

**PROCEEDINGS OF THE PRINCIPAL, JNTUA COLLEGE OF ENGINEERING
ANANTHAPURAMU (AUTONOMOUS):: JNTUACEA ANANTHAPURAMU
PRESENT: Prof. K. GOVINDA RAJULU: PRINCIPAL**

TEQIP-III

Procs. No. TEQIP-III/NPIU/Academics/1.3-2(iv)/31/2020-21

Date:10-09-2020.

Sub: JNTUACEA - TEQIP-III - Academics – Permission to conduct Online Three day Workshop on “Cyber Security” for PG Students at JNTUACEA during 16-18 September, 2020 – Orders - Issued.

Ref: Letter Dt: 09-09-2020 from Dr. A.P.Siva Kumar, Asst. Prof., Dept. of CSE, JNTUACEA.

Dr. A.P.Siva Kumar, Asst. Prof., Dept. of CSE, JNTUACEA has submitted a letter requesting the Principal for permission to conduct Online Three day Workshop on “Cyber Security” for PG Students at JNTUACEA during 16-18 September, 2020 and requested to meet the expenditure from TEQIP-III funds.

Title of the Programme	Cyber Security
Conducted at	JNTUACEA
Dates of Workshop	16-09-2020 to 18-09-2020
Co-ordinator's	Prof. C.Shoba Bindu, Dept., of CSE Dr. A.P.Siva Kumar, Asst. Prof., Dept. of CSE,
Convenor	Prof. A.Suresh Babu, HOD of CSE Dept.,

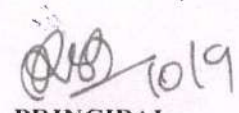
The requisition submitted is approved and the Principal is pleased to accord permission to Dr. A.P.Siva Kumar, Asst. Prof., Dept. of CSE, JNTUACEA to conduct the above said programme on the date(s) noted. The expenditure will be met from TEQIP-III funds under Academics SC 1.3-2(iv) head of account.

It is requested to follow the rules and regulations in incurring the expenditure and requested to submit the vouchers in original as per the guidelines provided by NPIU. And also requested to submit Photographs, list of participants, reports etc., as per TEQIP-III norms in Performa provided.

To

Copy to Dr. A.P.Siva Kumar, Asst. Prof., Dept. of CSE,
Copy to Dr.K.Madhavi, TEQIP-III Co-ordinator & Nodal Officer (P)
Copy to Prof.P.Sujatha, Vice Principal, Nodal Officer (A) (TEQIP-III)
Copy to Dr.K. Jithendra Gowd, Nodal Officer (F) & TEQIP MIS officer
Copy to Bills.

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J.N.T.U. Anantapur
ANANTHAPURAMU-515002


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J.N.T.U.A. College of Engineering,
(Autonomous)
ANANTHAPURAMU 515002,
A.P INDIA

JNTUA College of Engineering (Autonomous) Ananthapuramu

TEQIP III

WELCOME TO TEQIP-III

Sponsored Three days

Online workshop

16th – 18th September, 2020

on

CYBERSECURITY



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Organized by

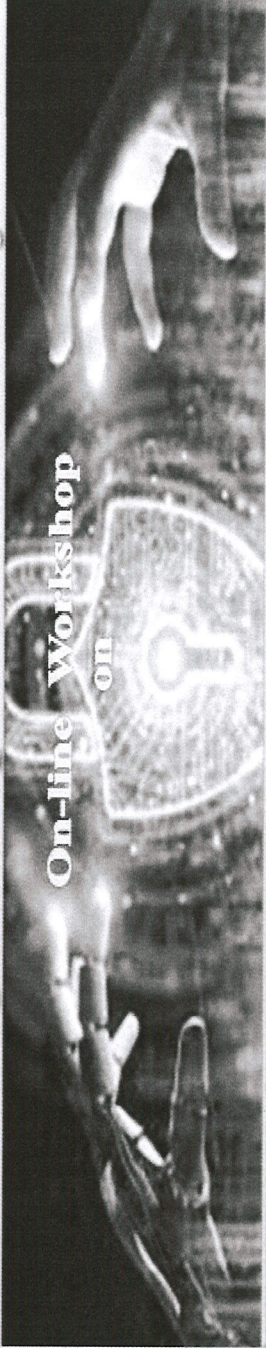
Department of Computer Science and Engineering, JNTUACEA



