



MATHEMATICS & COMPUTING

CONTACT DETAILS

Room No.326, Floor-III, Block-IV
Department of Mathematics
Indian Institute of Technology (IIT)
Patna
Patna, Bihar
Pin: 801103
Phone: +91-6123028252
www.iitp.ac.in



PLACEMENT BROCHURE

IIT PATNA



About

Mathematics And computing is an amalgamation of mathematics with computer science. The course provides students with comprehensive theoretical knowledge and also training in computer science, numerical computing . This program has been introduced due to the need of sophisticated mathematics for modern scientific investigations and technological developments. The curriculum is designed to provide students with in depth theoretical background and practical training in computer science, numerical computing. The course emphasizes on algorithm, numerical method and symbolic methods. It is distinct part of applied mathematics. Students of mathematics and computing branch also get exposure to computer science practical and electrical engineering.

Latest News

- A Four day workshop on Fluid Mechanics: Modeling, Analysis And Computation is being organized in IIT Patna from 14th-17th, July 2016.
- One day **Symposium** on Modeling and Computation on April 9, 2016, supported by National Mathematics Initiative (DST), IISc Bangalore.

Why Recruit Us

The degree course gives a firm foundation in Mathematics, in particular Pure Mathematics, Numerical Analysis and Statistics, and covers all the essentials of Computer Science, with an emphasis on developing software and reasoning formally about it, as well as more theoretical topics. By the start of the Industrial Placement students would have used a wide variety of programming languages and software tools. M.Tech in Mathematics and Computing at the department of Mathematics at IIT Patna is one of the few branch in the India and is a world leader in academic research in Industrial field based on computer science and mathematics Patna Mathematics and Computing students represent some of the top software engineering talent in India.

Our Industrial Placement programme offers your organisation a way to exchange new ideas combine with fresh enthusiasm and knowledge of some of the latest technology, the opportunity to encourage and invest in computer engineers and scientists of the future.

Course Curriculum

Related to Mathematics

- Probability ,Statistics and stochastic process
- Number theory and Cryptography
- Computational Differential Equation
- Numerical Optimization
- Statistical signal processing
- Large Scale Scientific Computation
- R Programming Lab

Related to Computer science

- Database and Data Mining
- Artificial Intelligence
- Graph Theory
- Wireless Sensor Network
- Network Science
- Machine Learning
- Natural Language processing
- Fuzzy set theory and Artificial intelligence.
- Formal Methods for Analysis and Verification
- Distributed Systems
- Data Structure Lab

Message from Head of Department

It is my immense pleasure to introduce the **fourth batch** of students graduating in M.Tech. (Mathematics and Computing) from our department in 2016. The 2-year programme, M.Tech. in Mathematics and Computing, is a unique programme. The curriculum for this program is designed to meet the need of sophisticated mathematics in modern scientific investigations and technological innovations. The programme has three components: mathematics, computing and financial engineering which are perfectly blended so that the strong mathematical and analytical components that are in-built in the curriculum form the basis on which the technological aspects of computing and finance are developed. On behalf of the department, I take great pleasure in inviting you to participate in the placement process at the campus

Upcoming Events

- IIT Patna is going to organize a GIAN course on "**Number Systems for Digital Signal Processing**" from October 17-23, 2016.

Faculty Information

- **Name:** Dr. Ashish kumar Upadhyay
- **Designation::** Associate Professor
- **Research Areas :** Combinatorial Topology, Geometric Topology, Algorithmic and Combinatorial aspects of Low - dimensional Manifolds, Synthetic Geometry, Combinatorial Geometry, Graphs on Surfaces, Automorphism Groups.



- **Name:** Dr. Yogesh Mani Tripathi
- **Designation::** Associate Professor, **Head Of Department**
- **Research Areas :** Statistical Decision Theory, Statistical Inference



- **Name:**Dr. Sudhan Majhi
- **Designation::** Assistant Professor
- **Research Areas :** Wireless communications and signal processing, estimation and detection, time and frequency domain signal analysis, blind signal parameters estimation, blind signal classification, blind wireless receiver design, estimation includes carrier frequency



- **Name:**Dr. Debashree Guha Adhya
- **Designation::** Assistant Professor
- **Research Areas :**Fuzzy logic and its application



- **Name:** Dr. Nutan Kumar Tomar
- **Designation::** Assistant Professor
- **Research Areas :** Mathematical Control Theory, Nonlinear Functional Analysis, Optimal Control



- **Name:**Dr. Om Prakash
- **Designation::** Associate Professor
- **Research Areas :** Rings & Modules, Associated Prime Rings



- **Name:**Dr. Prashant Kumar Srivastava
- **Designation::** Assistant Professor
- **Research Areas :**Mathematical Modeling in Ecology and Epidemiology, Applications of Differential Equations in Biology, Stability and Bifurcation, Mathematical Modeling of HIV dynamics :in vivo.



- **Name:**Dr. Amit Kumar Verma
- **Designation::** Assistant Professor
- **Research Areas :** Analysis of Nonlinear Differential Equations, Numerical Solutions of ODEs and PDEs



- **Name:**Dr. Pratibhamay Das
- **Designation::** Assistant Professor
- **Research Areas :** Numerical Analysis, Moving Mesh Methods, Singular Perturbation, A posteriori Error Estimates, r-refinement Strategy



- **Name:** Prof. Pushpak Bhattacharya
- **Designation::** Professor, **Director of IIT Patna**
- **Research Areas :** Natural Language Processing, Machine Learning, Cross Lingual IR, Information Extraction



- **Name:**Dr. Asif Ekbal
- **Designation::** Assistant Professor
- **Research Areas :** Natural Language Processing, Data Mining and Machine Learning Applications



- **Name:** Dr. Sriparna Saha
- **Designation::** Assistant Professor
- **Research Areas :** Pattern Recognition, Multiobjective Optimization, Bio-Text Mining, Bioinformatics, Soft Computing



- **Name:** Dr. Jimson Mathew
- **Designation::** Associate Professor
- **Research Areas :** Fault Tolerant Computing, VLSI, Design and Methodologies, Reliability Awareness Designs.



