Prof. Dinesh Kant Kumar, (Biomedical Engineering), RMIT University, Melbourne, Australia visited JUIT and delivered an Expert Lecture

"Biomedical Signals and Image Analysis for Affordable Diagnostic"

On October 10, 2019

Prof. Dinesh started his talk with informing us about the most common lifestyle disease, diabetes, and how diabetes leads to chronic illness. He explains that diabetes are also more likely to have certain conditions, or risk factors, that increase the chances of having heart disease or stroke, such as high blood pressure or high cholesterol, diabetes also leads to kidney failures , affects the cornea of eyes. He gave a brief comparison between countries in health conditions, in which he compared India. India is an incredibly diverse and culturally rich country. Despite gigantic and beautiful monuments, delicious food, a booming business sector, and Bollywood, it still has some major health issues that many other countries have minimized far more successfully. These health issues affect absolutely everyone, from the poorest people to the richest ones. According to the World Bank, India ranks 146th position among the countries of the world. Life expectancy at birth is also a yardstick of the overall quality of life in a country. According to World Health Organization, India ranks 126th position in life expectancy.

During the talk the he also informed us about the advancements of technology that can identify the symptoms of Parkinson's diseases using Signals and system processing. He also discussed the doctor patient ratio of Australia and India deficit of 600,000 doctors, and the nurse : patient ratio is 1 : 483, implying a shortage of two million nurses.

Prof Dinesh has been working towards changing the above paradigm and works for the development of diagnostic devices that are suitable for being used in remote regions by untrained healthcare personnel. Such devices provide automation of recording and analysis of the data, thereby do not require large buildings, and are suitable for the target audience. The success of such diagnostic devices is based on the development of advanced image and signal processing techniques that makes these devices noise tolerant and provide good quality diagnostics without high quality infrastructure.

Students of B Tech and M tech students attended the lecture and interacted with him enthusiastically. He also interacted with faculty members & Ph.D Research scholar and discussed about the latest research issues.

Coordinators : Dr. Meenakshi Sood, Dr. Shruti Jain