

Prof. (Dr.) Mayank Dave, Department of Computer Engineering at NIT Kurukshetra.

IoT Device Cyber Attacks and Countermeasures

September 23, 2022

The poster is a blue-bordered rectangle with a light blue background. At the top, it reads: "Jaypee University of Information Technology Electronics and Communication Engineering & Department of Physics and Materials Science 2nd Emergent Converging Technologies and Biomedical Systems (ETBS 2022)". Below this, the text "Keynote Speaker" is written in a large, brown, cursive font. In the center is a circular portrait of Prof. (Dr.) Mayank Dave, a man with glasses and a mustache. Below the portrait, a white rounded rectangle contains the text: "Prof. (Dr.) Mayank Dave Department of Computer Engineering NIT Kurukshetra". At the bottom, yellow text reads: "Date: 23th Sep, 2022, Time: 10:45 - 11:30 IST Medium: GoogleMeet". Logos for JUIT, Springer, and two NIT Kurukshetra departments are also present.

Professor Mayank Dave is currently a professor in the Department of Computer Engineering at NIT Kurukshetra. He is a senior member of IEEE. He did his Ph.D in 2002 from IIT Roorkee. His area of interests are Software Defined Networking, Cyber Security, Blockchain, Wireless Sensor Networks, Semantic Web, Cloud Computing, Internet of Things, Operating Systems, Data Structures, Programming. He has a teaching experience of 30 years approx., HoD for three terms, Dean (Research & Consultancy) for three years (2013-16), Dean (Students Welfare) briefly in 2016, M.Tech completed 27 Dissertations and supervised 15 Ph.Ds.

He delivered a keynote speech to the audience on **September 23, 2022** at 11:45 am to more than 50 participants. Participants carefully listened to his address and also came forward with their queries and discussions.

Mayank Dave is presenting

IMPORTANT IOT TECHNOLOGIES

- ZigBee (IEEE 802.15.4)
- (Low PAN (PoF) Thread)
 - Routing addressed by IEEE 802.15.4 (Routing over Low-power and Lossy Networks) (RPL)
- Bluetooth Low Energy (BLE)
- RFID / NFC
- Constrained Application Protocol (CoAP)
 - Based on REST Architecture
 - Runs over UDP in Application Layer
- Datagram Transport Layer Security (DTLS)
 - Runs over UDP for securing applications and services like low data-sensitive (medical applications, and other applications).

Mayank Dave (Presentation)

Participant avatars: Vandana Mohindru, Ghanshyam ECE, Anuj Kumar Gupta, PRIYANKA SHARMA, Pragya Gupta, Jahidul hasan, Shelly Kalsi, Rohit Kumar, Abhishek Chaudh..., Triambica Gautam, Jyotana Bajaj, himanshu dhumrash, Tanu Sharma, SIVASUBRAMANIA..., 7 others, You.

Mayank Dave is presenting

Participant avatars: Triambica Gautam, Tanu Sharma, Vandana Mohindru, Ghanshyam ECE, himanshu dhumrash, RAHUL SINGH 206..., NEHA LUHAKHRA, PRIYANKA SHARMA, Pragya Gupta, Siva Priya, Jahidul hasan, Shelly Kalsi, Rohit Kumar, 21 others, You.

IOT DEVICE LIFECYCLE MANAGEMENT

Establish device identity | Establish ownership & re-issue keypairs | Parametrize, set control access, and provision | Periodically re-key, recover, update, and re-provision | Delete ownership and decommission

Manufacturer → Distribution → Delivery → Deployment → Maintenance → Retirement

Reuse / Resell

Change ownership and re-issue new keypairs

Participant avatars: Mayank Dave, Triambica Gautam, Tanu Sharma, Vandana Mohindru, Ghanshyam ECE, himanshu dhumrash, RAHUL SINGH 206..., NEHA LUHAKHRA, PRIYANKA SHARMA, Pragya Gupta, Siva Priya, Hemanta Kumar B..., Shelly Kalsi, Rohit Kumar, 20 others, You.

Coordinators : Prof. Shruti Jain, Prof. Sunil Khah, Dr. Vikas Baghel