**JNTUA College of Engineering
(Autonomous) Ananthapuram
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

TEQIP-III

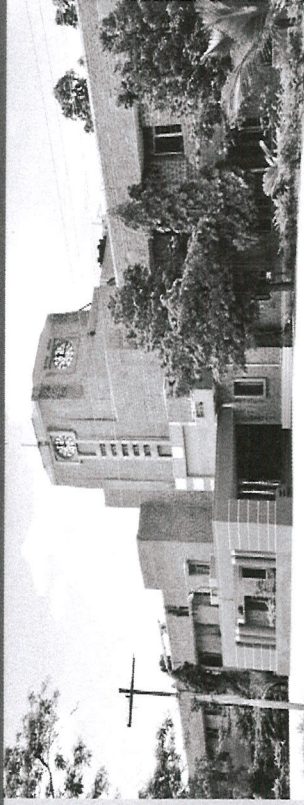
TEQIP-III Sponsored Three Day



**On-line Workshop
on**

**CYBER SECURITY
(16th – 18th September, 2020)**

About the Institution



JNTUA College of Engineering, Ananthapuram, is one of the oldest premier colleges in South India, with illustrious alumni. The college has celebrated its Diamond Jubilee in the year 2006 and has an excellent atmosphere for advancement of one's knowledge. In the year 2008 the college has become a constituent college of the newly formed JNTUA, Anantapur. About 194 private Engineering/Pharmacy/MBA colleges in the districts of Ananthapuram, Kadapa, Kurnool, Chittoor and Nellore are affiliated to JNTUA Ananthapuram. Ananthapuram is well connected with major cities like Mumbai, Hyderabad, Bangalore and Chennai by rail and road. It is very near to places of tourist interest like Lepakshi, Hampi, Belum caves and Puttaparthi.

About the Programme

Cyber Security

Cyber Space is a domain generated from the interconnection of computers and telecommunication networks around the world. It is used to store, modify, and exchange data via networked and related physical structures globally, regardless of physical geography. India has seen many attacks on its critical installations and the misuse of social media and internet has brought home the threat of cyber-terrorism, which cyber security experts say the country is poorly equipped to handle. A major challenge to Cyber Space is Security. The Cyber Security program focuses on technology, people, information, and processes to enable assured cyber operations in the context of adversaries. The program is built on a technical foundation of Computing and Information Technology.

Current Trends

- Build Skills related to cyber threat intelligence, digital forensics and risk management technology environment.
- The Socio-Ethical and legal aspects of Cyber Security.
- Analyse and Identify new and existing Cyber-Attacks and determine methods to mitigate them.
- A Growing Awareness of the Importance of Cybersecurity

REGISTRAR

**J.N.T.U. Anantapur
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Patron

Prof. K. Govinda Rajulu
Principal, JNTUACEA

Convener

Prof. A. Suresh Babu
Head of CSE Department, JNTUA CEA

Coordinators

Prof. C. Shoba Bindu
Professor, Dept. of CSE, JNTUACEA &
Director Skill Development &
Incubation Center, JNT University Anantapur.

