

***AICTE SPONSORED (ONLINE)***  
**NATIONAL CONFERENCE ON CRYPTOGRAPHY**  
**AND NETWORK SECURITY-2021**

UNDER  
**GRANT FOR ORGANIZING CONFERENCE (GOC) SCHEME**

***ORGANIZED BY:***  
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**  
IIMT COLLEGE OF ENGINEERING, GREATER NOIDA

***IN ASSOCIATION WITH:***  
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**NATIONAL CONFERENCE ON CRYPTOGRAPHY  
AND NETWORK SECURITY  
NCCNS-2021**

**Editors**

**DR. K. RAMA KRISHNA**

**MR. SHAILENDRA PRAKASH**

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***Publish By:***

*A.R. Research Publication*

## ***Preface***

Conference World and AR Research Publication is fast growing group of academicians in Engineering, Sciences and Management. AR Research Publication is also known for fast reply and zero error work. Conference world has organized a various conferences at renowned places namely Delhi University; New Delhi, Jawaharlal Nehru University; New Delhi, PHD Chamber of Commerce and Industry New Delhi, YMCA New Delhi, India International Centre New Delhi Sri Venkateswara college of Engineering and Technology, Andhra Pradesh, Dhananjay Mahadik Group of Institutions (BIMAT), Shivaji University, Maharashtra, Vedant Engineering Kota and many more places across the country.

We are very pleased to introduce the proceedings of the *National Conference on Cryptography and Network Security NCCNS-2021*. As for previous conferences, the theme was the link between the information provided by conference world and the use made of this information in assessing structural integrity. These were the issues addressed by the papers presented at the conference. The level of interest in the subject matter of the conference was maintained from previous events and over 110 suitable papers were submitted for presentation at the conference.

Papers were well represented in the conference to arouse a high level of international interest. Three countries were represented in the final program from Europe, North America and Asia. In the event, the conference was highly successful. The presented papers maintained the high promise suggested by the written abstracts and the program was chaired in a professional and efficient way by the session chairmen who were selected for their international standing in the subject. The number of delegates was also highly gratifying, showing the high level of international interest in the subject. This is also indicated by the large number of countries, 14 represented by the delegates. This Proceeding provides the permanent record of what was presented. They indicate the state of development at the time of writing of all aspects of this important topic and will be invaluable to all workers in the field for that reason. Finally, it is appropriate that we record our thanks to our fellow members of the Technical Organizing Committee for encouraging participation from those areas. We are also indebted to those who served as chairmen, without their support, the conference could not have been the success that it was. We also acknowledge the authors themselves, without whose expert input there would have been no conference. Their efforts made a great contribution to its success.

## **ABOUT CONFERENCE**

All India Council for Technical Education (AICTE) is a statutory body, and a national-level council for technical education, under the Department of Higher Education. AICTE is responsible for proper planning and coordinated development of the technical education and management education system in India. As part of its institutional development schemes, AICTE has introduced Grant for organizing conference (GOC). This scheme provides financial assistance to institutions for organizing Conference at National and International level in various fields of Technical Education. Department of Computer Science & Engineering, IIMT College of Engineering, has received this grant for organizing online National Conference on Cryptography and Network Security.

The National E- Conference on Cryptography and Network Security affords a collaborative forum for academicians, students, research scholars and industry delegates to present their innovative ideas, discoveries, models and concepts of diversified areas. The theme of the conference is an emerging interdisciplinary area where a wide range of theories, methodologies & algorithms are explored to analyse or secure complex data/challenging real world problems.

## **ABOUT THE COLLEGE**

IIMT College of Engineering Greater Noida: On the dawn of 18th August 2005, we started our journey. Since its inception in 2005, is absolutely committed to contribute in the field of Technical and Professional education. The college is imparting high quality education in the field of Engineering and Management. IIMT is a prestigious institute of higher learning producing meritorious students with excellent career growth and professional recognition.

IIMT College has demonstrated its excellence in research, placement and innovation and industry exposure. It has a vibrant learning atmosphere with a combination of strong academic and research activities. Both complement each other and the students at all levels under the valuable guidance of the faculty members maintain this brilliant combination and help the Institute to reach the zenith of knowledge and innovation.

