

# Brief Report of National Workshop on Network, Network Simulation & Information Security

[NWNSIS-2014]

24<sup>th</sup> - 29<sup>th</sup> November 2014

National Workshop jointly with Department of Computer Science, Institute of Science & Technology for Advanced Studies & Research (ISTAR) and IEEE Gujarat Section in conjunction with the IEEE ISTAR Student Branch (SBT Code 65201) was organized during 24<sup>th</sup> - 29<sup>th</sup> November 2014 at Computer Science Department, ISTAR, Vallabh Vidyanagar, Gujarat, India inaugurated by the Chief Guest of Inaugural Session **Prof. A.R. Dasgupta**, Formerly Deputy Director, Space Application Centre (SAC), ISRO and presided by **Dr. J. D. Patel**, I/C Secretary, Charutar Vidya Mandal (CVM), Vallabh Vidyanagar at which 45 researchers and faculty members from various states of India from reputed organizations like IIT, BITS Pilani, etc. attended the first of its kind intensive workshop which has been organized that provided practical hands on lab session and tutorials on NS2 Network Simulator, Castalia Simulator, Sensor Network and Information Security.



*[Inaugural of the Workshop on 24<sup>th</sup> November 2014: From Left Dr. Mohit Tahiliani, Dr. Nirbhay Chaubey, Prof. A.R. Dasgupta, Dr. J.D.Patel, Dr. P.M. Udani and Dr. Priya Swaminarayan].*



*[Inaugural of the workshop by lighting the lamp on 24<sup>th</sup> November 2014: From Left Dr. Nirbhay Chaubey, Dr. Mohit Tahiliani, Prof. A.R. Dasgupta, Dr. J.D.Patel, Dr. P.M. Udani, Dr. Priya Swaminarayan and in front Prof. Pritesh Patel]*

**On First Day:** **Dr. Priya Swaminarayan**, Convenor of the workshop welcomed the guests and registered participants. **Dr. Praful Udani**, Director, ISTAR gave the opening remarks for the National Workshop shared his views on the simulation topic and activities going on at ISTAR. **Dr. J. D. Patel**, I/C Secretary, CVM congratulated the organizers for selecting such a relevant topic for deliberation in the national workshop, further, he discussed in length about advancement of simulations in last few years and emphasized that simulations should be carried out under expert of domain and be implemented only after an efficient Model Analysis, otherwise sometimes it becomes dangerous. **Dr. Nirbhay Chaubey**, Course Co-ordinator of the workshop briefed about the course contents and objective of the workshop and also proposed the Vote of Thanks.

**Dr. Mohit Tahiliani**, NITK, Surathkal, Karnataka conducted a special tutorial session on importance of Network Simulation in the workshop. Further, he talked about NS2 Installation and Configuration on Linux, TCL, Simulation Example and conducted hands on lab session followed by other Speaker **Dr. Nirbhay Chaubey** talked on creating and running wireless networks simulations in NS2.



*[Prof. A. R. Dasgupta briefed about the IEEE and its advantage and delivered key note address on "Internet of Things" in Inaugural Opening].*



*[Dr. Mohit Tahiliani, NIT, Surathkal, Karnataka delivered Workshop Tutorial].*



*[Group Photo During Inaugural Opening -NWNSIS-2014].*



*[Dr. Mohit Tahiliani, explaining about how to do a mini Project on Routing Protocol Comparison in MANETs, Using shell scripts for large scale simulations].*



*[Dr. Nirbhay Chaubey talked about how to create a wireless network, generate mobility, creates traffic connection and solving problems during hands on lab session].*

