



SURANA COLLEGE
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A Report

Workshop on Applied

Mathematics and Physics:

Bridging Theory and Practice

for Future Innovators

RESEARCH AND DEVELOPMENT CELL



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RESEARCH AND DEVELOPMENT CELL

In Association with

on

Karnataka Science and Technology Academy (KSTA)

Department of Science and Technology, Government of Karnataka

ORGANIZED

A TWO-DAY WORKSHOP

APPLIED MATHEMATICS AND PHYSICS:

BRIDGING THEORY AND PRACTICE FOR FUTURE INNOVATORS

Date: January 9th & 10th, 2025

**Venue: Seminar Hall, Surana College Autonomous, South End Road,
Bangalore -04.**



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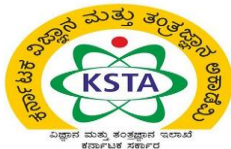
Acknowledgment

We wish to express our heartfelt gratitude to the Karnataka Science & Technology Academy (KSTA), Department of Science & Technology, Government of Karnataka for their Grant-In-Aid to organize Two Days Workshop titled on ***Applied Mathematics and Physics: Bridging Theory and Practice for Future Innovators***. Their financial assistance played a pivotal role in ensuring the success of this event, which aimed to bridge the gap between theoretical knowledge and practical applications in the fields of mathematics and physics.

This workshop has provided a valuable platform for all participants to engage with distinguished experts, gain insights into cutting-edge research, and collaborate on innovative solutions to complex challenges. We are also deeply grateful to our Management, Resource Persons, and both Teaching and Non-Teaching Staff Members for their unwavering support and seamless coordination throughout the entire process. Their collective efforts were instrumental in achieving the desired outcomes of this workshop.

Date: 20th January 2025

Dr. Vanishree M.R.
Dean, R&D, SEI

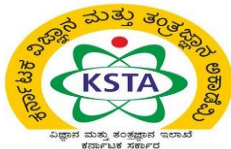


Preamble:

The Research and Development Cell of Surana Educational Institutions, in collaboration with the Karnataka Science and Technology Academy (KSTA) and the Department of Science and Technology, Government of Karnataka, organized a two-day workshop titled *"Applied Mathematics and Physics: Bridging Theory and Practice for Future Innovators"* on January 9th and 10th, 2025. This workshop aimed to provide a platform for academicians, researchers, and students to gain insights into the practical applications of mathematical and physical principles in innovation and technology development.

The event featured prominent resource persons from esteemed institutions like IISc Bangalore, CHRIST (Deemed-to-be University), PES University, and Alliance University. It included four technical sessions addressing key topics such as computational mathematics, statistical methods, quantum physics, and advanced quantum mechanics. The workshop was designed to foster interdisciplinary learning and bridge the gap between theoretical knowledge and practical innovation, empowering participants to contribute to the fields of science and technology.





Day 1: January 9th, 2025

The day began with the registration of participants at 8:00 AM. Registered participants received their conference kits and essential information, coordinated by Mr. Sumukha and Dr. Pooja. The arrival and hospitality of resource persons were meticulously managed by Dr. Vanishree and Dr. Divya Dexlin.

Inaugural Ceremony

The inaugural session commenced at 9:30 AM with Dr. Seethalakshmi served as the Master of Ceremonies. The ceremony began with the lighting of the lamp and an invocation song by Ms Anagha, BSc Student, Surana College Autonomous, followed by a video tribute of Surana Educational Institutions.

Dr. Vanishree M.R., Dean of the Research and Development Cell, delivered the welcome address, setting an inspiring tone for the workshop. She emphasized the pivotal role of mathematics and physics in fostering innovation and highlighted the workshop's objective of bridging theory with practice to equip participants with cutting-edge knowledge and skills. Her words resonated with the participants, instilling enthusiasm and anticipation for the sessions ahead.

Dr. Veena K.N., Principal of Surana College Autonomous, delivered the inaugural address, focusing on the importance of interdisciplinary learning in mathematics and physics. She stressed how these disciplines drive technological advancements and encouraged participants to leverage their knowledge to address real-world challenges. Her insightful remarks underlined the workshop's relevance in today's academic and professional landscape.

Following this, Dr. Seethalakshmi provided a concise program overview, detailing the themes and objectives of the technical sessions. The inaugural ceremony concluded with a heartfelt vote of thanks by Dr. Sompalli Bhavana, who expressed gratitude to the dignitaries, participants, and organizers. A group photo session at 10:00 AM marked the ceremonial closure, capturing the momentous start of the two-day workshop.

The event was generously funded by KSTA and brought together 80 participants from diverse institutions across India, representing a wide spectrum of academic disciplines. Notably, one participant traveled from Jammu, underscoring the nationwide appeal of the workshop. Institutions like Nrupathunga University, CHRIST (Deemed to be University), National College, MES College of Arts, Science, and Commerce, and Maharani Cluster University were among the prominent contributors. The workshop served as an interdisciplinary nexus for knowledge exchange and skill enhancement, fostering innovative thought and application-driven learning.



Day 1- Technical Session

The first technical session of the workshop began promptly at 10:05 AM with Dr. Divya Dexlin introducing the resource person, **Dr. Arulalan Rajan**, a faculty member from the Indian Institute of Science (IISc) Bangalore. Dr. Rajan, a leading expert in applied mathematics, began his lecture on Mathematical Foundations in Applied Sciences by discussing the critical role that mathematical principles play in solving real-world scientific problems. He emphasized the importance of a solid mathematical foundation for understanding complex phenomena in fields



-ranging from engineering and physics to data science and economics. By using relatable examples and visual aids, Dr. Rajan made the content accessible to a diverse audience, engaging both students and faculty in the intricacies of mathematical theory.

Dr. Rajan's lecture covered the fundamental mathematical tools used in various scientific domains, such as differential equations, linear algebra, and calculus. He explained how these tools are essential for modeling and analyzing systems in engineering, fluid dynamics, and natural sciences. The participants gained valuable insights into the importance of mathematics as a language that helps describe and predict real-world occurrences. The session highlighted how applied mathematics helps bridge theoretical concepts with practical solutions. Dr. Rajan also discussed several landmark problems and solutions in the history of applied mathematics, demonstrating how mathematical innovation drives scientific progress.

After the lecture, a vibrant Q&A session followed, where participants had the opportunity to engage directly with Dr. Rajan. The questions ranged from inquiries about specific mathematical models to more general discussions on how mathematical techniques are applied in emerging technologies. Dr. Rajan took the time to clarify complex topics, ensuring that everyone, regardless of their level of expertise, could gain something from the session. This interaction showcased the enthusiasm and curiosity of the participants, and the session ended with a short tea break, allowing attendees to reflect on the concepts discussed.

The session resumed at 11:30 AM with Dr. Rajan's second talk, titled Computational Mathematics and Simulation. In this segment, Dr. Rajan shifted focus to the computational techniques that are indispensable in modern science and technology. He explored how advanced algorithms, coupled with high-performance computing, enable researchers to simulate and solve problems that are otherwise analytically intractable. Using real-world examples, Dr. Rajan demonstrated how simulations are used in various fields, from predicting weather patterns and modeling fluid dynamics to simulating molecular behavior in drug design.

One of the key takeaways from this talk was the importance of computational tools in understanding and visualizing complex systems. Dr. Rajan explained how mathematical models are translated into computational algorithms, which then run simulations to test

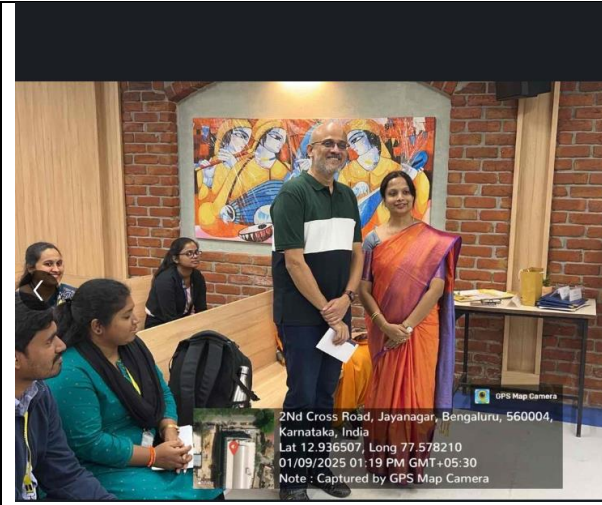


hypotheses and predict outcomes. He elaborated on the computational frameworks used in physics, particularly in simulating quantum systems and particle interactions, and how these techniques are used in both theoretical and applied physics. This section of the talk provided the participants with a deeper understanding of the synergy between mathematics, computation, and practical applications in scientific research.

Dr. Rajan also shared insights into the future of computational mathematics, emphasizing the growing role of machine learning and artificial intelligence in simulating and solving mathematical models. As the demand for real-time simulations and predictive modeling increases, the ability to leverage computational power and advanced algorithms will become increasingly vital in various sectors, including healthcare, finance, and environmental science. He also touched upon the interdisciplinary nature of computational mathematics, stressing how collaborations between mathematicians, computer scientists, and engineers lead to innovative solutions in diverse domains.

The session concluded with another interactive Q&A segment. Participants asked insightful questions about the use of computational techniques in different scientific areas, from computational biology to artificial intelligence. Dr. Rajan responded to each query with detailed explanations, highlighting the practical aspects of the methods discussed. His thorough responses ensured that the participants left with a clear understanding of the significance of computational mathematics in contemporary research.

Following the Q&A, Dr. Bhavana delivered a vote of thanks, expressing her gratitude to Dr. Rajan for his engaging and informative session. She acknowledged the immense value his insights brought to the workshop and the participants' learning experience. The session ended with a photo session, capturing the moment before the participants proceeded to the next part of the program.





