

IIT-D, AIIMS co-develop telerobotic ultrasound system

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Ultrasound imaging made possible to be done from a remote location

A research collaboration between the Indian Institute of Technology Delhi (IIT-D) and the All India Institute of Medical Sciences (AIIMS), New Delhi has jointly developed a Telerobotic Ultrasound System.

The system allows remote ultrasound access through a robotic arm. In the routine ultrasound setting, the doctor (Radiologist) stands in close contact with the patient for the entire scan duration.

However, cross-sectional imaging is preferred instead in the current pandemic scenario with stringent social distancing requirements – a more expensive and less dynamic technique.

Ultrasonography is a non-invasive, non-ionizing, cost-effective, rapid, bedside, and readily available modality with immense use in point-of-care and follow-up examinations.

Dr. Chandrashekhara, AIIMS, New Delhi said, "This system will promote healthcare and make our system more prepared for further pandemics. Besides its role in the pandemic, it will allow a better outreach of ultrasound imaging to remote rural areas of India.

The control architecture had been developed to teleoperate the ultrasound probe attached to the robotic arm while ensuring the patient's safety and the quality of ultrasound images.