

National Workshop

on

**“Bioinformatics from sequence and structural perspectives”**

11<sup>th</sup> - 13<sup>th</sup>, March, 2019

Organized by: Bioinformatics Infrastructure Facility

University of Kalyani

REGISTRATION FORM

Name :  
(Dr./Prof./Mr./Ms.)

Date of Birth :

Sex :

Position :

Organisation :

Mailing Address :

Telephone :

E-mail :

Academic Qualification :

Area of Research :

Food Orientation : Veg / Non-Veg [Please Strike out the wrong one]

Registration Particulars:

Payment Reference Number : Date :

Payment method : Amount :

Approval by appropriate authority \*

Signature of Applicant

\* Authority may be the Research Guide or HOD for students.

Please send the scanned filled Registration Form along with the transaction details of registration fees through Email.

The final completed form can be submitted by hand at the registration desk of workshop

\*Printout or Xerox copy of this form may be used.

About the Institute

University of Kalyani was established by the Chief Architect of Modern Bengal, the great philanthropist and physician Dr. Bidhan Chandra Roy in the year 1960. The university is situated in a surrounding close to the mother earth covering an area of 400 acres in Kalyani town of West Bengal with national highway (N.H.34) on one side and the river Ganges on the other.

The DBT funded Bioinformatics Infrastructure Facility (BIF), housed in the Department of Biochemistry and Biophysics took its inception in the year 2006 with a view to serve all the Life Science Departments of this university, as well as, the neighboring institutes.

WORKSHOP COMMITTEE

Chief Patron: **Prof. Sankar Ghosh**

Honorable Vice-Chancellor, KU

Convenor: **Prof. Rita Ghosh**

Dean, Faculty of Science & Head,  
Department of Biochemistry &  
Biophysics, KU

**Dr. Angshuman Bagchi**

Coordinator, BIF, KU

Organizing body: Members of BIF, KU

Address for Communication

DR. ANGSHUMAN BAGCHI

Coordinator, Bioinformatics Infrastructure Facility

Department of Biochemistry & Biophysics

University of Kalyani, Kalyani – 741235

PH: 033 2582 3405,

9051948843 (AB), 9875414804 (Rajabrata Bhuyan)

E-mail: [bifklyuniv@gmail.com](mailto:bifklyuniv@gmail.com)

DBT Sponsored  
National Workshop  
on

**Bioinformatics from sequence and structural perspectives**

11<sup>th</sup> - 13<sup>th</sup>, March, 2019

Organised by



Bioinformatics Infrastructure Facility  
(BIF) Centre  
at

Department of Biochemistry & Biophysics

University of Kalyani

Kalyani – 741235  
West Bengal  
India

Sponsored by



Department of Biotechnology  
Ministry of Science and Technology  
Government of India

## About the workshop

In the last decade, more biology-related information has accumulated than in the preceding two and a half thousand years of the history of science. This new surge of information mostly consists of nucleic acid and protein sequences, their structures and interactomes. Bioinformatics has emerged as a new field at the interface of informatics and molecular biology in the mid-1980s, with the aim of storing and analysing the huge amount of data provided by DNA sequencing. **Bioinformatics is a multidisciplinary field, involving researchers from different areas of specialty, including (but in no means limited to) physics, chemistry, genetics, molecular biology, mathematics, computer sciences and statistics (i.e. informatics methods) to derive knowledge from computational analysis of experimental biological data.**

From a molecular biological perspective, bioinformatics mostly deals with the storage, retrieval, and analysis of nucleic acid and nucleic acid-derived amino acid sequences of proteins. It has several specific subfields. For instance, structural bioinformatics deals with the in silico analysis of the three-dimensional structure of macromolecules. Beyond sequencing, a massive amount of data is produced by many other so-called high-throughput (HTP) methods that can be managed only by bioinformatics. These HTP methods include, just to mention a few, gene expression analysis, electrophoresis and mass spectrometry that generate data to establish genetic, metabolic, signal transduction, protein-protein and other interaction pathways and networks.

Organizing this national workshop on “Bioinformatics from sequence and structural perspectives” is an attempt to popularise the use of this subject among young students with most common types of analysis by providing lectures and demonstrations of many tools.

## Topics to be covered

Studying and visualizing Biological components

- Biological Databases
- Database Searching
- Sequence alignment
- Phylogenetics studies
- Machine learning approaches
- Modelling the structure of a protein
- Molecular docking
- Molecular dynamics & simulation
- Biological network analyses

## Eligibility

Faculty members from Universities and affiliated colleges, Scientists and Scholars from R & D Institutes, Professionals from Industries and Biotech companies, Post-Graduates, Under-Graduate and school level students with knowledge in biology are welcome to register for the workshop.

As the numbers of participants are limited strictly to 30, selection will be done on a first come, first served basis.

