



# **BVRIT HYDERABAD College of Engineering Women**

(Approved by AICTE | Affiliated to JNTUH | Accredited by NAAC with Grade 'A' & NBA for CSE, ECE, EEE, & IT)

**Bachupally, Hyderabad-500090**

**Department of Computer Science & Engineering  
Centre of Excellence for Cyber Security and Blockchain**

## **CoE Coordinator details**



**Name of the coordinator:** Dr. M Indra Sena Reddy

**Designation:** Professor

**Email -id:** [indrasenareddy.m@bvrithyderabad.edu.in](mailto:indrasenareddy.m@bvrithyderabad.edu.in)

## **Vision**

To achieve global recognition in advancing cyber security and blockchain technologies, fostering a secure, resilient, and innovative digital ecosystem through cutting-edge research, comprehensive education, and strong industry collaboration.

## **Mission**

The Centre of Excellence for Cyber security and blockchain technology are intricately intertwined, with blockchain offering unique features that enhance security measures and protect digital assets. Decentralization: The distributed ledger system of blockchain prevents single points of failure, making it difficult for cybercriminals to access data.

## **Objectives**

- To promote cutting edge research on cyber security, blockchain, and digital forensics.
- To train an efficient and skilled workforce that will work towards a secure and safe cyberspace, protect critical infrastructure from cyber threats, and advance blockchain technologies.
- To maintain the integrity of data, applications, and services by establishing standards for testing and validation in both cyber security and blockchain domains.
- To facilitate the best practices, standards, audits, and regulations for preventive measures against cyber-attacks and blockchain vulnerabilities.
- To assess and analyze the growing vulnerabilities, with a special focus on zero-day vulnerabilities and blockchain security issues.

## **Faculty Team**

| <b>S. No.</b> | <b>Name</b>               | <b>Designation</b>  | <b>Qualification</b> | <b>Specialization</b>         |
|---------------|---------------------------|---------------------|----------------------|-------------------------------|
| 1             | Ms. Padmavati E Gundgurti | Assistant Professor | Ph. D (Pursuing)     | Cyber Security and Blockchain |
| 2             | Dr. S Prasanth Vaidya     | Assistant Professor | Ph. D                | Cryptography                  |
|               |                           |                     |                      |                               |
|               |                           |                     |                      |                               |

## Infrastructure

| S. No. | Name of the Equipment   | Unit Cost       | Quantity |
|--------|---|-----------------|----------|
| 1      | Ultra Super Server SYS62U-TNR Intex Xeon Silver 4310, Processor 12-Core 2.1Ghz, 18MB Cache(120W) 128 GB RAM DDR4, 2*960 GB SSD, GPU KIT NVIDIA RTX A6 000 | Rs. 11,02,500/- | 1        |
| 2      | IBM Server X3650M4<br>8GB RAM<br>3* 600GB HDD   | 2,55,164.00     | 1        |
| 3      | Dell Power Edge R710<br>256 GB<br>4TB SATA HDD  | 1,82,009.00     | 1        |
| 4      | Dell Power Edge Rack Server R540<br>16GB RAM<br>2TB HDD<br>Sr. No. 6X Z23   | 2,40,900.00     | 1        |
| 5      | Internet Bandwidth- 1420 MBPS   |                 |          |

## List of Open-Source Software

| S. No. | Name of Software             |
|--------|------------------------------|
| 1.     | Burp Suite Community Edition |
| 2.     | Kali Linux OS                |
| 3.     | John the Ripper              |
| 4.     | Autopsy                      |
| 5.     | Wireshark                    |
| 6.     | Ethereum                     |
| 7.     | Hyper ledger Fabric          |
| 8.     | Bitcoin Core                 |
| 9.     | Truffle Suite                |

## MoU's (CoE)

1. MOU signed with Cyber Security Centre of Excellence, Hyderabad, and Telangana for collaborative research, innovation, incubation, marketing, hackathons, corporate innovation and training programs.
2. MOU signed with Algorand Foundation & started Algorand Blockchain Club (ABC) to build community of students in Blockchain Technology. Students can learn & build on Algorand blockchain.

