

One Week Short Term Course on NetSim

10th -14th April 2023

Organized by



Department of Computer Science & Engineering and

Department of Information Technology

National Institute of Technology Srinagar
Hazratbal, Jammu & Kashmir, India

in collaboration with

TETCOS LLP, Bangalore, India

Eligibility

- This program is open to faculty members, research scholars, PG & UG Students of NIT Srinagar.

Registration

- Registration fees = Nil
- Online Registration link and QR code bit.ly/3m7ih2G



Certificates

- E-Certificate will be provided to the participants who will attend the STC on all days.

Venue

- HiTech-V, NIT Srinagar
- Participants may join online as well

About NetSim

NetSim is the industry's leading network simulation software for protocol modelling and simulation, network R & D and defence applications.

It is an end-to-end, full stack, packet level network simulator and emulator, providing researchers with a technology development environment for protocol modelling and network R&D. The behaviour and performance of new protocols and devices can be investigated in a virtual network within NetSim at significantly lower cost and in less time than with hardware prototypes.

Design the network

- Create network scenarios using NetSim's GUI or using XML config files.
- Click and drop devices, links, application etc. into the environment using NetSim's GUI
- Set properties with just a click. Layer-wise parameters can be edited.

Run the simulation

- Run the Discrete Event Simulation (DES) through the GUI or CLI
- Log packet trace and event trace files
- Capture packets using Wireshark

Interface with external software

- MATLAB®
- SIMULINK®
- SUMO
- WIRESHARK
- Python

Analyze the results

- Examine output performance metrics at multiple levels - network, sub network, link, queue, application etc.
- Study a variety of metrics such as throughput, delay, loss, packet error, link utilization etc.
- Interpret metrics using in-built plots and graphs.
- Create pivot tables and charts for visualization.

Develop your own protocol / algorithm

- Extend existing algorithms by modifying NetSim's source C code.
- Create custom protocols using NetSim's simulation API's
- Debug your code (step-in, step-out, step-over, continue) and watch your variables in sync with simulation.



ORGANIZING COMMITTEE

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TOPICS TO BE COVERED

- Introduction to NetSim with demo.
- NetSim Academic Version.
- Introduction to MANETS.
- Introduction to VANETS.
- Introduction to WSN/IoT.
- Introduction to LTE and 5G NR.
- NetSim: Writing custom code.
- File Exchange Projects.
- NetSim Interfacing with Third-Party Tools.

Note: Participants need to bring their own laptops as there will be hands-on demonstration of the covered topics.

CONTACT DETAILS

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