

भारतीय सूचना प्रौद्योगिकी संस्थान भागलपुर
Indian Institute of Information Technology
Bhagalpur

(Institute of National Importance Under an Act of Parliament)



Two Weeks
Faculty Development Program

on

Artificial Intelligence in Biomedical
Signal & Image Analysis

19th - 30th December, 2022



Patron

Prof. Arvind Choubey
Director, IIT Bhagalpur

ABOUT IIT BHAGALPUR

Indian Institute of Information Technology Bhagalpur (IIT Bhagalpur) is an Institute of National Importance, set up by MoE (earlier MHRD), Govt. of India in Public-Private Partnership (PPP) mode. The institute is actively exploring the technical intervention required for the development of the country under the Make in India Initiative. The institute is in notable progress under the able leadership of Prof. Arvind Choubey, Hon'ble Director of the Institute.

Presently, the institute offers B. Tech in engineering in three disciplines in Computer Science and Engineering, Electronics and Communication Engineering and Mechatronics Engineering. The Institute has started Ph. D, M. Tech and Dual Degree M. Tech & Ph. D programs from August 2021.

ABOUT THE FDP

This FDP gives an opportunity to faculty members, research scholars and PG students who intend to pursue research in the field of biomedical signal and image analysis using Artificial Intelligence (AI), Machine Learning (ML) and Deep Learning (DL) techniques for healthcare. The participants will be get acquainted with different biomedical signal and image analysis methods to develop computer-aided diagnostic (CAD) tools that can be used in detection and prediction of diseases related to different human organs. It also includes the discussion on most recent innovations, trends, concerns, practical challenges encountered, and the solutions adopted in emerging trends of artificial intelligence for analysis of biomedical signals and image.

At the end of the program, the participants should be able to understand and apply the following topics:

- Processing and analysis of biomedical signals such as ECG/ EEG/ EMG.
- Processing and analysis of biomedical images such as X-ray/ MRI/ CT-Scan/ Ultrasound.
- Different signal and image processing techniques.
- Role of artificial intelligence in healthcare.
- AI based different disease detection methods.

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Sponsored by

AICTE Training and Learning
(ATAL) Academy

19th - 30th December, 2022



Organized by

Department of ECE
IIT Bhagalpur

Coordinator

Dr. Chandan Kumar Jha
ECE, IIT Bhagalpur

Co-Coordinator

Dr. Sandeep Raj
ECE, IIT Bhagalpur

About AICTE Training and Learning

AICTE is committed for development of quality technical education in the country by initiating various schemes launched by Ministry of Education, Govt. of India e.g., SWAYAM, MOOCs, Start-up Initiatives, Prime Minister Kaushal Vikas Yojana (PMKVY), Sansad Adarsh Gram Yojana (SAGY), Swachh Bharat/Unnat Bharat Abhiyan, Yoga Activities etc. It is required to train the young generation in skill sector and having faculty & technicians to be trained in their respective disciplines. It is also felt that training with latest tools and technologies is vital to keeping an institute competitive and more productive. AICTE Training and Learning (ATAL) program is focused for this purpose to increase the knowledge and skills of participant to make them more knowledgeable to acquire global competencies.

Target Participants

Assistant Professors/ Associate Professors/ Lecturers/ Ph.D. scholars/ PG students of the AICTE approved institutions/ universities.

Registration

Participants can register for this course through the below mentioned link.

<https://atalacademy.aicte-india.org/signup>

How to register?

Step 1. One can Register themselves with an email id (sign up). If one has already registered, then login.

Step 2. Click on Workshops FDPs.

Step 3. Search by type “ATAL” and Month “December” from above dropdown box.

Step 4. Click the RED plus sign button to register.

Step 5. A short notification “successfully course registered” appears.

Step 6. One can also check their registration by clicking on the Applied Workshops (after done successfully registration)

Number of seats (Maximum): 50

Registration Fee: Nil

Details of FDP Mode:

The mode of the FDP is ONLINE (Week-1) and OFFLINE (Week-2).

Test and e-Certificate:

- A test shall be conducted by the coordinator at the end of the program.
- The e-certificates shall be issued to those participants who have attended the program with minimum attendance and scored minimum marks in the test as specified by AICTE ATAL FDP scheme.