Dr. A.P. Siva Kumar
Assistant Professor, Dept. of CSE,
JNTUACEA

Registration Details

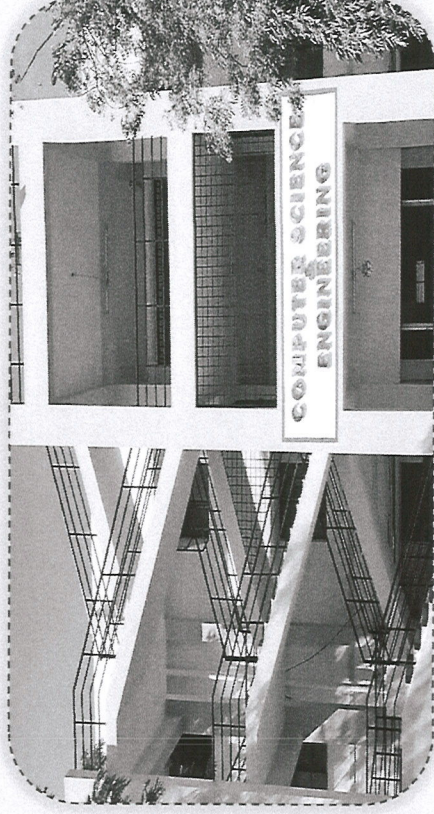
No registration fee. Participants are to register by using the link <https://forms.gle/WJu6c9xDyJ8Getnp8>

Last Date for Registration: 14.09.2020

Contact Details

Dr. A.P. Siva Kumar
Ph. No. 9441395659
E-mail Id : sivakumar.ap@gmail.com

Department of Computer Science and Engineering



The department of Computer Science and Engineering has started offering B.Tech programme since 1989 with an intake of 15 students. The present intake for the Bachelor's course is 60. Currently, the department is offering B.Tech, M.C.A, and three M.Tech programmes. The department is also having state of the art facilities for carrying out research equipped with three laboratories, one lab is dedicated for B.Tech students, one for Master's, and one lab for the Research students. The department also possesses a library with over 1300 text books, 10 journals and around 45 e-

Resource Persons

Mr. Sanjay Adiwai
Principal Technical Officer,
C-DAC Bangalore

Programme Schedule

Day-1 (16.09.2020)	Day-2 (17.09.2020)	Day-3 (18.09.2020)
Information Security	PKI & Digital Signature	Computer Network & IPV6 Addressing
Dr. Mohammed Misbahuddin	Dr. Mohammed Misbahuddin	Mr. Sanjay Adiwai
Session - 1: 10.15 AM - 11.45 AM	Session - 1: 10.15 AM - 11.45 AM	Session - 1: 10.15 AM - 11.45 AM
15 min Break	15 min Break	15 min Break
Session - 2: 12.00 PM - 01.30 PM	Session - 2: 12.00 PM - 01.30 PM	Session - 2: 12.00 PM - 01.30 PM


Instructions to Participants

- Attendance of 100% is compulsory for certification.
- Please enter a valid email id as the certificate will be mailed it. **REGISTRAR** Do submit the feedback form provided at the end of each day.
- Live sessions link will be shared through mail/WhatsApp

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Three Day FDP on Cyber Security
 Date: 16th September – 18th September 2020

Time	Session
Day-1 Schedule	
10:30 – 12:30 (with 15 minutes tea break)	Cyber Hygiene - I: Information Security, Security Threats and Attacks, Cyber Crimes DEMONSTRATIONS INCLUDED Speaker - Dr. Mohammed Misbahuddin , Joint Director, C-DAC Bangalore
12:30 – 13:30	Computer Network and IPv6 Addressing - I: Networking Fundamentals, TCP/IP Utilities, IPv6 Addressing Speaker – Mr. Sanjay Adwal , Principal Technical Officer, C-DAC Bangalore
Day-2 Schedule	
10:30 – 11:30	Computer Network and IPv6 Addressing - II: IPv6 vs IPv4 Comparison, IPv6 Application/Services DEMONSTRATIONS INCLUDED Speaker – Mr. Sanjay Adwal , Principal Technical Officer, C-DAC Bangalore
11:45 – 13:30	Cyber Hygiene - II: Social Engineering, Use cases of Cyber Security from AI/ML perspective Speaker - Dr. Mohammed Misbahuddin , Joint Director, C-DAC Bangalore
Day-3 Schedule	
10:30 – 13:30	PKI and Digital Signature: Overview of Symmetric and Asymmetric Key Cryptography, Digital Signature, Digital Signature Certificate, Certifying Authority & Trust Model, Certificate Issuance, Certificate Types, Certificate Classes, Certificate Life Cycle & Key Management, e-Sign – An Online Electronic Signature Service DEMONSTRATIONS INCLUDED Speaker - Dr. Mohammed Misbahuddin , Joint Director, C-DAC Bangalore
11:30 – 11:45	Tea Break – All 3 days