Technical Session 2: Applied Mathematics

The second technical session began at 2:00 PM with Dr. Sumaiya Tabassum introducing the resource person, **Dr. Sudev N V**, Professor at the School of Science, CHRIST (Deemed to be University). Dr. Sumaiya provided an overview of Dr. Sudev's academic credentials and contributions to the fields of data science and engineering. Following the introduction, Dr. Sudev took the stage to deliver his first lecture on **Statistical Methods in Data Science and Engineering**, a topic that is crucial for analyzing complex data sets in both academic research and industry applications. Dr. Sudev began by discussing the fundamental principles of statistics and its role in data science, explaining how statistical methods are essential for making sense of large, often noisy, data sets encountered in real-world scenarios.

Dr. Sudev then delved into various statistical techniques that are commonly used in data science and engineering, such as regression analysis, hypothesis testing, and Bayesian inference. He emphasized the importance of selecting the right statistical method depending on the nature of the data and the specific objectives of the analysis. By using practical examples, Dr. Sudev illustrated how statistical methods can help identify patterns, trends, and relationships within data, thereby enabling informed decision-making. His talk also highlighted the growing role of statistical analysis in machine learning algorithms, as data-driven models increasingly rely on statistical methods to improve their accuracy and robustness.

The session also covered the significance of advanced statistical techniques in engineering fields, where they are applied to optimize designs, improve system performance, and predict outcomes. Dr. Sudev shared insights on how statistical methods are used in fields such as signal processing, quality control, and operations research. The participants were particularly engaged by the real-world applications he showcased, which demonstrated the practical value of statistical methods in improving technological and industrial processes. The lecture not only deepened the participants' understanding of statistics but also provided them with tools they can apply in their own research or professional work.

Following Dr. Sudev's lecture, a lively Q&A session took place from 3:15 PM to 3:20 PM. During the session, participants posed questions related to statistical challenges they face in their own



work, such as the difficulties of working with incomplete or biased data. Dr. Sudev provided thoughtful responses, offering guidance on how to overcome common statistical pitfalls and reinforcing the importance of critical thinking when applying statistical methods. The Q&A allowed for valuable interactions, with participants gaining a clearer understanding of how to apply the concepts discussed during the lecture in practical scenarios.

The Q&A session was followed by a short high tea break, giving the participants an opportunity to network and discuss the lecture informally. The break also served as a brief respite, allowing everyone to reflect on the statistical methods that had been covered and engage in further conversations about their relevance to various scientific and engineering domains. As the break concluded, participants returned to their seats for the next session.

At 3:30 PM, the session resumed with Dr. Sudev's second lecture on **Optimization and Game Theory Applications**, a topic that explored mathematical techniques used to optimize decision-making in competitive and cooperative scenarios. Dr. Sudev introduced the fundamentals of optimization theory, discussing techniques such as linear programming and integer programming, which are vital for solving real-world optimization problems. He also covered the applications of game theory in economics, engineering, and computer science, explaining how game-theoretic models help understand strategic interactions in competitive environments. Dr. Sudev illustrated these concepts through examples from various industries, including logistics, finance, and even biology, showing the versatility of optimization and game theory in solving complex, real-world problems.

The session concluded with another Q&A segment from 4:45 PM to 4:50 PM. Dr. Sudev addressed questions related to the practical challenges of applying optimization and game theory in different contexts. He also provided additional insights into how these mathematical techniques can be integrated into emerging technologies like artificial intelligence and machine learning. Dr. Sudev's thorough explanations and practical examples left the participants with a deeper understanding of how optimization and game theory can be applied to solve pressing issues in both academia and industry.

The day's technical sessions ended with a vote of thanks delivered by Dr. Sompalli Bhavana, who expressed her gratitude to Dr. Sudev for his enriching contributions to the workshop. Dr. Bhavana also thanked the participants for their active engagement and participation throughout the session. The formal proceedings concluded with a group photo session at 4:55 PM, providing a memorable moment for all involved before participants headed off to their next activity.



Day 3- Technical Session

The second day of the workshop began at 9:55 AM with Dr. Seethalaxmi welcoming the resource person, participants, and distinguished guests. She set the stage for the day's sessions, emphasizing the significance of interdisciplinary knowledge in advancing both physics and applied sciences. Dr. Seethalaxmi's warm welcome created an enthusiastic atmosphere as the participants settled in for the session.



At 10:00 AM, Dr. Farzan Tasneem M I introduced the resource person, **Dr. Gajanan Honnavar**, a Professor and Team Leader at QuaNaD Lab, PES University. Dr. Farzan highlighted Dr. Gajanan's vast expertise in the fields of data science, machine learning, quantum physics, and electronics, making him an ideal speaker for the day's technical discussions. Dr. Gajanan's credentials and his leadership in the field set the tone for the insightful sessions that followed.

The first session, starting at 10:05 AM, focused on Data Science and Machine Learning Fundamentals. Dr. Gajanan, as the session chair, delivered an engaging talk on the core concepts of data science and machine learning, underscoring their growing importance in various scientific and industrial domains. He provided an overview of key concepts, including supervised and unsupervised learning, data preprocessing, and model selection. The session highlighted the role of data science in extracting actionable insights from complex data sets, driving innovations across fields ranging from healthcare to economics. Dr. Gajanan also discussed machine learning algorithms such as decision trees, support vector machines, and neural networks, explaining their applications in real-world scenarios.

The participants were actively engaged, with Dr. Gajanan offering practical insights into how machine learning is being applied to solve real-world problems. He demonstrated the power of machine learning in automation, predictive analytics, and decision-making processes, stressing its transformative impact on industries such as healthcare, automotive, and finance. The session provided participants with a solid foundation in data science and machine learning, sparking interest in further exploring these cutting-edge technologies. At the end of the talk, Dr. Gajanan encouraged the audience to continue building their knowledge in these fields, as they are essential for shaping the future of scientific research and technological advancements.

After the lecture, a Q&A session was held from 11:15 AM to 11:20 AM, allowing participants to ask questions and clarify doubts related to data science and machine learning. The interaction was fruitful, with participants seeking guidance on how to get started with machine learning projects and how to handle various types of data in practical scenarios. Dr. Gajanan provided clear, actionable advice, further enriching the participants' understanding of the concepts covered in the session.



Following the Q&A session, a high tea break from 11:20 AM to 11:30 AM allowed the attendees to mingle and discuss the lecture informally. The break provided a refreshing opportunity for networking and exchanging ideas, as participants reflected on the insights gained from the morning session.

At 11:30 AM, the session resumed with Dr. Gajanan's next lecture on Quantum Physics and Electronics in Innovation, which explored the intersection of quantum mechanics and electronics in driving innovation. Dr. Gajanan began by explaining the fundamental principles of quantum physics, including quantum superposition and entanglement, and how these principles are being leveraged in the development of next-generation electronic devices. He provided insights into quantum computing, quantum sensors, and the role of quantum mechanics in revolutionizing electronics. Dr. Gajanan emphasized how these innovations are poised to solve problems that classical technologies are unable to address.

The session on quantum physics was engaging, as Dr. Gajanan illustrated the real-world applications of quantum electronics in areas such as cryptography, communication systems, and advanced computing. He also discussed the challenges involved in harnessing quantum technologies and the ongoing research aimed at making quantum devices more practical and scalable. The lecture captivated the participants, highlighting the profound impact quantum physics and electronics will have on future technological advancements.

Following the session, a Q&A segment from 1:00 PM to 1:05 PM provided the participants with the opportunity to seek clarification on quantum mechanics and its applications in electronics. The questions reflected the participants' deep interest in the topic, with several attendees asking about the feasibility of quantum computers and their potential impact on industries like cybersecurity and AI.

At 1:05 PM, Dr. Sompalli Bhavana delivered the vote of thanks, expressing gratitude to Dr. Gajanan for his insightful lectures and to the participants for their active participation. She also acknowledged the efforts of the organizing team and sponsors for making the workshop a success. The formal proceedings concluded with a photo session from 1:10 PM to 1:15 PM, capturing the memories of the workshop.

Finally, the lunch break followed from 1:15 PM to 2:00 PM, offering participants a chance to relax, network further, and reflect on the valuable knowledge they had gained throughout the day's sessions.



The final session of the workshop commenced at 2:00 PM with an introduction to the resource person, Dr. Pooja R, who introduced **Dr. Srikanth Itapu**, International Affairs, Faculty of



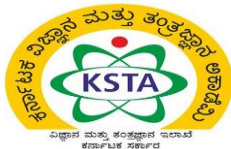
Engineering and Technology, Alliance University as the speaker for the afternoon session. Dr. Srikanth, with his expertise in applied physics and data science, was poised to share valuable insights in the session. His background in international affairs, specifically in engineering and technology, was highlighted, ensuring the participants understood the depth of knowledge Dr. Srikanth would bring to the session.

At 2:05 PM, Dr. Srikanth began the first talk of the session on **Statistical Methods in Data Science and Engineering**. As the session chair, Dr. Srikanth initiated the discussion by emphasizing the importance of statistical methods in the fields of data science and engineering. He outlined how these methods are crucial in interpreting large datasets and solving real-world problems across various domains, including engineering, health sciences, and social sciences. Dr. Srikanth discussed key statistical techniques, such as regression analysis, probability distributions, and hypothesis testing, explaining their applications in analyzing experimental data and engineering systems.

Throughout the lecture, Dr. Srikanth engaged the participants with examples of how statistical methods are applied in diverse engineering problems. He discussed case studies where data-driven insights played a pivotal role in optimizing engineering processes, enhancing quality control, and predicting system behavior. His clear, structured explanations helped participants understand the power of statistical techniques in making informed decisions and improving technological innovations. Dr. Srikanth also shared practical tools and software widely used in the industry, which participants could explore for their own research and applications.

