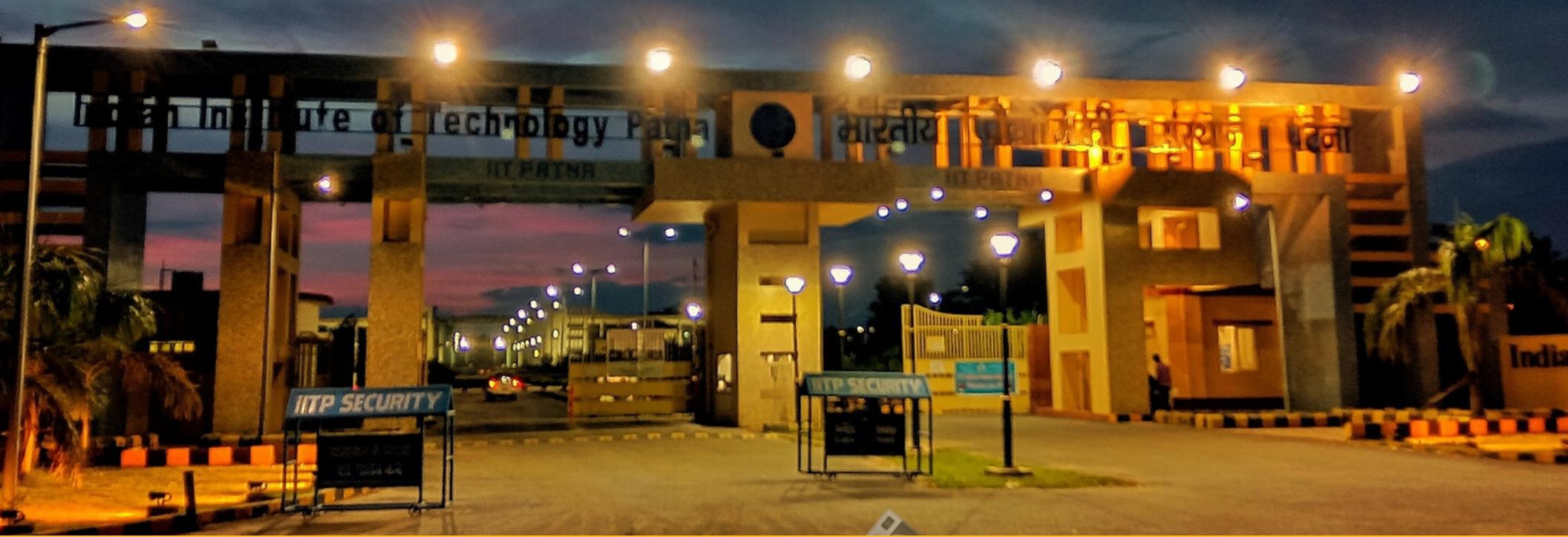
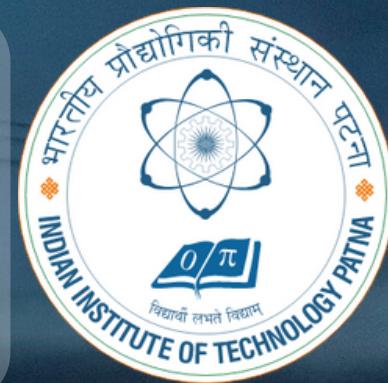


# MATHEMATICS AND COMPUTING PLACEMENT BROCHURE 2020 - 2021



भारतीय प्रौद्योगिकी संस्थान पटना

**INDIAN INSTITUTE OF  
TECHNOLOGY  
PATNA**

Raising leaders since 2008

**CONTACT US**

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# ABOUT US



*Mathematics & Computing Engineering is an amalgamation of Mathematics with Computer science, started in the year 2012. Covering the major areas in demand today, this course is of utmost value to the aspiring engineers. The course provides students with comprehensive theoretical knowledge and also practical training in Computer science and numerical computing. This program has been introduced due to the need for sophisticated mathematics for modern scientific investigations and technological developments. The curriculum is designed to provide students with an in-depth theoretical background and practical training in mathematical modeling, computer science, numerical computing, advance computational algorithm, and application field, necessary for a professional career or higher*

