

Department of Computer Science and Engineering

Department of Computer Science and Engineering was established in 2010. The Department offers **B.Tech. Computer Science & Engineering** and **M.Tech. Computer Science & Engineering**. The Computer Science students learn to develop, test various algorithms and problems in various domains. The Department also provides exposure to emerging technologies.

Programme Offered

Programme	Intake	Duration
B.Tech. – Computer Science & Engg.	60	4 years
M.Tech.–Computer Science & Engg.	25	2 years

Research Areas

- Network Security
- Computer Networks
- Big Data Analytics
- Information Retrieval and Information Security
- Cloud Computing
- Image and Video Processing

Infrastructure / Labs

The department have **following five laboratories:**

- Programming Lab
- Data Science Lab
- Research Lab
- IBM Lab
- Networking Lab

Faculty

Name	Designation	Specialisation	Experience
Dr. Monika Sachdeva	Associate Professor	Network Security	20 Years
Mr. Dinesh Gupta	Assistant Professor	Big Data, Cloud Computing	9 Years
Er. Rajdeep Singh	Assistant Professor	Wireless Networks	7 Years
Dr. Anshu Bhasin	Assistant Professor	Computer Networks, Fiber Optics based Networks	18 Years
Dr. Pooja	Assistant Professor	Digital Image Processing	11 Years
Dr. Alok Kumar Singh Kushwaha	Assistant Professor	Video Processing	7 Years

Events Organised

- 6-days National Workshop on **Big Data Analysis** organized by IKGPTU & AICRAD Study Pvt. Ltd. (June 6 – 11, 2016).
- **2-day Workshop on Android Application Development** in collaboration with i3 Indiya Technologies (October 12-13, 2017).
- **3-day Workshop on Cloud Computing & Social Network Analysis** (March 27-29, 2017).
- **2-day Workshop on Data Science using Python** (March 9-10, 2018).

Faculty Participation/Paper Presentation in Conferences

- Sachdeva, Monika (2017), “**Taxonomy of Network Layer Dos Attacks in Wireless Sensor Networks**” presented at 2017 Chandigarh, International Conference on Communication, Computing and Networking (ICCCN-2017), NITTTR, Chandigarh, India.
- Kushwaha, Alok (2017), “**A Recent Survey for Human Activity Recognition based on Deep Learning Approach**” presented at 2018 Shimla, Fourth International Conference on Image Information Processing (ICIIP), Shimla, India (Co-author- Dhillon, Jagwinder and Chandani,)
- Sharma, Pooja (2016), “**Effective Image Retrieval Using Polar Cosine Transform and Local Binary Patterns**”, presented at 2016 New Delhi, IEEE India International Conference on Information Processing (IICIP-2016), DTU, New Delhi, India

Faculty Publications:

- Sachdeva, Monika, Kumar, Krishan, Singh, Gurbinder (2016), “**A Comprehensive approach to discriminate DDoS Attack from flash events**”, *Journal of Information Security and Applications (Elsevier)*, Volume 26, Issue 26, 8-22.
- Behal, Sunny, Kumar, Krishan, Sachdeva, Monika (2017), “**Characterizing DDoS Attacks and Flash Events: Review, Research Gaps and Future Directions**”, *Journal of Computer Science Review*, Volume 25, 101-114.
- Kushwaha, Alok, Srivastava, Rajeev (2016), “**Multi-View Human Activity Recognition Based on Silhouette and Uniform Rotation Invariant Local Binary Patterns**”, *Multimedia Systems (Springer)*, Volume 23, Issue 4, 451-467.
- Kushwaha, Alok, Srivastava, Rajeev (2016), “**A Framework for Moving Object Segmentation using Dynamic Background Modeling and Shadow Suppression in Complex Wavelet Domain**”, *Imaging Science Journal*, Volume 64, Issue 5, 267-278.
- Sharma Pooja (2017), “Improved shape matching and retrieval using robust histograms of spatially distributed points and angular radial transform”, *Optik - International Journal for Light and Electron Optics (Elsevier)*, Volume 145, 346-364.
- Gupta, Dinesh, Sidhu, H. J. S., Kumar, G. (2017), “**Performance Analysis of Ant Based Task Scheduling Algorithms in Cloud Environment**”, *International Journal of Computer Engineering and Applications*.
- Gupta, Dinesh, Sidhu, H. J. S., Kumar, G. (2017), “**Comparative Analysis of Task Scheduling Algorithms in Cloud Environment**”, *International Journal of Computer Engineering and Applications*.

- Chahal,Harvinder, Bhasin,Anshu(2017), “**Comparative Investigation of Passive Optical Networks**”,*International Journal of Advanced Technology in Engineering and Science*, Volume 5, Issue 5, 9-15.
- Chahal,Harvinder, Bhasin,Anshu(2017), “**Efficient Resource Management Technique for Performance Improvement in Cloud Computing**”,*Indian Journal of Computer Science and Engineering*, Volume 8, Issue 1,37-43.

Workshops / FDP / Summer School / Winter School / Refresher Course attended:

- Monika Sachdeva Participated in a “**Faculty Development Programme on Machine Learning**” organised by NITTTR, Chandigarh (July 24th -28th, 2017).
- Pooja Sharma, Participated in a “**TEQIP sponsored workshop on Recent Advances in Image and Natural Language Processing**”organised byNIT Jalandhar (2016).
- Pooja Sharma Participated in a“**Faculty Development Programme on Research Methodology and Tools for Data Analysis**”organised by DAV University, Jalandhar (2016).