs. He has published many research papers in peer reviewed international journals and presented his work in many International & National conferences. He is a member of various prestigious organizations like Council of Architecture (CoA), Indian Institute of Architects (IIA), Indian Institute of Interior Designers (IIID), Indian Institute of Lighting Engineers (ISLE) and Indian Society for Technical Education (MISTE) etc. He is a resource person for APHRDI, HUDCO etc., His research interests include Sustainable Architecture, Energy efficiency in buildings, Conservation & restoration of traditional structures and vernacular Architecture.

### 6.3. Sanctuaries of the Divine: Sacred Groves and Nature in Spiritual Traditions

Dr. M. Banu Chitra, *School of Planning and Architecture, Vijayawada, India*

Sacred groves, ancient clusters of trees and vegetation held in reverence by communities, stand as living testaments to the profound spiritual connection between humans and nature. These sanctuaries of the divine are not merely physical spaces but cultural and ecological treasures, intertwining spiritual beliefs, traditional practices, and environmental conservation. Across the globe, sacred groves have been regarded as abodes of deities, spirits, or ancestors. In India, sacred groves such as those in the Western Ghats are associated with Hindu and tribal traditions, where they are seen as places to honor nature spirits or village deities. Similarly, in African spiritual traditions, groves serve as ceremonial grounds for rituals and ancestral worship, often protected by taboos and myths. The Druids of ancient Europe revered oak groves as sites of spiritual communion, while Shinto practices in Japan sanctify forests as places of divine presence.

Mythology and folklore play a vital role in preserving the sanctity of these landscapes. Stories often describe sacred groves as spaces of divine intervention, healing, or blessings. For example, Indian legends tell of groves protected by snakes and spirits, reinforcing the importance of their conservation. These narratives not only instill spiritual awe but also serve as traditional ecological knowledge, ensuring sustainable interaction with nature. Beyond their spiritual significance, sacred groves are ecological hotspots, harboring rare and endemic species of flora and fauna. They

play a crucial role in maintaining biodiversity, regulating local climates, and preserving water resources. Their undisturbed canopies protect soil from erosion, while their sacred status often acts as a shield against deforestation and exploitation. Sacred groves are also central to communal rituals, seasonal celebrations, and agricultural rites. These spaces act as cultural anchors, fostering a collective identity rooted in respect for the natural world. Traditional practices such as offerings, festivals, and prayers reinforce the grove's spiritual and social relevance. However, the sanctity of these groves is increasingly threatened by urbanization, deforestation, and the erosion of traditional beliefs. As modern lifestyles distance people from ancestral practices, the once-sacred landscapes risk degradation. Climate change further exacerbates this threat, altering ecosystems and endangering the groves' ecological balance.

Revitalizing sacred groves requires a collaborative effort that bridges ancient traditions with modern environmental ethics. Community-led conservation programs, awareness campaigns, and policy support can ensure their protection. Integrating spiritual values with contemporary sustainability initiatives offers a promising pathway to preserve these sanctuaries for future generations. Sacred groves exemplify the harmonious interplay between spirituality and nature, embodying a deep respect for the environment that is timeless and universal. They remind us that the natural world is not just a resource but a sacred entity deserving of reverence and protection. By safeguarding these groves, we honor not only spiritual traditions but also the ecological legacy they represent.

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Dr. M. Banu Chitra is a Landscape Architect with over a decade of academic experience. She has held diverse roles across organizations, making significant contributions to the fields of landscape architecture and environmental design. Her publications span topics such as landscape architecture, urban landscapes, soundscapes, environmental psychology, and urban design. Notably, Dr. Chitra has authored book chapters exploring the perception of soundscapes in landscapes and the cultural significance of doors in Odisha's tribal communities. She recently published a book titled *Fundamentals of Research Methodology: A Glimpse into Architectural Research*. Her research focuses on the complex interplay between landscapes and soundscapes. Her notable works on *Soundwalk as a Method to Uncover the Interplay between Landscape and Soundscape*, was presented at prestigious international conferences in Dubai and Chicago, USA. Her research interests also extend to environmental sustainability, sensory gardens for autistic children, impact of classroom window views on academic performance, carbon sequestration, GIS applications in analyzing landscape and soundscape interactions,

and cognitive skills and environmental sensitivity in children through nature-based travel etc .Dr. Chitra has delivered guest lectures on topics including urban landscapes, acoustics, outdoor soundscapes, and environmental perspectives, contributing significantly to the advancement of landscape architecture and sustainability. Her excellence has been recognized with the Best Ph.D. Thesis Award and the Best Researcher Award by the Technical Forum of the Research Foundation. Currently, she serves as the Dean of Research and Associate Professor in the Department of Architecture at the School of Planning and Architecture, Vijayawada (SPAV).

## Session 7: Vedanta and Science

### 7.1. Scientific Temper and Spiritual Wisdom for Balanced Growth

Sri Prabhakar Ballapalle, *Western Digital, Bangalore*

The unique nature of inquisitiveness or curiosity and quest for reality gives human beings a distinct identity amongst all the other life forms. The mind, the senses, and the intelligence are instruments in this dynamic and worthwhile exercise. Scientific knowledge is born out of such inquiry. Religious knowledge or spiritual wisdom is also aimed at finding and realizing the same Ultimate Reality.

In this journey to reality, we seek answers to fundamental queries like life's origin, meaning and purpose, origin and nature of consciousness, the origin of the cosmos, more profound dimensions of art, esthetics and beauty, and so on. The most common approach men of science take is the deductive method. This scientific method involves gaining systematic knowledge about the natural world through Hypothesis, experimentation, observation, and explanation and interpretation of the results (to test the proposed Hypothesis). The joy of doing science is enhanced with the vigor of scientific temper--- the child-like curiosity and simplicity to look into all possibilities with open-mindedness and honesty to experience the joy of discovering the truth. For example,

- Newton asked why the apple did fall. As an answer to this question, he discovered the law of gravitation,  $F = G \frac{m_1 m_2}{d^2}$  (where F is the force of attraction between two bodies having masses  $m_1$  and  $m_2$ , d is the distance between the two bodies, and G is the gravitational constant.)
- Young Albert was fascinated that no matter how he turned the compass, the needle always pointed in the same direction. This later led Einstein to reflect on the mysterious properties of space.
- When Galileo was a student, he observed the swinging of a lamp hanging from the ceiling of a church, and even if the lamp swung significantly or not so much, he noticed that "it took the same amount of time for one complete swing." In 1583, he discovered that the isochronism of a pendulum means that the period is the same. (The isochronism of a pendulum is applied in large mechanical clocks.)



Indeed, scientific endeavors mean toiling hard, but they are also accompanied by celebrations of the joy of discovery with awards such as Nobel Prizes or Fields medals. These discoveries are further translated to technology to help humanity achieve happiness, satisfaction, and peace. From time to time, we also measure how far we have come on this road to reality or how close we have gotten to the answers to the fundamental questions that stirred us such inquiries. And to our surprise, all the great thinkers and founders of science have unanimously echoed that solving the riddles of life, matter, or the cosmos has only opened up a Pandora's Box of perplexing questions. The celebrated achievements or answers were merely like pointing to the tip of an iceberg.

Certainly, unearthing the secrets of nature has given man immense power and benefits. For example, the tiny invisible atom put giant nuclear power into man's hands. But when misused, it can wipe out all life forms (making earth a lifeless pale gray dot in the cosmos). So, when we seek for some helping hand to ensure science becomes a boon and not a bane, we tend to look upward for such guidance— i.e., transcendental science or spirituality.

Men of science such as Max Planck, Michael Faraday, Pascal, and many others have opined that science should join hands with spirituality to guide human ethics and actions. In the recent millennium, faced with the dangers of war and unrest in society, it is more important than ever that man enrich himself with sublime values such as kindness, compassion, forgiveness, etc., which are the tenants of spirituality. Thus, it is essential to balance scientific temper with spiritual wisdom.

It is interesting to note that the timeless science of Vedanta offers a vast arena of proven methods to acquire knowledge about the nature of reality. The ancient Vedic monuments, temples, healing sciences, technology, art, etc., depict the vast knowledge of medicine, mathematics, astronomy, and life science. Such works urge us to look scrutinizingly into the life and works of our ancient seers. Thus, Vedic science opens up a newer paradigm in the quest for reality, beginning with nurturing life's sublime qualities as its foundation. At times like this, when the world is at risk of more wars or differences, it is timely to dwell into the 'timeless science of Vedanta' for promising solutions to achieve global peace and harmony.

