

**Rajesh M. Hegde**

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Prof. Hegde's primary research contributions at IIT Kanpur have been in the areas of Sensor Array and Multi-channel signal processing, Automatic Recognition of Spoken Indian Languages, Indian Language Processing, Multi modal signal processing, Wireless sensor networks, Internet of Things (IoT), Cyber Physical Systems (CPS) and ICT for socially relevant applications like Agriculture. As part of this effort two laboratories namely Multi modal signal processing Lab (MiPS Lab) and Wireless Sensor Networks Lab (WSN Lab) have been established. The laboratories are equipped with state of the art equipment like Audio-Visual arrays (Linear, circular and spherical), Acoustic Cameras, and a state of the art sensor network test bed. Significant funding has been generated from both Sponsored research and Industrial consultancy projects from various funding agencies which are supplementing his groups research.

He has made some significant contributions in the area of array signal processing and source separation. Some of his other significant contributions are in the areas of multi sensor data fusion for localization and node tracking in the context of mobile wireless sensor networks. This work has also led to the development of several new technologies with specific applications in ICT, Teleconferencing, Internet of things (IoT) and Cyber Physical Systems (CPS). His research group has also been very active in the development and deployment of socially relevant applications in the Indian Context and subsequent transfer of this technology to Industry. Some of the successful technology transfers include Digital Mandi for the Indian Kisan, Intelligent Video Retrieval on Cell phones (transferred to BSNL), and Audio Analyser to LG Software.

Capsule Bio :

Rajesh M. Hegde joined IIT Kanpur as an Assistant Professor of EE in May 2008 after obtaining a Ph.D degree in Computer Science and Engineering from the Indian Institute of Technology Madras in 2005. He became an Associate Professor in 2012 and a Full Professor of EE in July 2016. He is currently the Uan Gupta Chair Professor at IIT Kanpur. He was also awarded the P.K. Kelkar Research Fellowship at IIT Kanpur in 2009. Between 2005 to 2008, He worked as a Researcher at the California Institute of Telecommunication and Information Technology (CALIT2) and concurrently as a lecturer (2007) at the Department of Electrical Engineering at the University of California San Diego, USA. He was elected as a Senior Member of IEEE in 2017 and is an active affiliate member of IEEE-AASP technical committee. He has established two research Laboratories at IIT Kanpur namely, Multimodal Information Systems Lab and Wireless Sensor Networks Lab with funding obtained from BSNL, DST, MIT, LG Soft, Samsung Research and Indian space research organization. He has published prolifically at several benchmark International conferences and journals in the area of signal processing, communication and networks. He is also a member of the National working groups of ITU-T (NWG-16 and NSG-6) on developing multimedia applications. He actively teaches both undergraduate and post graduate courses related to digital signal processing, statistical signal processing, array signal processing, wireless sensor networks, and digital speech processing. Additional biographic information can be found at the URL: <http://home.iitk.ac.in/~rhegde>.