

**IIMT**  
**COLLEGE OF ENGINEERING**  
Greater Noida  
— Aim For Excellence —



# InfoMania

A Quarterly Publication of

**DEPARTMENT OF INFORMATION TECHNOLOGY**

Volume 10, Issue X, Oct -Dec 2022



**IT DEPARTMENT**  
**IIMT COLLEGE OF ENGINEERING**

## A Message from the desk of Editor, InfoMania

### Welcome to the X issue of our Newsletter, InfoMania!

For this edition I am really proud that we are about to bring up this issue with the moments that are to be remembered as we have articulated the activities of the IT Department in a frame of achievements by our faculties, our students and staff. These activities have provided us a fantastic experience in collaboration of knowledge sharing, learning, with extensive participation from every member of the Department on expanded horizon.

As an Editor of “Info Mania” it is always my aim that I should maintain the balance between all the contents of the newsletter so that our reader can enjoy the experiences shared here as the part of it.

I am a firm believer that by creating new venues for learning in a way that our readers are going to enjoy the visuals by presenting them in an accordable memory will be of worth as they will definitely feel the necessity of it.

At IT Department we create, we impart, we support and we cater the need of skills and talents of our students through our departmental and academic activities.

Being the IT department, it is always our responsibility to provide our students a combination of soft skills and personality development activities to make them corporate ready in a best way.

I am really thankful to Director Sir, Dean Sir and my supportive faculty members who have supporting me in bringing up this issue in a creative form.

### Activities:

- SCOPUS RESEARCH PAPER
- BOOK PUBLISHED
- ALUMNI CONNECT
- STUDENT DEVELOPMENT PROGRAM
- WORKSHOP
- GUEST LECTURE
- INTER DEPARTMENT TOURNAMENT
- CONCLAVE

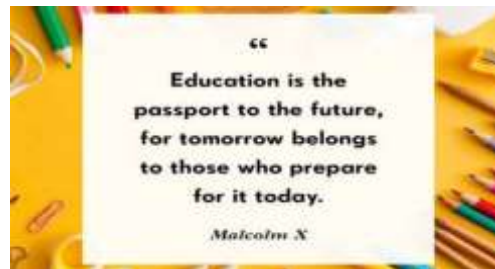


**Dr. Mahendra Sharma**

**Editorial Board Director, InfoMania**

**IT Department**

**IIMT COLLEGE OF ENGINEERING**



**QUOTE OF THE QUATERLY**

## Faculty Corner

### 1) RESEARCH PAPER PUBLISHED IN SCOPUS JOURNAL(Computer Integrated Manufacturing Systems)

**Title of the invention:** A Novel Method for Image Classification Using Hybrid Deep Learning Methods and CNN

**Authors:** i) Mr. Shakun Garg

ii) Mr.Sachin Bansal


**RESEARCH ABSTRACT:** In many computer vision tasks, convolutional neural networks (CNNs) perform well, however this impressive performance comes at a high computational cost. Power constraints make it difficult to implement CNNs in embedded systems, despite algorithmic and specialised hardware improvements. To improve picture categorization performance with little additional electronic computational cost or processing time, we look into a complementary strategy that includes a layer of optical computing prior to electronic computing.. Based on an improved diffractive optical element, we offer a design for an optical convolutional layer and test it in two simulations: a learned optical correlator and an optoelectronic two-layer CNN. In the actual world, image classification algorithms decrease in performance when pictures become polluted by noise, even when trained with pre-processed data. While it has been shown that deep neural networks (DNNs) are effective for image classification because to their deep layer-wise design that mimics latent properties from data, they too suffer from the same noise problem. Since noise in photographs is so pervasive in the actual world, scientists have spent a great deal of time and energy over the last few decades trying to find ways to work around it.

**DOI:** [10.24297/j.cims.2022.11.015](https://doi.org/10.24297/j.cims.2022.11.015)


## 2) Book Published: Secure Routing In Mobile Ad hoc Networks

Authors: i) Dr.Mahendra Sharma    ii) Ms.Roopali Gupta    iii) Ms.Laveena Sehgal


### ABOUT THE AUTHORS



**Dr. Mahendra Sharma** is a Professor in the Department of Information Technology at IIMT College of Engineering, Greater Noida. He is B.Tech (IT), M.Tech (CSE), Ph.D. in Computer Science and Engineering. He is a member of IEEE and lifetime member of ISTE. He published more than 20 research papers in reputed national and international journals. He has 05 patents and 04 copyrights. His main research work focuses on security in mobile ad-hoc networks.