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Prabhakar Ballapalle is presently a Senior Technologist (a very senior position in technical Leadership) at Western Digital, Bangalore. He is also presently leading Innovation across INAND Division as INNOVATION CHAMPION. His areas of research and development currently include flash controllers and enterprise storage

systems etc. Before joining WESTERN DIGITAL, he worked in very prestigious companies like: SEAGATE, LSI, AGERE etc. He also worked as a scientist at Central Research Laboratory and contributed in many prestigious indigenous projects like, Development of Thermal Imager, Remote Surveillance System and Radar Video Transmission System, etc. He received his M.Tech in Digital Signal processing from IIT-Kanpur in 2000. He has more than 10 publications and 3 issues patents to his credit. His research areas include Storage, pattern recognition, artificial intelligence, speech processing, audio processing, video processing etc.

He is very actively involved in promoting the discussions on science & spirituality among the student's community and learned circles. He is also an associate editor of "Savijnanam", Bhaktivedanta Institute journal, "Tattva Jijnasa", Bhaktivedanta Institute Magazine and the booklet "God, Intelligent design and Fine tuning". His areas of interest in Science and Spirituality include Consciousness, Biofeedback and Meditation, Effect of Prayers on Mind and Body, Japa Meditation, Personality Development etc.

## 7.2. Conservation of Conscious Experience: A Scientific and Vedantic Perspective

Dr. Roshan Tiwari, *Research Scientist, Bhaktivedanta Institute, Kolkata*

The observation of the natural world gives rise to distinct conscious experiences in living beings. These experiences are deeply personal, subjective, and first-person in nature, making them inaccessible from an objective or third-person viewpoint. Their qualitative essence cannot be adequately conveyed through classical bits of information. Recent research indicates that these experiences are rooted in quantum information, which also remains both unobservable and incommunicable due to the constraints imposed by the no-cloning and Holevo's theorems. In my talk, I will propose that these experiences are never truly lost but continue to exist in some form, supported by the no-hiding theorem of quantum information theory and perspectives from Vedanta.

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Dr. Roshan Tiwari earned his Ph.D. in Physics in 2023 from the Indian Institute of Science Education and Research (IISER) Kolkata. He completed his B.Sc. in Physics at Banaras Hindu University (BHU), Varanasi, in 2014. His doctoral research focused on spectroscopy, bioinspired waveguides, microscopy, sensing, and optical trapping. He is also deeply interested in exploring the connections between the unexplored

aspects of reality and ancient wisdom. Currently, he is affiliated with the Bhaktivedanta Institute as a research scientist, where he works in the field of quantum information and consciousness.

### 7.3. Origin of life: Scientific and Vedantic perspective

Dr. Sasi Kumar Kotagiri, *MD Anderson Cancer Center, Texas, USA*

“How and where did life begin?” is one of the most intriguing fundamental questions among several unsolved scientific mysteries from centuries. It’s an age-old mysterious puzzle for both philosophers and scientists and many theories have been proposed to explain the origin of life. During the middle of the 20th century, scientists used to believe that a common ancestor for life was formed due to spontaneous interactions among simple molecules in the primordial soup. Experiments by Urey & Miller in 1953 to the recent finding by John Sutherland have shown how precursor molecules for life originate from simple molecules in the laboratory.

Several theories were proposed to explain the origin of life including abiogenesis theory, biogenesis theory, sunlight theory, clay theory, deep-sea vent theory, panspermia theory, metabolism-first hypothesis, and RNA world hypothesis. However, currently, one of the widely accepted ideas to explain the origin of life is the RNA world theory. This theory proposes that life started from the self-replicating RNA molecules containing genetic information and catalytic function. Great scientists have expressed their doubts about RNA world theory and other above-mentioned theories. Extensive research on the chemical evolution and the origin of life during the last several years has provided few answers but raised many more questions. These findings are far from the proposed hypothesis, that life originated from chemicals.

Many great scientists of the world were fascinated by the Vedas (knowledge or wisdom) and ancient science of India. The Austrian physicist Erwin Schrödinger mentioned “Our scientific theories need “a bit of blood transfusion from Eastern thought... “. According to the Vedantic texts, life comes from life, not from matter. It states that life has consciousness, which is a fundamental quality of the ‘soul’. God is the source of both inferior energy (matter) and superior energy (life). Matter is inferior because, however complex it may be, will never have conscious symptoms. On the other hand, life is the superior energy of God, because it has consciousness.

Living beings are made up of inferior energy comprised of material and subtle bodies (Material body: Genome, micromolecules and macromolecules, earth, water, fire, air, and ether) + (Subtle body: Intelligence, mind, and false ego) and superior energy (Soul). It's concluded in the Vedantic text, that life comes from life, it's purely spiritual and superior to matter.

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Dr. Sasi kumar Kotagiri obtained his Master's degree in Genetics from Osmania University. With a fellowship from the Indian Council of Medical Research (ICMR), he pursued his doctoral study at the Centre for Cellular and Molecular Biology (CCMB), a premier research organization in frontier areas of modern biology. At CCMB, he worked on chronic myeloid leukemia and skeletal muscle differentiation. After obtaining his Ph.D degree, he got a Department of Science and Technology (DST)-National Postdoctoral fellowship to work at the Indian Institute of Chemical Technology (IICT) on developing therapeutics for diabetes. Currently, he is working at the world's number-one cancer hospital, MD Anderson Cancer Center. His work is on discovering novel therapeutics for non-small cell lung cancer. He recently discovered novel, selective, orally bioavailable SMARCA2 PROTACs with anti-tumor efficacy in SMARCA4 mutant lung cancers. PROTACs are used to degrade proteins that are responsible for cancer growth selectively. His findings provide additional evidence for the utility of single agent or combination regimens containing SMARCA2 PROTACs as therapeutics against SMARCA4 mutant cancers. His research works are peer-reviewed and published in internationally reputed journals.



# Young Minds Session - Abstracts & Bio-datas

## Session 8

### 8.1. Zero, Infinity, and Beyond: How Ancient Indian Mathematics Shaped Modern Concepts

Rajesh Pandit, *IISER Kolkata*

One of the most significant contributions from ancient India was the concept of zero as both a numeral and a concept of nothingness, a breakthrough that radically transformed arithmetic, algebra, and calculus. Indian scholars like Brahmagupta and Aryabhata developed sophisticated rules for operations involving zero, setting the stage for the mathematical systems that underpin modern computing, number theory, and scientific notation.

This presentation will explore the core ideas that arose from India's mathematical tradition, including the decimal system, negative numbers, and early algebraic formulations, and how these concepts laid the groundwork for later developments in both pure and applied mathematics.

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Rajesh Pandit received his integrated masters in mathematics from IISER Kolkata in 2019. Presently, he is trained in data science by IIT Madras through distance education since 2021. He has been working as an associate subject matter expert of Mathematics in Hurix Digital. His research interests include in the field of data science and artificial intelligence.



## 8.2. Ancient Indian Architecture: Bridging Heritage, Science, and Innovation

Yerrolla Monalisa, *B. Tech Student, Civil Engineering, IIT Bhubaneswar*

Ancient Indian architecture is a testament to the advanced scientific knowledge and engineering expertise of our ancestors. The marvels that inspire awe today were accomplished centuries ago with remarkable precision and dedication. Analyzing these architectural wonders and preserving their heritage can drive significant advancements in modern engineering.

These structures are not only visually stunning but also serve as energy centers, with their construction techniques and the use of metals scientifically proven to promote positivity. The study of ancient architecture offers valuable insights that can catalyze innovations in contemporary construction practices.

Preserving and studying this heritage is not about resisting progress but about respecting our history, understanding our roots, and building a future that honors the wisdom of the past.

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Y. Monalisa, born and brought up in Hyderabad and is a Civil Engineering student at the Indian Institute of Technology (IIT) Bhubaneswar. She is also pursuing Bachelor of Arts in Sociology, Public Administration, and Political Science through a distance learning program at BR Ambedkar open University. She is passionate about bridging the gap between science and spirituality, has delivered several presentations on the subject, including one at the United Religions Initiative on science and spirituality for World Peace. Recently She secured third place in the 18th International Ethics Olympiad and secured first place in a presentation competition based on the book God, Intelligent Design, and Fine-Tuning.

She is Assistant Coordinator of the Women Welfare Committee 2024, IIT Bhubaneswar and the Coordinator of Jijnasa: Science, Consciousness, and Inner Quest Group at IIT Bhubaneswar. She also contributes to the National Service Scheme and teaches Chemistry to JEE aspirants through the SATHEE initiative by IIT Kanpur. She is interested in reading, writing, drafting and reciting poetry and literature. She is known for organizing and participating in spiritual and patriotic events at IIT Bhubaneswar. As an active member of the Bhaktivedanta Institute, she continues to deepen her exploration of Science and Spirituality.