## **VISION:**

To be among the renowned institutions providing engineering and management education of excellence, empowered with research, innovation and entrepreneurship with high ethical values, catering to the needs of industry and society.

## **MISSION:**

- ⇒ To offer state of the art undergraduate and postgraduate program.
- ⇒ To be a learner centric institute imbibing experimental innovation and lifelong learning skills, addressing societal problems with high ethical values for nation building.
- ⇒ To deliver changing demands of industry and academia through our stakeholders.
- ⇒ To contribute as a professional leader in the growing field of entrepreneurship and research

## **ABOUT THE DEPARTMENT**

The Department of Computer Science and Engineering offers B.Tech course, lays emphasis on deep understanding of fundamental principles and knowledge of Computing Devices, logic, circuits, and computer architecture. The department is fully equipped with laboratories, along with advanced software's like MATLAB, Oracle, j meter and Selenium under the supervision of well-qualified Professors with Ph. D. and M. Tech. from reputed institutes like IITs, NITs, etc.

CSE department is privileged to have:

- Two sponsored projects from MSME, Govt. of India. ORACLE Work Force Development Centre, CISCO
- LAB, Microsoft Imagine Academy IEEE Student Chapter
- CSI Student Chapter

## **VISION OF THE DEPARTMENT**

To produce globally competent Computer Science engineers empowered with research aptitude and high ethical values to cater to the emerging computing needs of the industry and society.

## **MISSION OF THE DEPARTMENT**

To prepare graduates with

- To impart outcome based learning for emerging technologies in the field of computer science & engineering.
- To promote creative thinking and innovations by the students and faculty.
- To develop strong industry –academia relationship.
- To nurture students and infuse professional ethics, human values and positive attitude in the students.

## Message of the Managing Director



Twenty-First Century is widely accepted to be the Century of Knowledge driven industry. Bionic eye, Hearing Aids for the completely deaf and other intelligent system for the handicapped are the boon for the mankind that science and engineering has given us in the recent past.

Right from villagers to metropolitan cities, farmers to crops, doctors to patients, industry to consumer, trade to commerce, defense to soldiers, fight against terrorism to police personal, research design and development to scientist, layman to educated; intelligent system are here to improve productivity, make our lives secure and as comfortable as possible. All these are required secure at lower cost, higher reliability and for the benefit of living beings.

Self organizing, self healing, self repair system autonomic computing and remote crop health monitoring, machine intelligence and intelligent network are only a few fields to name that call for attention from Scientists, Engineering and Technocrats. Computer Science and Engineering department of IIMT College of Engineering, Greater Noida has taken initiative to organize AICTE sponsored National Conference in online mode under Grant for Organizing Conference (GOC) Scheme on "Cryptography and Network Security (NCCNS-2021)" from 10<sup>th</sup> August 2021 to 12<sup>th</sup> August 2021. I hope will go a long way in the service to human race. Organizers are making all efforts to ensure that experts from around the globe converge on one platform for the discussions and debates on their ideas and research findings in the field of network security.

I am hopeful that outcome of this conference could be applied for the well being of the human race in general and living being in particular. I have no words to express my gratitude to the organizing team that has worked tirelessly round the clock from last about a Year.

May this online conference bear a fruitful outcome.

**Dr. Mayank Agarwal**  
**Managing Director**  
**IIMT Group of Colleges**

## Message of the Director General



It gives me immense pleasure to learn that Computer Science & Engineering department of IIMT College of Engineering, Greater Noida is holding an AICTE sponsored National Conference in online mode under Grant for Organizing Conference (GOC) Scheme on "Cryptography and Network Security (NCCNS-2021)" from 10<sup>th</sup> august 2021 to 12<sup>th</sup> August 2021.

Engineers have a very important role in the development and progress at this nation. Their knowledge and expertise is required when setting up any secure infrastructure for development with innovation and modernization. It is important to constantly update one's knowledge to keep up with emerging trend and facilities along with security. I have no doubt that the discussion at the conference will not only solve present security problems but also seek new methodologies for secure data transmission.

I convey my best wishes to the participants the conference.

