# Workshop on
# Statistical Methods for Bioinformatics
## (December 12 - 14, 2013)

## Indian Institute of Science
## Bangalore

**December 12, 2013**
**Thursday**

**Venue: Lecture Hall – I, Department of Mathematics, IISc, Bangalore**

| | | |
|---|---|---|
| 9:00am – 9:30am | Registration | |
| 9:30am – 10:45am | Varghese George Georgia Regents University | Methods for Differential Methylation with Next Generation Sequencing |
| 10:45pm – 12:00pm | Indranil Mukhopadhyay ISI | Multilocus association test in genetic association study using similarity between individuals |
| **12:00pm – 1:00pm** | **Lunch** | |
| 1:00pm – 2:15pm | S.R. Deshmukh University of Pune | Statistical Techniques for Normalization of Microarray Data |
| 2:15pm –3:30pm | Naomi Altman Penn State University | Data Obesity: Inflated Estimation and Irreproducible Results with High Throughput Data |
| **3:30pm – 3:45pm** | **Tea** | |
| 3:45pm- 4:30pm | Snehalata Huzurbazar SAMSI | Statistical analysis of gene duplication data |
| 4:30pm – 5:45pm | Ashis Sen Gupta ISI | Circular Statistical Inference for Circadian Rhythms in Genomic Data |
| **5:45pm – 6:00pm** | **Discussions** | |

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| | | |
|---|---|---|
| 9:00am – 10:15am | Nagasuma R. Chandra IISc | Towards disease prediction modeling - Analysis of host pathogen interactions through integrated genome-scale networks and Boolean dynamics |
| **10:15am – 10:30am** | **Tea** | |
| 10:30am – 11:45am | Olga Vitek Purdue University | Statistical methods for quantitative mass spectrometry-based proteomics |
| 11:45am – 12:45pm | Contributed Papers (3 speakers): | |
| | Sheikh Taslim Ali Karnatak University | Likelihood and Bayesian Estimates of Reproduction Numbers through Stochastic Modelling for the Pandemic Influenza A/H1N1 2009 in India |
| | Trinadh Kumar Potina Tata Consultancy Services | Comprehensive statistical and functional annotation analysis of data from Affymetrix Human Genome U133 Plus 2.0 array |
| | Sandip Shil Gauhati University | Study on different gene selection methods: support vector machine classification approach |
| **12:45pm – 1:45pm** | **Lunch** | |

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| Time | Speaker | Title |
|---|---|---|
| 1:45pm – 3:00pm | N. Srinivasan<br>IISc | Filling-in void and sparse regions in protein sequence space by protein- like artificial sequences enables remarkable enhance mentin remote homology detection capability |
| 3:00pm – 4:15pm | T. S. Vasulu<br>ISI | Statistical methods for Phylogenetic analysis |
| **4:15pm – 4:30pm** | **Tea** | |
| 4:30pm-5:45pm | Paul Joyce<br>University of Idaho | The role of statistics in the theory of adaptive evolution informed by experimental data |
| **5:45pm-6:00pm** | **Discussions** | |

# Workshop on
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**December 14, 2013**
**Saturday**

**Venue: Lecture Hall – I, Department of Mathematics, IISc, Bangalore**

| | | |
|---|---|---|
| 9:00am – 10:15am | Susan Holmes<br>Stanford University | The many sides of the Human Microbiome:combining heterogeneous data in meaningful ways |
| **10:15am-10:30am** | **Tea** | |
| 10:30am-11:45am | K. Thangaraj<br>CCMB | Statistical Methods for Human Evolution, Health and Disease |
| 11:45am – 01:00pm | Contributed Papers (4 speakers): | |
| | Malay Bhattacharya<br>University of Kalyani | Micro RNA Signatures Distinguish Breast Cancer Subtypes |
| | H.V. Kulkarni<br>Shivaji University | A New Distribution on the Torus with Applications to Paired Circular Genome Data |
| | Anwesha Pan<br>ISI | Network Analysis wrt PCOS |
| | Ranjeet Rout<br>ISI | Analysis of Boolean Functions based on Interaction Graphs and their influence in System Biology |
| **01:00pm – 2:00pm** | **Lunch** | |
| 2:00pm – 3:15pm | Sanghamitra Bandopadhyay<br>ISI | Multiobjective Clustering with SVM Based Ensembling for Analysis of Gene Expression Data |
| **3:15pm – 3:45pm** | **Discussion** | |
| **3:45pm – 4:00pm** | **Concluding Remarks** | |