### 8.3. Life comes from life (The attempt by mathematical Formulation)

Yogesh Tambe, *B. Tech Student, Mechanical Engineering, IIT Bhubaneswar*

The presentation explores the philosophical and scientific dimensions of life, proposing that life emanates from the soul rather than the material body. It introduces the theory "Lfcl," asserting that life is an intrinsic property of the spirit-soul, independent of the physical form. By contrasting this with the materialistic view that life arises solely from bodily functions, the discussion highlights gaps in the latter perspective. Additionally, the concepts of "The Divine" (V) and its mathematical and spiritual implications are introduced to frame the relationship between consciousness, life, and the material universe. Through logical reasoning and foundational frameworks, this presentation lays the groundwork for further inquiry into the metaphysical nature of life and its connection to a divine origin.

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Mr. Yogesh Tambe is currently a Dual Degree student of Mechanical Engineering, IIT Bhubaneswar. He finished his schooling in Modern Education Society, Nasik, Maharashtra. He completed his XI & XII from Matoshree College, Nasik, Maharashtra. His research interests include, learning patterns, Dynamics of Mind, Concentration Enhancement & Consciousness.

### 8.4. The Mysteries of Ancient Indian Architecture

Ar. V Sanmukha Teja, *Student From School of Planning and Architecture*

Ancient Indian architecture stands as a testament to the ingenuity, spirituality, and scientific prowess of its creators. This paper delves into the enigmatic aspects of ancient Indian architectural marvels, exploring how they seamlessly blend science and spirituality. The study focuses on key structures such as the temples of Khajuraho, the rock-cut caves of Ajanta and Ellora, and the monumental Brihadeeswara Temple and others.

The architectural principles employed in these structures reveal a profound understanding of geometry, astronomy, and engineering. The precise alignment of temples with celestial bodies, the use of advanced construction techniques, and the incorporation of intricate carvings and sculptures reflect a deep connection between the physical and metaphysical realms. The paper also examines the symbolic significance of architectural elements, such as the mandala patterns and the Vastu

Shastra principles, which were believed to harmonize the built environment with cosmic energies.

Furthermore, the study highlights the role of ancient Indian architects, known as Sthapatis, who were not only skilled craftsmen but also spiritual practitioners. Their holistic approach to architecture ensured that each structure served as a conduit for spiritual experiences, fostering a sense of divine presence and cosmic order.

Through a comprehensive analysis of historical texts, architectural treatises, and field studies, this paper aims to unravel the mysteries of ancient Indian architecture. It seeks to provide insights into how these timeless structures continue to inspire awe and reverence, bridging the gap between science and spirituality in the quest for understanding the universe.

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Ar. V Shanmuka Teja is an Architectural Consultant and Academician from Visakhapatnam with a teaching experience of more than 4 years and professional experience of more than 6 Years. He is currently pursuing PhD in Architecture from School of Planning & Architecture, Vijayawada. He has been working as an Assistant Professor at GITAM School of Architecture, Visakhapatnam. Holds a bachelor's in architecture from JNAFAU Hyderabad & Master of Architecture degree with specialization in Sustainable Architecture. He is an IGBC Accredited professional, IGBC Accredited Faculty & ECBC Expert. He has been recently awarded the IIA Young Architect Andhra Pradesh Chapter for the Year 2023. His thesis on Sustainable Farmers Market received Runner-up at GRIHA's National Awards for Excellence in Architecture Thesis on Sustainable Design 2019. His notable professional works include designing Visakhapatnam's 1st & India's Tallest 3D Printed Residential Façade & Various Hospitals.

## **8.5. Exploring the Boundaries of Science & Beyond, Integrating Vedantic insights to Understand Consciousness, Matter, and the Ultimate Reality**

Yadu Vamsi, *Business Development Manager, Modiam Co., Ltd, Thailand*

The scientific sequence of any discovery follows a series of steps grounded in the existing scientific paradigm. A thorough examination of recent developments in

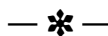


both science and consciousness studies raises fundamental questions, such as: Are matter and consciousness interconnected, or are they separate realities? Can the current scientific paradigm explain the relationship between them? These questions, among others, underscore the limitations of existing scientific methodologies and formal systems, suggesting the need for a new scientific approach. This talk aims to explore these topics in depth and address key questions such as: If a new scientific paradigm is required, how can it overcome the limitations of the current one? What role does Vedanta play in shaping this new paradigm? Can Vedantic epistemology complement the limitations of the bottom-up scientific approach in understanding the ultimate reality, including the existence of God?

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Yadu Vamsi Krishna G is a dedicated professional with a robust academic foundation in civil engineering and construction management. He holds a bachelor's degree in Civil Engineering from Jawaharlal Nehru Technological University, Kakinada, and a master's degree in Construction Engineering and Infrastructure Management from the Asian Institute of Technology, Bangkok.

Currently, Vamsi works as a Business Development Manager specializing in project management, government contracting, and infrastructure development. He has held leadership roles in business development and project management, working with reputed organizations in Thailand including BBC Group of Companies and Modiam Co., Ltd, Thailand. His research interests include sustainable construction practices, advanced project management techniques, and innovations in infrastructure development. In addition to his profession, he also has interests at the synthesis of science and spirituality.





# Abstracts of Poster Presentation Session

## 1. Can Machines Lead the Mind? Man vs. Machine in the Age of Brain-Computer Interfaces

Boddu Sai Ram, *VIT-AP University, Amaravathi*; Balaji Asawa

What if a machine could guide the human mind? Brain-Computer Interfaces (BCIs) are unlocking incredible possibilities—allowing paralyzed individuals to control prosthetics, enhancing memory, and even connecting thoughts to machines. But as machines communicate with the brain, new questions arise: Could they one day shape or lead consciousness? If so, what would that mean for humanity?

Machines are powerful but lack consciousness. They can process brain signals and influence decisions, but they do not understand why we think the way we do. Yet, their growing ability to interface with human thought blurs the line between help and control.

Brain-Computer Interfaces (BCIs) offer remarkable possibilities to improve lives, but they also bring ethical challenges. One key concern is autonomy—while BCIs can enhance cognitive abilities or restore functions, they might also manipulate thoughts or subtly influence decisions. This raises questions about how much control we truly have over our own minds. Over-reliance on these technologies could also diminish human creativity and individuality, making us dependent on machines for even basic tasks. Ultimately, the most pressing dilemma is this: if machines begin to guide our consciousness, will we still be free to think independently, or will control shift from humans to the very tools we create?

Imagine a world where your thoughts are no longer fully your own—a world where machines shape your ideas and influence who you are. The danger isn't that machines become conscious, but that humans surrender control to them. BCIs reveal a clear divide: machines can interact with the brain but will never truly be the brain. Consciousness—the ability to feel, reflect, and create meaning—is what makes us human. Machines must stay as tools that assist us, not as leaders that define how we think.



## References

Research Article: "The Ethics of Brain-Computer Interfaces" by Eric Racine et al.  
Book: Tattvjinasa: Are Machines Intelligent?

## 2. Exploring Conscious AI: Bridging the Human Mind and Machines with BCIs

Ruthvik korukonda, *VIT-AP University, Amaravathi*

The integration of neuroscience and artificial intelligence (AI) signals the beginning of a new era, where AI systems can simulate aspects of consciousness. This research examines the potential of Brain-Computer Interfaces (BCIs) to bridge human cognition and machine intelligence. A key inspiration is the concept of fluctlight, representing a digital embodiment of consciousness capable of self-awareness, decision-making, and adaptability. By capturing and processing real-time neural signals, BCIs lay the groundwork for AI systems that evolve dynamically, mirroring traits of human cognition such as emotional intelligence and memory formation.

The concept of fluctlight offers a framework for developing AI systems that integrate neural data into adaptive learning models. These systems are envisioned to simulate cognitive processes, enabling them to engage in personalized and intuitive interactions. BCIs provide the mechanism to create this dynamic feedback loop, transforming AI from static, rule-based systems into entities capable of perceiving and responding to complex human thought patterns. This capability could redefine applications in healthcare, education, and other fields by fostering seamless human-machine collaboration.

Despite the promise, significant challenges lie ahead. The complexity of consciousness, ethical concerns, and technological limitations must be addressed to realize this vision. Nonetheless, the fusion of BCIs and advanced AI models marks the dawn of a transformative era. By leveraging the principles of fluctlight, this research outlines a pathway toward AI systems that redefine intelligence and interaction, moving closer to the realm of conscious thought.

