



A Report on TEQIP-III Sponsored - Two Day National Workshop on Network Simulator 3 (ns-3)

On 16th -17th APRIL 2018

**Organized by Computer Engineering Department
BVM Engineering College (An Autonomous Institute)
Vallabh Vidyanagar, Gujarat, India.**

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About CVM

Charutar Vidya Mandal was established in the year 1945 by Shri Bhaikaka and Shri Bhikabhai Saheb as a charitable trust with a prime objective of rural development through education to bring about the social awakening, social upliftment and enrichment. Over the subsequent years, Dr. H M Patel (the first finance minister of India) consolidated the efforts put in by the founders. Various self-financed educational institutions started being established in the areas of Technology, Science and Engineering, Commerce and Management, offering emerging and innovative courses and programs. From 1994 to 2017, Dr. C.L. Patel took over the reins of CVM as the chairman and he not only rejuvenated the ongoing education system but added a modern education campus at New Vallabh Vidyanagar. At present, CVM operates 48 educational Institutions with 45000 students on the rolls from 18 states and 12 countries across the world under the dynamic Chairman Er. Shri Bhikhubhai Patel.

About BVM

Functioning under the umbrella of Charutar Vidya Mandal (CVM), BVM is the first engineering college of Gujarat state established way back in 1948. BVM is the first Autonomous Engineering institute of Gujarat to obtain academic autonomy for all its UG & PG programs, The College is affiliated to the Gujarat Technological University. The Institute has successfully completed prestigious World Bank Assistance Project TEQIP-II of INR 10 crores and further has been awarded with TEQIP-III grant of INR 7 crores. BVM is listed in top 200 Engineering institutes in NIRF ranking 2017.

About TEQIP-III

BVM has selected under TEQIP-III project as a mentor under sub – component 1.3 – Twinning Arrangements to Build Capacity And Improve Performance of Participating Institutes.

About Computer Engineering Department

Computer engineering program commenced in 1991. Department of Computer Engineering is progressing at a rapid pace with the development in terms of infra-structure facilities, upgraded syllabi and learned faculty. Besides offering B. E. (Computer Engineering) it also offers Post Graduation in Computer Engineering. The department is privileged to have a highly experienced faculty.

About the Course

The Network Simulator 3 (ns-3) is fast becoming popular for simulating Wired and Wireless Networks, and is a boon to researchers working in these areas. The course is aimed at enabling the participants to get the exposure and hands on training on ns-3.

Course Contents and expected outcomes

Differences between ns-2 and ns-3, Overview of ns-3 and Structure of a C++ program in ns-3, Simulating point-to-point and CSMA networks in ns-3, Using PyViz for visualizations, Simulating BSS and IBSS in ns-3, Using Wireshark for tracing, Simulating a hidden node problem in ns-3, Using NetAnim for visualizations. The course will be conducted in a hands-on manner. The course intends to give an in-depth idea about the art of network simulation and the capabilities of ns-3 in terms of simulating state-of-the-art network technologies.

Course Contents:

Differences between ns-2 and ns-3

- Overview of ns-3 and Structure of a C++ program in ns-3
- Simulating point-to-point and CSMA networks in ns-3
- Using PyViz for visualizations
- Simulating BSS and IBSS in ns-3
- Using Wireshark for tracing
- Simulating a hidden node problem in ns-3
- Using NetAnim for visualizations

Expert Resource Persons

1. Dr. Mohit P. Tahiliani, Assistant Professor, NITK, Surathkal
2. Ms. Ankita J. Desai, Assistant Professor, CGPIT, UTU, Bardoli.

Participant List

Sr.	Faculty / PG-Student Name	Faculty/PG	Institute
1	Akhilesh Y Ladha	Faculty	Shree Swami Atmanand Saraswati Inst. Of Tech, Surat
2	Sandipkumar Patel	Faculty	CHARUSAT, Changa
3	Nehal Patel	Faculty	CHARUSAT, Changa
4	Amitkumat J Nayak	Faculty	CHARUSAT, Changa
5	Sejal K Haveliwala	Faculty	M M Patel Inst. of Sci. & Research Dept. (M.Sc.) IT, Gandhinagar
6	Nisha Velani (PRV)	Faculty	SVIT, Vasad
7	Bhatt Tejaskumar P (PRV)	Faculty	SVIT, Vasad
8	Dr. Khanna Samrat Vivekand	Faculty	IICT, Indus University, Ahmedabad
9	Dimple R Bharad	Faculty	Atmiya College, Rajkot
10	Gaurang V Lakhani	Faculty	Govt. Polytechnic, Bhuj
11	Suchita Patel (PRV)	Faculty	ISTAR, Vallabh Vidyanagar
12	Dr. Minal Patel	Faculty	ADIT, Vallabh Vidyanagar
13	KeyurKumar Jayantilal Patel	Faculty	ADIT, Vallabh Vidyanagar
14	Prof. Amit H Choksi	Faculty	BVM
15	Dr. Mayur M Vegad	Faculty	BVM
16	Pranay S Patel	Faculty	BVM
17	Parmar Karankumar	PG Student	BVM
18	Obhalia Khusali Harendra	PG Student	BVM
19	Nagariya Maitree	PG Student	BVM
20	Chaudhari Vidhibahen	PG Student	BVM
21	Sindhav Bhumikaben	PG Student	BVM
22	Suthar Diksikumari	PG Student	BVM
23	Kadri Arsala Rizwan	PG Student	BVM
24	Patel Smit Hareshkumar	PG Student	BVM
25	Kaji Kuratulain Bismillah	PG Student	BVM
26	Jetashri Raseshkumar	PG Student	BVM
27	Bhensjaliya Ami	PG Student	BVM
28	Shivanginiben	PG Student	BVM
29	Yatrik Badrikesh Buch	PG Student	BVM
30	Parmar Dharmistha	PG Student	BVM
31	Lichi Upadhyay	PG Student	BVM
32	Nandanawar Sneha Ashok	PG Student	BVM
33	Shah Viral Hiteshkumar	PG Student	BVM
34	Raval Krupali Rajeshkumar	PG Student	BVM