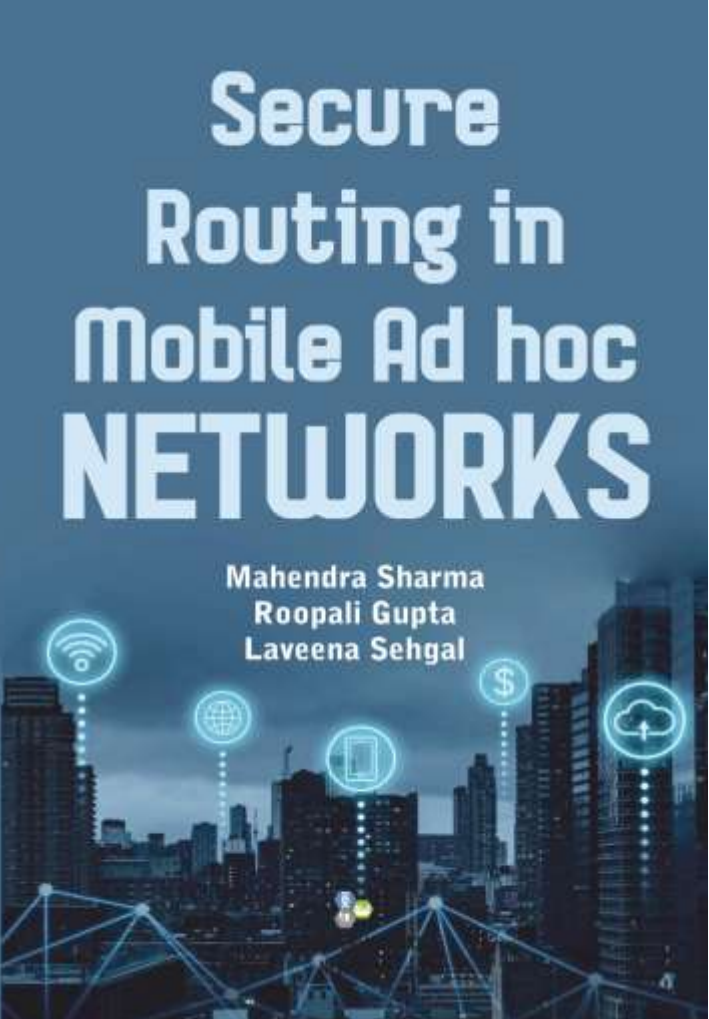
**Roopali Gupta** is an assistant professor in the department of Information technology at IIMT College of Engineering, Greater Noida. She is B.Tech (CSE), M.Tech (CS) and pursuing Ph.D in Computer Science. She has published research papers in reputed national, international journals and conferences. She has 05 patents and 01 copyright. she also attended many FDPs, seminars and workshops in engineering institutes and universities. Her area of research is Cloud Computing and network security.



**Laveena Sehgal** is Assistant Professor in the Department of Information Technology at IIMT College of Engineering, Greater Noida. She is B.Tech (CSE), M.Tech (CSE), pursuing Ph.D. in Computer Science and Engineering. She has over 10 years of teaching experience in the field of Data Structures and Algorithms, Theory of Automata, Data Mining, Artificial Intelligence and related subjects. She has published more than 15 research papers in national and international journals and conferences. She has 2 patents and 1 copyright. She also attended many workshops, FDPs in different engineering colleges. Her area of interest focuses on data mining, machine learning and information security.

# Secure Routing in Mobile Ad hoc NETWORKS

Mahendra Sharma  
Roopali Gupta  
Laveena Sehgal



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Routing in wireless ad-hoc networks is one of the fundamental tasks which helps nodes send and receive packets. Traditionally, routing protocols for wireless ad-hoc networks assume a non-adversarial and a cooperative network setting. In practice, there may be malicious nodes that may attempt to disrupt the network communication by launching attacks on the network or the routing protocol itself. In this chapter, we present several routing protocols for ad-hoc networks, the security issues related to routing, and securing routing protocols for mobile wireless ad-hoc networks. We discuss several well known contemporary protocols aimed at securing routing in mobile wireless ad hoc networks. We analyze each of these protocols against requirements of ad hoc routing and in some cases identify fallibilities and make recommendations to overcome these problems so as to improve the overall efficacy of these protocols in securing ad hoc routing, without adding any significant computational or communication overhead.