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Link: <https://doi.org/10.1038/nrn1105>

### 3. Consciousness & Artificial Intelligence

Chinmay Vidhya Charan Akurathi, *B.Tech-1st year, Electrical and Computer Engineering, Shiv Nadar University, New Delhi*

In both philosophy and science, the connection between consciousness and artificial intelligence (AI) is a fascinating problem. Machines can now learn from data, execute difficult jobs, and imitate human behaviours thanks to substantial advancements in AI. But consciousness, which is defined by self-awareness, subjective experiences, and comprehension, is a unique feature of human life that AI has not yet attained. This abstract examines the various methods that artificial intelligence (AI) might mimic or evolve consciousness, including developments in machine learning algorithms, neural networks, and cognitive modelling. To ascertain if artificial intelligence (AI) can ever have actual consciousness or if it will always be a sophisticated mimic of human behaviour, we will look at philosophical viewpoints such functionalism and dualism.

In addition, ethical issues will be discussed, with an emphasis on the ramifications of building sentient robots. These issues will include rights, obligations, and the effects such beings might have on society. This lecture attempts to provide a balanced perspective on the future of artificial intelligence and consciousness by examining both philosophical discussions and scientific advancements. It addresses the question of whether robots may develop into more than just tools and become sentient beings with their own sense of awareness. As we approach a time when artificial intelligence (AI) may call into question our basic conceptions of life and intellect, this question is vital.

### 4. Enhancing Human Intellect and well-being with AI-powered Superbrain Yoga

Ande Jeevan Rao, *District Vocational (Intermediate) Education Officer (F.A.C.) (Rtd.), Vinayak Nagar, Telangana*

Thoppu Karanam (in Tamil) and Uthak Baithak (in Hindi) are Traditional Knowledge Systems of India. The great Indian Rishis have developed these techniques to increase the intelligence of the people, based on the principle of ear acupuncture and the science of energy movement through various chakras. Thoppu Karanam or Dhorbi Karanam (in Sanskrit) is a Hindu practice rooted in Hindu

philosophy and Yoga. It is performed by Hindu devotees with the belief that the practice is a kind of austerity, which would grant wisdom, intelligence and success in all endeavours. Thoppu Karanam has now been transformed into `Superbrain Yoga` (SBY) which has attained international status. SBY is a distilled version of Thoppu Karanam or Uthak Baithak. It enhances the qualitative and quantitative pranic energy in the brain. SBY improves memory, confidence, concentration, attention, cognitive performance and brain function. SBY which is considered as fitness yoga, helps in achievement of Social Development Priorities. SBY fulfils two Sustainable Development Goals (SDGs) viz. Goal- 3: Good health & Wellbeing and Goal-4: Quality Education, that are aimed to transform our world.

Superbrain Yoga combines physical movement, breathing and acupuncture to purportedly enhance brain function and energy levels. To use artificial intelligence (AI) for identifying and optimizing the gestures and breathing involved in SBY, we can leverage several technologies, including computer vision, deep learning, and wearable sensors. Setup, data collection, real-time analysis, feedback, and post-session analysis are all included in the design of workflow. By leveraging AI in this way, practitioners of SBY can receive guided assistance and improve their technique, potentially enhancing the benefits of their practice.

**Key Words:** Superbrain yoga, Artificial Intelligence, Gesture Recognition, Breathing Patterns, Computer Vision, Wearable Sensors.

## 5. Legends to Logins: Connecting Spirituality and the Cyberworld

Sai Sravanthi Avuladoddi, *B.Tech-4th year ,Electronics and communication Engineering, Vijaya Institute of Technology for women, Vijayawada*

The ancient Indian scriptures, the Mahabharata and Ramayana, are rich tapestries woven with tales of heroism, villainy, and cosmic battles. Though centuries old, these epics offer surprising parallels to the modern-day challenges of cybersecurity. Both domains involve intricate strategies, ethical dilemmas, and the struggle between good and evil.

This paper explores the intriguing connections between ancient Indian scriptures and the contemporary landscape of cybersecurity. We delve into the strategic nuances of warfare employed by the characters of these epics and their parallels to modern cyberattacks. We examine the ethical considerations involved in both

contexts, highlighting the importance of Dharma (righteousness) in ancient India and the ethical guidelines that govern cybersecurity practices today.

In the digital age, deepfake technology has emerged as a powerful tool for malicious actors to create highly realistic but fabricated media. This paper explores the potential threats posed by deepfakes, drawing parallels to Ravana's illusory tactics and many such examples.

By drawing parallels between these seemingly disparate fields, we aim to offer a fresh perspective on cybersecurity. The lessons learned from the epics can provide valuable insights into developing robust defense mechanisms, identifying vulnerabilities, and mitigating cyber threats. This paper will argue that by understanding the timeless wisdom of the past, we can better equip ourselves to navigate the complex and ever-evolving world of cybersecurity.

**Keywords:** Indian scriptures, The Mahabharata ,The Ramayana ,Challenges of Cybersecurity,Cyber Threats.

## 6. Mystery of Ancient Indian Architecture

Sai Sanusha Moram, *B.Tech-1st year, Civil Engineering, V R Siddhartha Engineering College, Vijayawada*

Our country's architecture is a fantabulous blend of art, religion, and engineering. Ancient architecture of India highlights the country's rich culture and spiritual heritage through their diverse style of architecture. These constructions symbolize their artistic way of thinking and show it through their engineering expertise. However, these wonderful temples and monuments hide their mysteries ways of building.

The many mysteries include Veerabhadra temple which has 70 pillars but there is one pillar 20 feet tall, the most impressive part is that it defies gravity and is hanging in mid-air. There is enough space between the base of the pillar and ground to pass a piece of cloth of paper.

The Vittala Temple in Hampi is a genuine masterpiece in term of grandeur and architecture. This place is most known for its 56 mysterious pillars each 3.6 meters high which produce delicate musical notes when struck.

Jaganath Puri, the home to Lord Shiva also holds a mystery. We all know that lightweight things like flags float in the direction of the wind and there are no exceptions to physics. But looks like there is! In Jagannath Puri, the flags fly in the direction opposite to that of the wind.

These just a few of many examples of the mystery hidden in many constructions of those times. It is very shocking that they have managed to create such fascinating pieces centuries ago without any technology or fancy equipment. Cracking the mysteries of construction and architecture of those times one of the challenges today's architects and engineers face. If these mysteries are cracked, then it can help modern architecture and construction reach new heights.

## **7. Cosmic Consciousness and Scientific Theories: Exploring the Synergy between Science and Spirituality with Special reference to the work of Saint Dnyaneshwar and Albert Einstein**

Hussain Sheikh, MA[English], Ph.D scholar, MIT Academy of Engineering, Alandi, Pune

This study aims to investigate confluence between theories in modern science and spiritual philosophy referring to the work of Albert Einstein, doyen physicist of the 20th century and revolutionary spiritual Poet and Philosopher from 13th century India Saint Dnyaneshwar. The aim of the study is to probe into the concept of Cosmic consciousness dealt in the works of Saint Dnyaneshwar and its correlations in the idea of Observer Effect in the quantum physics, evaluates the Einstein's Theory of Relativity to identify the parallels with his views on the idea of relativity of time and space, and studies the interrelations between the Einstein's equation  $(E = mc^2)$  and the insights of Saint Dnyaneshwar on energy-matter.

Through a comparative analysis, the research aims to identify and interpret metaphysical concepts from Dnyaneshwar "Dnyaneshwari" and "Amrutanubhav" that may align with or even anticipate principles in contemporary physics, contributing to an enriched, unified understanding of reality that transcends disciplinary boundaries.

The study employs the qualitative research methodology. The aim is to conduct in-depth-interviews of the experts from the science and spirituality discipline. The

research uses the multi-faceted methodology incorporating the scientific theoretical review, primary text analysis and qualitative comparative interpretations to find the points of convergence and divergence between these two apparently different intellectual traditions. Key hypotheses are examined to assess whether Saint Dnyaneshwar's spiritual insights offer complimentary or advanced perspectives on consciousness, time, space, and energy. Findings indicate potential analogies in the treatment of observer-dependent reality, the fluidity of time and space, and the equivalence of energy and matter, suggesting that Saint Dnyaneshwar's philosophies provide profound insights that may enhance modern scientific discourse. Precisely, the present study intends to highlight the prospect of an integrated worldview with science and spirituality mutually informing and enriching human understanding of the cosmos

**Key Words:** Cosmic Consciousness, Unified Theories, Synergy, Science, Spirituality, Energy-matter, Theory of Relativity and Observer Effect

## 8. Pain Reprocessing Therapy and Ramana Maharishi

Sivakumar Venugopal, *Faculty, Amrita Institute of Medical Sciences, Kochi, Kerala*; U. Kasi Viswanatha Sarma; Damodaran Madhavi Vasudevan

While people in the East were naturally inclined to spirituality with various age-old rituals associated at every stage of individual and social life, the influence of western culture in recent times have led especially the younger generation to question its relevance and validity. Culturally sensitive segments of the society do carry forward the legacy motivated by the benefits they could experience, however modernity looks everything from the scientific angle demanding valid explanation for their often genuine curiosity.