*The rigor of pure mathematics coupled with the most flexible elective driven structure in the institute gives the students an ample opportunity to hone their skills in varied fields of interests ranging from data analytics, computer science, computational mathematics, optimization, parallel computing to statistics, finance and other applied fields. The courses offered here are taken by professors who are leading researchers in that field.studies.*

# COURSES

## FIRST YEAR

### **Core course**

- Database and Data Mining
- Probability, Statistics & Stochastic Process
- Design And Analysis Of Algorithm
- Numerical Optimization and Programming
- Computational Differential Equations
- Technical Communication

### **Lab**

- R Programming Lab
- Data Structure & Algorithm Lab in C

## SECOND YEAR

- M.Tech Project/Thesis Work

### **Elective course**

- Advances in Algorithm
- Artificial Intelligence
- Formal Methods For Analysis and Verification
- Natural Language Processing
- Introduction To Deep Learning
- Machine Learning
- Advance Machine Learning
- Network Science
- Cloud Computing
- Cryptography
- Wireless Networks
- Statistic signal processing for communication
- BlockChain
- Robotics

# RESEARCH LABS

- Elsevier Centre for Excellence of Natural Language Processing
- Shusrut: ezDI Research Lab on Health Informatics
- Advanced Computing Lab
- Network Security Lab
- SPWICOM (Signal Processing For Wireless Communication )
- Statistics Lab

## TECHNICAL ACTIVITIES

### NJACK

An active computer science student club, that regularly organizes classes for the students and teaches them topics - like ethical hacking, competitive coding, android development and many more.

### GIAN

A program approved by the Govt. of India aimed at tapping the talent pool of scientists and entrepreneurs, encourages their engagement with the institutes of Higher Education of India.

### IEEE Student Br.

IEEE Student Branch of IIT Patna opened with a group of students enrolled in various M.Tech and Phd. Courses with a view to promote technical activities in the campus, city and the state of Bihar.

# FACULTY TALKS



*Dr. Asif Eqbal*  
DEPT. OF COMPUTER SCIENCE

## **Dr. Asif Eqbal (Course Instructor of Artificial Intelligence, Natural Language Processing, Machine Learning and Advance Machine learning)**

**Learning and Advance Machine learning**) : The fields of Artificial Intelligence, Natural Language Processing and Machine Learning have created enormous opportunities, and have brought a lot of excitement. Developing technologies related to the areas has been in the forefront of many multinational R&D companies, such as Google, Amazon, Microsoft, Facebook, IBM, Uber etc. Several academic institutions all over in the world such as Stanford, MIT, UC Berkley, USA; DFKI, Darmstadt University, University of Aachen, Edinburgh University, Cambridge University in Europe and UK; NUS, NTNU, Kyoto University, Tokyo University in Asia; and IIT Bombay, IISc Bangalore, IIIT Hyderabad, IIT Madras, IIT Kanpur, IIT Delhi, IIT Kharagpur etc in India have been involved in active research and development in these areas. Govt. of India has been promoting Research and Development with the vision of digital unite and knowledge for all, especially in Indian languages. Artificial Intelligence-Natural Language Processing-Machine Learning (AI-NLP-ML) research group at IIT Patna has been pursuing extensive research and development in the broad areas of AI, NLP and ML, and showcasing its presence at both national and international levels. It has established itself as a leading institution of Research and Development by publishing its research in the well-acclaimed journals and conferences, undertaking important R&D projects duly sponsored by the various Government agencies such as MeITY, SERB, DRDO, MHRD; and Industries such as Elsevier, Accenture, LG Soft, Samsung Research, Honeywell, Wipro etc; and representing several national and international bodies. As per the CS ranking (<http://csrankings.org/#/fromyear/2015/toyear/2020/index?nlp&asia>), it ranks 14th in Asia and 1st in India for Natural Language Processing research in terms of publications during the last 5 years (2015-2020).