## DEPARTMENTAL ACTIVITIES

### ALUMNI CONNECT SESSION

ON  
10-11-2022

The IT department organized an Alumni Connect Session on 10th November 2022. The speaker for the guest lecture was Mr. Bibhakar Jha who is alumnus of batch 2018-2022 currently working as a Full stack Developer in Healthassure pvt. Ltd.

He started his session by sharing his college journey. He discussed year wise important subjects and topics to be focused. He shared how to prepare for companies and the things need to be focused when you prepare for companies. He also advised to work on at least 3 projects during your engineering. He suggested students to work in at least one startup company which is product based to learn the things thoroughly.

The main objective of the session is to share his experience with students that will help them to make the academic good as well as provide a good path for their effective placements. Apart this he also discussed about the market strategies and the types of technologies used in industries, what types of skills are required by candidates etc.

In the end, few questions were discussed related to the session. The session was full of knowledge and motivation for all the spectators.

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**Department of Information & technology**  
— Alumni Activity —

**ALUMNI CONNECT**

**Mr. Bibhakar Jha**  
(Batch 2018-22)  
Full Stack Developer  
Healthassure Pvt. Ltd.

Thursday, 10<sup>th</sup> November, 2022 02:00 PM -03:00 PM  
Venue - Sarabhai Hall

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## Student Development Program on “HOW TO CONVERT YOUR IDEA INTO A PRODUCT” on 18<sup>th</sup> November 2022 by Dr. Ajay Sharma

The department of IT organized a Student Development Program on the topic of “HOW TO CONVERT YOUR IDEA INTO A PRODUCT” on 18<sup>th</sup> November 2022. The speaker for this program is **Dr. Ajay Sharma** who has started career as a Global Service Delivery Manager in IBM India Pvt.Ltd and having more than 15 years of experience in this domain.

There were more than 60 students from IT department attended this program. He discussed about the various research ideas and how to establish our own startups in the field of product development. In this program various learning techniques and steps for converting our innovative ideas into product development has been discussed. He explained students how idea becomes a product, when the idea is converted in to kind of tangible and definable offering, at a price, covering its costs and it also makes profit. If it is physical product, it comes with a specification and if it is a service, you should be able to define the process, input and output and the benefits. Then the product should be repeatable, that you should be able to produce more in number, with reasonable consistency and at cost that makes it viable and earn some profits. Products should be engineered well, so that reproduction does not require the same expertise that was required when it was designed first time. Often one uses tooling in the case physical product or a process in the case of service or a combination of the two, to ensure standardized output as defined.

**INSTITUTION'S INNOVATION COUNCIL**  
Ministry of Education (India)

**IIMT**  
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Institution's Innovation Council (IIC - IIMT) & Department of Information Technology  
are jointly organising  
**Students Development Program**  
on  
**"HOW TO CONVERT YOUR IDEA INTO A PRODUCT"**

**Speaker**  
**Dr. Ajay Sharma**  
Global Service Delivery Manager  
IBM India Pvt. Ltd.

**Date: Friday, November 18, 2022 | Time: 10:00 AM - 01:00 PM**  
**Venue - SARABHAI HALL**

**FACULTY COORDINATOR**  
**Ms. Laveena Sehgal**  
Assistant Professor  
IIMT College of Engineering

**STUDENT COORDINATORS**  
**Gaurav Yogvalya (3<sup>rd</sup> Year)**  
**Adarsh (3<sup>rd</sup> Year)**

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## Workshop on “CREATIVITY AND INNOVATION” on 23<sup>rd</sup> November 2022 by Dr. Ajay Kumar Singh

The Department of IT organized a workshop on “Creativity and Innovation” on 23<sup>rd</sup> November 2022 at 03:00 PM onwards under ED cell. The guest Speaker is Dr. Ajay Kumar works as a Professor at RKGIT Ghaziabad. This activity was organized by Mr. Chaman Kumar, Assistant Professor of IT.