The session concluded with a Q&A segment from 3:15 PM to 3:20 PM, where participants asked questions related to the application of statistical methods in various fields, particularly in engineering and data science. Dr. Srikanth responded with practical advice, helping participants understand the integration of statistical methods in solving complex real-world problems.

After the Q&A session, a short break was scheduled until 3:30 PM, allowing participants to refresh before the next topic. The session resumed promptly at 3:30 PM, with Dr. Srikanth chairing the next presentation on **Advanced Quantum Mechanics and Its Application**.



In this session, Dr. Srikanth delved into the complexities of quantum mechanics, a fundamental area of physics with significant implications for technology. He began by explaining the key principles of quantum mechanics, such as wave-particle duality, quantum superposition, and entanglement, and their application in advanced technology. Dr. Srikanth discussed how these principles are being harnessed in the development of quantum computers, quantum encryption, and other cutting-edge technologies. The session also covered the potential of quantum mechanics to revolutionize fields such as material science, computing, and communications.

The lecture then explored the real-world applications of quantum mechanics, focusing on its role in creating more efficient and powerful technologies. Dr. Srikanth shared insights into the field of quantum computing, where quantum bits (qubits) are used to perform calculations at speeds unimaginable with classical computers. He also covered the importance of quantum mechanics in fields like cryptography and secure communication, illustrating how quantum encryption can offer unbreakable security for sensitive data. Dr. Srikanth's talk was rich in content, with complex concepts explained in an accessible manner, enabling participants to grasp the immense potential of quantum technologies.

The session concluded with another Q&A segment from 4:45 PM to 4:50 PM, where participants asked questions about quantum computing, its practical challenges, and its future implications for various industries. Dr. Srikanth provided further clarification on how quantum mechanics is being applied today and the road ahead for its widespread adoption.

At 4:50 PM, Dr. Sompalli Bhavana delivered the vote of thanks, expressing her gratitude to Dr. Srikanth for his outstanding presentations on statistical methods and advanced quantum mechanics. She also thanked the participants for their enthusiastic involvement throughout the session. Dr. Bhavana acknowledged the efforts of the organizing team, sponsors, and the distinguished resource persons for making the workshop a success.

The workshop ended with a photo session from 4:55 PM to 5:00 PM, capturing the moments of the event. The group photo served as a token of appreciation for all the efforts that went into making the workshop a valuable learning experience for everyone involved.

Pre & Post Training Test was conducted to evaluate the overall impact of the workshop deliverables among the participants.



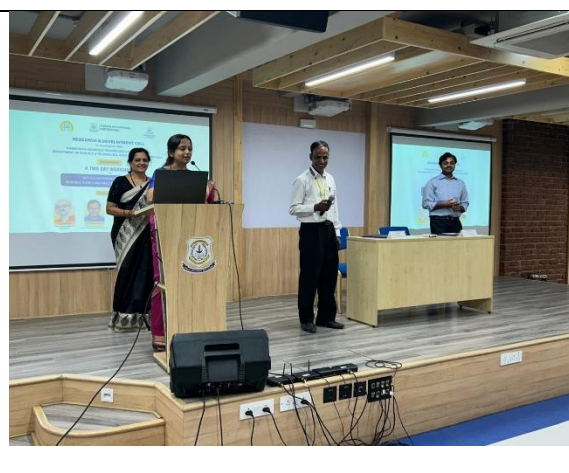
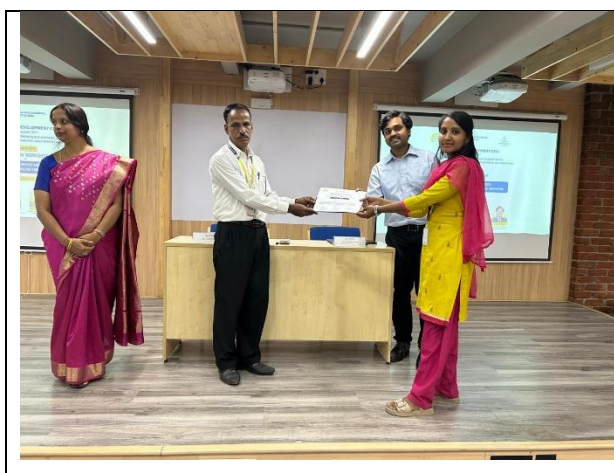
The workshop concluded with a formal valedictory ceremony, hosted by Dr. Seethalakshmi, who began by thanking all the participants and resource persons for their contributions throughout the two days. She expressed her appreciation for the rich exchange of knowledge and ideas that had taken place during the workshop. Dr. Seethalakshmi also highlighted the importance of interdisciplinary learning in bridging theory and practice, emphasizing how the sessions would contribute to shaping future innovators in the fields of applied mathematics and physics.

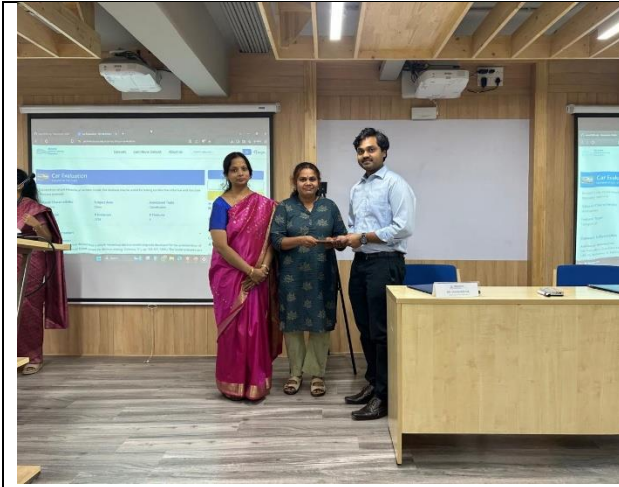
Dr. Vanishree, Dean of Research and Development at Surana College, began the distribution of certificates to all participants. She congratulated the attendees for their active participation and

engagement in the sessions. Dr. Vanishree praised the collective efforts of the resource persons, faculty members, and participants in making the workshop a meaningful and successful event. She noted that the diverse backgrounds of the participants enriched the discussions and learning experience, making the workshop an ideal platform for fostering knowledge exchange.

The vote of thanks was delivered by Dr. Sompalli Bhavana, who extended her gratitude to everyone involved in making the event a success. She thanked the participants for their enthusiasm and dedication to learning, which added tremendous value to the workshop. Dr. Bhavana also acknowledged the support of the managing trustee, Dr. Archana Surana, and the Group Director, Dr. Punith Cariappa, for their guidance and leadership. She expressed appreciation to Principal Dr. Veena K N for her continued support of such educational initiatives.

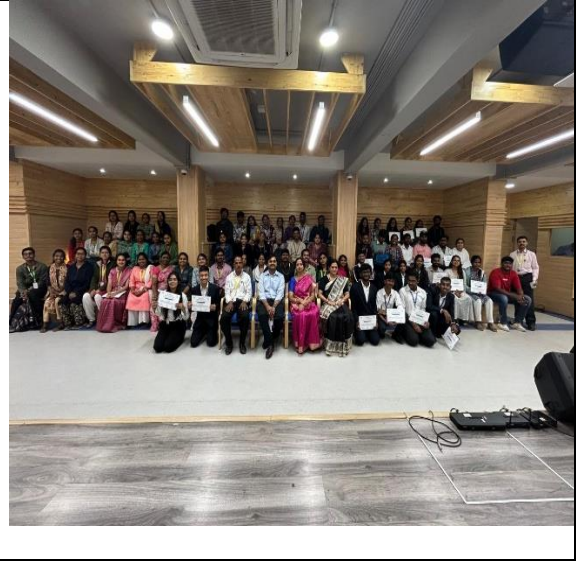
In her closing remarks, Dr. Bhavana extended heartfelt thanks to the funding agency, Karnataka Science and Technology Academy (KSTA), for their financial support. She also recognized the efforts of the IT technical staff, hospitality team, student volunteers, committee members, and the helping staff, whose hard work ensured the smooth running of the event. The workshop concluded on a positive note, with everyone leaving the ceremony with a sense of accomplishment and a renewed commitment to advancing their knowledge in applied sciences.







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ANNEXURES

I. Sanction Letter



ಕರ್ನಾಟಕ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಅಕಾಡೆಮಿ

ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆ, ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಪ್ರೊ. ಯು.ಆರ್.ರಾವ್ ವಿಜ್ಞಾನ ಭವನ, ತೋಟಗಾರಿಕೆ ವಿಜ್ಞಾನಗಳ ಕಾಲೇಜು ಮಹಾದ್ವಾರದ ಪಕ್ಕ, ಮೇಜರ್ ಸಂದೀಪ್ ಉನ್ನಿಕ್ಯಪ್ಪನ್ ರಸ್ತೆ,
ದೊಡ್ಡಬೆಟ್ಟಹಳ್ಳಿ ಬದಾವಣೆ, ವಿದ್ಯಾರಣ್ಯಪುರ ಪೋಸ್ಟ್, ಬೆಂಗಳೂರು - 560097;
ದೂರವಾಣಿ: 080-29721550, ಇ-ಮೇಲ್: ksta.gok@gmail.com, website: www.kstacademy.in

ಡಾ. ಎ.ಎಂ. ರಮೇಶ್

ಮುಖ್ಯ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಧಿಕಾರಿ

ನಂ. ಕ.ವಿ.ತಂ.ಅ/ಕಾರ್ಯಕ್ರಮ/11/2024-25

ದಿನಾಂಕ: 10.12.2024

ಮಾನ್ಯರೇ,

ವಿಷಯ: "Applied Mathematics and Physics: Bridging Theory and Practice for Future Innovations" ವಿಷಯದ ಮೇಲೆ ವಿಶೇಷ ಉಪನ್ಯಾಸ ಮಾಲೆ ಕಾರ್ಯಾಗಾರವನ್ನು ಆಯೋಜಿಸಲು ಅನುದಾನವನ್ನು ವರ್ಗಾವಣೆ ಮಾಡಿರುವ ಬಗ್ಗೆ.