**Dr. Balendu B. Upadhyay**  
DEPT. OF MATHEMATICS

**Dr. Balendu Bhooshan Upadhyay (M.Tech First yr. Course Advisor, Course instructor)**

**Numerical Optimization** : The M Tech program Mathematics and Computing has an amazing curriculum. It just not make our students technically sound but also trains them as per the need of modern industry. We are proud to have such a enthusiastic and hardworking bunch of students. I am sure that they will excell in every walk of life.

**Dr. Pratibhamoy Das**  
DEPT. OF MATHEMATICS



**Dr. Pratibhamoy Das, Faculty Instructor, Computational Differential Equations.**

The mathematical and logical analysis behind a computational algorithm would help our students in future, specially when they join somewhere as an analyst.



**Dr. Prashant Kr. Srivastava**  
DEPT. OF MATHEMATICS

**Dr. Prashant Kumar Srivastava (Vice-Chairman JEE Advance, Course Instructor Numerical Optimization & Computational Differential Equations)**

**Course Instructor Numerical Optimization & Computational Differential Equations** : The program in M&C is one of important MTech programs where candidates are trained to cater need of industry which require both analytical and computational skills of the candidate. The courses on Computational differential equations and Numerical Optimization are very important as these courses can provide base to application in any area of engineering, finance and science.

# ALUMNI



Shivesh kr. Roy

Year of Passing:2019

Positions:

- Currently pursuing PhD ( fully funded by the European Research Council) in the algorithms group at the Eindhoven University of Technology, Netherlands.
- Secured All India Rank 31 in Theoretical Computer Science paper of JEST-2018.
- Selected for Master's Internship Program in NetApp's Advanced Technology Group.



Arjun Roy

Year Of Passing:2019

E-Mail: arjunroyihrpa@gmail.com

Positions:

- DAAD Scholarship 2018
- Researcher at L3S Research Center from Sept., 2019



Anindya Sundar Das

Year Of Passing:2020

E-Mail: anindyasd34@gmail.com

Positions:

- TRDDC Pune Data and Decesion Science Group , Internship
- DAAD Fellowship to TU Darmstadt UKP Lab



Aritra Pal

Year Of Passing:2020

E-Mail: palaritra69@gmail.com

Position:

- Interned at LVPE
- Researcher at TCS R&D

Paper/Project:  
Reliability Estimation



Mandeep Rathee

Year of Passing:2020

E-Mail : mandeeprathee77@gmail.com

Position:

- Qualified CSIR-JRF(mathematics) with AIR 110
- Selected for DAAD fellowship(01-09-2019 to 01-05-2020), Leibniz University Hannover,Germany



Abhijeet Anand

Year of Passing:2020

E-Mail: abhijeetanand390@gmail.com

Positions:

- Worked as a Graduate Technical Intern in TCS R&D Kolkata
- Intel India Co.

Paper/Project :  
Unsupervised Anomaly Detection Of Time Series Data Using Deep Learning



Avinash Kumar

Year of Passing:2020

E-Mail: avinash04iitp@gmail.com

Position:

- Internship at "Intel Corporation, Bangalore"
- CAD Engineer at "Intel Corporation,Bangalore"



Sushil kr. Maurya

Year of Passing:2020

Position:

- Internship at "Intel Corporation, Bangalore"
- CAD Engineer at "Intel Corporation,Bangalore"

# CURRENT STUDENTS



**CS-13**

**B.TECH  
BACKGROUND**

**EC-1**

EC:Electronics and Communication Engineering  
CS: Computer Science Engineering

# CONTACT US

## PROFESSOR IN CHARGE



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## STUDENTS REPRESENTATIVE



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**Mr. Vikas Rai**  
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