## How to apply

The registration fees for participants are **Rs. 500/-** for all. Interested candidates may register their name by submitting the registration fee **via RTGS, NEFT, IMPS and UPI transfer only. P.S. No cash deposits directly to the bank account are not allowed.** The bank details are given below. Dully filled registration form (see last

page of this brochure) and the transaction details of fees can be sent through email given below. **Selected candidates will be intimated after successful completion of the process.**

Communication Email ID: [bifklyuniv@gmail.com](mailto:bifklyuniv@gmail.com)

Name of the Bank: **BANK OF INDIA**

A/C Name: **DBT Project Estb of BIF**

SB A/C No: **422210110001084**

Branch: **University of Kalyani Branch**

IFSC Code: **BKID0004121**

MICR Code: **700013090**

Address: KALYANI UNIVERSITY ADMINISTRATIVE BUILDING, P.O. KALYANI, DISTRICT NADIA, WEST BENGAL - 741235

## N. B.

- Last date of application by email is **06<sup>th</sup> March, 2019**.
- The registration fee includes course material, lunch and refreshments.
- Number of participants is limited to **thirty**.

**Outside candidates can search for different hotels / guest house near University area. No accommodation will be provided by the authority.**

## Tentative Speaker list

Professor Sudip Kundu

Department of Biophysics, Molecular Biology and Bioinformatics, University of Calcutta

Dr. Shubhra Ghosh Dastidar

Associate Professor, Bioinformatics Centre  
Bose Institute, Kolkata

## PROGRAMME

### DAY: 1

Monday, March 11<sup>th</sup>, 2019

Venue: *Vidyasagar Hall, University of Kalyani*

10:00 a.m. - 11:00 a.m.	<b>Registration</b>
11:00 a.m. - 11:05 a.m.	<b>Address by Dr. Angshuman Bagchi</b> Coordinator, BIF Centre, University of Kalyani
11:05 a.m. - 11:10 a.m.	<b>Welcome address by Prof. Rita Ghosh</b> Dean-Faculty of Science & Head, Department of Biochemistry & Biophysics, University of Kalyani
11:10 a.m. - 11:25 a.m.	<b>Inaugural Address by Prof. Sankar Ghosh</b> Honorable Vice-Chancellor, University of Kalyani
11:25 a.m. - 11:30 a.m.	<b>Felicitation to guests</b>
11:30 a.m. - 12:00 noon	<b>Keynote lecture by Professor Sudip Kundu</b> Department of Biophysics, Molecular Biology and Bioinformatics University of Calcutta
12:00 noon - 12:10 p.m.	<b>TEA</b>
12:10 p.m. - 01:40 p.m.	<b>Lecture by</b> <b>Professor Sudip Kundu</b> Department of Biophysics, Molecular Biology and Bioinformatics University of Calcutta
01:40 p.m. - 01:45 p.m.	<b>Vote of Thanks by</b> <b>Dr. Rakhi Dasgupta</b> Dept. of Biochemistry & Biophysics, University of Kalyani
01:45 p.m. - 02:45 p.m.	<b>LUNCH</b>
02:45 p.m. - 03:45 p.m.	<b>Lecture / Demonstration on Biological Databases by members of BIF center at E Classroom, CIRM building, University of Kalyani</b>
03:45 p.m. - 04:00 p.m.	<b>TEA</b>
04:00 p.m. - 05:00 p.m.	<b>Lecture / Demonstration on Biological Sequence Analysis By members of BIF center at E Classroom, CIRM building, University of Kalyani</b>

### DAY: 2

Tuesday, March 12<sup>th</sup>, 2019

Venue: *E Classroom, CIRM building, University of Kalyani*

10:30 a.m. - 11:45 a.m.	<b>Lecture by</b> <b>Dr. Shubhra Ghosh Dastidar</b> Bose Institute, Kolkata
11:45 a.m. - 12:00 noon	<b>TEA</b>
12:00 noon. - 01:00 p.m.	<b>Demonstration/ Hands on session on molecular modelling By</b> <b>Dr. Shubhra Ghosh Dastidar</b> Bose Institute, Kolkata
01:00 p.m. - 02:00 p.m.	<b>LUNCH</b>
02:00 p.m. - 04:00 p.m.	<b>Demonstration/ Hands on session on molecular simulations of biomolecules By</b> <b>Dr. Angshuman Bagchi and Team</b> BIF Centre, University of Kalyani
04:00 p.m. - 04:15 p.m.	<b>TEA</b>
04:15 p.m. - 05:00 p.m.	<b>Contd. Demonstration/ Hands on session By</b>

**Dr. Angshuman Bagchi and Team**  
BIF Centre, University of Kalyani

## **DAY: 3**

**Wednesday, March 13<sup>th</sup>, 2019**

**Venue:** *E Classroom, CIRM building, University of Kalyani*

10:30 a.m. - 11:45 a.m.

**Demonstration/ Hands on session on molecular dynamics analysis By**

**Dr. Angshuman Bagchi and Team**  
BIF Centre, University of Kalyani

11:45 a.m. - 12:00 noon

**TEA**

12:00 noon. - 01:00 p.m.

**Demonstration/ Hands on session on molecular dynamics of complexes  
By**

**Dr. Angshuman Bagchi and Team**  
BIF Centre, University of Kalyani

01:00 p.m. - 02:00 p.m.

**LUNCH**

02:00 p.m. - 03:00 p.m.

**Valedictory session and certificate distribution**