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Inaugural Session:

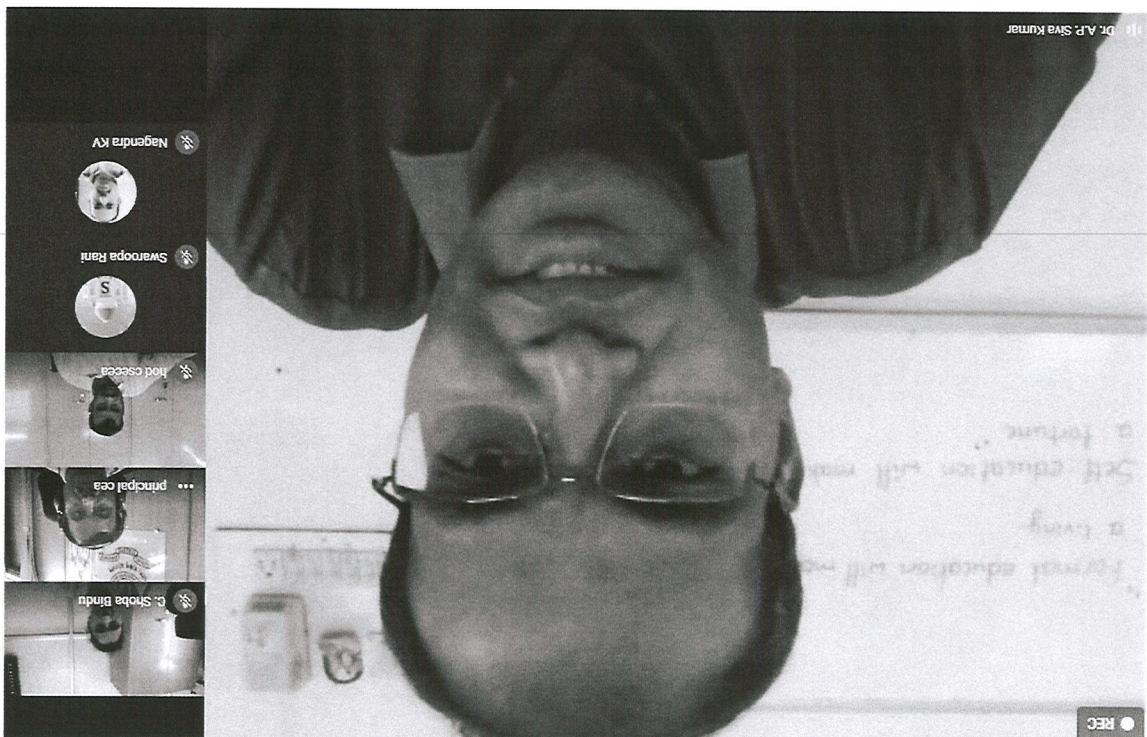


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REC ● Dr Mohammed Misbahuddin is presenting



Cyber society


In today's world, we depend on Internet at home, in school and at work place

CDAC
www.cdac.gov.in
InfoSec awareness.in
ISEA

Sanjay Adwal
Dr. A.P. Siva Kumar
Nagendra KV
dileep kumar reddy
Dr. Mohammed Misbahuddin

