1. STUDENT IDENTIFICATION

Name: Puneet Singh

Title: PhD student

Institution: Indian Institute of Science, Bangalore

Institution background: The Indian Institute of Science (IISc) was conceived as a Research Institute. IISc is a public university for scientific research and higher education located in Bangalore, India. Established in 1899 with active support from Jamshetji Tata. IISc is widely regarded as India's finest institution in its field, and has made significant contribution to advanced computing, space, biology and nuclear technologies.

2. SCHOOL EXPERIENCE AND CONTRIBUTION

- Research interest

My research interest is in the field of neuroscience and robotics. My goal is to adjoin both fields of robotics and neuroscience, in order to develop good understanding of movement control (motor cortex). To do so in my research, I am trying to solve the question “How the human brain solves arm redundancy”. My past research experience has been predominantly in robotics.

- Reason for participating in BCBT2014

One of the reasons why I wanted to attend the summer school is to study in-depth understanding Computational neuroscience and state of the art in the area of cognitive systems and robotics. I hoped attending BCBT would expose me to current interfaces of technology between robotics and neuroscience. My main motivation to attend the summer school is that its courses are spited between robotics and neuroscience.

- How did BCBT2014 contributed to your education

This summer school spawns new thoughts and ideas which will be immensely useful for my research. The school offered me the possibility to participate in a project related to rehabilitation, which provided me with a better understanding about reward function and muscle memory. This helped me to learn about handling experiments, recording electromagrophy data and setup of Armeo (Exoskeleton, Hocoma) and provided me with a good understanding of rehabilitation. Moreover developed a MATLAB code to analyze data of the reward function and the electromagrophy data. We have shown the muscle memory. The project work was a great way to
apply what I have learnt in summer school. Lastly, I also enrich and got enriched by the cultural diversity of the workshop audience.