## **List of projects**

| <b>S. No.</b> | <b>Title</b>  | <b>Specialization</b>              | <b>Faculty mentor</b>     | <b>Academic Year (Keep Latest first)</b> | <b>SDG</b>        |
|---------------|---|------------------------------------|---------------------------|--|-------------------|
| 1             | Elliptic Curve Cryptography   | Cryptography and Networks Security | Dr. M. Indrasena Reddy    | 2023-24                                  | 4,8,9,10,11,12,16 |
| 2.            | Fake News Detection using Deep Learning                                       | Security                           | Dr. Reya Sharma           | 2023-24                                  | 4,8,9,10,11,12,16 |
| 3.            | Secure Blockchain For Admission   | Blockchain                         | Dr. M. Indrasena Reddy    | 2023-24                                  | 4,8,9,10,11,12,16 |
| 4.            | Elevating Drug Accountability through GIS-Enabled Tracing                     | Blockchain                         | Ms. Padmavati E Gundgurti | 2023-24                                  | 4,8,9,10,11,12,16 |
| 5.            | System for Identifying fake product using Blockchain Technology               | Blockchain                         | Dr. M. Indrasena Reddy    | 2023-24                                  | 4,8,9,10,11,12,16 |
| 6.            | Elevating Security in Internet of Vehicles through Intrusion Detection System | Security                           | Dr. S Ashok               | 2023-24                                  | 4,8,9,10,11,12,16 |
| 7.            | Smart and Secure Certificate Validation System through Blockchain             | Blockchain                         | Ms. Padmavati E Gundgurti | 2020                                     | 4,8,9,10,11,12,16 |
| 8.            | Decentralized Image Sharing App using Blockchain                              | Blockchain                         | Ms. Padmavati E Gundgurti | 2022                                     | 4,8,9,10,11,12,16 |

## **Hackathons:**

1. Three teams competed in a hackathon hosted by Pals IIT Madras. PECAN+ is a Cyber Security Capture the Flag (CTF) contest created and overseen by the School of Science at Edith Cowan University in Perth, Western Australia. The event took place on February 15, 2024, with mentoring provided by Ms. Padmavati E Gundgurti, Ms. Suparan Das, and Dr. Indrasena Reddy.

2. Ms. Gundgurti E Padmavati, Assistant Professor, mentored the team consisting of Ms. B Sreeja (19WH1A05B0), Ms. M Srinidhi (19WH1A05B3), and Ms. K Prathima (20WH5A0509), whose research idea "Drug Traceability Using Geographic Information System" advanced to the final phase of The DST - Geospatial Hackathon held at IIIT Hyderabad on February 22, 2023.

### **Online Certifications:**

1. Ms. Padmavati E Gundgurti has successfully completed online certification on the **“Introduction to Critical Infrastructure Program”** on 06th Nov 2022 on OPSWAT academy platform.
2. Ms. Padmavati E Gundgurti has successfully undergone a bridge course training program on **“Pragmatic Approach to Cyber Security”** under **“Future Skills PRIME”** and **“CDAC”** programme, held from September 1st, 2023 to January 4th, 2024.

### **List of Patents**

1. Published a patent for **"Blockchain Based System for Biomedical Documents towards Data Integrity, Non-Repudiation and Digital Forensics"** with Application Number 202041040619 on 25-09-2020.

### **Outcomes (Activities)**

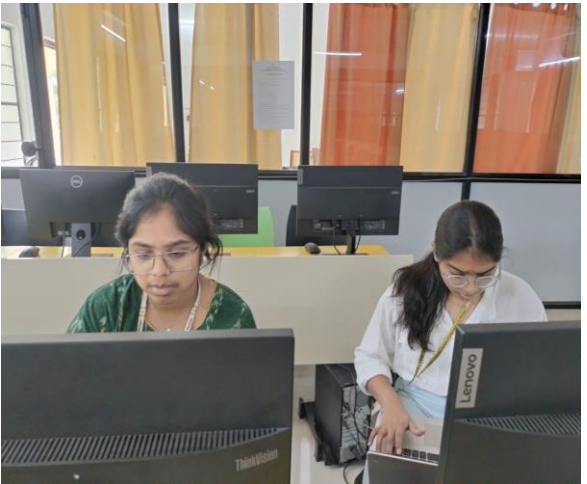
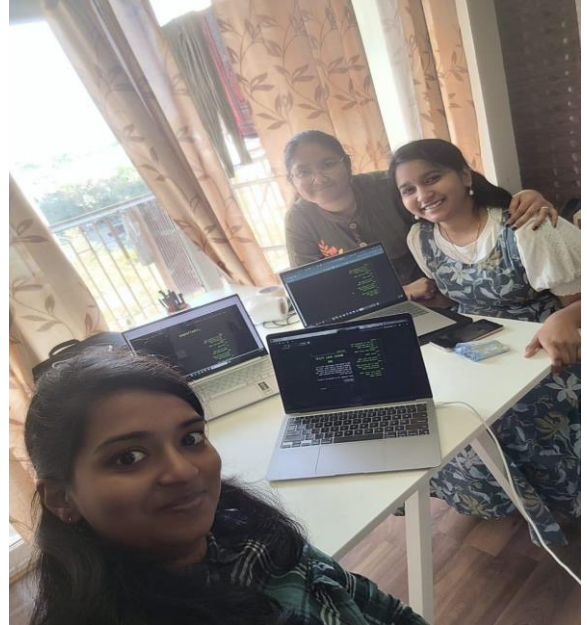
1. Students achieved Highest Score in IIT Madras PALS ECU CTF Qualifier Round.
2. Finalists in DST - Geospatial Hackathon at IIIT Hyderabad.
3. Mentors recognized for guiding successful research ideas.

