

National Science day celebrated at RRI

With an objective to promote science outreach among school children and the general public, the Raman Research Institute, an autonomous institute under the Department of Science and Technology, hosted an “Open Day” as part of its National Science Day Celebrations. Students from various Government and private schools, colleges, and the general public visited the Institute during the day.

A variety of science demonstrations that explain basic science were conceptualized and executed by the Ph.D. students and staff of the Institute. Members from all the four groups of the Institute, as well as the facilities, including library, mechanical engineering services, and electronics engineering group, were seen enthusiastically demonstrating experiments and interacting with the visitors. A peek into the experiments is given below.

A visitor to the “Dark Room” of the Light and Matter Physics Group would witness a range of experiments that explain fundamental concepts in light-matter interaction. A sugar solution with a concentration gradient was used to bend light and motivate questions on refraction and the role of the refractive index of a medium. The narrow slit at the center of the common shaving razor along with a laser pointer was used to recreate the famous Young’s Double Slit experiment. Two different types of pinhole cameras were built and used for creating images. Part of a glass rod that was immersed into a solution in a beaker magically disappeared; it turns out this was due to the fact that the refractive indices of the rod and the liquid were similar.

The Astronomy and Astrophysics group used the simple concept of parallax to demonstrate a technique for measuring distances to many stars we see in the night sky. Other attraction in the Astronomy and Astrophysics stall was models of various telescopes used in Radio, X-ray and Optical astronomy. Students appreciated the fact that one can “see” the sky not only through visible light but also through X-rays, radio waves, gamma rays, etc.

The Soft condensed matter group members showcased experiments on chemi and bioluminescence, microscopic reversibility, Pearling Instability, Venture Bots, Microscopic Reversibility, Fano Flow, Oscillatory chemical Reactions, Chemical Traffic Light, Complex Fluid, Mahogany Seed Dynamics and Real-Time Fast Fourier transform. The theoretical physics group demonstration included inclined plane experiments where varying speeds of objects rolling down an inclined plane was used to explain fundamental science concepts.

There were also demonstrations on sending and receiving signals from the EEG group as well as a live demonstration of component fabrication by the Mechanical Engineering services. The Library had on display panels that communicated the Life and Science of the Institute’s founder Sir C V Raman.

During their time at the Institute, the visitors also had the opportunity to interact with RRI Ph.D. students and faculty regarding exciting science and technology initiatives and current research activities of the various labs of the Institute. The Raman Museum, which contains the personal effects of Sir C V Raman, was also open for visits.

Some of the Schools and colleges that visited the Institute included Govt. Girls High School, Malleshwaram, Sri Vidya Mandir, Poornaprajna High School, Kendriya Vidyalaya, Govt. High School, Malleshwaram, Kishore Kendra, Himanshu Jyothi Kala Peeta, Nagasena

School, National Public School, Rajajinagar, Stella Mary's Girls Convent School, and New Horizon College.