



# St. Francis

## College for Women

Begumpet, Hyderabad-500016

(Autonomous & Affiliated to Osmania University)  
NAAC Re-accredited with 'A' Grade 4th Cycle



जैवप्रौद्योगिकी विभाग

DEPARTMENT OF  
**BIOTECHNOLOGY**

## ST. FRANCIS COLLEGE FOR WOMEN, HYDERABAD

ACADEMIC YEAR 2023 - 2024

### DEPARTMENT OF PHYSICS

#### REPORT ON ONLINE WORKSHOP ON 'ARTIFICIAL INTELLIGENCE IN PHYSICS'

Date: February 15-20, 2024

Time: 6:00 PM -7:30 PM (All 6 days)

Brochure:

**IAPT - INDIAN ASSOCIATION OF PHYSICS TEACHERS  
ONLINE NATIONAL WORKSHOP**

**Artificial Intelligence Awareness In Physics**

Date : 16 - 20 Feb 2024

Timings : 6pm - 7.30pm

**15 Thu**

**Introduction to AI**  
Dr. P. Tamhankar  
Georgia, Atlanta, USA

**16 Fri**

**AI in Science & Technology**  
Mr. Binod Suman  
Walmart Global Tech, Bangalore

**17 Sat**

**AI for Physics**  
Dr. Subarna Roy  
IBM, Bangalore

**18 Sun**

**AI in Classrooms**  
Dr. Rajamohan P.  
Teachers College, Bidar

**19 Mon**

**AI in Learning sphere**  
Dr. Sudhir Chitnis  
Computer Science, Panaji

**20 Tue**

**Future with AI**  
Prof. Radhika  
Computer Science Bangalore

**About the Workshop:**  
The IAPT Management felt concerned about the Advent of Artificial Intelligence (AI) in almost all walks of life & living. Academics being our area of operation, it was decided to create an opportunity for students & teachers of physics, to increase their Awareness About AI, Machine Learning, Internet of things and Data Science. We felt that the academics as we are currently doing, will change in content, speed & application. The Physics, along with Mathematics & Statistics, has contributed significantly in the development of the newer Knowledge Tools.

**Scope of the Workshop:**  
Gently introducing the AI in the first lecture, the second will consider how Science & Technology, in particular has advanced, impacting our lives. We believe that Physics has contributed significantly for Computation in hardware on Classical & Quantum scales. At the same time, AI has contributed significantly to the developments in Physics, in turn. This symbiotic relation is brought into focus. The role of AI in the classroom, in schools & colleges/universities is the next topic. How can AI change the Classroom delivery, assignments, evaluation, testing etc. and help the teacher substantially is the next topic. Whereas the AI Technologies have impacted everyone's life in one way or the other, the Impact on the Learning World is very dramatic. While the content part of learning has become very urgent, without the learning method or discipline in place, the content will remain unused.

last, but not the least, the Future scenario with AI is something everyone is deeply concerned about. While the beneficial uses of AI are there for all to see, the dangers and misuses of AI are also equally attracting attention. Ethics & Morality are likely to have different meanings and interpretations. The Impact on Agriculture, Weapons for Warfare, Human presence in near space and on nearby planets, public and personal entertainment, show-business, trade & commerce, tourism, governance, all will be deeply impacted.

**Registration Link:**  
google form link : <https://forms.gle/PLGKqKzXbmcuTEQW9>

**QR Code:**

**Contact Details:**

**Convenor: Dr A G Kulkarni**  
arvindkulkarni99@gmail.com  
9538995223

**Co-Convenor: Dr Sarmishttha Sahu**  
sarmishttha.sahu@gmail.com  
9446437747

**Org Secretary : Dr Vinay Venugopal**  
vinay@uos.edu.in  
96651142999

**Target Audience:**  
UG & PG Students Physics, Engineering  
Faculty members - Physics & Co  
Others Interested

**Registration Fees:**  
Students 400/-  
Teachers 600/-  
Industry personnel 1000/-

**Participation Certificates will be given to all registered participants**

**Bank Account Details :**

Bank: canara bank, Malleswaram  
Account name: IAPT RC 12A  
Account no.: 44752099003124  
IFSC: CNRB0010424

**Zoom link will be shared with the registered participants by 14 Feb 2024.**



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## DEPARTMENT OF BIOTECHNOLOGY

Dr. Usha Praveena attended an 6 Day **National online workshop on 'ARTIFICIAL INTELLIGENCE IN PHYSICS'** under DBT STAR COLLEGE (Strengthening Component). It was conducted by The Indian Association of Physics Teachers- IAPT- Bengaluru Chapter. The goal of the extensive online workshop on "Artificial Intelligence in Physics" was to investigate the relationship between physics and artificial intelligence (AI). The workshop, which was held virtually, brought together specialists, investigators, and enthusiasts from the two domains to discuss the potential uses, difficulties, and long-term implications of incorporating AI methods into physics study and practice.

### Objectives:

1. To talk about the newest developments in physics-related AI technology.
2. To investigate different uses of AI for resolving challenging physics issues.
3. To encourage cooperation and information sharing between the physics and AI communities.
4. To determine prospects for physics research and AI integration.

### Outcomes:

The "Artificial Intelligence in Physics" online workshop showcased the revolutionary potential of AI in improving physics research and tackling difficult scientific problems. It also served as a useful forum for interdisciplinary discussion and knowledge exchange. Participants discussed the ethical ramifications of AI integration in physics, discovered potential for collaboration, and obtained insights into cutting-edge techniques. After the session, there was a feeling of hope and excitement for the future investigation and use of AI methods in Physics.

### Topics covered

**An introduction to artificial intelligence (AI) in physics:** Topics covered included machine learning methods, neural networks, and deep learning architectures.

**AI for Computational Physics:** Participants investigated how AI techniques may improve physics computational models and simulations, increasing precision and effectiveness in fields like cosmology, quantum mechanics, and fluid dynamics.



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**Data-driven Physics Discoveries:** This session addressed how artificial intelligence (AI) algorithms may examine large datasets produced by observations and experiments to derive significant insights, facilitating discoveries in fields such as condensed matter physics, astronomy, and particle physics.

**AI in Experimental Design and Instrumentation:** The use of AI to improve experimental configurations, data collection, and instrument calibration in order to further experimental physics research was the subject of discussions.

## Certificate