ಮೇಲ್ಕಂಡ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ, ತಮ್ಮ ಕಾಲೇಜಿನಲ್ಲಿ 2024-2025ನೇ ಸಾಲಿನಲ್ಲಿ "Applied Mathematics and Physics: Bridging Theory and Practice for Future Innovations" ವಿಷಯದ ಮೇಲೆ ಉಪನ್ಯಾಸ ಮಾಲೆ ಕಾರ್ಯಾಗಾರವನ್ನು 2025ರ ಜನವರಿ 09 & 10 ರಂದು ಆಯೋಜಿಸಲು ರೂ. 70,000/-ಗಳ ಅನುದಾನ ಮೊತ್ತವನ್ನು ಮುಂಗಡವಾಗಿ Principal, Surana College Bangalore ಕಾಲೇಜಿನ ಬ್ಯಾಂಕ್ ಖಾತೆಗೆ ದಿನಾಂಕ: 05.09.2024 ರಂದು ವರ್ಗಾವಣೆ ಮಾಡಲಾಗಿದೆ.

ಷರತ್ತು ಮತ್ತು ನಿಬಂಧನೆಗಳು:

1. ಉದ್ದೇಶಿತ ಕಾರ್ಯಕ್ರಮವನ್ನು ಕಾಲಮಿತಿಯೊಳಗೆ ಪೂರ್ಣಗೊಳಿಸುವುದು.
2. ಉದ್ದೇಶಿತ ಯೋಜನೆಗೆ ಬಳಸಿಕೊಳ್ಳಲಾದ ಅನುದಾನವನ್ನು ನೋಂದಾಯಿತ ಲೆಕ್ಕ ಪರಿಶೋಧಕರಿಂದ (Registered Chartered Accountant) ಆಡಿಟ್ ಮಾಡಿಸಿ ಯೋಜನಾ ವರದಿಯೊಂದಿಗೆ ಉಪಯೋಗತಾ ಪ್ರಮಾಣ ಪತ್ರವನ್ನು ಅಕಾಡೆಮಿಗೆ ಸಲ್ಲಿಸುವುದು.
3. ಅನುದಾನ ಉಳಿತಾಯದಲ್ಲಿದ್ದು ಸಮೇತ ಅಕಾಡೆಮಿಗೆ ನೀಡುವುದು.
4. ಉದ್ದೇಶಿತ ಯೋಜನೆಯನ್ನು ಕಾಲಮಿತಿಯೊಳಗೆ ಪೂರ್ಣಗೊಳಿಸಲು ವಿಫಲರಾದಲ್ಲಿ ಜಡುಗಡೆಯಾದ ಅನುದಾನವನ್ನು ಅಕಾಡೆಮಿಗೆ ಸೂಕ್ತ ಕಾರಣಗಳೊಂದಿಗೆ ಹಿಂದಿರುಗಿಸುವುದು.

ವಂದನೆಗಳೊಂದಿಗೆ,

ತಮ್ಮ ವಿಶ್ವಾಸಿ.

ಮುಖ್ಯ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಧಿಕಾರಿ

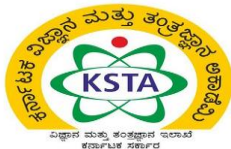
ಇವರಿಗೆ,

Principal,

Surana College, Autonomous

No. 16, South End Road Bangalore - 560004

ಪ್ರತಿ: 1 Dr Vanishree M R, Dean, Research & Consultancy, Surana Educational Institutions Bangalore



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II. Brochure & Poster

RESEARCH AND DEVELOPMENT CELL
In Association with
Karnataka Science and Technology Academy (KSTA)
Department of Science and Technology, Government of Karnataka

ORGANIZES

A TWO DAY WORKSHOP
on
**APPLIED MATHEMATICS AND PHYSICS:
BRIDGING THEORY AND PRACTICE FOR FUTURE INNOVATORS**

Date: January 9th & 10th, 2025

Venue: Seminar Hall, Surana College Autonomous, South End Road, Bangalore -04.

Preamble

Applied Mathematics and Physics are central to many scientific breakthroughs in the world. They are the building blocks of innovation and refining technology in the fields of medicines, aerospace, energy, quantum computing, computational science, nanotechnology, environmental sciences and so on largely contributing towards better understanding real-time problems and scenarios. These disciplines have been extensively contributing to industries transformation viz., healthcare, finance, engineering, life science and data science. Their interdisciplinary nature and broad applicability make them indispensable in addressing the pressing challenges of the present time.

Surana College Autonomous, Research & Consultancy Cell, is organizing two-days intensive workshop on Applied Mathematics and Physics aim to promote greater insights into both the disciplines to post-graduate students, research scholars and faculty members. The workshop will bridge theoretical foundations with practical applications, equipping students with essential skills to tackle real-world problems through research and industry approaches. The training will bring together leading experts, interactive sessions, and hands-on problem-solving exercises, creating a collaborative environment that fosters deep learning and innovation.

Objectives

1. To provide PG students, research scholars & faculty members with solid understanding of applied mathematics and physics concepts and methodologies.
2. To showcase practical applications of theoretical knowledge in fields of data science, quantum mechanics material science and mathematical modelling.
3. To enhance critical thinking, problem-solving and computational skills essential for research and industry careers.
4. To foster networking and collaboration between students, faculty and industry professionals.

Target Audience

The primary audience will be postgraduate students, research scholars and faculty members from the disciplines of mathematics, physics, engineering and related science fields.

Resource Persons



Dr. Anulom Rajan
Faculty, Proficiency Programme,
#Sc Bangalore

Topic Coverage
Mathematical Foundation in Applied Sciences

📅 9th January 2025 ⌚ 10:00 AM-11:15 AM

Topic Coverage
Computational Mathematics and Simulation

📅 9th January 2025 ⌚ 11:30 AM-1:00 PM



Dr. Sudar N V
Professor, School of Science
CHRIST (Deemed to be University), Bangalore

Topic Coverage
Statistical Methods in Data Science and Engineering

📅 9th January 2025 ⌚ 2:00 PM-3:15 PM

Topic Coverage
Optimization and Game Theory Applications

📅 9th January 2025 ⌚ 3:30 PM-5:00 PM



Dr. Gajanan Honnavar
Professor & Team Leader QuaNed Lab,
PES University, Bangalore

Topic Coverage
Data Science and Machine Learning Fundamentals

📅 10th January 2025 ⌚ 10:00 AM-11:15 AM

Topic Coverage
Quantum Physics and Electronics in innovation

📅 10th January 2025 ⌚ 11:30 AM-1:00 PM



Dr. Srikanth Rappa
International Affairs,
Faculty of Engineering and Technology,
Alliance University, Bangalore.

Topic Coverage
Advanced Quantum Mechanics and its Application

📅 10th January 2025 ⌚ 2:00 PM-3:15 PM

Topic Coverage
Industry Application and Approach towards Applied Physics

📅 10th January 2025 ⌚ 3:30-5:00 PM

Expected Outcomes:

- Develop the understanding of how applied mathematics and physics can be utilized in various real-world scenarios through interdisciplinary approach.
- Strengthen the problem-solving, analytical and computational skills among PG Students and Scholars.
- Reinforce the motivation for research and innovation in applied mathematics and physics.
- Establish a strong collaborative network between academic fraternity, researcher and industry for future research and job opportunities.

NOTE

1. LIMITED SEATS ONLY-First come first serve basis.
2. Research Scholars & Students must carry their College/University ID Card.
3. All the participants will receive certificate of participation, training kit and recorded session.



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Event Registration

- Last Date of registration for this event is 3rd January 2025

Registration fees

Research Scholars & PG Students	FREE
Faculty Members & Professor for Practice	Rs. 500/-

- Registration Link: <https://forms.office.com/r/h0tRu0pQH7>

Online payment details

Account Holder Name: PRINCIPAL SURANA COLLEGE
Bank Name: STATE BANK OF INDIA
Bank Branch: JAYANAGAR II BLOCK (BENGALURU)
Account No: 41752158251
IFSC Code: SBIN0003286

Patron Dr. Archana Surana Managing Trustee, Surana Educational Institutions	
Chief Patron Dr. Punith Cariappa Group Director, Surana Educational Institutions	
Dr. Veena K N Principal, Surana College Autonomous	Dr. Vanishree M.R. Dean, Research & Consultancy, Surana Educational Institution

For any further information please feel free to contact through
mail: sel-research@suranacollege.edu.in or call on: +91 9488387238 | +91 9448223568.

Organizing Committee Members

- Mr. Maralusiddappa T.R. Department of Mathematics
- Dr. Divya Dexlin, Department of Physics
- Dr. Seethalakshmi, Department of Biotechnology
- Dr. Pooja R, Department of Biotechnology

About the Karnataka Science & Technology Academy (KSTA)

The Karnataka Science and Technology Academy (KSTA), an autonomous organization under the Department of Science and Technology, Government of Karnataka, was established in 2005 under the chairmanship of Padma Vibhushan awardee Prof. U. R. Rao, Former Chairman, ISRO & Secretary, DOS, Government of India. KSTA's objective is to foster STEAM (Science, Technology, Engineering, Agriculture, and Mathematics) education at various levels in an educational pyramid and to popularize science among the general public in the State.

