INDIAN INSTITUTE OF TECHNOLOGY MANDI

भारतीय प्रौद्योगिकी संस्थान मंडी

Institute Colloquium

“Shaping the Future of Human-Robot Collaboration”

30th March, 2026

06:15 PM

Auditorium, North Campus

Prof. Oussama Khatib

Professor of Computer Science at Stanford University and Director of the Stanford Robotics Center (SRC), USA

“Shaping the Future of Human-Robot Collaboration”

Prof. Oussama Khatib

Affiliation: - Professor of Computer Science at Stanford University and Director of the Stanford Robotics Center (SRC), USA.

Abstract: -

Distancing humans physically from dangerous and unreachable spaces while connecting their skills, intuition, and experience to the task promises to fundamentally alter the future of work and remote robotic operations in extreme environments. This has been thoroughly illustrated during the recent expeditions of OceanOneK, where its advanced autonomous skills for physical interaction have been effectively combined with the cognitive abilities of a human expert through an intuitive haptic/stereo-vision interface. Skills are learned from human demonstrations, where physical models are used to reveal from motion and contact data sequences of parametrized human-like compliant strategies. During several archaeological expeditions in the Mediterranean, OceanOneK demonstrated remarkable performance in operating at deep depths. These developments show how human-robot collaboration induced synergy can expand our abilities to reach new resources, deliver medically care to distant patients, build and maintain remote infrastructure, and perform disaster prevention and recovery operations – be it deep in oceans and mines, at mountain tops, or in space.

Bio-Sketch: -

Prof. Oussama Khatib received his PhD from Sup'Aero, Toulouse, France, in 1980. He is Professor of Computer Science at Stanford University and Director of the Stanford Robotics Center (SRC). His research focuses on methodologies and technologies in human-centered robotics, haptic interactions, artificial intelligence, and human motion synthesis. Professor Khatib is President of the International Foundation of Robotics Research (IFRR) and an IEEE Fellow. He is Editor of the Springer STAR and SPAR series, Springer Handbook of Robotics, and Springer Encyclopedia of Robotics. He is a recipient of the IEEE Robotics and Automation, Pioneering Award, the George Saridis Leadership Award, and the Distinguished Service Award. Professor Khatib is recipient of the Japan Robot Association (JARA) Award, the Rudolf Kalman Award, and the IEEE Technical Field Award. He is Knight of the French National Order of Merit and a member of the United Sates National Academy of Engineering. Professor Khatib is recipient of the 2024 Great Arab Minds Award.