Pain reprocessing therapy, designed scientifically on the basis of the already familiar methodologies of hypnosis and body-mind medicine paradigm seems to adequately scale up to the expectations of the modern mind. The spiritual basis of Indian philosophy exemplified so demonstrably by the most celebrated saint In recent times, Ramana Maharishi gets its validated from science through the evidence provided by research into pain reprocessing therapy.



## 9. The Geometry of Consciousness: Mathematical Insights into AI and Spiritual Experience

Siripalli Hemanth Durga Kumar, *PhD scholar, SRM University, Andhra Pradesh*

This work explores the intersection of mathematics, artificial intelligence (AI), and spirituality through the lens of geometry to better understand the nature of consciousness. Geometry, as a universal language, provides profound insights into the patterns underlying both human cognition and spiritual experiences. Ancient traditions like sacred geometry depict consciousness as an interconnected web, mirroring modern mathematical frameworks such as Integrated Information Theory (IIT) and fractals, which model consciousness in high-dimensional spaces.

In the context of AI, the geometric structure of neural networks demonstrates how decision-making and emergent behavior can simulate aspects of awareness, drawing parallels to the recursive and self-referential nature of human cognition. Furthermore, quantum geometry and holographic principles offer metaphors for spiritual teachings about unity and interconnectedness, suggesting that consciousness may transcend physical boundaries.

## 10. Artificial Intelligence & Consciousness

Niket Kumar Jha, *B.E. 2017 Batch, Electrical and Electronics Branch, CMR Institute of Technology- Bangalore*

The two terms AI and Consciousness are related in the sense that both involves thinking to find meaning and purpose beyond the usual logics when starts evolving to higher levels although AI operates at limited machine level and Consciousness works for life. AI is a field of research in computer science that develops and studies methods and software that enable machines to perceive their environment and use learning and intelligence to take actions that maximize their chances of achieving defined goals. Consciousness refers to the ordered distinction between self and environment, simple wakefulness, one's sense of selfhood or soul explored by "looking within" and as per Vedanta it is the very symptom of life that distinguishes from matter. General intelligence is ability to complete any task performable by human on an at least equal level, it is exhibited by conscious life but it's at developing stage in AI machines and among long term goals. Some methods are developed to test ability of machines to exhibit intelligent behaviour equivalent to, or

indistinguishable from, that of human and examples include Turing test, Chinese room experiment etc. Some AI machines including ChatGPT, the Eugene Goostman and ELIZA chatbot are argued to have passed Turing test or by fooling judges but no machine has perfectly passed it due to lack of consciousness that generates emotions, feelings etc. in life as these attributes are not quantifiable but can only be felt by observers therefore since machines lack consciousness although can be intelligent enough so both needs integration to evolve into higher conscious intelligence.

## 11. Samkhya Cosmology

Dr. Deobrat Singh, *Department of Physics, Dr. Vishwanath Karad MIT World Peace University, Pune*; Mr. Saurabh More

The origin and the large-scale structure of the universe can be explained by the Sāṃkhya cosmology, one of the oldest philosophical systems in India, through its dualistic principles. Originally proposed by Sage Kapila, it posits two eternal realities: Puruṣa (consciousness) and Prakṛti (matter). Puruṣa is the passive observer, while Prakṛti is the dynamic force that evolves into the material world.

The Sāṃkhya Philosophy advocates three gunas of Prakṛti: sattva (balance), rajas (activity), and tamas (inertia). The interaction of these guṇas leads to the evolution of the cosmos. The first product of this interaction is mahat (cosmic intelligence), followed by ahaṃkāra (ego), which differentiates into the mind, senses, and elements.

Sāṃkhya cosmology emphasizes the liberation of Puruṣa from Prakṛti's influence, achieved through self-realization and knowledge. This system profoundly influences other Indian philosophies, including Yoga and Vedānta, providing a framework for understanding the nature of existence and the path to spiritual liberation.

## 12. Household Humanoid Robots: Implications on Human abilities

M. Deemanth Kumari, *B.Tech 3rd year, NRI Institute of Technology, Vijayawada*

Household humanoid robots, powered by artificial intelligence (AI) and robotics, are revolutionizing homes by automating tasks traditionally handled by humans. Unlike

earlier gadgets, which focused on simple functions, these robots offer personalized, interactive assistance, adapting to household needs.

These robots significantly impact human abilities by reducing the physical and cognitive load. They handle repetitive tasks like cleaning and caregiving, allowing individuals to focus on more complex activities. While this increases efficiency and independence, it may also decrease human cognitive engagement, as many memory-stimulating tasks are now performed by robots. Over-reliance on these technologies could affect human memory retention and problem-solving skills.

Before humanoid robots, people relied more on personal engagement for tasks such as managing schedules and caregiving, which helped maintain cognitive skills. The shift toward automation in homes today brings convenience but also raises concerns about social isolation and diminishing life skills.

In conclusion, humanoid robots are transforming society by enhancing efficiency and independence, but they also present challenges related to cognitive engagement and human relationships. As these technologies continue to evolve, their impact on human memory, societal roles, and everyday life will be significant.

### 13. Architectural Mysticism: Bridging Science and Spirituality through Heartfulness Practice

Ar. Shriya Agrawal, *PhD scholar, HRC, University of Mysore and Assistant Professor, FOAPD, Integral University, Lucknow*; Dr. Rajeshwari Hegde; Ar. Amit Khandelwal

Architecture, as a medium for human expression, embodies the mysteries of science and spirituality—a dynamic interplay of measurable accuracy and ethereal transcendence. This research explores the possibility of Heartfulness Practice, a meditation practice that promotes mindfulness and self-awareness, as a bridge between these two dimensions. By investigating the concepts of Quantum Architecture, the study illustrates how this discipline allows designers to match physical structures with deeper metaphysical principles, resulting in settings that promote holistic well-being.

The study looks at the symbiotic interaction between light, energy flow, geometry, and materiality, as well as spiritual concepts like awareness, balance, and harmony. It looks at how Heartfulness might inspire architects to create environments that

elicit not only visual or functional responses, but also emotional and spiritual ones. Case studies, experiential reflections, and design analyses serve as the foundation for reinventing architecture as an integrative discipline that balances scientific rigor and spiritual understanding.

This study contends that the future of meaningful design is dependent on architecture's capacity to embrace its position as both a science of structure and a spiritual sanctuary.

## 14. An approach to examine the Geometric proportions of Buddhist stupa architecture in the Amaravati region, Andhra Pradesh

Narasimman R, *School of Architecture and Planning, Vijayawada*

This paper examines the geometric proportions of Buddhist stupa architecture in the Amaravati region of Andhra Pradesh, India. By incorporating the influence of megalithic burial mounds. Local traditional knowledge may have contributed to the design and proportion of Buddhist stupas. By examining the geometric proportions of these ancient structures, through archival drawing analysis, stone slab examination, and comparative analysis, this research investigates the evolution of stupa design from early to late periods, with a focus on changes in shape, proportion, Fractal Geometry, and geometric patterns. It explores the relationship between geometric proportions and the morphology of Buddhist stupas, examining the mathematical concepts, symmetry, balance, and distinctive features that characterize Amaravati stupa architecture.

**Keywords:** Amaravati region, geometric patterns, geometric proportions, Buddhist stupas, archival drawing, stone slab examination, megalithic burial, comparative analysis, mathematical concepts, Fractal Geometry.

## 15. Sepulchral Temples Culture in Tamil Nadu (Pallippadai temples)

Yazhini M, *Masters of Architecture in Architectural Conservation, School of Planning and Architecture, Vijayawada*

The Sepulchral temples are part of the southern Indian temple tradition. It is a unique and unusual temple building type in Tamil Nadu. The Pallippadai temples evolved from monolithic buildings to temples, which are now monuments. The systematics of this temple typology have been documented in Tamil literature (Ulas, Paranis, Tirumadiram, and so on). The Temple was the most kind organization in medieval India, and its activities had a wide-ranging impact on people's lives, enriching and honoring them. Hindus believe that God lives in temples, even though he is believed to be present everywhere. They also believe in life after death and the deification of their forefathers after death. They built temples for both the gods and their departed ancestors. Temples created for the deceased are sometimes referred to as sepulchral temples or memorial temples. In south India, sepulchral temples are known as 'Pallippadai' - 'புளப்படை', Parokshavinayam, and Sivayatanam, which signifies the place where the departed soul sleeps.