In 2022, KSTA was honored with the prestigious "National Award for Outstanding Efforts in Science and Technology Communication" by the National Council for Science and Technology Communication (NCSTC), Department of Science and Technology, Government of India.

About the Surana College Autonomous

Established in 1995 under the GDA Foundation Trust, Surana College Autonomous is affiliated with Bangalore University under section 53(5) of the Karnataka State Universities Act, 2000 and is recognized under sections 2(f) and 12(B) of the UGC Act, 1956. The institution has been a pioneer in providing inclusive, need-based quality education to all sections of society. With a steadfast commitment to student success, the college focuses on nurturing academic excellence alongside holistic personal development. Surana College Autonomous has a proud legacy of transforming average-performing students into achievers, evidenced by numerous case studies of students excelling to earn distinctions and ranks.

Surana College Autonomous enriches the university-prescribed curriculum by integrating carefully balanced curricular and co-curricular components. This approach emphasizes value addition and experiential learning, ensuring students are equipped for both their careers and personal lives.

Our Mission

The institution is dedicated to shaping students into self-reliant, independent thinkers who are globally competent, socially responsible, and morally grounded. Surana College Autonomous instills skills, values, and a sense of purpose in its students, enabling them to contribute meaningfully to society.

Core Values

- Freedom with Responsibility:** Students are encouraged to explore and innovate within a structured environment of discipline and accountability.
- Research and Entrepreneurship:** The college promotes a culture of research and entrepreneurship, fostering out-of-the-box thinking and innovation.
- Affordability and Inclusivity:** Surana College Autonomous offers quality education at affordable fees with a strict no-donation policy, reflecting its commitment to accessibility.
- Pro-Community Practices:** Community engagement and socially impactful initiatives are embedded in the curriculum.

Holistic Development

Surana College Autonomous emphasizes a student-centred approach, actively involving learners in academic, co-curricular, and extension activities. Students participate in community service, contribute to sustaining an enriching academic environment, and benefit from strong parental and public support.

Legacy of Excellence

The institution enjoys widespread recognition among scholars, industry leaders, and socio-cultural organizations. Many corporate entities and service industries seek Surana College Autonomous graduates for their skills and professional readiness. The dedicated faculty, fostering a healthy academic relationship with students, plays a crucial role in achieving high learning outcomes.

Leadership and Collaboration

The college prioritizes the cultivation of leadership skills through a 360° approach. Strong management support and seamless interdepartmental coordination have been instrumental in sustaining Surana College's commitment to excellence. A shared vision of preserving the joy of learning underscores the institution's enduring success.

Surana College Autonomous stands as a beacon of affordable quality education, driving innovation and fostering values while empowering its students to thrive in a dynamic global landscape.



SURANA EDUCATIONAL
INSTITUTIONS



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A TWO DAY WORKSHOP

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BRIDGING THEORY AND PRACTICE FOR FUTURE INNOVATORS

Resource Persons



Dr. Anubhai Rajan
Faculty, Proficiency Programme,
ISD, Bangalore



Dr. Sudesh N.V.
Professor, School of Science,
CHRIST (Deemed to be University), Bangalore



Dr. Siddhant Narasimha
Professor & Team Leader Quality Lab,
PES University, Bangalore



Dr. Srikanth Nagu
International Affairs,
Faculty of Engineering and Technology,
Alliance University, Bangalore

Registration fees

Research Scholars & PG Students	FREE
Faculty Members & Professor for Practice	Rs. 500/-

9th & 10th JANUARY
2025



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For any further information please feel free to contact through
Mail: sel-research@suranacollege.edu.in
Call on: +91 9488387238 | +91 9448223568.



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III. Program Schedule

Two Days Workshop

On

**APPLIED MATHEMATICS AND PHYSICS: BRIDGING THEORY AND PRACTICE
FOR FUTURE INNOVATORS**

Date: January 9-10, 2025

Venue: Seminar Hall, Surana College Autonomous, South End Road, Bangalore

Program Schedule

9 th January 2025	
8:00-9:30 AM	Registration and Guest arrival
9:30-9:35 AM	Lighting of the Lamp & Invocation Song
9:35-9:40 AM	Surana Educational Institution - VT
9:40-9:45 AM	Welcome Address by Dr Vanishree MR , Dean, Research & Development Cell Surana Educational Institutions
9:45-9:50 AM	Inaugural address by Dr Veena K N Principal, Surana College Autonomous
9:50-9:55 AM	Briefing of Program & Technical Session – Dr. Seethalakshmi
9:55 AM	Vote of thanks by Dr Sompalli Bhavana
10:00 AM	Photo Session

MC- Dr Seethalakshmi

9 th January 2025	
DAY 1- TECHNICAL SESSION 1- Applied Mathematics	
10:05- 10:10 AM	Introduction to Resource Person by Dr. T R Maralusiddappa
10:05- 11:15 AM	Topic: Mathematical Foundation in Applied Sciences Session Chair: Dr. Arulalan Rajan Faculty, Proficiency Programme, IISc Bangalore
11:15-11:20 AM	Q & A Session
11:20- 11:30 AM	High Tea
11:30-1:00 PM	Topic: Computational Mathematics and Simulation Session Chair: Dr. Arulalan Rajan Faculty, Proficiency Programme, IISc Bangalore
1:00- 1:05 PM	Q & A Session
1:05- 1:10 PM	Vote of thanks by Dr Sompalli Bhavana
1:10-1:15 PM	Photo Session
1:15-2:00 PM	Lunch Break

1

Day 1- TECHNICAL SESSION 2 – Applied Mathematics	
2:00-2:05 PM	Introduction to Resource Person by Dr Pooja R
2:05-3:15 PM	Topic: Statistical Methods in Data Science and Engineering Session Chair: Dr. Sudev N V Professor, School of Science, CHRIST (Deemed to be University)
3:15-3:20 PM	Q & A Session
3:20- 3:30 PM	High Tea
3:30-4:45 PM	Topic: Optimization and Game Theory Applications Session Chair: Dr. Sudev N V Professor, School of Science, CHRIST (Deemed to be University)
4:45 – 4:50 PM	Q & A Session
4:50 – 4:55 PM	Vote of thanks by Dr Sompalli Bhavana
4:55- 5:00 PM	Photo Session

MC- Dr Seethalakshmi

10 th January 2025	
DAY 2- TECHNICAL SESSION 3 - Applied Physics	
9:55 – 10:00	Welcoming the Resource Person & Participants – Dr. Seethalakshmi
10:00- 10:05 AM	Introduction to Resource Person by Dr Farzan Tasneem M I
10:05- 11:15 AM	Topic: Data Science and Machine Learning Fundamentals Session Chair: Dr. Gajanan Honnavar Professor & and Team Leader QuaNaD Lab at PES University
11:15-11:20 AM	Q & A Session
11:20- 11:30 AM	High Tea
11:30-1:00 PM	Topic: Quantum Physics and Electronics in innovation Session Chair: Dr. Gajanan Honnavar Professor & and Team Leader QuaNaD Lab at PES University
1:00- 1:05 PM	Q & A Session
1:05- 1:10 PM	Vote of thanks by Dr Sompalli Bhavana
1:10-1:15 PM	Photo Session
1:15-2:00 PM	Lunch Break
DAY 2- TECHNICAL SESSION 4 - Applied Physics	
2:00-2:05 PM	Introduction to Resource Person by Dr. Divya
2:05-3:15 PM	Topic: Statistical Methods in Data Science and Engineering Session Chair: Dr. Srikanth Itapu International Affairs, Faculty of Engineering and Technology, Alliance University, Bangalore.
3:15-3:20 PM	Q & A Session
3:30-4:45 PM	Topic: Advanced Quantum Mechanics and its Application Session Chair: Dr. Srikanth Itapu International Affairs, Faculty of Engineering and Technology, Alliance University, Bangalore.
4:45 – 4:50 PM	Q & A Session
4:50 – 4:55 PM	Vote of thanks by Dr Sompalli Bhavana
4:55-5:00 PM	Photo Session




MC- Dr Seethalakshmi



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IV. Certificate of Participation (Sample)

	 SURANA EDUCATIONAL INSTITUTIONS	 SURANA COLLEGE AUTONOMOUS
RESEARCH & DEVELOPMENT CELL		
<i>In Association With</i>		
KARNATAKA SCIENCE & TECHNOLOGY ACADEMY (KSTA)		
DEPARTMENT OF SCIENCE & TECHNOLOGY, GOVERNMENT OF KARNATAKA		
Certificate of Participation		
This is to certify that		
<u>Dr. MALINI SHETTY, A.G.</u>		
from <u>Surana College</u> has participated and successfully completed two days' workshop on		
APPLIED MATHEMATICS AND PHYSICS: BRIDGING THEORY AND PRACTICE FOR FUTURE		
INNOVATORS organised by Surana College Autonomous, Research and Development Cell in		
association with KSTA from 9 th – 10 th January 2025.		
 Dr. Vanishree M R Dean – Research & Consultancy Surana Educational Institutions	 Dr. Ramesh A M Chief Executive Officer KSTA	 Dr. Veena K N Principal Surana College Autonomous

