

**Karnatak University's
KARNATAK SCIENCE COLLEGE, DHARWAD
SCIENCE ASSOCIATION**

**DEPARTMENT OF PHYSICS
EINSTEIN STUDY CIRCLE**

Invited Talk (Topic): Role of Physics in Medicine

Resource Person: Shri. Ajay Hooli



Figure 1. A view of the P1 Gallery hall of KSCD during the invited talk on "Role of Physics in Medicine", organised by the Einstein Study Circle, KSCD. Here, the resource person Shri. Ajay Hooli, Product Manager, GE Healthcare is addressing the gathering with the help of a power point presentation.

The Einstein Study Circle is a forum for extra-curricular subject-related activities in the Department of Physics, Karnatak Science College, Dharwad (KSCD). The Einstein Study Circle of KSCD had organised an invited talk by Shri. Ajaykumar A. Hooli on the topic "Role of Physics in Medicine", on 7th July 2023. Shri. Ajaykumar A. Hooli is working as a

Senior MRI Radiographer (Application Specialist) and the Product Manager in GE Healthcare, Bengaluru.



Figure 2. Mr. Prajwal P. Patil, Student Secretary of the Einstein Study Circle of KSCD introduced the Resource Person, Shri. Ajaykumar A. Hooli to the gathering.

Today we are living in a world of wonders. Our life is completely controlled by technology and every technology is developed by the principles of Physics. Different analytical instruments used in research, agriculture, industry and medicine work on the principles of Physics. In the medical field, there are different types of diagnostic tools, such as sphygmomanometer, stethoscopes, ophthalmoscopes, thermometer, and electrocardiographs, which are used to observe the health condition of the patient. In order to observe the fractures in the bone, cavities in the tooth, brain tumours, stroke protocols, fat quantification, and the growth of cancer cells in different organs of the body, the patient should undergo different types of radiological scanning, such as X ray CT scan, MRI, PET, Ultrasound, among many others.



Figure 3. The Student Secretary of the Science Association, Mr. Manoj R. P. welcomed Ex-Principal of KSCD, Dr. Ashok Hooli, who graced the occasion with his presence.



Figure 4. Mr. Ajaykumar Hooli enlightened the audience comprising faculty members and students of KSCD about the developments in medical diagnostic tools and the role of Physics in their construction and working.

Shri Ajaykumar Hooli explained about basic Physics principles used in Radiology, working of X ray machines, principle used in MRI (Magnetic Resonance Imaging), CT (Computerized Tomography), Ultrasound and also in nuclear medicine. He elucidated how to interpret the X ray images and MR signal intensities with interesting and clear slides in his power point presentation. He showed 2D images of different anatomic sections of the body. He also expounded about the job opportunities for students with a Medical Physics degree.

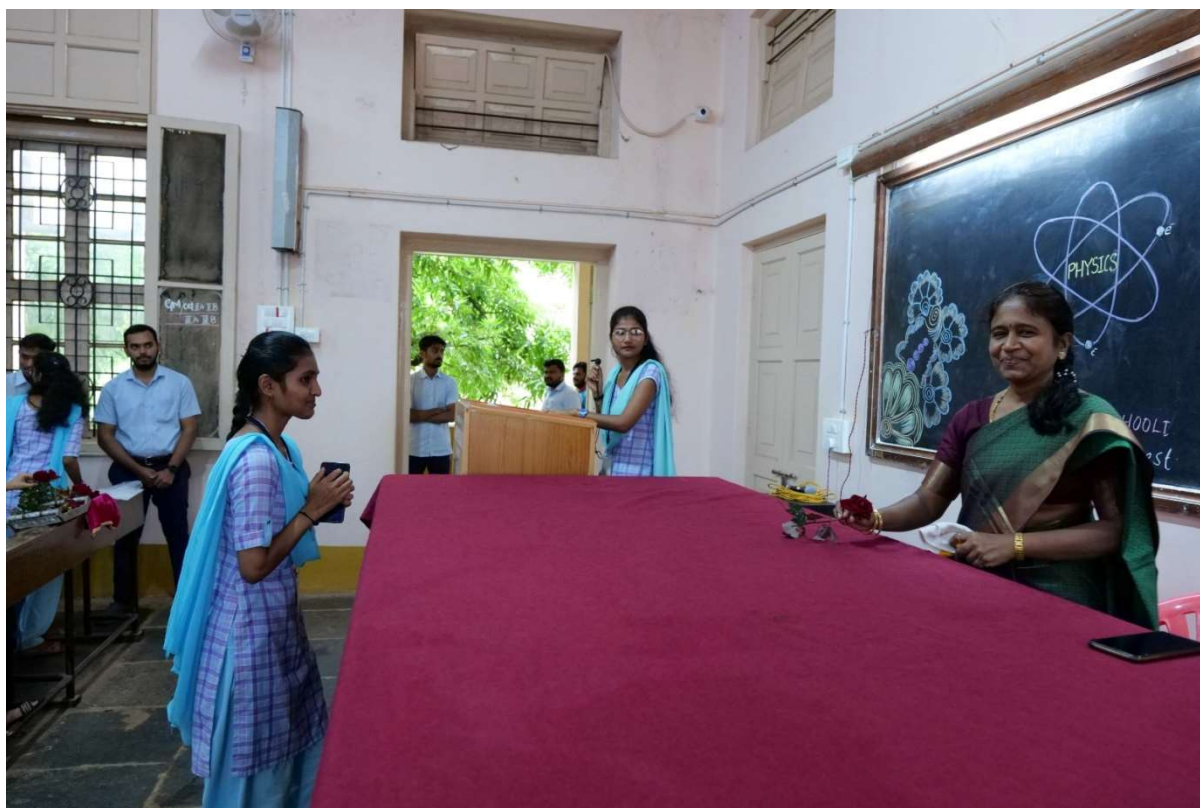


Figure 5. Dr. (Smt.) Nirupama J. M, Chairperson of Einstein study circle, KSCD organised the program. Here, she is greeted with a rose by a B.Sc. student. Ms. Chennavva Lakkundi, who anchored the program, is seen in the background.

All the staff members of the department participated in the workshop. Ms. Tejaswini Devarmani presented a prayer song. Ms. Chennavva Lakkundi anchored the program. Prof. Blaise Lobo, Chairman, Science Association, Karnatak Science College congratulated the organisers and also the students for their active participation. Prof. M.R. Ranganath, H.O.D, Department of Physics, Karnatak Science College delivered the presidential remarks. Mr. Gangadhar Muddennavar expressed the vote of thanks.

Report prepared by: Dr. (Smt.) Nirupama, J. M, Chairperson of Einstein Study Circle, Department of Physics, Karnatak Science College, Dharwad 580001