



CSIR-Central Building Research Institute Roorkee (Uttarakhand) **Scientists and Students Interaction Program** 7th November, 2024

On 7th November 2024, the Institute successfully organized a Scientists-Students Interaction Program as a part of the Jigyasa 2.0 initiative. The event was graced with the active participation no of **350 students** and **22 faculty members** from **PM Shree Kendriya Vidyalaya, Punjab Lines, Meerut**. The program aimed to introduce students to cutting-edge technologies like Waste to wealth and IoT, meanwhile highlighting CSIR-CBRI's advanced research and innovations in Building Science and Technology.



The program commenced with a warm welcome from Senior Scientists and Co-Nodal Officers, Dr. Chandan Swaroop Meena and Mr. Aasish Peepal. Following the introduction, the students were shown a short film that covered the history and objectives of CSIR-CBRI, sparking a keen interest among students. Dr. Chandan S. Meena, encouraged the students to maintain a curious mindset and pursue continuous learning, emphasizing the role of emerging technologies in shaping the future. The program continued with two technical lectures from eminent scientists Er. Chandrabhan

Patel and Dr. Saumitra Maiti, who presented on advanced topics in the fields of Real-Life Applications of IoT and Waste to Wealth, respectively. Er. Chandrabhan discussed the significance of IoT in modern technology, explaining concepts including IoT programming, smart house technologies, data transmission techniques, and the use of open-source platforms including ArduinoCloud. He provided a detailed overview of how electronics and computing technologies are revolutionizing the IoT landscape, sparking the students' interest in the field. In the second lecture, Dr. Saumitra Maiti discussed innovative ways to repurpose waste for productive uses like building construction and electricity generation. He explained types of waste based on origin, physical state, and properties, emphasizing factors like chemical composition and mineral content that affect reuse. Dr. Maiti also introduced waste management hierarchies and key analysis methods such as SEM, EDS, and XRD, giving students insights into sustainable waste utilization. This session provided students with a comprehensive understanding of how strategic waste management can contribute to sustainable technological development. These talks highlighted the transformative potential of modern technology in everyday life and sustainable development, creating a highly engaging and informative experience for students.



Following the lectures, the students were given a visit to the institute's prestigious Ctesiphon Exhibition Gallery, which displayed cutting-edge research and innovations, showcasing the progress made by CSIR-CBRI from its inception to date. Among the notable projects highlighted were the construction of the Ram Mandir, an iconic architectural feat, and the successful demolition of the Super-tech Twin Towers, which was a remarkable achievement in controlled building demolition. These projects sparked great interest among the students, and they were eager to learn more about the technologies and innovations presented. A vibrant and continuous student-scientist interaction took place throughout the event, allowing students to ask questions and engage with the Scientists.



Following the exhibition, students visited the Rural Technology Park, where Dr. Chandan S. Meena Senior-Scientist at CSIR-CBRI, gave an in-depth brief on the research and development work carried out at the park. He explained various technologies related to structural building work, providing students with a hands-on experience of modern-day technologies and research efforts in rural development.

He discussed various technologies used in house construction, tailored to different regions based on local needs and emphasized that the technology and materials used should be sustainable, economical, and readily available. The discussion also covered different roofing techniques and water filtration systems commonly employed in rural areas, along with their scientific principles and how they relate to practical, everyday life. The interactive session allowed students to relate what they had learned to real-world scenarios, enhancing their understanding of the significance of technology in today's world.

Director of Institution Prof. Pradeep Kumar also joined the event, took time from his busy schedule to inspire and interact with the students. The event was smoothly and efficiently coordinated by Dr. Chandan S. Meena, Senior Scientist and Co- Nodal Officer ,Ar. S. K. Negi, Chief Scientist, Er. AshishPippal, Senior Scientist, and team members including Ms. Namita Shah, Ms. Prachi Dhingia, Mrs. Pooja, Mr. Amzad and Mr. Mahesh were also present during the said event. At the end of the event, students and faculty members expressed their heartfelt gratitude to CSIR-CBRI for providing such a valuable and inspiring learning experience. By showcasing the latest innovations in building science, structural engineering, and sustainable technology, CSIR-CBRI inspired a new generation of learners to think critically about the future of infrastructure and their potential role in shaping it.



