

Training on Biological Data Analysis Using Computational methods (21-25 October, 2024)

Under CABIn Network Project

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Jointly organized by



**ICAR-Central Institute of
Freshwater Aquaculture**

Kausalyaganga, Bhubaneswar-751 002, India



**ICAR-Indian Agricultural
Statistics Research Institute**

Library Avenue, PUSA, New Delhi- 110012

About Training

Biological data analysis has become a cornerstone of modern biological research. With the advent of high-throughput technologies, there has been an explosion of biological data, requiring the use of advanced computational methods to analyze and interpret this information. This training program aims to provide a comprehensive guide to the tools and techniques used in biological data analysis, offering practical applications and hands-on experience for life science research. This program is ideal for students, researchers, and professionals seeking to enhance their data analysis capabilities in the field of computational biology.

About ICAR-CIFA

ICAR-Central Institute of Freshwater Aquaculture (CIFA) is a premier research Institute under the Indian Council of Agricultural Research (ICAR). Established in 1987, ICAR-CIFA is dedicated to conducting research, training, and extension activities in frontiers in freshwater aquaculture. The institute is renowned for its contributions to the development and dissemination of innovative aquaculture technologies.

In the context of this training program, ICAR-CIFA brings its expertise in aquaculture research and biological data collection, providing participants with valuable insights into practical applications of data analysis in freshwater aquaculture.

About ICAR-IASRI

ICAR-Indian Agricultural Statistics Research Institute (IASRI) is a leading Institute under the ICAR, specializing in the field of agricultural statistics, bioinformatics, and computer applications. Established in 1930, ICAR-IASRI has been at the forefront of developing statistical methodologies and computational techniques for agricultural research.

For this training program, ICAR-IASRI contributes its expertise in statistical analysis, bioinformatics tools, and computational methods, ensuring participants receive a well-rounded education in biological data analysis.

Objectives

- Understand the fundamentals of biological data analysis.
- Learn to use computational tools for data processing and visualization.
- Gain hands-on experience with real-world biological datasets.
- Develop skills to interpret and present data effectively.

Who Should Attend?

- Researchers and scientists in biological and agricultural sciences
- Postgraduate and doctoral students
- Data analysts and bioinformaticians
- Anyone interested in advancing their skills in biological data analysis
- Maximum intake capacity: 15 participants

Program Highlights

- Lectures by Experts: Hear from leading experts from ICAR-CIFA and ICAR-IASRI.
- Hands-on workshops: Participate in practical workshops using popular computational tools and software.
- Case Studies: Analyze real-world data sets to understand practical applications of computational methods.
- Interactive Sessions: Engage in discussions and problem-solving activities with peers and instructors.

Key Topics

- Introduction to Biological Data and Computational Tools
- Wet Lab
- Data Cleaning and Preprocessing
- Statistical Methods in Biological Research
- Bioinformatics Tools and Techniques
- Visualization of Biological Data
- Advanced Computational Methods and Algorithms

Schedule

Date: 21-25 October, 2024

Time: 9:00 AM - 5:00 PM

Venue: ICAR-CIFA, Kausalyaganga, Bhubaneswar - 751002, Odisha, India



Detailed 5-day schedule

Day 1: Introduction to Bioinformatics & Wet lab Experiments	Day 2: Wet lab Experiments - DNA Isolation and Gel Electrophoresis	Days 3-5: Lectures & Hands-on Training on Bioinformatics Analysis (ICAR-CIFA and IASRI)
<p>Morning:</p> <ul style="list-style-type: none">• Registration and Welcome• Introduction to Bioinformatics: Scope and Applications• RNA Isolation: Principles and Protocols <p>Afternoon:</p> <ul style="list-style-type: none">• Practical Session: RNA Isolation Hands-on, Troubleshooting and Q&A	<p>Morning:</p> <ul style="list-style-type: none">• DNA Isolation: Techniques and Importance• Practical Session: DNA Isolation Hands-on <p>Afternoon:</p> <ul style="list-style-type: none">• Practical Session: Gel Electrophoresis Hands-on and analysis of Gel results and discussion	<ul style="list-style-type: none">• Introduction to Bioinformatics Tools for Data Analysis• Data Cleaning and Quality Control analysis• Sequence Analysis and Annotation• Advanced Bioinformatics Techniques: Next Generation Sequence• Data Visualization and Interpretation

Join us for this insightful training program to enhance your data analysis skills and advance your research capabilities.

We look forward to your participation!

Travel and accomodation

The participants will have to arrange travel to ICAR-CIFA, Bhubaneswar by their own Conveyance. Accommodation and food would be provided to the participants in the Institute Guest House/ Trainees' Hostel on payment basis.

Registration

There is a course fee, of **Rs.6000/-** (Rupees Six thousand only) (Including GST). For details of payment visit ICAR-CIFA website

<https://www.cifatraining.com/registration.php?trid=140>

How to apply

Interested candidates should register and apply online through

<https://www.cifatraining.com/Index.php>. Participants are advised to depart to Bhubaneswar only after the receipt of participation confirmation letter from the Course-Director. Last date of receiving application is 2 October 2024. Intimation to selected candidates will be sent through email.

How to reach

The Institute is located near to Uttara, Kausalyaganga, about 10 km from Bhubaneswar Railway station and 12 km from Biju Pattnaik International Airport (Approx. Auto fare is Rs.300/- or Taxi/OLA/UBER fare is Rs 400/-).

Contact Information

For more information, please contact:

For any enquiry regarding the programme, please contact:

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CIFA Training Online Application System

<https://www.cifatraining.com/Index.php>

