

# INVITATION



Bapuji Educational Association (Reg.)

**Bapuji Institute of Engineering and Technology,  
Davanagere-577004 Karnataka.**

(Affiliated to VTU, Belagavi, Accredited by NBA and NAAC with 'A' grade)

**Department of Physics**

***Cordially invites you to***

**Inauguration**

**of**

**Indian National Science Academy (INSA)**

**Sponsored Two Days State Level Seminar**

**on**

**“QUANTUM COMPUTING”**

**26<sup>th</sup> – 27<sup>th</sup> OCTOBER 2023**

**Venue: Swamy Vivekananda Seminar Hall (EEE Dept.), BIET.**

**Time:10.00 AM**

**Guest of Honour**

**Prof. Y. Vrushabhendra**

**Director, BIET  
Davanagere**

**Chief Guest**

**Prof. S P Basavaraju**

**Former Professor of Physics  
Bengaluru**

**President**

**Dr. H B Aravind**

**Principal, BIET  
Davanagere**

**Coordinator**

**Dr. T K Krishna Kumar**

**HOD, Dept. of Physics  
BIET, Davanagere**

**Convener**

**Dr. M R Jagadeesh**

**Associate Professor  
BIET, Davanagere**

**All are cordially invited**

**Conveners, organizing committee, Staff & students of BIET**

## CONTENTS

- *Need of Quantum Computation*
- *Quantum Dots and their applications*
- *Quantum Logic Gates and Circuits*
- *Quantum Communication*
- *Pioneering the Quantum AI frontier*
- *Quantum Cryptography and Quantum key Distribution*

## SCOPE OF THE SEMINAR

The subject of quantum computing brings together ideas from classical information theory, computer science, quantum physics and mathematics. The objective of the seminar is not only to understand future technology in terms of quantum computing, but the whole subject of quantum information theory.

Quantum computing connects some of the unique properties of quantum physics to solve problems that are too complex for regular computers and aims to manipulate and control the tasks and computations that our current digital computers are incapable of. By taking the advantage of the ways in which energy and matter behave at the subatomic level which are only explainable by the principles of quantum mechanics.

No longer will the industry be able to double the computing power of computer chips every 1.5 years at half the price, unless quantum effects can be integrated.

The Union Cabinet on April 19, 2023, approved the ₹6,003 crore for the “National Quantum Mission (NQM)” to provide financial assistance for the research and development of quantum computing technology and associated applications.

## ELIGIBILITY

The Program is open to the Faculty of UGC/AICTE approved Institutions, Research Scholars, PG students and Participants from Industry who are interested in the field of Quantum Computing irrespective of discipline.

## REGISTRATION

### QR CODE



<https://forms.gle/UcXVRFSEw4TN6WyU9>

## IMPORTANT DATES

**Last date (Online Registration): 24-10-2023**

**Date of Seminar: 26<sup>th</sup> and 27<sup>th</sup> October 2023**

## CHIEF PATRONS

**Dr. Shamanur Shivashankarappa**

Hon'ble Secretary, BEA, MLA Davangere South

**Sri. S.S.Mallikarjuna**

Minister of Mines & Geology and  
Horticulture, Government of Karnataka

## PATRONS

**Dr. H B Aravind**

Principal, BIET, Davangere

**Prof. Y Vrushabhendrappa**

Director, BIET, Davangere

Bapuji Educational Association (R.)