**On Second & Third Day:** The workshop was conducted by Dr. Mohit Tahiliani followed by another speaker **Mr. Pathik Shah**. Dr. Mohit explained about Wireless Network Simulations, Trace File Analysis and Plotting Graph and Designing MANET Scenarios in NS-2, how to create an attacker agent and implementation of black hole attack, Designing Wireless Sensor Network simulations in NS-2 and Designing Underwater Sensor Network Simulations in NS-2. In the afternoon session, Mr. Pathik Shah, Software Engineer, Tata Consultancy Service (TCS) explained about security issues in AODV Routing Protocol and discussed A Novel Approach to Secure AODV Routing Protocol in design of MANETs



*[A view of participants during Hands on Lab Session].*



*[Mr. Pathik Shah explained about security issues in AODV Routing Protocol].*

**On Fourth Day:** **Dr. Sanjay Srivastav**, Professor of DA-IICT, Gandhinagar talked about “Hybrids of VANET and Social Network – Some Research Directions” followed by other speaker **Prof. Vijay Ukani**, Nirma University, Ahmedabad. Prof. Ukani gave introduction of Castalia Simulator and conducted hands on lab session about Installation and Configuration of Castalia Simulator, controlling the simulation runs. Generating results and plotting graphs, developing our own/extending existing MAC, Routing and Application module and Image and Video transmission over simulated environment.



*[Dr. Sanjay Srivastava addressing participants on Hybrids of VANET and Social Network – Some Research Directions].*



*[Prof. Vijay Ukani, Nirma University, Ahmedabad talked on Castalia Simulator].*

**On Fifth Day:** In the morning session, **Dr. Souradyuti Paul**, IIT, Gandhingar talked on “Password cracking and countermeasures” and conducted hands on practical session on Password cracking and computer simulation of password hashing technique. In the afternoon, **Dr. Mehul Raval**, Professor of IET, Ahmedabad University talked on “Digital Watermarking and Steganography Security” followed by lab session.



*[Dr. Souradyuti Paul talked on Password cracking and computer simulation of password hashing technique].*



*[Dr. Mehul Raval addressing participants about Digital Watermarking, Steganography Security].*

**On Sixth Day:** In the morning session, **Dr. Manoj S. Gaur**, Professor of CSE, MNIT, Jaipur talked about “Mobile Platform Security” followed by distinguished speaker **Dr. H.S. Mazumdar**, Head, R&D, DDIT, Nadiad enlighten participants on “Computational Intelligence and Security in Wired/Wireless Networks”.

In the afternoon session, valedictory function was organized. Dr. Praful Udani, Director, ISTAR welcomed the Chief Guest of the function **Dr. Prabhat Ranjan**, Executive Director, TIFAC, New Delhi, invited guests and participants. Dr. Prabhat Ranjan delivered a talk on “Wireless Sensor Networks: Applications for Nation and Society”.

Dr. Nirbhay Chaubey, Course Co-ordinator, NWNSIS-2014 presented six days detailed technical session reports. Certificates and course material were presented to the participants, also written feedback from the participants about the workshop were collected. In their feedback, participants would like to look forward such kind of research oriented workshop to be organized in future.



*[Dr. Prabhat Ranjan, Chief Guest Address during Valedictory Function].*



*[From Left Dr. Mohit Tahiliani, Dr. Nirbhay Chaubey, Dr. .P.M. Udani, Dr. Prabhat Ranjan, Dr. Priya Swaminarayan and Prof. Pritesh Patel]*



*Group Photo During Valedictory Function -NWNSIS-2014*

The participants like Ms. Urmila Mane, YTC, Satara, Maharashtra, Prof. Mayur Vegad, BVM, Vallabh Vidyangar, Gujarat and Prof. Chirag Patel, Faculty of Marwardi Education, Rajkot Gujarat highly appreciated the efforts put-up by the organizing committee member, Charutar Vidya Mandal (CVM), IEEE Gujarat Section and IEEE ISTAR Student Branch Volunteer in their feedback speech.

Prof. Pritesh Patel, Counsellor, IEEE ISTAR Student Branch proposed vote of thanks.

Report prepared by Course Co-ordinator -NWNSIS-2014

Date: 8<sup>th</sup> December 2014