REC ● Dr Mohammed Misbahuddin is presenting

Major Online Risks and Threats To Computer



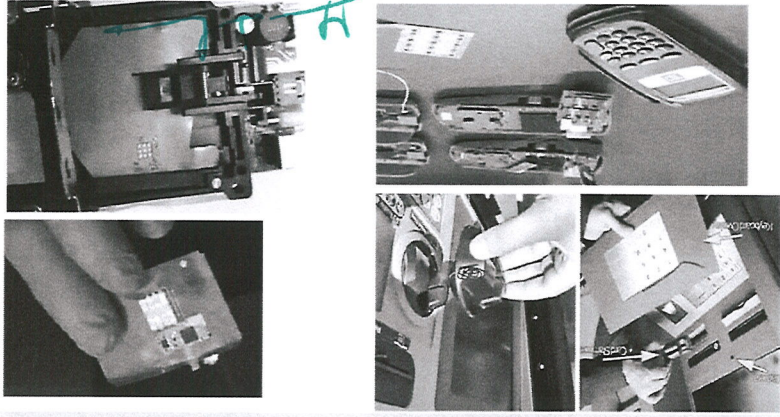
Virus
Worms
Trojans

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ISEA

Dr. Mohammed Misbahuddin
KARUNA PAINAM
Sanjay Adwal
Nagendra KV
dileep kumar reddy

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Shimmers / Shimmers



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NATARAJU KNR
Nagendra KV
dileep kumar reddy

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Mobile Security

- Mobile Security
- WhatsApp Security
- SIM Swap
- Wi-Fi Security
- Vishing
- Smishing



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www.infosecawareness.in

Deeksha Hegde B

Ramjan D

Dr Mohammed Misbahuddin

Nagendra KV

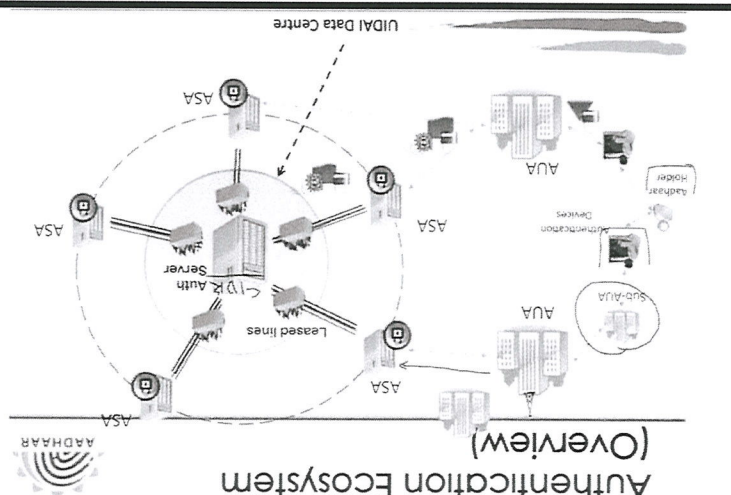
Ankekalwa Devika

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Computer related offences

- Section 66
- 3 years jail and / or fine upto 5 lakh
- New provision
- Replaces 'hacking'



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Deeksha Hegde B

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Dr Mohammed Misbahuddin

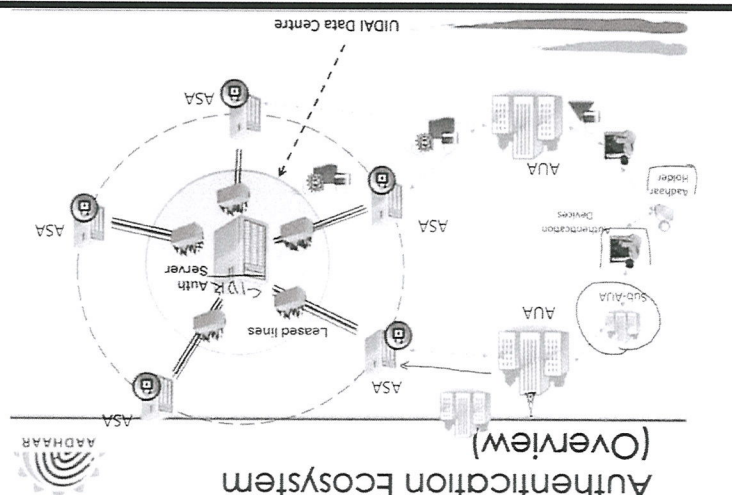
Nagendra KV

dileep kumar reddy

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Authentication Ecosystem (Overview)