V. Registration Details and Attendance Sheet

S.No	Name	College	Signature
32	Hemavathi K. T.	The National College, Autonomous, 7th block, Jayanagar	
33	JOYITHI A. GOUDAM	B.M.S. COLLEGE OF ENGINEERING	
34	JOYITHI M.V.	The National College (Autonomous)	
35	K. Prasad	Government science college, Muppathunga university	
36	Kavya	National college Jayanagar	
37	Kavya R.	National college Jayanagar	
38	Kavya S.	The National College, Jayanagar	
39	Kavya S.	National College Jayanagar	
40	Kousalya M.	National College Jayanagar	
41	Kousalya M.	National College Jayanagar	
42	Kousalya M.	National College Jayanagar	
43	Kousalya M.	National College Jayanagar	
44	Manish Gowda S.K.	Surana College South End Circle Bangalore	
45	Manish Bharat Ponnica	Christ (Deemed to be University) Central Campus	
46	Manish R.	Christ University	
47	Manish R.	MES College of Arts, Commerce and Science	
48	Manish R.	MES College of Arts, Commerce and Science	
49	Manish R.	MES College of Arts, Commerce and Science	
50	Manish R.	MES College of Arts, Commerce and Science	
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65	Manish R.	MES College of Arts, Commerce and Science	
66	Manish R.	MES College of Arts, Commerce and Science	
67	Manish R.	MES College of Arts, Commerce and Science	



S.No	Name	College	Signature
6	Swathi M	Swathi college autonomous	
7	Shruthi M	The National College (Autonomous)	
8	Shruthi B.M	Swathi college women's studies	
9	Shruthi B.M	THE NATIONAL COLLEGE-TRIPUNITHUR	
10	Shruthi D.V	Swathi college	
11	Shruthi V.K	Swathi college	
12	Shruthi V.K	Swathi college	
13	Shruthi V.K	Swathi college	
14	Shruthi V.K	Swathi college	
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100	Shruthi V.K	Swathi college	

[illegible]

Slr's	Name	KITA - Workshop Institution	Deregistration	Signature
9.	Bhuma K.C	National College, Jaynagar	PG Student	Bhuma K.C
3)	Anjitha A	National college (Jaynagar)	PG student	Anjitha A
3)	Alexander S	National college (Jaynagar)	PG student	Alexander S
9	Bhaskara K.	National College, (Jaynagar)	PG student	Bhaskara K.
5	Rakshitha M	National College (Jaynagar)	PG Student	Rakshitha M
6	Thyoti M.V	The National college (Jaynagar)	PG student	Thyoti M.V
7	Rohini H.B.	The National college (Jaynagar)	PG Student	Rohini H.B
3	Pratyasha P.R	The National college (Jaynagar)	PG Student	Pratyasha P.R
1	Shalini Sree G	The National college (Jaynagar)	PG student	Shalini Sree G
2	Rajashree V.R	The National college (Jaynagar)	PG student	Rajashree V.R
1.	Kousalya N.	The National college (Jaynagar)	PG student	Kousalya N.
1	Ananth Mair	CHRIST (Dedared to be Universal)	PG student	Ananth Mair
3	Aishwarya S	CHRIST (Dedared to be Universal)	PG student	Aishwarya S
1	Vidyaashree V	CHRIST (Dedared to be Universal)	PG student	Vidyaashree V
1	Vibha B.S	CHRIST (Dedared to be Universal)	PG student	Vibha B.S
1	Gayathree A	National College, Jaynagar	PG student	Gayathree A
1	Vijay B.C	National college Jaynagar	PG student	Vijay B.C
1	GUDOKKINATH S	National college Jaynagar	PG student	GUDOKKINATH S
1	Hemachand Kumar H	National college Jaynagar	PG student	Hemachand Kumar H

Attendance Sheet

[illegible]



2018-2019	2017-2018	2016-2017	2015-2016	2014-2015	2013-2014	2012-2013	2011-2012	2010-2011	2009-2010	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004	2002-2003	2001-2002	2000-2001	1999-2000	1998-1999	1997-1998	1996-1997	1995-1996	1994-1995	1993-1994	1992-1993	1991-1992	1990-1991	1989-1990	1988-1989	1987-1988	1986-1987	1985-1986	1984-1985	1983-1984	1982-1983	1981-1982	1980-1981	1979-1980	1978-1979	1977-1978	1976-1977	1975-1976	1974-1975	1973-1974	1972-1973	1971-1972	1970-1971	1969-1970	1968-1969	1967-1968	1966-1967	1965-1966	1964-1965	1963-1964	1962-1963	1961-1962	1960-1961	1959-1960	1958-1959	1957-1958	1956-1957	1955-1956	1954-1955	1953-1954	1952-1953	1951-1952	1950-1951	1949-1950	1948-1949	1947-1948	1946-1947	1945-1946	1944-1945	1943-1944	1942-1943	1941-1942	1940-1941	1939-1940	1938-1939	1937-1938	1936-1937	1935-1936	1934-1935	1933-1934	1932-1933	1931-1932	1930-1931	1929-1930	1928-1929	1927-1928	1926-1927	1925-1926	1924-1925	1923-1924	1922-1923	1921-1922	1920-1921	1919-1920	1918-1919	1917-1918	1916-1917	1915-1916	1914-1915	1913-1914	1912-1913	1911-1912	1910-1911	1909-1910	1908-1909	1907-1908	1906-1907	1905-1906	1904-1905	1903-1904	1902-1903	1901-1902	1900-1901	1899-1900	1898-1899	1897-1898	1896-1897	1895-1896	1894-1895	1893-1894	1892-1893	1891-1892	1890-1891	1889-1890	1888-1889	1887-1888	1886-1887	1885-1886	1884-1885	1883-1884	1882-1883	1881-1882	1880-1881	1879-1880	1878-1879	1877-1878	1876-1877	1875-1876	1874-1875	1873-1874	1872-1873	1871-1872	1870-1871	1869-1870	1868-1869	1867-1868	1866-1867	1865-1866	1864-1865	1863-1864	1862-1863	1861-1862	1860-1861	1859-1860	1858-1859	1857-1858	1856-1857	1855-1856	1854-1855	1853-1854	1852-1853	1851-1852	1850-1851	1849-1850	1848-1849	1847-1848	1846-1847	1845-1846	1844-1845	1843-1844	1842-1843	1841-1842	1840-1841	1839-1840	1838-1839	1837-1838	1836-1837	1835-1836	1834-1835	1833-1834	1832-1833	1831-1832	1830-1831	1829-1830	1828-1829	1827-1828	1826-1827	1825-1826	1824-1825	1823-1824	1822-1823	1821-1822	1820-1821	1819-1820	1818-1819	1817-1818	1816-1817	1815-1816	1814-1815	1813-1814	1812-1813	1811-1812	1810-1811	1809-1810	1808-1809	1807-1808	1806-1807	1805-1806	1804-1805	1803-1804	1802-1803	1801-1802	1800-1801	1799-1800	1798-1799	1797-1798	1796-1797	1795-1796	1794-1795	1793-1794	1792-1793	1791-1792	1790-1791	1789-1790	1788-1789	1787-1788	1786-1787	1785-1786	1784-1785	1783-1784	1782-1783	1781-1782	1780-1781	1779-1780	1778-1779	1777-1778	1776-1777	1775-1776	1774-1775	1773-1774	1772-1773	1771-1772	1770-1771	1769-1770	1768-1769	1767-1768	1766-1767	1765-1766	1764-1765	1763-1764	1762-1763	1761-1762	1760-1761	1759-1760	1758-1759	1757-1758	1756-1757	1755-1756	1754-1755	1753-1754	1752-1753	1751-1752	1750-1751	1749-1750	1748-1749	1747-1748	17
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[illegible][illegible][illegible]

Sl. No.	Name of the Participant	Institution Name	28-01-2023 Morning Session				29-01-2023 Morning Session				30-01-2023 Morning Session			
			Attended	Present	Assessment	Remarks	Attended	Present	Assessment	Remarks	Attended	Present	Assessment	Remarks
1	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
2	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
3	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
4	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
5	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
6	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
7	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
8	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
9	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
10	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
11	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
12	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
13	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
14	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
15	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
16	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
17	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
18	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
19	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
20	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
21	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
22	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
23	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
24	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
25	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
26	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
27	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
28	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
29	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	
30	Dr. Arulalan Rajan	Surana College, Bangalore	✓	✓	✓		✓	✓	✓		✓	✓	✓	

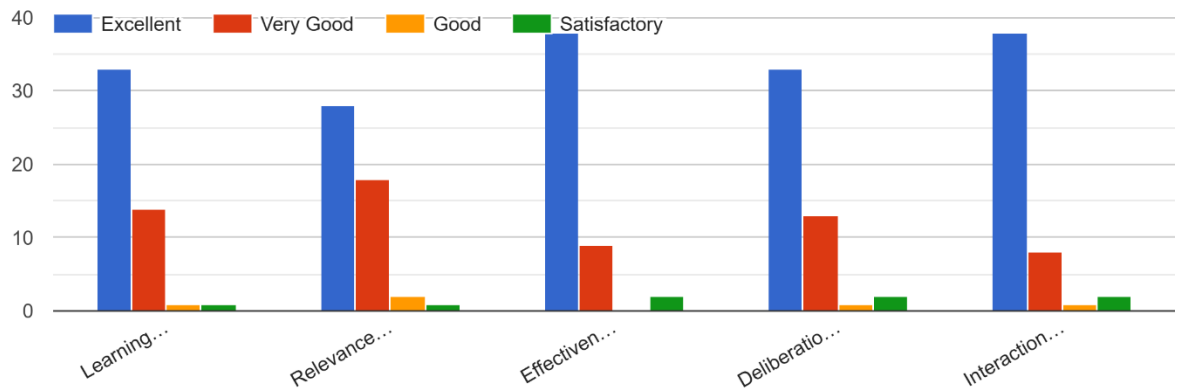
VI. Feedback (from participants)

The feedback received from the participants highlighted the co-ordination, immense learning from the speakers.

