hours of data which is approximately 1200 sentences. The text collected is being converted to ITRANS format and the speech wavefiles are being labelled with the help of volunteers. We have completed the labelling of two hour of data. A TTS for Rajasthani was built using a corpus of around 200 sentences. The building of TTS System using the newly recorded data is under progress.

School of Engineering:

School of Engineering has been involved in teaching of following courses that are common for all the branches: Engineering graphics, Manufacturing processes and Engineering thermodynamics. A well equipped workshop has become operational in the main campus at Kamand since March 2012. The school is in the process of developing Solid Mechanics and Thermo-fluids Laboratories. These labs are likely to be operational during August 2012 to November 2012.School of Engineering has got a total of eleven faculty members including three mentor professors. There are currently three PhD and two masters student in the school. The main areas of research are broadly classified in following categories: materials and design, thermo-fluids engineering, energy efficient systems and supply chain management. In materials and design, the work is directed towards development of materials for the sensor and actuator applications, development of the smart structures and systems. In thermo-fluids engineering, faculty members are involved in investigating radiative heat transfer, nano-scale heat transfer, flow analysis and heat transfer analysis of IC engines. Additionally, molten metals/alloys are also being explored. Energy efficient systems cover climate change studies, applications of phase change materials towards energy efficient buildings, use of non-conventional energy sources in IIT Mandi to enhance energy efficiency and development of energy park. The research in the area of Supply Chain Management involves design of green supply chains with carbon footprint considerations and design of humanitarian relief supply chains in India.

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Research Projects

IIT Mandi Seed grant projects

Project	Principal investigator	Project cost (in lac)
Active control of vibration using fuzzy logic controller for smart structure and its experimental validation	Rajeev Kumar	5,13,000

Progress report of the projects:

Active control of vibration using fuzzy logic controller for smart structure and its experimental validation

PI – Rajeev Kumar

The major objectives of this project has been to develop a finite element modeling of piezolaminated composite structure and to optimize the placement of piezoelectric sensors and actuators for use in the space and air craft industries. Based on the modeling a finite element program will be developed in MATLAB. Fuzzy logic controller will also be developed to control the vibration of smart structure which has optimum placed piezoelectric sensors and actuators. In the view of its practical importance, a numerical study will be performed to damp out the vibration of spacecraft antenna reflector (parabolic shell made of composite material). Thereafter, an experimental set up will be developed to validate the numerical simulation of the results. Attempts have been made to develop the finite element formulation to determine the nonlinear response of the general pizolamainated composite structure. In addition, fuzzy logic controller has been also developed to control the vibration of smart structure.