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Dr Mohammed Misbahuddin

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KARUNA PAINAM

Nagendra KV

sudha gowd

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Mobile Security Tips to REMEMBER

- Doing these simple tips with help keep your phone protected from vulnerabilities
 - Set Password Protection for Important Apps
 - Update Anti-virus Software
 - Update Operating System
 - Use Trusted Source to download Apps
 - Disable Wi-Fi, Bluetooth when not in use
 - Backup your data

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Dr. Ashokreddy Pamulapati

Raman D

Deeksha Hegde B

Nagendra KV

Dr. Mohammed Misbahuddin

DAC

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What is Social Engineering ?

► Social Engineering is an approach or method used to gain access to information through misrepresentation or false identity by using various methods few are as follows

- Careless talking is one of the reason for social engineering
- Careless talking about business, the office, home, personal and the people and discussing with those who not authorized to talk.
- The widely used Social Engineering techniques by attackers are Phishing, Vishing & Smishing

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Dr. Ashokreddy Pamulapati

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Dr. Mohammed Misbahuddin

Raman D

Deeksha Hegde B

DAC

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Fake UPI id

PM CARES FUND fake UPI id scam: Make sure you donate to the correct ID

The latest scam using UPI involves around the PM CARES FUND with a fake UPI id being designed to make sure they donate to the correct PM CARES FUND which unfortunately is the PM CARES FUND.

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Dr. Ashokreddy Pamulapati

dilip kumar reddy

Dr. Mohammed Misbahuddin

Deeksha Hegde B

Dr. A.P. Siva Kumar

DAC

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CCA
Paper Records v/s Electronic Records
PNI Knowledge Dissemination Program

	Paper Record	Electronic Record
Privacy (Confidentiality)	Sealed Envelope	Digital Envelope
Authenticity	Hand Signature	Digital Signature
Integrity	Hand Signature	Digital Signature
Non-Repudiation	Hand Signature	Digital Signature

Hand Signature
Digital Signature
Hand Signature
Digital Signature
Hand Signature
Digital Signature

Handwritten: *Handwritten Challenge*

KARUNA PAINAM
V LOKESWARA REDDY
diya Sd4
PAVAN GOWD
Dr Mohammed Misbahuddin

Dr Mohammed Misbahuddin is presenting

Symmetric Key Cryptography

- Also called as Secret Key Cryptography or Single Key Cryptography.
- Uses one key shared by both sender and receiver.
- This key is used for both encryption and decryption.
- Both parties have to agree on the key before start of the communication
- Encryption and Decryption is extremely fast comparing to asymmetric cryptography

Dr. D. Prag. P.C. Bangalore

Nageswar Reddy Pulikanti
Sana Tabassum Nandev
Raman D
dileep kumar reddy
Dr Mohammed Misbahuddin

Dr Mohammed Misbahuddin is presenting

Model for Network Security

The diagram illustrates the Model for Network Security. It shows a Sender on the left and a Recipient on the right. A central 'Information Channel' connects them. Above the channel is an 'Opponent' who can intercept the communication. Below the channel is a 'Trusted third party (e.g., arbiter, distributor)'. The process involves 'Secure message' being sent from the Sender to the Recipient through the channel. 'Secret information' is used for 'Security-related transformation' at both ends. The Trusted third party is involved in the distribution of secret information.