Pallipadai (tomb-type) temples are the temples raised over the mortal remains of the dead kings at the burial place. Though the majority is generally for the kings, they were occasionally built for the queens, chieftains, and saints. From the origins of ancestral spirits to Sepulchral temples according to Saivism Agamas, Dedicated to Saints, Chalukyas, Cholas, Chieftains, and Pandya. Temples in the inscriptions are described architecturally, local influences, cultural influences in their context, and understanding their value with our Dravidian traditional context and language.

## 16. Echoes of Mithila Region: Exploring the Architecture of Darbhanga Raj Palaces – Case of Navlakha Palace

Anannya Sinha, *School of Planning and Architecture, Vijayawada*

This research explores the architecture and cultural significance of the palace of Navlakha, also known as the Rajnagar Palace, which is regarded as an important heritage from the Darbhanga Raj period in the Mithila region of Bihar, India. The palace group was ordered by Maharaja Rameshwar Singh in the late 19th century,

and it signifies the opulence and aristocracy associated with the Darbhanga Raj, rated as one of the wealthiest zamindaris in British India. The palace signifies the convergence of indigenous Maithil architectural practices and outside influences, exhibiting a style that combines aspects of Mughal and Rajputana architecture with vernacular local forms. In this regard, the paper utilizes a multidisciplinary approach based on historical documentation, architectural examination, and cultural narratives to probe into the Navlakha Palace design and its significance. Architectural arrangement: the sheer scale of the palace, symmetric layout, and the coherent amalgamation with the surroundings of the natural environment define its architectural configuration. Ornamental features, including stucco craftsmanship, intricately carved columns, and detailed frescoes, highlight the skilful artistry of the artisans involved in its creation. The research highlights the importance of religious themes, which are portrayed through the deep spiritual beliefs of the Maithil culture that are visible in the shrine and sacred areas of the palace.

One of the major events in the history of the Navlakha Palace took place during the devastating earthquake of 1934, which caused severe structural damage to the complex. Some parts of the palace are not inhabited and have gradually become dilapidated while others have been used for different purposes, thus leaving a divided but long-lasting heritage. The physical deterioration of the palace brings out some of the challenges that occur when heritage structures are involved in disasters, insufficient funds, and people's lack of awareness.

The study puts forth essential architectural characteristics of the palace, which are using indigenous materials, modifying the environmental conditions, and mixing traditional and modern construction techniques that were current during that time. These characteristics, therefore, present a regional architectural language that is not only environmentally responsive but also of visual significance. Open courtyards, jaali work for ventilation, and water management systems serve as illustrations of ecological principles inherent in the design of the palace.

This study deepens the exploration of the significance of the Navlakha Palace as a center of culture at its peak. It was used as an arena for literary assemblies, spiritual rituals, and administration, and acted as a microcosm of the cultural identity of Mithila. The linkage of the palace with the Darbhanga Raj amplifies the symbolic relevance of the work, as the dynasty played a great role in promoting the arts, education, and religious activities in the region.

The study further discusses the current importance of the palace in the context of heritage conservation. It points out the risks brought by urbanization,

encroachments, and neglect that have all led to the faster deterioration of the site. The lack of an appropriate conservation policy and the limited governmental intervention have made this valuable heritage resource vulnerable to further damage.

By conducting comparative analyses with various heritage sites in the Mithila region, this research highlights the necessity of a comprehensive conservation strategy that includes documentation, restoration, and adaptive reuse. Furthermore, it promotes the importance of community participation and the development of awareness initiatives to cultivate a sense of ownership among local stakeholders. Moreover, the paper suggests that the Navlakha Palace be made use of by leveraging tourism by developing sustainable heritage tourism initiatives in line with the principles of cultural preservation and economic development.

The findings of this research enrich the larger conversation about architectural heritage in India, particularly in contexts of devalued heritage like Mithila. The study of the Navlakha Palace brings out the complex interplay of architecture, culture, and identity in a context that is rapidly changing socio-economically. It calls for urgent action to preserve this icon of Bihar's heritage, thus ensuring its transmission to the future.

In summary, the Navlakha Palace is a striking monument to the architectural and cultural heritage of Mithila. The analysis puts under focus the importance of such historical monuments as it relates to vessels of history and regional identity representations. With this research, it encounters the challenges of conservations and provides feasible alternatives in restoration of the Navlakha Palace and strengthens its stand in the cultural memory of Mithila. This study supports a cooperative initiative involving policymakers, heritage specialists, and local communities to ensure that the important historical site is preserved in its entirety.

## **17. The Kakatiyan Legacy: Diverse Aspects of Perini Shiva Tandavam Dance and Its Connection to Architecture**

Mahitha Vankayalapati, *School of Planning And Architecture, Vijayawada*

Despite their different mediums, dance and architecture are inextricably linked through the interaction of space and movement, which enhances each other's aesthetic and practical aspects. This synergy was especially noticeable during the

Kakatiya period in the Perini Shiva Tandavam, which represents the architectural complexities of temples that functioned as both performance venues and sanctuaries, in addition to reflecting South India's martial and spiritual legacy. Through its interconnection, the dance's dynamic motions and rhythm reinforce cultural narratives and communal identity by evoking the structural features of temple designs and generating a visual and spatial discourse that enlivens the space's sacred and bodily dimensions..

An essential resource for comprehending the Kakatiya dynasty's contributions to Indian cultural history, especially in the field of dance, is Jayapa Senapati's *Nritya Ratnavali*. In addition to preserving the complexities of Perini Shiva Tandavam, a dynamic dance style that captures the spiritual and social spirit of the Kakatiyan era, Senapati's painstaking codification of numerous dance techniques established it as a crucial expression of regional identity that influenced later classical dance traditions throughout India. His thesis emphasises the interaction of dance, architectural magnificence (such as the famous Kakatiya temples), and the sponsorship system that made sure these arts flourished. This interdependence highlights the larger story of how regional customs of the era shaped and enhanced India's rich cultural heritage.

## 18. Understanding the Geographical setting of temples in Dakshin Kosala Region

*Kshetra, SPA Vijayawada*

The region of Dakshina Kosala( also known as South Kosala) is mentioned in colourful ancient Indian textbooks. The exact geographical boundary has continuously changed over time, and at the moment, only a rough estimate can be made of the Dakshina Kosala region, which roughly covers the northern and central corridor of the present- day state of Chhattisgarh. Excavations and jottings indicate that Dakshina Kosala was a prosperous region, characterised by large requests, trade centres, and educational institutions. Also, temples within this region reflect the impalpable heritage of the area.



## 19. Harmonizing Science and Spirituality: A Profound Journey of Discovery

Ar V Shanmuka Teja, *PhD Scholar, SPA Vijayawada*

The image is a captivating piece of digital style art that beautifully intertwines elements of geometry, cosmology, and abstract design. At the heart of the image lies a radiant, glowing sphere, symbolizing the source of light and energy, which can be interpreted as the divine or the ultimate truth that both science and spirituality seek to understand.

Surrounding this central sphere are intricate layers of geometric patterns, including circles, lines, and grids, creating a sense of depth and dimensionality. These patterns evoke the structure of the universe, the interconnectedness of all things, and the fundamental principles that govern both the physical and metaphysical realms. The presence of various spherical objects, resembling planets or celestial bodies, further emphasizes the cosmic theme and the exploration of the unknown.

The color scheme transitions from warm, fiery tones at the center to cooler, darker hues towards the edges, enhancing the sense of a radiant core and the journey from the known to the unknown. This gradient symbolizes the quest for knowledge and enlightenment, a journey that transcends the boundaries of science and spirituality.

## 20. Stomatal Movement - A Divine Drive

Naveen Kumar Gaddala, *Government Degree College (A), Bodhan,  
Nizamabad, Telangana; Prashanti Sandepogu*

In this present research work we want give some information that plants are not non cognitive, because like animals they also shows many sophisticated cognitive like Respiration, transportation of water and minerals, photosynthesis, Reproduction by Zoospores in lower plant,(Algae, fungi, Bryophytes) and transpiration by stomatal movement. And they shows anatomical changes depending upon the environmental conditions which we also can call it as consciousness to the nature. In this present topic we are giving some note on Transpiration of plants which is dependent on environmental changes especially availability of water. Upon the level of water content how the plants protect themselves by showing opening and closing of stomata. If conditions are not favorable how they show abscission by ABA Stomata are central adjustable pores which mediates in the geo-chemical cycles for the

physiological activities of the plants like photosynthesis and transpiration in the form of SPAC.