## Bapuji Institute of Engineering and Technology

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Recognized by UGC under 2(F) and 12(B)



## Indian National Science Academy

Sponsored

**Two Days State Level  
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Organized by

**Department of Physics**

**Bapuji Institute of Engineering and  
Technology, Davangere-577 004**



## ABOUT THE INSTITUTE

Bapuji Institute of Engineering & Technology (BIET) has been in the forefront imparting high quality technical education in the state of Karnataka. State of the art infrastructure in all branches of engineering, dedicated and qualified staff, highly conducive environment for teaching- learning and a lush green campus with an area of 63 Acres is the hallmark of this professionally managed institution. BIET is recognized by NBA, New Delhi & NAAC with “A” grade. National River Conservation Directorate (NRCD), Ministry of Environment and Forest, Govt. of India recognized our institute as ‘Reputed Scientific Institute’. IBM has recognized Dept. of CS&E as “Centre of Excellence” & given appreciation as “Learning Excellence & Technical Application of IBM Software”. Institute has bagged KSCST “Best College” award 6 times in SPP exhibition. ISRO & VTU have jointly identified BIET & have provided State-of-the-art V-SAT Channel under country’s prestigious EDUSAT program to this institute. Institute has Memorandum of Understanding with many leading industries, research organizations and institutes of repute in India.

## ABOUT INSA

Indian National Science Academy (INSA) was established in January 1935 with the object of harnessing scientific knowledge for the cause of humanity and national welfare. The foundation of the Academy, earlier known as the National Institute of Sciences of India (NISI), was the outcome of joint endeavors of several organizations and individuals and the Indian Science Congress Association (ISCA) playing a leading role in this regard. INSA always focus on Promotion of scientific knowledge and its application to national welfare.

## ABOUT THE DEPARTMENT

The Department of Physics is one of the very few earliest departments of the Institution. Department has experienced faculty members who are actively involved in both academic and research activities. Physics department is recognized as Research Centre by Visvesvaraya Technological University, Belagavi and having research supervisors and research scholars. The current active research domains of the department are crystal growth, Non-linear optics, Nano composites and mathematical modelling.

## CERTIFICATION

The Participation certificates will be issued to those participants who attend all the sessions of the seminar and on successful submission of the feedback at the end.

## RESOURCE PERSONS

### **Prof. S P Basavaraju**

Former Professor and HOD, Department of Physics, Bangalore Institute of Technology, Bangalore

### **Dr. H M Mahesh**

Department of Electronic Science, Bangalore University, Bangalore.

### **Dr. Bhawana Rudra**

Department of Information Technology, National Institute of Technology, Surathkal, Mangalore

### **Dr. M Nagaraja**

Department of Physics, Sri Siddhartha Institute of Technology, (SSAHE), Tumakuru

### **Dr. Swathi Mummadi**

Department of Computer Science and Engineering B.V.Raju Institute of Technology, Telangana

### **Dr. B R Sreenivasa**

Department of Information Science, BIET, Davangere

## ADVISORY COMMITTEE

### **Dr. Y N Dinesh**

Dean Academic and HOD Textile, BIET, Davangere

### **Dr. C R Nirmala**

Dean, Training & Placement and HOD CS, BIET Davangere

### **Dr. A G Shankara Murthy**

Dean, R & D, BIET, Davangere

### **Dr. T K Krishna Kumar**

HOD, Department of Physics BIET, Davangere

### **Dr. K S Basavarajappa**

HOD, Department of Maths BIET, Davangere

### **Dr. H R Mallikarjun**

HOD, Department of Chemistry BIET, Davangere

## CONVENOR

### **Dr. M R Jagadeesh**

Associate Professor, Dept. of Physics

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Mobile: 9740776111

## EVENT COORDINATORS

### **V K Geetha**

Asst. Prof., Dept. of Physics, BIET, Davangere

### **Dr. M V Santhosh Kumar**

Asso. Prof., Dept. of Physics, BIET, Davangere

### **Dr. Vinay Parol**

Asst. Prof. Dept. of Physics, BIET, Davangere

### **P G Kavitha**

Asst. Prof. Dept. of Physics, BIET, Davangere

### **Dr. B M Prasanna**

Asso. Prof., Dept. of Chemistry, BIET, Davangere

### **Dr. Ashwini M Rao**

Asso. Prof, Department of Maths, BIET, Davangere

### **G S Pallavi**

Assist Prof, Department of Maths, BIET, Davangere