

# Centre for Advanced Faculty Training

on

## Recent advances in Agricultural Bioinformatics: Big Data Analytics Perspectives

Sponsored by

Agricultural Education Division

Indian Council of Agricultural Research

New Delhi -110012

No. of Participants: 25

Last Date for Receipt of Nomination

September 25, 2018

Intimation to Selected Candidates

September 29, 2018

**Duration**

**November 14, 2018**

**to**

**December 04, 2018**

Course Coordinator : Dr. K.K. Chaturvedi

Co-Course Coordinator : Md. Samir Farooqi

**Centre for Agricultural Bioinformatics**

**ICAR-Indian Agricultural Statistics Research Institute**

**Library Avenue, PUSA, New Delhi - 110012**

**<http://cabgrid.res.in/cabin>; <http://iasri.icar.gov.in>**

## Introduction

With the advancements in genomic and sequencing technologies, there has been a tremendous growth of omics data. The omics covers genomics, proteomics, metagenomics, transcriptomics etc. The storage and analysis of this data requires huge storage space, specialized data structure and tools for easy and fast retrieval of data. This can be achieved by using big data platform. Big data revolves around three Vs i.e. Volume, Variety and Velocity. Consequently, a number of computational and statistical techniques for the analysis of biological data in agriculture have also been developed and being used for storage, retrieval, analysis, annotation and visualization of this huge and heterogeneous biological data.

## About Training

This training program aims to provide theoretical as well as hands on learning of these specialized omics tools to help researchers in efficient and accurate analysis of their data. The course has been structured as a series of various modules for high performance computing, big data, machine learning, genomics, transcriptomics, proteomics, metagenomics and analytics. Each module will consist of theory as well as practical sessions to work with bioinformatics tools and software. This training program will provide a platform for interaction between researchers in strengthening the bioinformatics research in various domains of agriculture.

## About ICAR-IASRI

ICAR-IASRI is responsible for promoting and conducting research and imparting education/ training in the field of Agricultural Statistics, Computer Applications and Bioinformatics. With the passage of time the institute has equipped itself with the modern facilities to meet the requirements in the changed scenario. There are six divisions in the Institute equipped with various modern facilities.

### Objectives

- ♦ To familiarize the participants with computational advances including big data in agricultural bioinformatics.
- ♦ To expose the participants with latest analytical tools for analysis of biological data
- ♦ To provide a common platform for researchers working in the area of agricultural bioinformatics.

### Modules of the Course

- High Performance Computing
- Big Data
- Machine Learning
- Genomics
- Transcriptomics
- Proteomics
- Metagenomics
- Software and Tools

## Eligibility

- ◆ Master's degree in any discipline of Agricultural/ Allied Sciences.
- ◆ Working in a position not below the rank of Scientist/Assistant Professor.
- ◆ Desirable : Working knowledge of Computer.

## Super-Computing Facility (ASHOKA)

Institute has high performance computing facility (ASHOKA) with 256 node Linux, 16 node GP-GPU, 16 node Windows cluster and two SMPs with high speed network connectivity and pre-installed software and tools. A number of open source and commercial bioinformatics software such as CLC genomics, Discovery studio and AN-VAYA workflows are also available in this High Performance Computing Resources.



## Library:

The Institute has a fully furnished computerized library having latest books and journals relating to Computer Science, Statistics, Mathematics, and other related disciplines.

## Accommodation Facilities:

The institute has a guest house with modest facilities to cater to the needs of the participants.

## General Information:

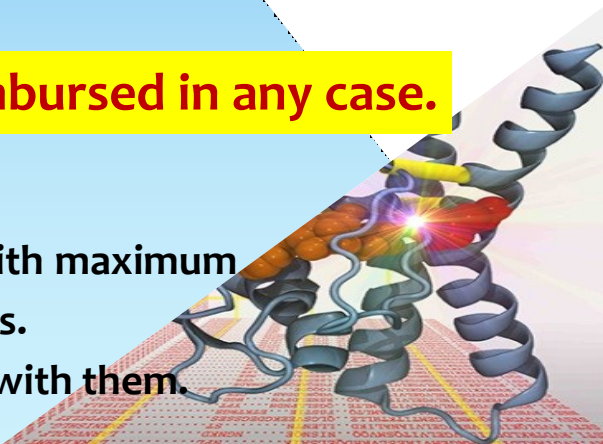
The participants will be paid to and fro travel fare for the journey by train as per their entitlement for the class of travel restricted, however, to the maximum of AC-II Tier fare only (excluding Rajdhani and Shatabdi) or bus or any other means of transport in vogue as the case may be, if the same is not borne by the sponsoring organizations. Free boarding and lodging will be provided to participants during the training.

**Important: Cost of air travel will not be reimbursed in any case.**

## Weather:

The climate of Delhi is pleasant during this duration with maximum and minimum temperature ranging from 28° - 10° Celsius.

Participants are advised to bring light woolen clothes with them.



## Nominations:

- The participants must fill online application using CBP portal at <https://cbp.icar.gov.in> or ICAR website <http://www.icar.org.in/> (Capacity Building Program link under Quick links).
- Upload the scanned copy of approved printed application using CBP portal (recommended).
- In case of any difficulty applying online or uploading using CBP portal, the participants may also send the application form duly

## Application Format

Name:

Designation & Basic Pay:

Discipline:

Date of birth:

Gender (M/F):

Educational qualifications:

Experience (in years):

Details of experience:

Present employer's address:

Correspondence Address:

Participation in training programmes (details) during past one year:

E-mail:

Contact no. :

Level of knowledge of Computers:

Signature of the applicant with date

It is certified that information furnished above is correct.

Name, Designation and Address of the Recommending Authority

Signature (Recommending Authority with with seal):

**Dr. L.M. Bhar**

**Director (A)**

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