Each surrounded by a pair of guard cells, are microscopic pores in the epidermal cells of plants. It is very necessity to balance environmental factors in the evolution of plants, and is increasingly important in maintain the humidity in drier world. The conductance of CO<sub>2</sub> and loss of water vapour across the leaf surface is maintained by epidermal and stomatal morphology (the number, size, and spacing of stomatal pores) and stomatal physiology (the regulation of stomatal pore aperture in response to environmental conditions). The proportion number of stomata on the epidermis allocated to stomata and the evolution of amphistomaty are linked to the physiological function of stomata. In reference to the relationship between stomatal density and [CO<sub>2</sub>] is mediated by physiological stomatal behaviour; species with less responsive stomata to light and [CO<sub>2</sub>] are most likely to adjust stomatal initiation. These differences in the sensitivity of the stomatal density—[CO<sub>2</sub>] relationship between species influence the efficacy of the 'stomatal method' that is widely discussed in this study. Many studies have revealed stomata physiology or morphology in K<sup>+</sup> pump mechanisms for stomatal control. In Consideration with the interaction between stomatal morphology and physiology is critical to our understanding of plant evolutionary history, plant responses to on-going climate change and plant hormones like ABA.

Through this research work we want give some information that plants are not non cognitive, because like animals they also shows many sophisticated cognitive responses like Respiration, transportation of water and minerals, photosynthesis and transpiration. By studying the structure and opening and closing of stomata we come to know that there might be almighty power beyond the creation of living organisms. The times, seasons, tides, elements, weather, reproduction, and all the cycles of life, growth, and death are orchestrated and controlled by unseen and unreled power of almighty power. Each plays its role in God's glorious harmony in nature and is given for humans to enjoy.

This research work trying to introduce or giving information about the consciousness in the plants according to environmental factors and changes what where takes place in the nature they exist and which conditions were provided by almighty God. And this not main goal of this research work to provide a positive argument for plant cognition and consciousness, but to invite a constructive and innovative thought to welcome the advices and suggestions from the delegates of the conference.

**Keywords:** Stomata conductance – Stomata morphology - Stomata anatomy – environmental factors – SPAC - K + pump mechanism – ABA.

## 21. Effect of Sound on Nature and Life

R.Nitai Charan, *Dept. Electrical & Electronics engineering, Chaitanya Bharathi Institute of Technology, Hyderabad*; R. Chaitanya Charan

Sound, an ethereal force, pervades our world, shaping both the natural environment and human consciousness. Its influence extends far beyond mere auditory perception, reaching into the depths of our being and the intricate workings of nature. In the grand tapestry of nature, sound plays a vital role, with rhythmic pulses, melodious chirps, and gentle rustles composing a symphony that nurtures life. Scientific studies have revealed that sound waves can influence plant growth, water structure, and animal behavior. Humans have long recognized the power of sound to evoke emotions, alter consciousness, and promote healing. Music, a universal language, can transport us to different emotional states, while sound therapy can alleviate pain and reduce anxiety. Mantra meditation, an ancient practice, harnesses the power of sound to transform the mind and body. As our understanding of the power of sound deepens, we are increasingly recognizing its potential to improve human health and environmental sustainability. By harnessing the healing properties of sound, we can create a more harmonious and resilient future.

## 22. Life - Origin, Meaning and Purpose

Gruhalaxmi Suna, *Rama Devi University, Bhubaneswar*; Rakesh Kumar; Pratyush Mishra, *IISER Kolkata*

The origin, meaning, and purpose of life have intrigued humanity for centuries, serving as a focal point for scientific, philosophical, and spiritual exploration. Each perspective offers unique insights, reflecting diverse paradigms and cultural contexts. This abstract synthesises contemporary scientific theories, philosophical discourses, and spiritual interpretations to present a cohesive overview.

Scientifically, the Big Bang Theory suggests the universe originated 13.8 billion years ago, leading to Earth's formation. Abiogenesis proposes life arose from simple

organic compounds around 3.5–4 billion years ago, evolving into complexity through natural selection, as outlined by Darwin’s evolutionary biology. Spiritual perspectives attribute life’s origin to divine creation, with traditions like Christianity, Hinduism, and Islam emphasising its sacred nature.

The meaning of life varies across contexts. Philosophical views, such as existentialism, advocate for personal purpose creation, nihilism denies inherent meaning, and Stoicism finds significance in virtue and reason. Religions like Christianity and Islam view life’s purpose as serving God, while Hinduism and Buddhism focus on liberation (Moksha or Nirvana). Personally, many find meaning in relationships, passions, and contributing to societal well-being.

Life’s purpose is often tied to themes like self-discovery, serving others, intellectual and spiritual growth, and leaving a legacy. Exploring these facets, this abstract underscores the universal yet personal nature of understanding life’s essence, inviting reflection on the enduring question: What does life mean to you?

## 23. Mysteries of Ancient Indian Architecture

Madhulatha Gadula, *Aditya Degree College, Benzcircle, Vijayawada*

The wonders hidden behind the mysteries of ancient Indian architecture will astound you. Structures like the Kailasa Temple pose enduring questions—how were these feats achieved? What knowledge guided the construction of the Konark Sun Temple, aligning its geometry with cosmic precision? This research explores how ancient artisans blended art, engineering, and spirituality to create wonders that transcend time and low. By examining forgotten techniques, astronomical understanding, and the hidden symbolism encoded in these monuments, this study seeks to offer a new perspective on human ingenuity. Every stone carved tells a story — of innovation, determination, and a vision intertwined with the cosmos.

We invite you to step into this incredible world—unravel the secrets of ancient Indian architecture yourself!

## 24. TBA

J.R.Vigneshwaran, SPA Vijayawada

## 25. Holistic Education and Human Excellence

Gayathri Mothukuru, *Aditya Degree College, Vijayawada*

Traditional education systems primarily focus on intellectual development, often neglecting the emotional, physical, and spiritual aspects of growth. Holistic education, however, offers an approach that integrates all dimensions of human development, fostering true excellence. Our methodology includes exploration of existing holistic education theories, analysis of schools and programs implementing holistic education practices and outcome is focused on overall well-being, academic success, and personal growth of participants.

## 26. Beyond the Matrix: Exploring Quantum Realities and Ancient Wisdom

Y Sri Hari Krishna, *Senior Software Developer, Anaqua Inc*

This document explores ideas that challenge our understanding of reality, suggesting that existence transcends physical perception. It discusses key concepts of quantum phenomena, along with ancient wisdom traditions that align with these principles. By integrating these insights, we aim to illuminate the profound mysteries of existence and the interconnectedness of all things.



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2. **Tour to Goddess Durga Temple, Vijayawada:** Sri Rangeswar & Sri Parama Karuna, HH Nilambar Swami,

3. **Tour to Lord Balaji Temple, Nekkalam:** JayaLaksmi Devi Dasi, Sri Krishna Chandra Das, Krishna Misra Das, HH Vishal Swami, Sri Pitambara Krishna

C) **Food:** Sri Vemula Muralidhar, Sri Srivas Pandit, Sri Acharya Charan

D) **Local Promotions:** Sri Srivas Pandit

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Prof. Dr. Srikonda Ramesh,  
 Director, School of Planning and Architecture, Vijayawada, AP

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Ar. Sreeleha C, Assistant Professor, Dept of Architecture

Ar. Renuka Mohan W, Assistant Professor, Dept of Architecture

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Mr. B Bhargav Reddy, Technical Assistant, Dept of Architecture

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# About Bhaktivedanta Institute



The Bhaktivedanta Institute was founded by His Divine Grace A. C. Bhaktivedānta Swami Prabhupāda in Vrindavan in August 1974. Śrīla Prabhupāda was one of the greatest exponents of Vedic culture in the 20th Century. He strongly felt that modern civilization is completely misdirected by scientific materialism and there is an urgent need to introduce the spiritual knowledge and wisdom of the *Bhagavad-gītā* and the *Śrīmad-bhāgavatam*, the essence of all the Vedic literatures, to the scientists, philosophers, scholars and students of the world. He noticed that all the prestigious academic institutions and universities of the world were teaching many different subjects but they had left out the most important branch of knowledge—the science of the soul. He envisioned that this spiritual knowledge of life would help restore an ethical culture for modern society. Thus, there would be hope for bringing lasting happiness and world peace. He felt that introducing this spiritual culture should be the contribution of India for the welfare of humanity. Śrīla Prabhupāda appointed his disciple Dr. T. D. Singh (Bhaktisvarūpa Dāmodara Swami) as the director of the Institute from its very inception and left several instructions to him to carry forward his vision.

