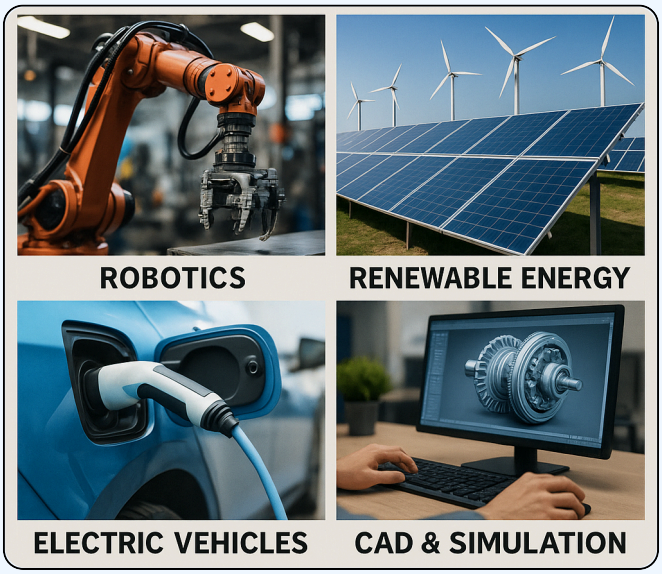
Central Mechanical Engineering Research Institute (CSIR-CMERI), Durgapur

Have you ever wondered how machines are designed to make life easier—from water pumps in villages to robots in factories? Behind many such innovations is the **Central Mechanical Engineering Research Institute (CMERI),** one of India's leading centres for mechanical engineering research.

CMERI was established in **1958** and is located in **Durgapur, West Bengal**. It functions under the **Council of Scientific and Industrial Research (CSIR)**. The institute's main goal is to use engineering and technology to solve real-life problems faced by society, industry, and rural communities.

At CMERI, scientists and engineers design, test, and improve **machines, tools, and mechanical systems.** Their research covers areas such as manufacturing, robotics, automation, energy systems, and agricultural machinery. From developing advanced factory equipment to creating simple, low-cost machines for farmers, CMERI blends high-tech innovation with practical needs.



One of CMERI's special strengths is designing technologies for rural and small-scale industries. The institute has developed affordable machines for irrigation, food processing, renewable energy, and sanitation. These inventions help improve productivity, reduce manual labour, and support sustainable development across India.

CMERI also works on **cutting-edge technologies** like robotics, artificial intelligence in manufacturing, and smart mechanical systems.

By using computer simulations and modern testing labs, scientists ensure that machines are safe, efficient, and durable. Many of CMERI's technologies are transferred to industries, helping Indian manufacturing grow stronger and more competitive.

CMERI also plays an important role in **inspiring young minds.** The institute regularly conducts workshops, internships, exhibitions, and science outreach programs for school and college students. These programs allow students to see real laboratories, interact with scientists, and understand how ideas turn into working machines. CMERI shows students that innovation is not only about complex equations, but it starts with observing problems around us and thinking creatively to solve them. Whether it is saving energy, improving farming tools, or building smarter machines, CMERI encourages students to dream big and use engineering to make the world a better place.

For school students, CMERI shows how **physics, mathematics, and creativity come together** to build the world around us.