



Leibniz Institute
for Solid State and
Materials Research
Dresden

Cryogenic Engineering Centre Indian Institute of Technology Kharagpur &

Leibniz Institute for Solid State and Materials Research, Dresden

jointly organize

Indo-German Conference on Cryogenics for Sustainable Technologies November 9-11, 2026

Ever wondered how MRI and NMR machines can see inside the human body, how liquefied natural gas is stored and shipped across the globe, or how rockets carry the fuel that takes us to space? The answer, in each case, is cryogenics - the science and engineering of extreme cold, conventionally below ~ 120 K, which quietly underpins an enormous range of technologies we rely on every day. This same deep-cold regime has now become essential to the emerging quantum economy as well, since superconducting quantum computers, ultra-sensitive quantum sensors, and single-photon detectors all depend on cryogenic, and often millikelvin-scale, environments to preserve the fragile quantum states at the heart of their operation. Yet despite decades of progress, sustainable cryogenic technology has lagged behind, with core methods for liquefying, storing, and handling liquid hydrogen having barely changed since the 1950s, posing a real challenge both for deep-space missions that need propellants stored for years with minimal loss, and for the infrastructure the world will need to decarbonize its energy systems using hydrogen. Meanwhile, instruments ranging from infrared space telescopes to superconducting detectors keep pushing engineers toward ever lower temperatures under ever tighter constraints on mass and power, making cryogenic engineering one of the most quietly critical fields in modern science.

Here is an opportunity for you to explore this fascinating and fast-evolving field, engage with researchers and professionals working at the frontier of cold science, and discover how solving these cooling challenges could help shape the future of energy space exploration, and quantum technology.

Cooling and Liquefaction

Cryogenic liquid storage
and distribution

Hydrogen and LNG
technologies

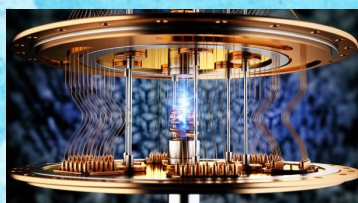
Cryogenic Infrastructure

Cryogenics in Space
Technologies

Ultralow temperature
Refrigeration

Cryogenics for Quantum
Technologies

Superconductivity and
Quantum materials



Organizing Committee

Chairman: Prof. Parthasarathi Ghosh (IIT Kharagpur)
Convenor 1: Prof. Venimadhav Adyam (IIT Kharagpur)
Convenor 2: Prof. Dirk Lindackers (IFW Dresden)
Co-convenor: Prof. Pavitra Sandilya (IIT Kharagpur)

Notice

Registration: There is no registration fee, but registration is compulsory.
Student Accommodation: Limited number of accommodations are available on first come, first served basis.

More Details

<https://igccst2026.github.io/indo-german-cryo-conf-2026>

Scan to
register