The Entrepreneurship and Innovation program combines theoretical and empirical perspectives with the development of practical skills and opportunities for the application of knowledge to real-life organizational issues that are faced by those who are establishing and managing organizations that are driven by innovation.

Dr. Ajay Kumar highlighted topics such as having the attitude of a millionaire, networking and becoming an entrepreneur. According to him, entrepreneurs should have a mindset similar to that of a global company and be prepared to encounter adversities along their path as entrepreneurs.

**ED Cell**  
IIMT COLLEGE OF ENGINEERING

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Greater Noida  
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ED Cell and Department of Information Technology  
is organising  
Workshop on  
**“CREATIVITY AND INNOVATION”**

**Speaker**  
**Dr. Ajay Kumar Singh**  
Professor  
RKGIT, Ghaziabad

Date: Wednesday, November 23, 2022  
Time: 03:00 PM - 04:00 PM  
Venue: Sarabhai Hall

**FACULTY COORDINATOR**  
**Mr. Chaman Kumar**  
Assistant Professor, IT  
IIMT College of Engineering

**STUDENT COORDINATOR**  
**Gaurav Yogvalya (3<sup>rd</sup> Year - IT)**

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## Workshop on “PROBLEM SOLVING AND IDEATION ” on 25<sup>th</sup> November 2022 by Mr.S.Ravi Kumar

IIC Cell and the Department of IT have organized workshop on “Problem solving and Ideation”. Mr Ravi discussed about Problem solving in context of software development and IT industry. He discussed in depth about problem solving and ideation. In analyzing problem few steps involved :- Define the Problem, Define the goals, identify root cause of the problem, develop action plan, evaluate results and continuously improve. Approaches for problem solving:- White hat [Facts],Red hat [Feelings],Black hat [Negative],Yellow hat [Positive],Green hat [Creativity] and Blue hat [Control]. Ideation is the creative process of generating, developing, and communicating new ideas. These ideas can be understood as a basic element of thought that can be visual, concrete, or abstract.” “The process of coming up with an idea that can be turned into something valuable is called ideation.” These are some of the simplest definitions for Ideation on the internet. For our purposes, we can further simplify it as: Ideation is the first step towards tinkering - this is the step where a student will/should start thinking - about a new idea, a new concept, or a new solution to an existing or new problem. The whole idea is to start thinking. Once the students become responsive and start sharing ideas, ask them to concentrate on, and identify one problem statement - any problem/issue that they would like to work on.

**INSTITUTION'S INNOVATION COUNCIL**  
(Ministry of Education, India)

**IIMT**  
COLLEGE OF ENGINEERING  
Greater Noida  
— Aim For Excellence —

Institution's Innovation Council (IIC - IIMT) & Department of Information Technology  
are jointly organising  
Workshop on  
**“PROBLEM SOLVING AND IDEATION”**

**Speaker**  
**Mr. S. Ravi Kumar**  
Software Architect  
Softline India

**Date: Friday, November 25, 2022 | Time: 10:30 AM Onwards**  
**Venue - SARABHAI HALL**

**FACULTY COORDINATOR**  
**Ms. Roopali Gupta**  
Assistant Professor  
IIMT College of Engineering

**STUDENT COORDINATORS**  
**Mr. Gaurav Yogvalya (3<sup>rd</sup> Year)**  
**Mr. Adarsh (3<sup>rd</sup> Year)**

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## Guest Lecture on “DATA ANALYTICS USING PYTHON” on 29<sup>th</sup> November 2022 by Er.Rohit Pahwa

The department of IT organized a Guest Lecture on the topic of “DATA ANALYTICS USING PYTHON” on 29<sup>th</sup> November 2022. The speaker for Guest lecture is **Er.Rohit Pahwa** who is Technical Business Development Manager in Ducat. He discussed about how Data Analytics can appear to be a complex process for a beginner, which we can easily understand the important aspects of implementing Data Analytics with Python by working along with the following steps: Step 1: Set Up a Python Environment. Step 2: Learn the Basic Concepts of Python. He explained Data Analysis is the technique to collect, transform, and organize data to make future predictions, and make informed data-driven decisions.