Dr. A.R. Siva Kumar
Nageswar Reddy Pulikanti
Sana Tabassum Nandev
dileep kumar reddy
Dr Mohammed Misbahuddin

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Creating Digital Signature

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- Every individual is given a pair of keys
 - *Public key*: known to everyone
 - *Private key*: known only to the owner
- To *digitally sign* an electronic document the signer uses his/her *Private key*
- To *verify* a digital signature the verifier uses the signer's *Public key*

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Digital Signing – Step 3

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Digital Signing – Step 3

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This is an example of how to create a message digest and how to digitally sign a document using a Public Key cryptography

Digital Signature

Append

Digital Signature

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Signing a Word Document

This is a demo of Digitally

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Meghashree E.M

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Digital Signatures - Examples

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I agree
 c7e67e1e03db8d8ea8569545e073e814a0ed755 ✓
 My place of birth is Gwalior
 fe1188eed44ee23e13c416635de8ed5cd6b6725
 I am 62 years old
 0e6d7d56e4520756f59233b6ae981cd4b5f9820d0
 I am an Engineer
 e40e29b3b2e20fe018ae45c3746a057b893e7
 I am a Engineer
 01f1d8ab49c2e6130870842053a97d315d4f1ca3

- These are digital signatures of same person in different documents
- Digital Signatures are numbers
- They are content and signer dependent

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Digital Signing Process

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Sender

Message

Hash Algorithm

Message Digest
 23be d09 3add d79
 876 d11 78d 19ed

Encryption with
 Private key

Digital signature

Receiver

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Dr. A.P. Siva Kumar

Sanjay Adwal

Bhanu Prasanna

Chidananda K

narendra reddy n

IPV6 Addressing and IPV6 vs IPV4 Comparison

Principal Technical Officer, e-DAC Bangalore
Sanjay Adwal

18 September 2020

Sanjay Adwal is presenting

REC

Sanjay Adwal

Dr. A.P. Siva Kumar

Chidananda K

Bhanu Prasanna

Subhanuliah Omakhiil

Revise IPV4

An IPV4 address consists of 32 bits which limits the address space to 4294967296 (2^{32}) possible unique addresses.

It is logically divided into 4 octets. Normally represented by decimal form of each octet separated by dots.

An IPV4 address (dotted-decimal notation)

172 · 16 · 254 · 1

↑ ↑ ↑ ↑

One byte = Eight bits

↑ ↑ ↑ ↑

10101100, 00010000, 11111110, 00000001

↑ ↑ ↑ ↑

Thirty-two bits (4×8), or 4 bytes

18 September 2020

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Sanjay Adwal

Dr. A.P. Siva Kumar

Meghashree E M

Bhanu Prasanna

Dr. Dilip Kumar Reddy P

Current State of IPV4

APNIC was the first regional Internet Registry to run out of freely allocated IPv4 addresses, on 15 April 2011.

RIFE NCC, the regional Internet registry for Europe, was the second RIR to deplete its address pool on 14 September 2012.

On 10 June 2014, LACNIC, the regional Internet registry for Latin America and the Caribbean, was the third RIR to deplete its address pool.

ARIN was the fourth RIR to deplete its address pool on Sept 2015.

AFRINIC are expected to exhaust within several years.

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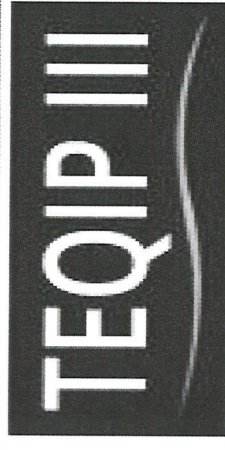
18 September 2020



JNTUA College of Engineering

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Sir Mokshagundam Vishveshwariah Road, Ananthapuram-515002, Andhra Pradesh, INDIA.



TEQIP-III Sponsored Three Days Workshop

CERTIFICATE OF PARTICIPATION

This is to certify that Dr./Mr./Mrs./Ms. G. Pradeep Reddy has participated and completed TEQIP-III Sponsored Three Days Online Workshop on “Cyber Security” organized by the Department of Computer Science and Engineering, JNTUACEA during 16th – 18th September 2020.

Dr. A. P. Siva Kumar
Coordinator

Prof. C. Shoba Bindu
Coordinator

Prof. A. Suresh Babu
Convener

Prof. K. Govindarajulu
Principal