**Prof (Dr.) M. K. Soni**  
**Director General**  
**IIMT Group of Colleges**

## Message of the Director



I feel Proud and privileged that Department of Computer Science & Engineering, IIMT College of Engineering, Greater Noida is organizing an AICTE sponsored National Conference in online mode under Grant for Organizing Conference (GOC) Scheme on "Cryptography and Network Security (NCCNS-2021)" from 10<sup>th</sup> august 2021 to 12<sup>th</sup> August 2021.

This is a very meaningful and productive academic exercise where numbers of the faculty and students will benefit from the experience and expertise of the experts from all over the India. In addition to academic excellence that this conference will bring, it will also help accelerate the process of plural culturism. I am sure with the most enlightened delegates in their fields of specialization from across the world, many meaningful issues will emerge adding new dimensions to the "Knowledge Society".

I take this opportunity to specially complement the efforts of the whole team comprising the conference committee.

**Dr. Gaurav Sinha**  
**Director**  
**IIMT College of Engineering, Greater Noida**



## Message of the Conference Coordinator



I am pleased to inform that Computer Science & Engineering Department of IIMT College of Engineering Greater Noida is organizing an AICTE sponsored National Conference in online mode under Grant for Organizing Conference (GOC) Scheme on "Cryptography and Network Security (NCCNS-2021)" from 10<sup>th</sup> august 2021 to 12<sup>th</sup> August 2021.

I know that this conference is very relevant to present day scenario in the area of secure network systems. Events such as this play a vital part in facilitating professionals to share the latest developments and ideas in the fields of cryptography and network security.

On behalf of the department and institute, I would like to extend a warm welcome to the delegates from all over the India and I will like to thank AICTE for believing in us and providing this opportunity to organize this online conference.

I wish all the participants best of luck and very useful research debates.

**Prof. (Dr.) K. Rama Krishna**  
**Conference Coordinator & HOD, CSE Department**  
**IIMT College of Engineering, Greater Noida**

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**Coordinator**

Dr. K.Rama Krishna , HOD CSE , IIMT College of Engineering

**Co-Coordinator**

Mr. Shailendra Prakash, Assistant Professor, Department of CSE

**International Guest**

Dr. Abubakar Mohammad, Modibbo Adama University, Yola Nigeria

**Chief Guest**

Prof Dr Firdos T.Shroff

Global Motivation Guru and International Member,

World Constitution and Parliament Association ,USA & UN Talent Pool

**Keynote lecturer by**

Dr. Ravi Shanker

Prof. & HOD-ECE, Sambhram Group of Institutions, Bangalore, Karnataka on

“Cyber security - Future Issues & Consequences”

Dr. Rohit Tiwari

Assistant Professor, Department of Computer Science & Engineering

Madan Mohan Malviya University Of Technology, Gorakhpur on “Recent Trends in Cloud Security”

Dr. Pooja Khurana

Associate Professor, Manav Rachna International Institute of Research and Studies, Faridabad on “Mathematical modeling and applications”

Dr.M.Mohankumar  
Associate Professor, Karpagam Academy of Higher Education,  
Tamilnadu, Eachanari Post on “Recent trends in Cybersecurity”

Garg Gurcharan Dass  
Principal, MM Post Graduate College Fatehabad on “Current Education Policy”

Dr. Bhawna Singla  
Assistant Professor, Manav Rachna University, Faridabad, Haryana on  
“Applications of Graph Theory”

Dr.Shakuntla Singla,  
Associate Professor, MM Deemed to be University Mullana on “Importance of  
Mathematical Modeling”

### **Guest of Honor and Session Chair**

Dr. Nilesh J UKE  
Principal/Professor  
Trinity Academy of Engineering , Kondwa, Pune , Maharashtra

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Associate Professor,  
MSIT, MATS University, Pandari, Raipur, Chhattisgarh

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*National Conference on Cryptography and Network Security NCCNS-2021* organized  
by **Department of Computer Science and Engineering** IIMT College of  
Engineering, Greater Noida **on 10 Aug 2021-12 Aug 2021**. Total 100 papers were  
received for the conference and 66 papers were shortlisted by the committee. The  
Conference was took place through online Google platform. 7 tracks were run in  
parallel in two sessions during these three days.

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Managing Director: Gauri Sharma

Senior Researcher—Product Development: Ms. Pratima Singh

Head—Production (Higher Education and Professional): Satinder Kulkarni

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