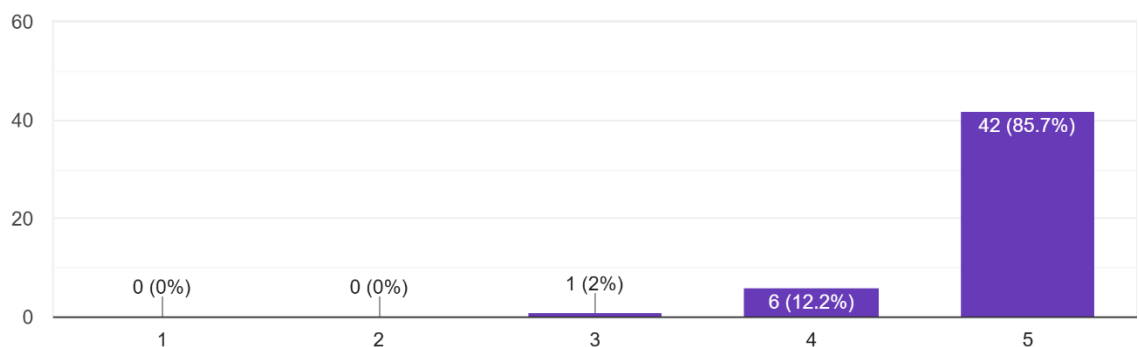
DAY-1

The feedback for the sessions conducted by Dr. Arulalan Rajan, covering Mathematical Foundation in Applied Sciences and Computational Mathematics and Simulation, was overwhelmingly positive. Most participants rated the sessions as "excellent," commending the relevance and depth of the topics discussed. They appreciated the clarity of concepts and the practical applications highlighted, which enhanced their understanding of the subject matter. A few participants rated the sessions as "very good," suggesting that the content was highly effective but could benefit from additional real-world examples for even greater impact. Overall, the sessions were lauded for their relevance, effectiveness, and interactive delivery.

How would you rate the Session 1- Dr. Arulalan Rajan_Mathematical Foundation in Applied Sciences Session 2: Computational Mathematics and Simulation

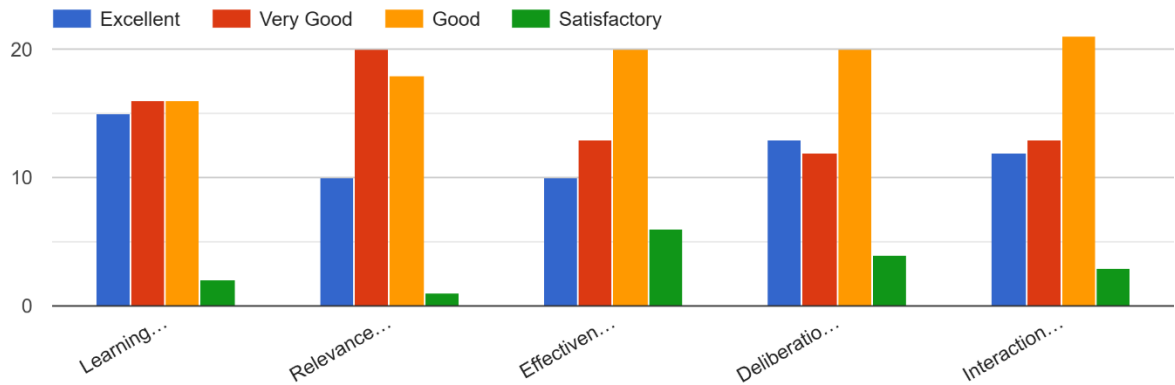


How do you rate overall sessions of Dr. Arulalan Rajan
49 responses



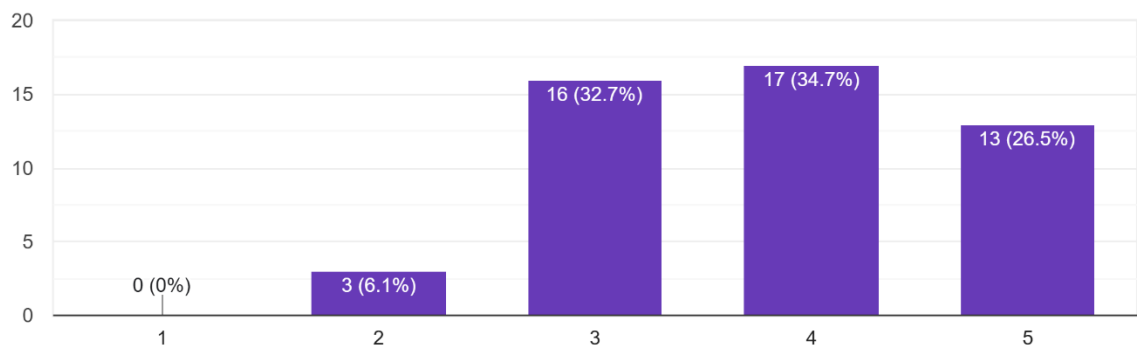
The participants gave a stellar **5-star rating** for the overall sessions conducted by Dr. Arulalan Rajan, reflecting their immense satisfaction with his overall session.

How would you rate the Session 3- Dr. Sudev N V_ Statistical Methods in Data Science and Engineering Session 4: Optimization and Game Theory Applications



The feedback for Dr. Sudev N V's sessions on *Statistical Methods in Data Science and Engineering* and *Optimization and Game Theory Applications* was largely positive, with the majority of participants rating them as excellent, and some providing ratings of very good, good, or satisfactory.

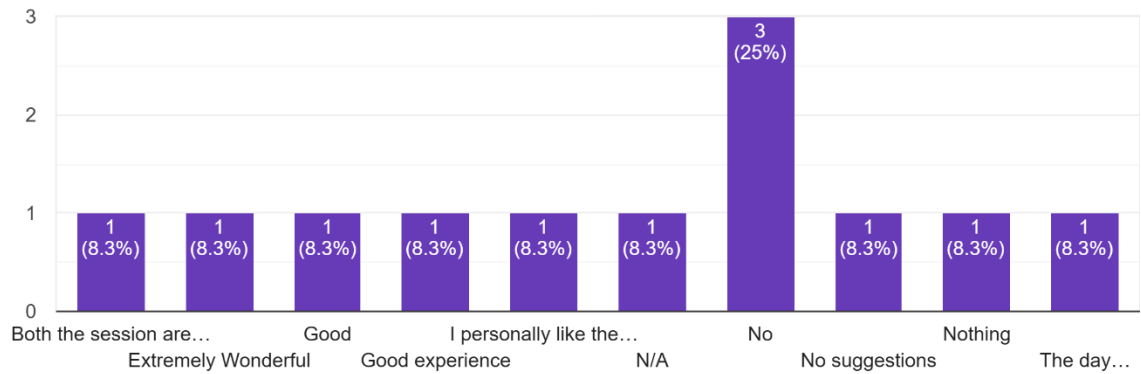
How do you rate overall sessions of Dr. Sudev N V
49 responses



The participants gave a stellar 4-star rating for the overall sessions conducted by Dr. Sudev N V, reflecting their immense satisfaction with his presentations.

Any other Comments or Suggestions

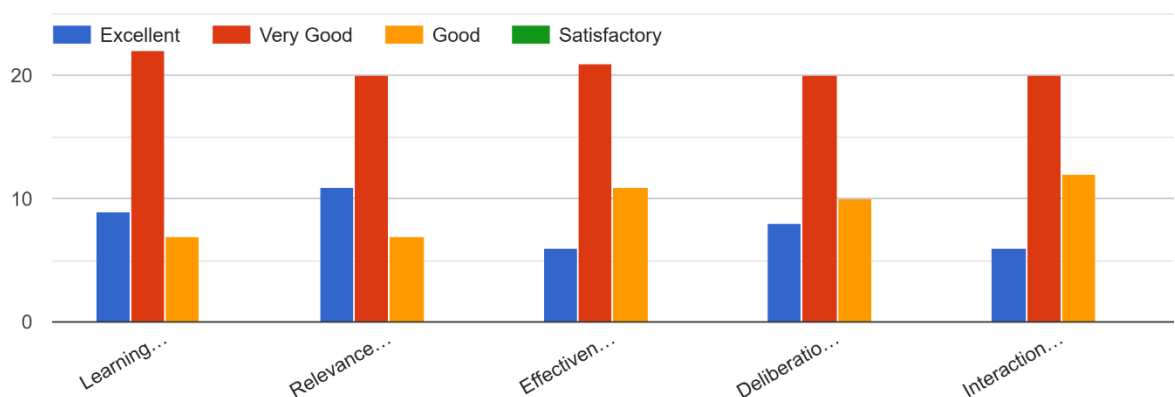
12 responses



The participants shared overwhelmingly positive feedback, describing the day as super exciting and an excellent opportunity to gain knowledge from esteemed experts. Many highlighted the sessions as extremely wonderful, very useful, and a valuable learning experience. The hospitality and simplicity of the professors were particularly appreciated, reflecting the welcoming environment of the institution.

