



Online ATAL Faculty Development Program
ON
CYBER SECURITY

6th December 2021 - 10th December, 2021

Under the Aegis of

All India Council for Technical Education (AICTE), New Delhi

Organized by

School of Computer and Systems Sciences
Jawaharlal Nehru University, New Delhi-110067

www.jnu.ac.in



About University

Jawaharlal Nehru University is the foremost university in India, and a world-renowned center for teaching and research. Ranked number one in India by the National Assessment and Accreditation Council (NAAC) with a Grade Point of 3.91 (on a scale of 4), JNU was ranked no 3 among all universities in India by the National Institutional Ranking Framework, Government of India, in 2016 and no 2 in 2017. JNU also received the Best University Award from the President of India in 2017. Still a young university, established by an act of Parliament in 1966, the strength, energy, and reputation of Jawaharlal Nehru University result from the vision that ideas are a field for adventure, experimentation and unceasing quest, and that diversity of opinions are the basis for intellectual exploration. JNU is the place for the intellectually restless, the insatiably curious, and the mentally rigorous, giving them the space to grow amidst the calmness of an oasis, a green lung within the hustle and bustle and the crowds of the capital city of India. Coming into being in 1969, three years after its establishment by Parliament, JNU brought frontier disciplines and newer perspectives for old disciplines to the Indian university system.

About School

Ever since its inception in 1974, this School has been trying to meet the computing needs of different Schools in JNU and offering specially designed courses for their students.

The teaching is specially designed to integrate inputs from Statistics, Operations Research, Algebra and Combinatorics, Digital Electronics, Systems Software, Artificial Intelligence, Computer Architecture, Programming Languages. A training and placement cell have been set up at the School to maintain liaison with various government and industrial organizations to facilitate employment for the students.

After the completion of the course, the students are fully competent to enter the Global IT- world as well as the fields of Research & Development at prestigious institutions in India and abroad. The various programmes offered in the School of Computer and System Sciences are M.C.A. (6 Semesters), M.Tech (4 Semesters) and Ph.D. These courses are designed to provide the necessary theoretical background and practical experience in Computer Science and Applications, to meet the growing manpower requirements of the Global Software & hardware Industry.

Workshop Overview

Cryptology is an art of protecting information by encrypting it into an unreadable format & then retransforming it to plain text. The knowledge of cryptology is essential because of its popularity in data communication for example, e-mail, banking, defense and cryptocurrency etc. Cryptography is a key technology for achieving information security in communications, computer systems, e-commerce, and, the entire information technology at large. This workshop will provide the understanding of fundamentals of cryptology and network security in data communication. The participants will understand and learn the basics as well as new developments in the related fields.

Topics of Interest

As per schedule plan.

Coordinators

Workshop Coordinator

Dr. Karan Singh, Assistant a Professor JNU, New Delhi
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Workshop Co-coordinator

Prof. D. K. Lobiyal, Professor & Dean, SC & SS, JNU, New Delhi
lobiyal@gmail.com

Resource Persons

Resource Persons are from IIT, NIT, Center University, DRDO, ISSER and Repute State University.

1. Prof. R. S. Yadav, NIT Allahabad, Pragraj
2. Prof. Nanhey Singh, AIT, New Delhi
3. Dr. Indivar Gupta, DRDO, New Delhi
4. Dr. Amit Kumar Awasthi, GBU, Greater Noida
5. Dr. P. R. Mishra, DRDO, New Delhi
6. Dr. Dhananjay Dey, SAG DRDO Delhi
7. Dr. Shashank Singh, IISER, Bhopal
8. Dr. Neeraj Kumar, Thapar Institute, Patiala
9. Dr. Sahdeo Padhye, MNNIT, Allahabad
10. Dr. Sartaj Ul Hasan, IIT Jammu
11. Dr. S. K. Sanadhya, IIT Ropar
12. Dr. Anurag Jain, IPU, New Delhi
13. Dr. Vivek Srivastava, NIT Delhi
14. Dr. Sandeep Sharma, GBU, Greater Noida
15. Dr. Arvind Kumar, Hansraj College, Delhi University
16. Dr. Ahmed Aziz, Egypt (Living in India)
17. Dr. Vikas Maheshkar, NSIT, New Delhi
18. Dr. Anup Ghridhar, Sedulity Solution, New Delhi

Who should attend?

PG Scholar, Ph.D. Research Scholars, Faculty, Delegates from Govt. and R&D Institutions Professionals in Cyber Security, IT and related fields are encouraged to attend this workshop.

Registration Fee

No registration Fee.

Last Date of Registration

30th November, 2021

Schedule Plan

Dates	10:00 AM to 11:30 AM	11:30 AM to 12.00 PM	12.00 PM to 1.30 PM	1.30 PM to 2:30 PM	2:30 PM to 4.00 PM	4:15 PM to 4:45 PM
6.12.2021	Registration and Inauguration	High Tea	Session 1 Essential Terminologies (Threats, Attacks, Risks, Foot Printing & Scanning)	Lunch	Session 2 Essential Terminologies Open Source/Tools (nmap, zenmap)	Tea
7.12.2021	Session 3 Cryptography (Introduction to Cryptography, Symmetric and Asymmetric key cryptography, Message Authentication, Digital Signatures)	Tea	Session 4 Cryptography Open Source/Tools (OpenSSL, Hash Values Calculations MD5, SHA1, SHA256, SHA512)	Lunch	Session 5 Infrastructure and Network Security (Introduction to System Security, Server Security, OS Security, Physical Security)	Tea
8.12.2021	Session 6 Infrastructure and Network Security Open Source/Tools (Wireshark, Cain & abel, iptables, snort, suricata)	Tea	Session 7 Cyber Security Vulnerabilities & Safe Guards (Internet Security, Cloud Computing & Security, Cyber Security Vulnerabilities)	Lunch	Session 8 Cyber Security Vulnerabilities & Safe Guards Open Source/Tools (WinAudit, Zap proxy, burp suite DVWA kit)	Tea
9.12.2021	Session 9 Malware (Explanation of Malware, Types of Malware: Virus, Worm, Trojans, Rootkits, Robots, Spywares, Ransom wares etc.)	Tea	Session 10 Malware Open Source/Tools (Antivirus Protection, Anti Spywares, System tuning tools)	Lunch	Session 11 Security in Evolving Technology (Biometrics, Mobile Computing and Hardening on android and ios)	Tea

10.12.2021	Session 12 Security in Evolving Technology Open Source/Tools (adb for android, xcode for ios) Topic/Activity	Tea	Session 13 Cyber Laws and Forensics (Introduction, Cyber Security Regulations, Role of International Law, The State and Private sector)	Lunch	Session 14 Cyber Laws and Forensics Open Source/Tools (Case Studies related to Cyber Law)	Valediction
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