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# Women Empowerment: Career Opportunities in Science

***Organized by***

**Gender In Physics Working Group, Indian Physics Association**

**and Department of Physics, IIT Indore**

**15th March 2024, Venue: 1D-105**

*Program*

2:30 pm – 2:40 pm Welcome Remarks & Introduction

2:40 pm – 3:45 pm Public lecture (*OPEN TO ALL)*

***"Machine Learning Approach of Design of New Materials with Targeted Properties"***

***by***

**Prof. Tanusri Saha Dasgupta**

***Director, S. N. Bose National Centre for basic Sciences, Kolkata***

3:45 pm - 4:15 pm High Tea

4:15 pm - 5:15 pm *Workshop I :* **Career Opportunities for Women**

*Facilitator:* **Prof. Sarita Vig,** IIST, Thiruvananthapuram

5:15 pm - 5:30 pm Break

5:30 pm - 6:30 pm *Workshop II:* **Combating Biases**

*Facilitators:* **Prof. Deepa Chari,** HBCSE- TIFR, Mumbai

& **Prof. Vandana Nanal**, TIFR, Mumbai

6:30 pm Concluding remarks

***Local Convener:***

**Prof. Krushna R. Mavani,** Department of Physics, IIT Indore (krushna@iiti.ac.in)

**GIPWG :** gipwg.ipa@gmail.com

***Public lecture***

**Links for FREE Registration**

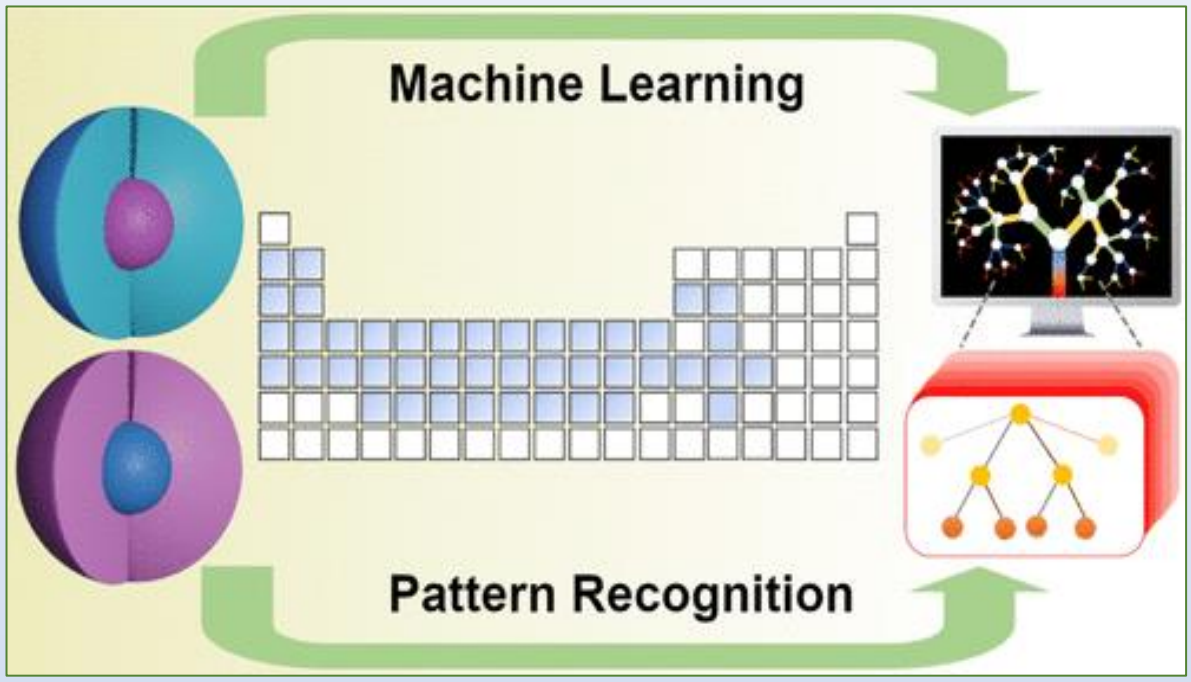
***Workshops***

https://forms.gle/VAwbrtdCFDxEe8ik9

https://forms.gle/YWdiGu1WhFLEZsft8

# Public Lecture

# Machine Learning Approach of Design of New Materials with Targeted Properties




**Tanusri Saha-Dasgupta**
Senior Professor and
Director
S. N. Bose National Centre
for Basic Sciences, Kolkata

**Date: 15 March 2024**
**Venue: POD ID-105**
**IIT Indore**

**Free Registration link**

https://forms.gle/VAwbrtdCFDxEe8ik9

**ABSTRACT:** One of the strong pillars in advancement of designed materials, with targeted properties like magnetism, superconductivity, topological characters is computation of materials. The synthesis and optimization of properties of real materials in experiment is both time-consuming and costly, being mostly based on trial and error. Computational approach in this connection is of natural interest to screen materials, before they can be suggested and tested in the laboratory. For the prediction of new materials, a powerful tool is the machine-learning assisted high throughput computation. In this approach new materials have been computationally predicted by combining electronic-structure methods with intelligent machine learning technique based on data mining and database construction. In this talk we discuss application of this method for prediction of new magnetic double perovskites, low cost rare earth based permanent magnets and semiconductor heterostructures, binary nanoalloys.