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Department of Information Technology  
is organising  
Guest Lecture on

# “DATA ANALYTICS USING PYTHON”

**Speaker**  
**Er. Rohit Pahwa**  
Technical Business Development Manager  
Ducat

Date: Tuesday, November 29, 2022 | Time: 10:30 AM Onwards  
Venue - SARABHAI HALL

**FACULTY COORDINATOR**  
**Ms. Laveena Sehgal**  
Assistant Professor  
IIMT College of Engineering

**STUDENT COORDINATORS**  
**Mr. Gaurav Yogvalya (3<sup>rd</sup> Year)**  
**Mr. Adarsh (3<sup>rd</sup> Year)**

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## Conclave on “COMMUNICATION TECHNOLOGIES” on 21<sup>st</sup> December 2022 by Mr O.P.Singh

A Conclave was organized by department of Information Technology, IIMT College of Engineering, Greater Noida . The conclave coordinators Ms.Laveena Sehgal, Assistant Professor, Ms. Bandana Kumari , Department of Information technology invited a renowned and distinguished personality, Mr.O.P.Singh is currently associated with National Small Industries Corporation (NSIC)-an ISO 9001:2015 certified Government of India Enterprise under the Ministry of Micro, Small and Medium Enterprises (MSME) as General Manager and Centre Head of NSICTechnical Services Centre situated at Okhla, New Delhi. He started his presentation by describing important part in various projects towards the furtherance of the MSME Sector in India and across the globe, recently, he played a key role in setting up Industry 4.0 compliant Centre-Of-Excellence: “Advanced Training Centre” at NTSC Okhla enabled with State-of-the-Art training and Common-Facility-Services in AR-VR, 3D Printing, Automation, Industrial Robotics & CMM while connecting institutions from the industry under one roof. He discussed about various Training Programs in contemporary fields such as Android App design with Kotlin, Data Science with Python, AI, Interior Design, and Digital Forensics..The event co-ordinator began the session by a thought provoking brief and introduced the Guest Speaker in a short while . The Guest Speaker delivered a wonderful Conclave session on Communication Technologies and finally session ended by giving vote of thanks given by the Event Co-ordinator.

The poster for the IIMT Evolution Expo 2022 Conclave on Communication Technologies is set against a yellow background. At the top left is the IIMT Evolution Expo logo, and at the top right is the IIMT Group of Colleges logo. The central text reads 'EVOLUTION EXPO 2022' with a tagline '(Nurturing Young Minds with Innovative Thoughts Through Expo)'. Below this, it states 'CONCLAVE ON COMMUNICATION TECHNOLOGIES organising by IIMT COLLEGE OF ENGINEERING'. A dark blue oval highlights the 'RESOURCE PERSON' Mr. O.P. Singh, General Manager and Centre Head of NSIC New Delhi, with a circular portrait of him. At the bottom, two red boxes list the 'Convener' Dr. Mahendra Sharma and 'Faculty Co-ordinator' Ms. Laveena Sehgal and Ms. Bandana. The date and time are 'Date - 21<sup>st</sup> December, 2022 | Time - 12:00 PM - 01:00 PM'. The location is 'Plot No. 19 & 20, Knowledge Park - III, Greater Noida - 201310, Uttar Pradesh, India'. Contact numbers '9911009144, 9717015300' and the website 'www.iimtindia.net' are at the bottom.

## Students' Corner

### INTER DEPARTMENT KHO-KHO TOURNAMENT ON 15<sup>TH</sup> & 16<sup>TH</sup> DECEMBER 2022

IT 2<sup>nd</sup> year student has been participated in Inter Department KHO-KHO Tournament, Sport event held at IIMT COLLEGE OF ENGINEERING , GREATER NOIDA on 15<sup>th</sup> & 16<sup>th</sup> December 2022. He was were selected as 1<sup>st</sup> position in this Sports Event.

#### Name of Winners:

- 1) Ayush Panda(IT 2<sup>nd</sup> Year)



# **InfoMania**

## **Editorial Board**

### **Director**

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### **Editor-in Chief**

Ms.Laveena Sehgal

### **Editor**

Ms.Bandana

### **Executive Editor**

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