



**Centre for Biosystems Science and Engineering
Seminar**

Genome Wide Association Studies (GWAS): Design strategies, computational challenges and translating genetic discoveries to personalised medicine

4 PM, 14th June 2016,
Seminar Hall, MCB, Biological Sciences Building.

Dr. Bratati Kahali

University of Michigan, Ann Arbor.

Large scale genetic association studies performed at genome wide level are powerful and currently widely used methods for detecting genetic variants that increase the risk of developing particular complex human diseases. The speaker will present the existing concepts and methodologies for executing a genome wide scan which is essentially the scanning of markers across genomes of many patients to identify genetic variations associated with particular diseases, that will enable more tailored detection, prevention and treatment of diseases. The talk will also portray the key details of genotype imputation to 1000G like reference panels that increases power in a typical GWAS by estimating genotype probabilities at untyped locations across the human genome. This talk will also cover the pathophysiological findings of the largest ever meta analysis GWAS done for human obesity. Finally, the speaker will discuss some future work intended to understand the genetic and biological bases of human diseases in the Indian population using state of the art computational and statistical approaches.

About the speaker

Dr. Bratati Kahali did at doctoral research from Bose Institute Centre of Excellence in Bioinformatics, Kolkata, India. She is presently at the University of Michigan, Ann Arbor for her post doctoral studies where she is part of Elizabeth Speliotes lab in the Division of Gastroenterology.