

**AICTE Training and Learning Academy
(ATAL) Sponsored One week Faculty
Development Program on
CyberSecurity for Industry 4.0**

9th to 14th October 2023

Technically supported by EC-Council

R. V. College of Engineering, Bengaluru

RV College of Engineering (RVCE) is a prestigious self-financing engineering college established in 1963. It is affiliated with Visvesvaraya Technological University (VTU) Belagavi and operated by Rashtreeya Sikshana Samithi Trust (RSST). RVCE offers 15 Bachelor's and 14 Master's programs with research centers in all departments. The institution's vision emphasizes quality technical education, interdisciplinary research, innovation and sustainable technology. RVCE has an impressive publication record with over 1500 national and international journal and conference publications. It has filed 62 patents, published 53 patents, and been granted 22 patents. The institution has completed sponsored research and consultancy projects worth ₹16.0 crores in the last three years. Additionally, RVCE has established 8 Centers of Competence and 18 Centers of Excellence in various domains.

About the Department of Computer Science and Engineering

Department of Computer Science and Engineering was established in year 1984. The Department offers three undergraduate programs, B.E (CSE), B.E (CSE- Data Science), B.E (CSE- Cyber Security) and two postgraduate programs M.Tech(CSE) & M.Tech(CNE). Department also offers M.Sc by research and Ph.D. degree in various specializations of Computer Science and Engineering. The two new B.E programs namely B.E (CSE- Data Science) and B.E (CSE- Cyber Security) are offered from academic year 2022-23. The department has been accredited for 6-years by National Board of Accreditation (NBA).

Department of Computer Science and Engineering has MoUs for Research, Consultancy and training with multinational companies and government agencies such as CISCO, Citrix, Nihon, Gnostice, Sapient, Infosys Technologies and Karnataka Forest department. Department has industry sponsored labs from CISCO, IBM and Nvidia GPU research centre. Students are encouraged to take up interdisciplinary research in various domains of computer science like computer vision, Data Mining, Networking, high performance computing etc. and are placed in reputed companies. The department has partnership with EC-Council: a cybersecurity certification, education, training, and services company based in Albuquerque, New Mexico.

About the workshop

India assumed the presidency of G20, the grouping which brings together 20 of the world's largest economies. Enhanced cybersecurity cooperation at the G20 forum can contribute to ensuring the security and integrity of critical infrastructure and digital public platforms. Therefore, cybersecurity must be a key focus area in the digital agenda under India's presidency in 2023. With this motivation a 6-days workshop on CyberSecurity in Industry 4.0 is proposed

Industry 4.0, also known as the fourth industrial revolution, is characterized by the integration of advanced technologies, such as the Internet of Things (IoT), artificial intelligence, big data, cloud computing, and automation, into traditional manufacturing and industrial processes. While these technologies bring tremendous opportunities for efficiency and productivity, they also introduce new cybersecurity challenges. The objectives of a Faculty Development Program (FDP) on cybersecurity and Industry 4.0 are to equip educators and researchers with the knowledge, skills, and tools necessary to understand, address, and mitigate the cybersecurity challenges arising from the integration of advanced technologies in the context of Industry 4.0.



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Rashtreeya Sikshana Samithi Trust

RV COLLEGE OF ENGINEERING®
(Autonomous Institution Affiliated to VTU, Belagavi)
Bengaluru- 560059, Karnataka.

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Registration Link:

<https://forms.gle/9jKJSySGpHwWJYKP9>



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Workshop Content

Understanding Industry 4.0: Provide participants with a comprehensive understanding of the key concepts, technologies, and applications of Industry 4.0, including the Internet of Things (IoT), artificial intelligence (AI), big data, cloud computing, and automation, Information security Act.

Vulnerability Analysis: Identify security loopholes in a target organization's network, communication infrastructure, and end systems.

Hacking Web Servers, Web Applications: Web server attacks, including a comprehensive attack methodology used to audit vulnerabilities in web server infrastructures and counter measures.

Securing Cyber-Physical Systems: Explore the unique challenges and best practices for securing cyber-physical systems in manufacturing, energy, transportation, and other Industry 4.0 sectors.

AI and Machine Learning Security: Explore the intersection of artificial intelligence, machine learning, and cybersecurity, including potential AI-based attack vectors and AI-driven defense mechanisms.

Best Practices and Case Studies: Present real-world case studies and best practices from industry and academia to illustrate successful cybersecurity implementations in Industry 4.0 settings.

Blockchain Security and Cyber Forensics.