DAY- 2- FEEDBACK

How would you rate overall session of Dr. Gajanan Honnavar Session 1- Data Science and Machine Learning Fundamentals Session 2: Quantum Physics and Electronics in innovation

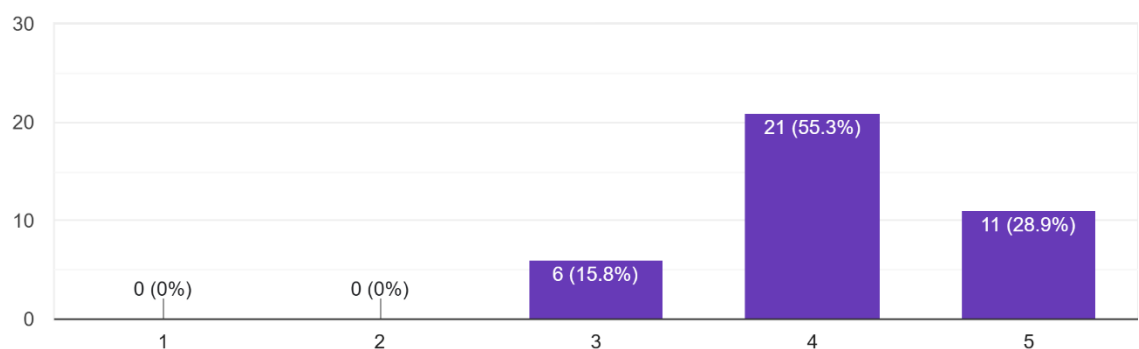


Participants provided highly positive feedback on the sessions by Dr. Gajanan Honnavar, covering *Data Science and Machine Learning Fundamentals* and *Quantum Physics and*

Electronics in Innovation. The majority rated the sessions as very good, highlighting the relevance of the topics to current trends and their effectiveness in bridging theoretical concepts with practical applications. Some participants rated the sessions as excellent, appreciating the depth of knowledge shared and the clarity of explanations. A few rated the sessions as good, suggesting room for enhanced interaction. Overall, the sessions were engaging, informative, and well-aligned with the workshop's objectives.

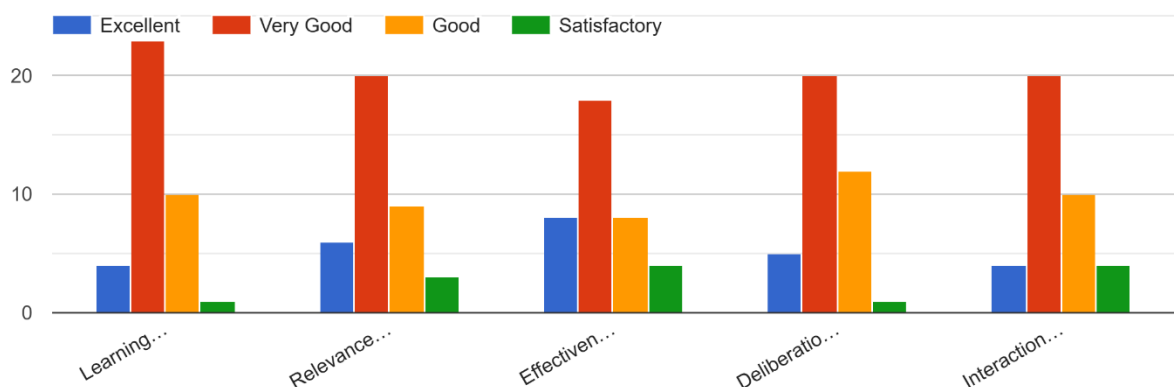
How do you rate overall sessions of Dr. Gajanan Honnavar

38 responses



The participants gave a stellar 4-star rating for the overall sessions conducted by Dr. Gajanan, reflecting their immense satisfaction with his presentations.

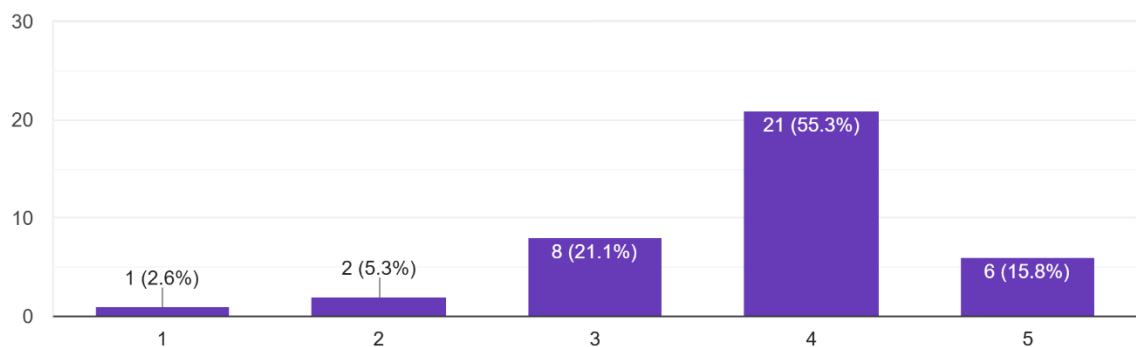
How would you rate overall session of Dr. Srikanth Itapu Session 1- Statistical Methods in Data Science and Engineering Session 2: Advanced Quantum Mechanics and its Application



The sessions by Dr. Srikanth Itapu on *Statistical Methods in Data Science and Engineering* and *Advanced Quantum Mechanics and its Application* received mixed feedback from participants. Many found the sessions to be excellent or very good, appreciating the relevance and depth of the topics covered, as well as the clear link between theory and practical applications. Some participants rated the sessions as good or satisfactory, indicating that while the content was informative, certain advanced concepts could have been made more accessible. The overall interaction and engagement were commendable, with participants valuing the opportunity to ask questions and gain insights from an expert.

How do you rate overall sessions of Dr. Srikanth Itapu

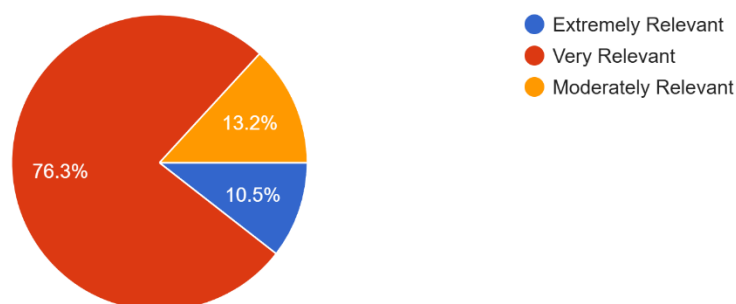
38 responses



The participants gave a stellar 4-star rating for the overall sessions conducted by Dr. Srikanth Itapu, reflecting their immense satisfaction with his presentations.

How would you rate the relevance of the topics covered in the workshop to your academic/professional growth?

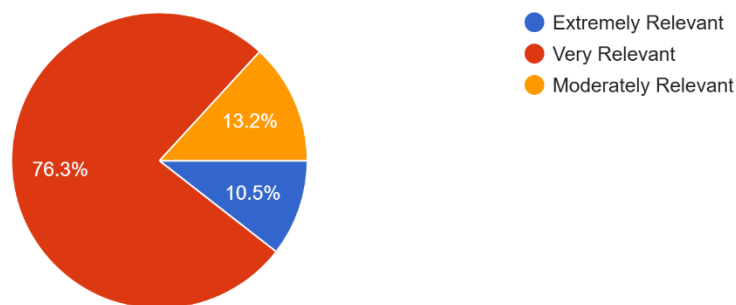
38 responses



The majority of participants found the topics covered in the workshop to be highly relevant to their academic and professional growth, with many rating them as *very relevant*. Some participants rated the relevance as *excellent*, highlighting the significance of the content in advancing their knowledge and skills. A few others deemed the topics *relevant*, indicating that while the sessions were informative, they could have benefited from more direct application to their specific areas of expertise. Overall, the workshop successfully aligned with the participants' expectations for growth in their respective fields.

How would you rate the relevance of the topics covered in the workshop to your academic/professional growth?

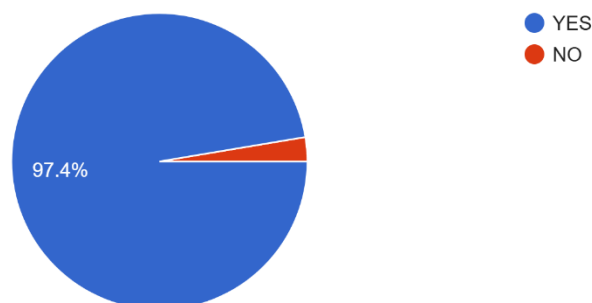
38 responses



Most participants, 52%, strongly agreed that the workshop schedule was well-organized and communicated clearly.

In future would you like to attend this kind of Workshops/Seminars/Conferences?

38 responses

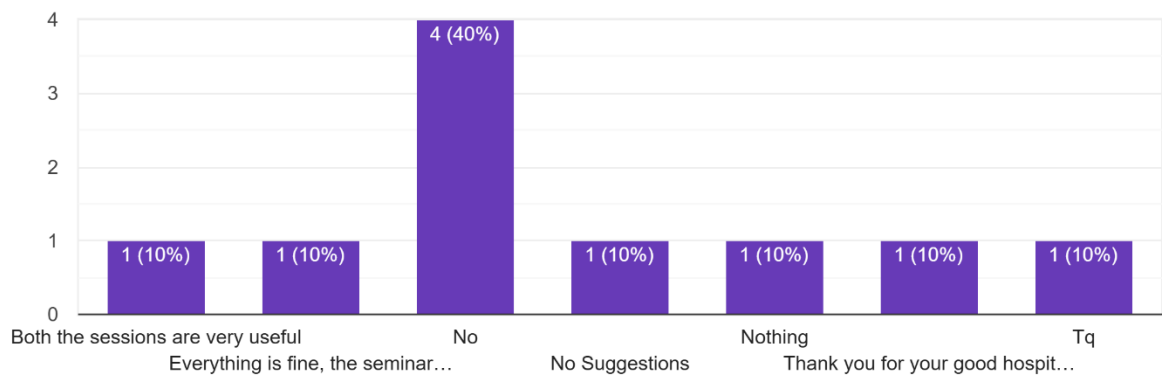


An overwhelming 97.4% of participants expressed interest in attending similar workshops, seminars, or conferences in the future. This indicates a strong positive response to the event and suggests that the content, structure, and overall experience were highly valued by the

participants. It also highlights the demand for more opportunities in these areas, reflecting the relevance and quality of the workshop.

Any other Comments or Suggestions

10 responses



Participants found the sessions to be extremely useful, highlighting the practical application of the topics discussed.