RESOURCE PERSONS

Tentative list of eminent speakers is as follows:

- ✓ Prof. Ram Bilas Pachori, IIT Indore
- ✓ Prof. Vikram M. Gadre, IIT Bombay
- ✓ Dr. Sushil Chandra, Scientist G, INMAS, DRDO
- ✓ Dr. M. H. Kolekar, IIT Patna
- ✓ Prof. Bharat Gupta, NIT Patna
- ✓ Dr. Prashant Kumar, NIT Jamshedpur
- ✓ Dr. Ajay Pratap, IIT BHU
- ✓ Dr. Abhinoy Kumar Singh, IIT Mandi
- ✓ Dr. Mukesh Kumar, NIT Patna
- ✓ Dr. Sandeep Raj, IIIT Bhagalpur
- ✓ Dr. Chandan Kumar Jha, IIIT Bhagalpur

ORGANIZING COMMITTEE

Patron

Prof. Arvind Choubey, Director, IIIT Bhagalpur

Coordinator

Dr. Chandan Kumar Jha, ECE, IIIT Bhagalpur

Co-Coordinator

Dr. Sandeep Raj, ECE, IIIT Bhagalpur

Chairperson

Dr. Dhruvajyoti Bhattacharya, HoD ECE,
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CONTACT DETAILS

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Schedule Plan

Two-weeks Faculty Development Program

on

Artificial Intelligence in Biomedical Signal & Image Analysis

(BASIC AICTE ATAL FDP)

Week 1 – Online (7:00 pm – 9:30 pm)

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
7:00-7:50 Session-1 (I) Prof. Ram Bilas Pachori IIT Indore	7:00-7:50 Session-2 (I) Dr. Sushil Chandra Scientist 'G', INMAS, DRDO	7:00-7:50 Session-3 (I) Prof. V. M. Gadre IIT Bombay	7:00-7:50 Session-4 (I) Dr. Ajay Pratap IIT BHU	7:00-7:50 Session-5 (I) Prof. Arvind Choubey IIIT Bhagalpur	7:00-7:50 Session-6 (I) Dr. Abhinoy Singh IIT Mandi
8:00-8:50 Session-1 (II) Prof. Ram Bilas Pachori IIT Indore	8:00-8:50 Session-2 (II) Dr. Sushil Chandra Scientist 'G', INMAS, DRDO	8:00-8:50 Session-3 (II) Prof. V. M. Gadre IIT Bombay	8:00-8:50 Session-4 (II) Dr. Ajay Pratap IIT BHU	8:00-8:50 Session-5 (II) Prof. Arvind Choubey IIIT Bhagalpur	8:00-8:50 Session-6 (II) Dr. Abhinoy Singh IIT Mandi
9:00—9:30 Session 1 Interactions	9:00—9:30 Session 2 Interactions	9:00—9:30 Session 3 Interactions	9:00—9:30 Session 4 Interactions	9:00—9:30 Session 5 Interactions	9:00—9:30 Week 1 MCQs

Schedule Plan

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Week 2 – Offline (9:30 am – 5:30 pm)

Day 1	Day 2	Day 3	Day 4	Day 5
Inauguration (9:30-10:00 AM)	9:30-12:00 Session-8 Dr. Prashant Kumar NIT Jamshedpur	9:30-12:00 Session-10 Dr. Sandeep Raj IIIT Bhagalpur	9:30-12:00 Session-12 Dr. Mukesh Kumar NIT Patna	9:30-12:00 Session-14 Dr. M.H. Kolekar IIT Patna
Session-7 (10:00-12:30 PM) Prof. Bharat Gupta NIT Patna	12:00-1:00 PM Article Discussion	12:00-1:00 Article Discussion	12:00-1:00 MCQs	12:00-1:00 Report of article discussion
12:30-1:30 PM Lunch	1:00-2:00 PM Lunch	1:00-2:00 Lunch	1:00-2:00 Lunch	1:00-2:00 Lunch
1:30-2:30 PM Travel for Visit	2:00-4:00 PM Session-9 Dr. Prashant Kumar NIT Jamshedpur	2:00-4:00 Session-11 Dr. Chandan Kumar Jha IIIT Bhagalpur	2:00-4:00 Session-13 Dr. Mukesh Kumar NIT Patna	2:00-3:00 Reflection of learned concepts
2:30-4:30 PM Visit	4:00-5:30 PM Teaching Practice	4:00-5:30 PM Teaching Practice	4:00-5:30 PM Teaching Practice	3:00-4:00 Feedback
4:30-5:30 Travel Back				4:00-5:00 Valedictory