The Bhaktivedanta Institute is a center for Advanced Studies in Science and Vedānta and focuses on a consciousness-based paradigm. This spiritual paradigm has a unique potential to resolve the mind-body problem, the question of evolution and life's origin and many other philosophical and ethical concerns. Thus, this paradigm will have profound significance for science, religion, and



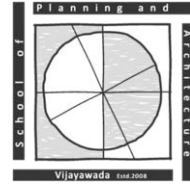
their synthesis. One of the primary objectives of the Bhaktivedanta Institute is to present this paradigm for the critical attention of serious scholars and thinkers throughout the world. As such, the Institute supports a closer examination of existing scientific paradigms in cosmology, evolution, physics, biology, and other sciences. The Institute also promotes scientific, philosophical and religious dialogues among scientists, scholars and theologians of the world covering various common conceptual grounds of science and religion for the purpose of creating a better and harmonious understanding among all people. In order to achieve these goals, the Institute organizes international conferences regularly and publishes books and journals. Interested persons may contact the secretary of the Institute at:

The Bhaktivedanta Institute,  
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Manasi Manjil Building, Fourth Floor  
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About

## School of Planning and Architecture



**School of Planning and Architecture (SPA) Vijayawada** is one of the three institutes of national importance, under the Ministry of Education (MoE), Government of India, offering education in the fields of Planning and Architecture. The School has distinguished itself and has grown as a role model in the professional education offering undergraduate, post graduate and doctoral programmes in the fields of planning and architecture, while at the same time fostering quality research in these domains. SPA Vijayawada is ranked one of the best technical institutes in the country. The campus is green rated and is equipped with state-of-the-art infrastructure such as hostels, central library, ICT enabled teaching atmosphere, high end digital surveillance systems, modern laboratories, spacious studios, classrooms, open air theatres, auditorium, cafeteria, outdoor sports facilities, etc.

All efforts are being made to develop the School as a place of excellence for innovation, creativity and research through the architecture and planning domains. Faculty members are constantly involved in various academics, research and developmental activities of the School.

At SPA Vijayawada, academic degree programmes are designed to address physical, socio-economic and environmental challenges, so as to achieve future sustenance and hence to cater to the specific needs of the industry and academics. The key objective of these courses is to equip the students with adequate skills required, such as :-

1. To comprehend various built environment related issues
2. To analyze physical, socio-economic, cultural, political and ecological dimensions of the human settlements.

## VISION of SPA Vijayawada

“ To achieve academic excellence in Architecture and Planning through innovating, creating, acquiring and disseminating knowledge using sustainable local and global practices and enhancing the quality of society through responsible built environment.”

## MISSION of SPA Vijayawada

“To rethink conventions of design practice with societal, economic and environmental dimensions and add value to the body of knowledge as well as practice in the field of Architecture and Planning through multidisciplinary curricula, research base, active industry academia, capacity building and emerge as credible resource centres. Adding value to the body of knowledge in the field of Architecture and Planning through multidisciplinary and research-based curricula, active industry-academia interface and capacity building.”

## Research Initiatives

SPAV enhances the research and consultancy activities of the school, by encouraging the faculty to undertake research projects and Institutional consultancy. It is also instrumental in coordinating the academic management of research and Institutional Consultancy for the Institution. Currently, a number of Institutional collaborations for research, Faculty exchange and students exchange have been established by the School through MoUs with leading Institutions such as University of Melbourne, University of Lille, IIT-Rourkee etc.

The School also has a number of Consultancy projects such as GIS based Master Plan for AMRUT towns- Bhimavaram and Elluru, Project for Andhra Pradesh Police Martyr’s Memorial and Detailed Project Report and Master Plan for Amaravathi Techno Park, Revision of Andhra Pradesh Town Planning Act 2018.

The School has established a Design Innovation Centre with an objective to develop innovative designs primarily to address the local issues which need low cost solutions and to nurture and advance the culture of design and innovation in the region to improve the quality of life.

The Unnat Bharat Abhiyan is inspired by the vision of transformational change in rural development process.

Two prestigious projects namely, Building Inclusive Urban Communities (BINUCom) and the Building Resilient Urban Communities (BReUCom) are funded under EU Erasmus + Program in the field of Capacity Building in Higher Education.

### **Institute Innovation Cell (ICC)**

School of Planning and Architecture, Vijayawada has established Institute Innovation Cell (ICC) in line with the Ministry of Education, Govt. of India ' with a purpose of systematically fostering the culture of Innovation in the institute. ICC at SPA Vijayawada will focus on creating complete ecosystem which will foster the culture of Innovation from ideas generation to pre-incubation, incubation and graduating from the incubator as successful start-ups. Further, it shall work closely with the students to encourage the creative energy of Östudent population to work on new ideas and innovation and promote them to create start-ups and entrepreneurial ventures.



# Previous AISSQ Conferences

**Science & Spiritual Quest**  
12<sup>th</sup> AISSQ Conference  
21-23 January 2022 @ Online

The first step from the plane of material science and its use in our lives, lies at the bottom of the plane that is reality in the past.

**TOPICS**  
• Science and Spirituality  
• The Role of Science and Spirituality  
• The Role of Science and Spirituality in the Age of Science and Technology  
• The Role of Science and Spirituality in the Age of Science and Technology

**IMPORTANT DATES**  
Registration: 15th January 2022  
17th January 2022  
19th January 2022

Organized by: **BHAKTIVEDANTA INSTITUTE**  
www.bvbinstitute.org

**11<sup>th</sup> AISSQ Conference**  
**MATHEMATICS & REALITY**  
6-7 October 2019 @ IT Madras

**TOPICS**  
• Mathematics and Reality  
• The Role of Mathematics in Science and Spirituality  
• The Role of Mathematics in Science and Spirituality

**IMPORTANT DATES**  
Registration: 25th September 2019  
27th September 2019  
29th September 2019

Organized by: **BHAKTIVEDANTA INSTITUTE**  
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**AISSQ Conference**  
**Science and Spiritual Quest**  
04-06 May 2015  
Indian Institute of Space and Technology  
Madras, Chennai, India

**TOPICS**  
• Science and Spirituality  
• The Role of Science and Spirituality  
• The Role of Science and Spirituality

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**AISSQ Conference**  
**Science and Spiritual Quest**  
30<sup>th</sup> Oct - 1<sup>st</sup> Nov 2015  
IIT Kharagpur, India

**TOPICS**  
• Science and Spirituality  
• The Role of Science and Spirituality  
• The Role of Science and Spirituality

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**AISSQ Conference**  
**Serving the Self and the Society - the Role of Science and Spirituality**  
1-2 Feb 2014  
IIT (BHU) Varanasi, UP, India

**TOPICS**  
• Science and Spirituality  
• The Role of Science and Spirituality  
• The Role of Science and Spirituality

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**AISSQ Conference**  
**7<sup>th</sup> All India Students' Conference on Science and Spiritual Quest**  
JN Tata Auditorium  
INDIAN INSTITUTE OF SCIENCE  
Bangalore, India  
September 1-2, 2012

**TOPICS**  
• Science and Spirituality  
• The Role of Science and Spirituality  
• The Role of Science and Spirituality

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**AISSQ Conference**  
**19<sup>th</sup> All India Students' Conference on Science and Spiritual Quest**

**TOPICS**  
• Science and Spirituality  
• The Role of Science and Spirituality  
• The Role of Science and Spirituality

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**Bridging Science and Spirituality**  
Conference

**TOPICS**  
• Science and Spirituality  
• The Role of Science and Spirituality  
• The Role of Science and Spirituality

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**Science and Spiritual Quest**  
4<sup>th</sup> All India Students' Conference  
27-29 December 2008  
NIT Tiruchirappalli, TN, India

**TOPICS**  
• Science and Spirituality  
• The Role of Science and Spirituality  
• The Role of Science and Spirituality

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**13<sup>th</sup> All India Students' Conference on Science and Spiritual Quest**  
22-23 December 2007  
Trapat, India

**TOPICS**  
• Science and Spirituality  
• The Role of Science and Spirituality  
• The Role of Science and Spirituality

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**AISSQ - 2006**  
and All India Students' Conference on  
**SCIENCE AND SPIRITUAL QUEST**  
December 09-10, 2006  
Paris, Orissa, India

**TOPICS**  
• Science and Spirituality  
• The Role of Science and Spirituality  
• The Role of Science and Spirituality

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• The Role of Science and Spirituality  
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For More Details:  
<https://bvbinstitute.org/science-and-spiritual-quest-aissq/>

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## Vedanta and Science Series



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## Books on Science - Spirituality



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# Notes









“

*... a critical comparison of major contents of scientific notions with philosophical and spiritual reflections can show us that ... fundamental notions, ideas and beliefs by these different cultures are often not in contradiction.*

— Prof. Werner Arber  
*Nobel Prize in Physiology or Medicine*

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