(Most of the sessions include hands-on training on CyberSecurity tools)

Resource Persons: Researchers from CSE,

RVCE, EC-Council and industries.(Dell technologies, BlackBerry Security System, Akamai, JP Morgon)

Patrons:

Dr. M P Shyam, President, RSST, Bengaluru
Dr. A V S Murthy, Hon Secretary, RSST, Bengaluru
Sri. D P Nagaraj, Joint Secretary, RSST, Bengaluru

Advisory Committee:

Dr. K.N. Subramanya, Principal, RVCE
Dr. Geetha K S, Vice Principal, RVCE
Dr. Shanmukha Nagaraj, Dean Academics, RVCE
Dr. Uma B V, Dean Student Affairs, RVCE

Main Coordinator:

Dr. Ramakanth Kumar P, Prof & HoD, CSE

Co-Coordinator:

Dr. Minal Moharir, Prof, CSE (CY), RVCE

Address for Correspondence:

1. Dr. Ashok Kumar A R

Associate Professor, CSE (CY), RVCE

Ph: 8497042779

Email: ashokkumarar@rvce.edu.in

2. Dr. Mohana

Assistant Professor, CSE (CY), RVCE

Ph: 9739866723

Email: mohana@rvce.edu.in

Organizing Committee

1. **Dr. Pavithra H**, Assistant Professor, CSE, RVCE
2. **Dr. Satish V. Motammanavar** Assistant Professor, Department of Mathematics, RVCE
3. **Mr. Vasanth M L**, CSE, RVCE
4. **Ms. Priyanka R**, CSE, RVCE

Objectives of the workshop:

1. The aim of the FDP is to introduce the methodologies and framework of Cybersecurity in the context of Industry 4.0.
2. The FDP includes Impacts of Hacking; vulnerability analysis, securing CPS and USE of AI/ML in Cybersecurity
3. Sharing information related to Recent trends and R&D on cutting edge cyber security technologies and its ecosystem.



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SCHEDULE

Day/Date	9.00 AM – 11 AM	11.30 AM – 1.30 PM	2.30 PM – 3.30 PM	3.45 PM – 4.45 PM
October 9th, 2023 Monday	Inauguration & Keynote talk: Introduction to Cyber Security and Ethical Hacking. Dr.Deepa Shenoy.Chair, IEEE Computer Society Bangalore Chapter, Cyber Security (STC) Professor, Dept of CSE UVCE Bangalore,	Understanding Industry 4.0 Ramakanth kumar P Professor& Head, CSE Dept, RVCE, Bangalore	Information Security Act & Cyber Forensics Mr. Sanjay Sahay Founder & Director, TechConPro Pvt Ltd., Founder & Mentor CCTV Research Center , RVCE.	Article discussion
October 10th, 2023 Tuesday	Introduction to Ethical Hacking Dr. Minal Moharir Professor, CSE Dept, RVCE, Bangalore	Footprinting and Reconnaissance Kumar Eesahn, Senior Manager, Academia, EC Council, Pune, Maharashtra, India	Article discussion	Hands on Training Footprinting and Reconnaissance – <i>EDGAR, WHOIS, People, theHarvester</i> Dr. Minal Moharir Dr. Ashok Kumar A R Dr. Mohana
October 11th, 2023 Wednesday	Securing Cyber-Physical Systems Mr. Raj Pagaku Vice President of Engineering, BlackBerry Cybersecurity, India	IoT and Cloud Security Kumar Eesahn, Senior Manager, Academia, EC Council, Pune, Maharashtra, India	Hands on Training Scanning Networks, Enumeration <i>fping, Megaping, Nmap, ZenMap</i> Dr. Minal Moharir Dr. Ashok Kumar A R	Article discussion

October 12th, 2023 Thursday	Research Methodology Dr. K N Subramanya, Principal R.V.College of Engineering	MCQs, reflective journal and feedback	Industry Visit Dell Technologies Ltd.	
October 13th, 2023 Friday	AI and Machine Learning Security Mini TT Technologist at Dell Technologies Bengaluru, Karnataka, India	Threat Intelligence and Incident Response Kiran Kumar Chief Architect Cyber Recovery Solution, Distinguished Engineer at Dell EMC Bengaluru, Karnataka, India	Hands on Training Tools and techniques to demonstrate IDS and IDPS system Dr. Minal Moharir Dr. Ashok Kumar A R Dr. Mohana	Article discussion
October 14th, 2023 Friday	Blockchain Security Gaurav yellure Software Developer JP Morgan Bengaluru, Karnataka, India	Best Practices and Case Studies Akshay Koshy Arcesium Technologies Pvt Ltd Bengaluru, Karnataka, India	MCQs, reflective journal and feedback	Valedictory And Feedback



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Confirmation Link

<https://forms.gle/9jKJSySGpHwWJYKP9>

Date

9th October 2023 - 14th October 2023

Timings

9:00 am - 4:45 pm

Venue

Department of Computer Science and Engineering, R.V. College of Engineering

