

Guest Lecture Title:

# Physics Today

Guest Lecture

**Dr. R. Shankar**

Assistant Professor,  
Department of Physics  
Bharathiar University, Coimbatore

DEC

**28**

2020

Time: 02.00 PM - 3.00 PM

Convener

**Dr. E. Sivasenthil**

Associate Professor & Head,  
Karpagam Academy of Higher Education

Organizing Secretary,

**Dr. B. Janarthanan**

Associate Professor,  
Department of Physics,  
Karpagam Academy of Higher Education



Google meet Link: <https://meet.google.com/ort-hrmk-otm>

# KARPAGAM ACADEMY OF HIGHER EDUCATION, COIMBATORE

## DEPARTMENT OF PHYSICS

### Report on Guest Lecture

Department of Physics organized **Guest Lecture** on **28<sup>th</sup> December 2020 at 2.00 PM - 03.00 PM** by conducting guest lecture on **“Physics Today”**. Dr.R.Shankar, Assistant Professor from Department of Physics, Bharathiar University, Coimbatore is the Chief Guest of the session. More than **50 students and 10 Faculty members** attend the session through Google meet. **Dr.E.Sivasenthil**, Head of the Department, Department of Physics, KAHE introduce the chief guest and address the gathering. The Chief Guest explained about the importance of physics (science) used in daily life. Finally, the session came to an end with vote of thanks given by the organizing secretary **Dr. B.Janarthanan**.



### Hamiltonian for a Molecule

$$\hat{H} = \sum_i^{\text{electrons}} \frac{-\hbar^2}{2m_e} \nabla_i^2 + \sum_A^{\text{nuclei}} \frac{-\hbar^2}{2m_A} \nabla_A^2 + \sum_i^{\text{electrons}} \sum_A^{\text{nuclei}} \frac{-e^2 Z_A}{r_{iA}} \\ + \sum_{i>j}^{\text{electrons}} \frac{e^2}{r_{ij}} + \sum_{A>B}^{\text{nuclei}} \frac{e^2 Z_A Z_B}{R_{AB}}$$

- i. Kinetic energy of the electrons
- ii. Kinetic energy of the nuclei
- iii. Electrostatic interaction between the electrons and the nuclei
- iv. Electrostatic interaction between the electrons
- v. Electrostatic interaction between the nuclei