- **Name:** Dr. Raju Halder
- **Designation::** Assistant Professor
- **Research Areas :** Formal Methods, Abstract Interpretation, Programming Languages, Static Analysis and Verification, Databases.



- **Name:** Dr. Somanath Tripathy
- **Designation::** Associate Professor **Associate Dean, Academic**
- **Research Areas :** Lightweight Cryptography, Computer Security, Network Security



Paper Published this year

- **Pracheta Sahoo** (M.Tech 2014-16) published a research paper "Analysing Structured Scholarly Data Embedded in Web Pages" with Dr. Sriparna Saha (IIT Patna) and Dr. Stefan Dietze (L3S Research Lab, Hannover)
- **Amit Kumar** (M.Tech 2014-16) published a research paper "Beyond Sentiment Lexicon combining Domain dependency and distributional semantic features for aspect based sentiment analysis" with Dr. Asif Ekbal (IIT Patna) and Chris Biemann
- **Abdus Samad** (M.Tech 2014-16) "Receiver Design for Quasi-Asynchronous MC-CDMA by using CSS Code", with Dr. Sudhan Majhi, Considered for Elsevier publications, 2016
- **Mohammed Arif Khan** (M.Tech 2013-15) "Simultaneous Feature Selection and Parameter Optimization Using Multi-objective Optimization for Sentiment Analysis", in Proceedings of the 12th International Conference on Natural Language Processing (ICON-15), Trivandrum, India, December, 2015 under guidance of Dr. Asif Ekbal

Achievements of Students

- Nilamadhava Mohapatra got selected for **DAAD IIT Master Sandwich Programme** at university of Hannover.
- Pracheta Sahoo got selected for PhD in **University of Dallas, United States**
- Sonam Singh and Nilamadhava Mohapatra got selected for 10 months internship in **NetApp**

M.Tech Current Students

Student Name

Abhishek Bansal
(abhishek.mtmc15@iitp.ac.in)
+91-8678858649

Aparna Chigurupalli
(aparna.mtmc15@iitp.ac.in)
+91-9866996988

Arabinda Bahera
(arabinda.mtmc15@iitp.ac.in)
+91-9861699044

Bitopan Das
(bitopan.mtmc15@iitp.ac.in)
+91-9859264960

Guide Name

Dr.Sriparna Saha

Dr. Asif Ekbal and Dr.
Somnath Tripathi

Dr. Debashree Guha and Dr.
Sanjoy Kumar Parida

Dr. Raju Halder

Project

Econometric Modelling and
Convex Optimization based
study in scientometric analysis

Text Analysis to Cyber Security

Application of FUZZY Fraction
Order PID Controller in
Automatic Generation Control

Model checking, Software
reuse

Kamal Singh
(kamal.mtmc15@iitp.ac.in)
+91-8510953695

Gopal Jee Jha
(gopal.mtmc15@iitp.ac.in)
+91-9471846934

Gyan Ranjan
(gyan.mtmc15@iitp.ac.in)
+91-9472213815

Nilamadhava Mohapatra
(nilamadhava.mtmc15@iitp.ac.in)
+91-8763311986

Dr. Jimson Mathew

Dr. Amit Kumar Verma

Dr. Yogesh Mani Tripathi

Dr. Asif Ekbal and
Dr. Stefan Dietze (LUH,
Germany)

Real Time Video analysis using
Artificial Intelligence

Fuzzy transform to approximate
solution of two-point boundary
value problems

Analysis of at risk students in
open University

- Deep Learning Approaches to Sentiment Analysis
- Exploring Structured Annotation for Salient Entity Detection

Rajkaran Kori
(rajkaran.mtmc15@iitp.ac.in)
+91-9795046280

Ramen Ghosh
(ramen.mtmc15@iitp.ac.in)
+91-9955367286

Sonam Singh
(sonam.mtmc15@iitp.ac.in)
+91-8676047831

Ujjwal Pratap Singh
(ujjwal.mtmc15@iitp.ac.in)
+91-7295959153

Varsha Sharma
(varsha.mtmc15@iitp.ac.in)
+91-7319880049

Dr. Ashish Kumar Upadhyay

Dr. Nutan Kumar Tomar

Prof. Pushpak Bhattacharya

Dr. Nutan Kumar Tomar

Dr. Debashree Guha Adhya
and Dr. Shovan Bhawmik

Statistical tool for Topological
data Analysis

Solution of Differential
Algebraic Equation

Automated Email
Classification using Deep
Learning

Model Order Reduction

Tuning of PID controllers
with FUZZY Logic

Faculty Incharge

Dr.Sumanta Gupta

(Training and Placement Incharge)

+91-612-302 8096

sumanta@iitp.ac.in

Dr.Jimson Mathew

(Training and Placement Incharge)

+91-612-302 8347

jimson@iitp.ac.in

For any Query you can contact our tpc coordinators

Student Incharge

Sonam singh

Training And Placement
Coordinator(Head)

+91-0867604781

sonam.mtmc15@iitp.ac.in

sonamsingh6193@gmail.com

Abhishek Bansal

Training And Placement
Coordinator

+91-8678858649

abhishek.mtmc15@iitp.ac.in

abhibansal28@gmail.com