



Karnataka Physics Association (R)



**&
Seshadripuram Composite Pre University College
Bengaluru**



Jointly Organising
A One day Workshop
on



Artificial Intelligence, Quantum Science & Technologies and Innovative Methods of Teaching Physics

on Saturday, 30th August 2025

Venue:

Seshadripuram Composite Pre University College
40, Girls' School Street, Seshadripuram, Bengaluru 560020

About the workshop

The landscape of education across the globe is undergoing an unprecedented transformation moving from traditional models to more dynamic, customised and technology driven approaches. Increased accessibility, student-centred learning and adoption of innovative pedagogy are the hallmarks of the present educational scenario. Besides, emerging branches of knowledge like Artificial Intelligence, Quantum Science and Technologies and others are significantly impacting our lives, expanding our knowledge horizon and also leading to new groundbreaking technological developments. In order to keep educators abreast of these developments and equip them to understand and assimilate new concepts, this workshop is being organised.

Artificial Intelligence

Artificial Intelligence refers to ability of machines to simulate human intelligence, encompassing several capabilities like customised learning, problem solving and decision making. Lately, Artificial Intelligence is increasingly moving towards an exalted position with its profound impact on various disciplines, from education to health care, medical diagnosis, finance, academics, industrial technology, environmental science, weather forecasting etc. Artificial Intelligence is set to impact and transform all dimensions of education by offering personalised learning experiences, automated tasks and enhancing engagement for both teachers and students. This workshop aims to have a comprehensive discussion on all these aspects.

Quantum Science and Technologies

The United Nations has proclaimed the year 2025 as the “International Year of Quantum Science and Technology” to enhance awareness about importance of Quantum Science and its applications in our lives. It also marks 100th anniversary of the development of Quantum



Mechanics by Werner Heisenberg. Very interestingly, of late, Quantum Science is rapidly moving out of the experimental phase into realm of practical applications. Quantum technologies broadly categorised into four verticals-Quantum Computing, Quantum Communications, Quantum Sensing and Quantum Materials and Devices- are driving some of the most exciting breakthroughs of the 21st century. In the days to come, Quantum Science and Technology is poised to play a significant role in solving global challenges like climate change, health care and sustainable development. It is intended to discuss on all these aspects in the workshop and create awareness on the importance of Quantum Science and Technologies.

Innovative Methods of Teaching Physics

We the educators, must understand that teaching -learning process in 21st century is markedly distinct from that of the 20th century. We have been witnessing sweeping changes in all realms of education such as types of institutions, curriculum content and design, enhanced expectations of students, diversity in students, pedagogy, instructional technology and so on. Of all these, pedagogy which

refers to the theory and practice of teaching is central and crucial for enhancing student engagement, catering to diverse learning styles and preparing students to face challenges of the 21st century. Hence, innovative teaching methods which promote critical thinking, conceptual understanding, problem solving skills, deeper understanding of the subject and that prepare students for the future are needs of the hour.

Seshadripuram Composite Pre University College

Seshadripuram Composite Pre University College located in the heart of Bengaluru city, is offering pre university courses with student strength of more than 1800. It has witnessed phenomenal growth in last two decades, growing stronger year after year. The college aims to nurture students through ethics, morals and academic excellence inculcating team spirit and leadership qualities as well. The college is a part of Seshadripuram Educational Trust which is running 34 institutions across four cities in the state. Seshadripuram Composite Pre University College adheres to the motto of SET of delivering quality education at an affordable cost to enrich, empower and educate the future nation builders.

Karnataka Physics Association

Karnataka Physics Association (KPA) is a registered non-profit organisation with jurisdiction extending over the entire state of Karnataka. The main objective is to encourage and improve teaching, learning and application of physics and its allied disciplines at all levels. The association organises events such as workshops, conferences and programmes to develop innovative teaching methods and conducts popular lectures by experts for students and general public. KPA has so far (since October 2023) published 8 newsletters and organised 75 online lectures in Zoom platform. Several workshops and lecture- cum -demonstration classes have been held for school and college teachers and students. One national conference was held in March 2025. The membership is open to all those interested in the objectives of the association.



Topics and Resource Persons

1. Artificial Intelligence and its Use in Education

Dr. J Abhiram, Department of Physics, Sir MVIT, Bengaluru

2. Quantum Science and Technologies

Prof. A R Usha Devi, Department of Physics, Bangalore University

3. Innovative Methods of Teaching Physics

Dr. B S Srikanta, Former Director and Principal, Sindhi College,
Principal Grade I (Rtd), RBANMS First Grade College,
Former Academic Advisor, Indian Academic Degree College, Bengaluru

4 Demonstration of Optics Experiments

Dr. P Nagaraju, Professor and Coordinator, PG Department of Physics
The National College - Autonomous, Jayanagar, Bengaluru

Organising Committee

Patron - Nadoja Dr. Wooday P Krishna

Honorary General Secretary, Seshadripuram Educational Trust

Members:

Prof. B A Kagali, President, Karnataka Physics Association

Prof. G K Manjunath, Principal, Seshadripuram Composite PU College

Dr P Nagaraju, General Secretary, Karnataka Physics Association

Dr B S Srikanta, Vice President, Karnataka Physics Association

Dr M S Jogad, Vice President, Karnataka Physics Association, Kalaburagi

Dr H S Sudheendra, Treasurer, Karnataka Physics Association

Prof. K R Meera, HOD of Physics, Seshadripuram Composite PU College

Dr. S Somasekara, Joint Secretary, Karnataka Physics Association

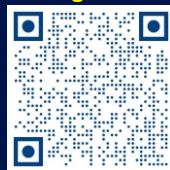
Prof. B Rudraswamy, Joint Secretary, Karnataka Physics Association

Dr. S P Basavaraju, Joint Secretary, Karnataka Physics Association

Registration

Interested teachers are requested to register using the QR code and filling the associated Google Form linked to it. Alternatively, they may send an email giving their details – Name, Educational Qualifications, Teaching Experience, Postal Address, Phone Number and Email address – to the following email addresses before **23rd August 2025**.

**Click on QR Code
for Registration**



<https://forms.gle/Cyqs9HDecGQ4YGnF7>

Email for correspondence:

karnataka.physics@gmail.com / srikantabs.tdv@gmail.com

krm.gkm92@gmail.com

Workshop Coordinators: **Dr B S Srikanta - 6360320228**

Prof. K R Meera - 8861435970

For details, please visit the KPA website: www.karphysics.org

Note: **NO Registration fee**