### **Achievements**

1. Our students participated in IIT Madras PALS ECU CTF Qualifier Round on Cyber Security On 5th & 6th March 2024. Students received a "Certificate of Appreciation" for achieving the Highest Score among participants from our institute in the CTF Qualifier Round. Student Ms. Sruthi Laya Reddy IV CSE B roll. no 20WH1A05B5 and 3 teams, under the Mentorship of Ms. Padmavati E G, Dr. M Indrasena Reddy, Professor and Ms Suparna Das.
2. Participated in Research Challenge at IIIT Hyderabad as a Finalist, Ms. Gundgurti E Padmavati, Assistant Professor was the mentor for Ms. B Sreeja (19WH1A05B0), Ms. M Srinidhi (19WH1A05B3), and Ms. K Prathima (20WH5A0509) are the team members of the research idea **“Drug Traceability Using Geographic Information System”**, selected for the final phase of The DST - Geospatial Hackathon IIIT Hyderabad on 22nd Feb 2023.
3. Mr. U Chandrasekhar, Associate Professor was the mentor for the research ideas **“Geospatial data validation uses Blockchain”**, and **“Image asset recognition”**,

selected for the final phase of The DST - Geospatial Hackathon IIIT Hyderabad on 22<sup>nd</sup> Feb 2023.

## Gallery



1. Online Hackathon event was conducted On 15th February 2024 Qualifier Round- Capturing the Flags (CTF) challenge.





2. Qualifier Competition round will be held to determine which Teams will advance to the PECAN+CTF Final Competition On 5th and 6th March 2024.



3. Qualifier Competition round will be held to determine which Teams will advance to the PECAN+CTF Final Competition on 6th March 2024.

|  |   |  |
|--|---|--|
| <p><b>Drug Traceability Using Geographic Information System using Blockchain</b></p> <ul style="list-style-type: none"> <li>Developing a blockchain application to create a transparency environment between all the stakeholders and consumers across the supply chain and ensure all the drugs across the supply chain are not being counterfeited.</li> <li>Smart contracts technology helps in address the real time transparency of drugs which reduces human interference.</li> <li>It makes use of the GIS in such a way that it allows the efforts of routing and logistics decisions to be seen visually, projected on to a map.</li> <li>It shows consumers the geo location where the product is manufactured and detailed information on who produced it.</li> </ul> | <p><b>TEAM PRESENTATION</b></p> <p>Ms. Padmarati E.G<br/>Assistant Professor<br/>Dept: Computer Science and Engineering<br/>BVRIT HYDERABAD<br/>College of Engineering for Women</p> <p>Ms. B. Sreeja<br/>IT Year Student<br/>Dept: Computer Science and Engineering<br/>BVRIT Hyderabad<br/>College of Engineering for Women</p> <p>Ms. M. Sravithi<br/>IT Year Student<br/>Dept: Computer Science and Engineering<br/>BVRIT Hyderabad<br/>College of Engineering for Women</p> <p>Ms. K. Prathima<br/>IT Year Student<br/>Dept: Computer Science and Engineering<br/>BVRIT Hyderabad<br/>College of Engineering for Women</p> | <p><b>CERTIFICATE</b><br/>Of Participation</p> <p>This certificate is presented to<br/><i>Team Suraksha</i></p> <p>We give this certificate as a token of appreciation to Ms. Balasani sreeja, Ms. Padmarati E.G, Ms. M. Sravithi and Ms. K. Prathima for being the finalist in the DIT Geospatial Hackathon, Research Challenge</p> <p>Signature _____ Date _____</p> |
|--|---|--|





4. Geospatial Hackathon IIIT Hyderabad on 22<sup>nd</sup> Feb 2023.

**Coordinator**

**HOD-CSE**