Workshop Schedule

16th April, 2018:

Time	Schedule	Venue
09:00 AM - 10.00 AM	Registration of the participants & Breakfast	Foyer, Computer Engineering Department
10:00 AM - 10.30 AM	Inauguration	Computer Center / Lab 8 / F Block
10.30 AM - 12.00 Noon	Session – 1	Computer Center / Lab 8 / F Block
	Break	
12.10 PM - 01.40 PM	Session – 2	Computer Center / Lab 8 / F Block
01:40 PM - 02:20 PM	Lunch Break	BVM Canteen.
02:20 PM – 03.50 PM	Session – 3	Computer Center / Lab 8 / F Block
	Tea-Break	
04.10 PM - 05.40 PM	Session – 4	Computer Center / Lab 8 / F Block

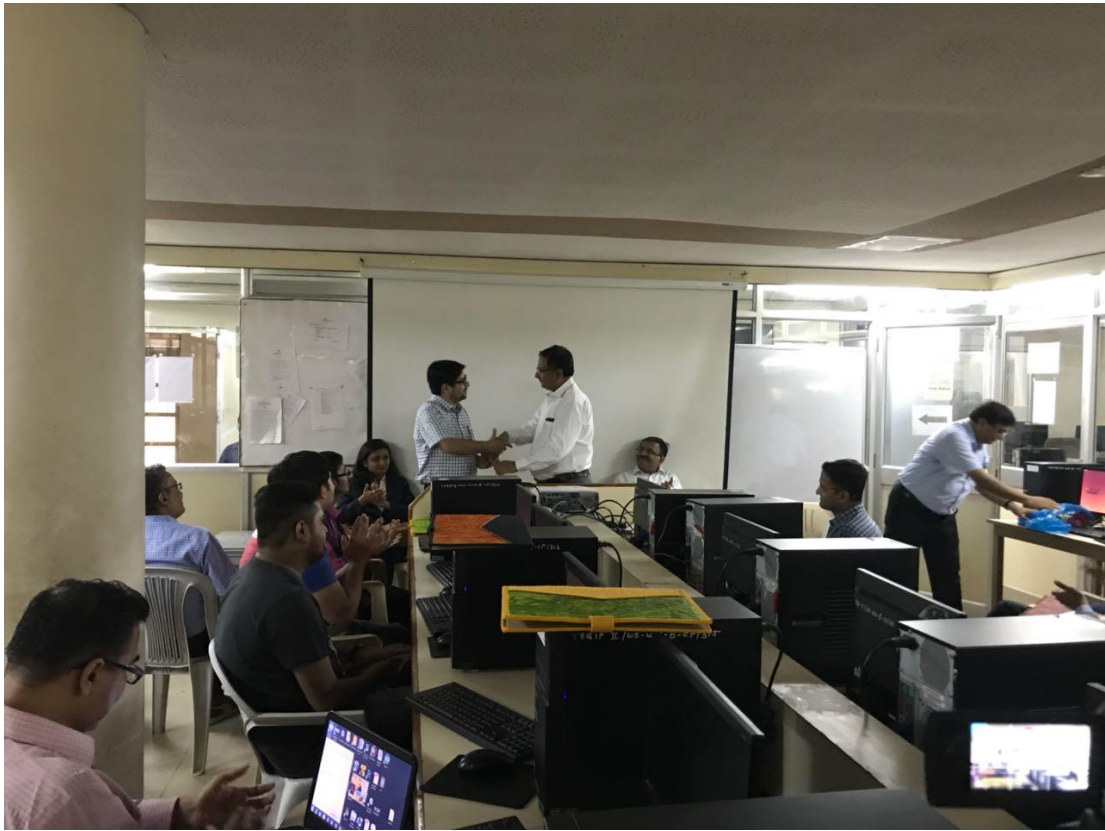
17th April, 2018:

Time	Schedule	Venue
9:30 AM - 10.00 AM	Breakfast	Foyer, Computer Engineering Department
10.00 AM - 11.30 Noon	Session – 1	Computer Center / Lab 8 / F Block
	Break	
11.40 PM - 01.10 PM	Session – 2	Computer Center / Lab 8 / F Block
01:10 PM - 01:50 PM	Lunch Break	BVM Canteen.
01:50 PM – 03.20 PM	Session – 3	Computer Center / Lab 8 / F Block
	Tea-Break	
03.40 PM - 05.10 PM	Session – 4	Computer Center / Lab 8 / F Block
05.10 PM – 05.40 PM	Valedictory	Computer Center / Lab 8 / F Block

Inauguration

At a brief inaugural ceremony, Principal Dr. Indrajit Patel presided over the function attended by the Expert Guest Faculties Dr. Mohit Tahiliani, and Ms. Ankita Desai, Participants of the workshop, TEQIP-III Coordinator Dr. S D Dhiman, and the Head Dr. D G Thakore, Coordinator of the workshop Prof. S A Bakhru and Organizing -team-faculties of Computer Engineering Department. The coordinator of the program, head of the organizing department, the TEQIP-III coordinator Principal Sir and the expert faculties provided brief orientation to the participants about the need for such workshops and for an open source network simulation software.





Workshop sessions:

The expert faculty Dr. Mohit Tahiliani conducted the workshop sessions in a highly simplified and pedagogical manner. The participants could see his thorough authority on the topic and could greatly benefit from the knowledge and skill of the expert speakers Dr. Mohit who was joined by Ms. Ankita Desai, who provided great support in conducting the workshop sessions. Not only that all the intended topics were covered in good detail, but Dr. Mohit also discussed with all the participants, even further topics such as Advanced level BE Projects and ME Dissertations, and quite many of the original contributions made by him and his students towards developing ns-3.

The participants could gain a good insight and practice in working with ns-3 over all such topics as Simulating point-to-point and CSMA networks in ns-3, Simulating BSS and IBSS in ns-3, Simulating a hidden node problem in ns-3, Using Wireshark for tracing, Using PyViz for visualizations, Using NetAnim for visualizations. Towards the end, all the participants appeared at a small quiz which was conducted by the expert speakers.

Valedictory:

The Valedictory function was attended by all the participants and was presided over by Principal Sir, with Training Coordinator, Dr. Dipak Patel, Head of the Department, Coordinators of the workshop and Computer Engineering Department faculties. All the participants were full of praise and satisfaction for the learning provided by for the Workshop. At the end of the valedictory program, certificates were distributed to the participants.





વિદ્યાર્થીઓને નેટવર્ક સિમ્યુલેટરની ઉપયોગિતા વિશે માહિતગાર કરાશે

BVM ખાતે નેટવર્ક સિમ્યુલેટર-3 પર દ્વિ-દિવસીય વર્કશોપનો પ્રારંભ

નવગુજરાત સમય > આણંદ

ચારૂતર વિદ્યામંડળ સંચાલિત બિરલા વિશ્વકર્મા મહાવિદ્યાલય ખાતે ટેક-૩ અંતર્ગત કોમ્પ્યુટર એન્જિનિયરિંગ ડિપાર્ટમેન્ટ દ્વારા નેટવર્ક સિમ્યુલેટર-૩ પર બે દિવસીય વર્કશોપનો પ્રારંભ કરવામાં આવ્યો હતો.

આ પ્રસંગે મુખ્ય અતિથી તરીકે સંસ્થાના પ્રિન્સીપાલ ડૉ.ઈન્દ્રજીત એન.પટેલ, ડૉ.દર્શક ઠાકોરે (હેડ, કોમ્પ્યુટર એન્જિનિયરિંગ), ડૉ.એસ. ડી.ધીમાન (કોર્ડિનેટર, TEQIP-II) ઉપસ્થિત રહ્યા હતા. આ પ્રસંગે સંસ્થાના પ્રિન્સીપાલ ડૉ.ઈન્દ્રજીત એન.પટેલે



નેટવર્ક સિમ્યુલેટરની ઉપયોગિતા વિશે જણાવીને વર્કશોપના આયોજન બદલ અભિનંદન પાઠવ્યા હતા. ડૉ.એસ. ડી.ધીમાને TEQIP-II અંતર્ગત પ્રવૃત્તિ વિશે ખ્યાલ આપ્યો હતો. ડૉ.દર્શક ઠાકોરે હબ એન્ડ સ્પોક મોડલની રીતે કોમ્પ્યુટર

એન્જિનિયરિંગ ડિપાર્ટમેન્ટ ઉપયોગી થઈ રહ્યું છે તેમ જણાવ્યું હતું. પ્રો.સુનિલ બાકરે એ ઓપન સોર્સનું મહત્વ સમજાવ્યું હતું. આ આયોજન બદલ ચારૂતર વિદ્યામંડળના અધ્યક્ષ ભીખુભાઈ પટેલ તથા અન્ય હોદ્દેદારોએ અભિનંદન પાઠવ્યા હતા.

