

A NEWSLETTER OF SFIT VOLUME 4 ISSUE 2 July - December 2014

# **VIPULA RAVATE MAKES SFIT PROUD**

Just within two years of launching the P.G. programme, SFIT shines bright. Ms.Vipula Rawate who is pursuing M.E. in ComputerScience makes us proud by scoring an astonishing 9.82 SGPA and topping the charts with her first year M.E. results! A hearty congratulation to her! She says "I never aimed to top; I just studied, waited for the results and was ready to accept whatever came by". SFIT's discipline and attendance system has in a way helped me to study regularly and achieve this success."



We also acknowledge the contribution she is making to SFIT by teaching our B.E. students. She stresses on the importance of regular studies and advices all the budding M.E.s as well as B.Es to at least give 2 hours a day for studies. The topper has keen interest in

Semantic web which she believes has the potential to change the search engines completely in 20 years. Also, she wants to develop an expert system on medical diagnosis using the same as her final year project. She idolizes Dr. Abdul Kalam Azad and describes her urge to meet her idol by using a funny analogy "I'm as crazy for meeting him as Mr. SRK was for the President in the movie My Name is Khan."





The various sessions organized were as follows:

Objectives, Effectiveness and Quality in Professional / Technical Education by
 Dr. Thomas Mathew

- Vision and Mission (ISO awareness) by Mr. Francis D'souza
- Non-Verbal Communication) by Ms. Bhavi Joshi
- Accreditation Process NBA by Dr. Deepak Jayaswal
- 'Guiding Adolescencs through the period of storm and stress' by Shilpa Gangatirkar (Lecturer, Child Care Department, Shri M. D. Shah Mahila College).
- Effective Communication, Contemporary Teaching and Evaluation by Dr. Geeta Shetty
- Preparing for a lecture, course file, evaluation Techniques' by Mr. Pramod Shanbhag (HOD – INFT)
- Pre-microteaching session was conducted by Ms. Preethi Colaco and Dr.
  Poonam Hemnani.
- Microteaching by Ms. Preethi Colaco

- Building Harmonious Relationships by Sister Shreya
- 'Guiding Ethics in the workplace by Fr. Keith D'souza
- Writing a technical paper by Dr. T.S. Rathore
- Online Tools and Techniques for Research by Mr. Santosh Hulagabali (Librarian, Nagindas Khandwala College of Engineering, Malad)
- How to become an effective teacher by Dr. Prachi Gharpure (Principal, Sardar Patel Institute of Technology, Andheri)

A lecture by Brahma Kumari Sister Shreya was conducted in conjunction with the Staff Meeting on July 9, 2014 followed by lunch.

An Orientation was organized by Mr. Pramod Shanbhag (HOD – INFT) for the subject of Microprocessors (TE CMPN) in our Institute on July 18, 2014. A total of 11 participants attended the orientation followed by a display of books on the subject by Educational Books and Periodicals.

Various Orientation sessions were conducted for the First Year students between July 22 to August 16, 2014. Mr. Albert D'souza (Director – Aldel Educational Trust,



success isn't far away. Amey Borkar. national level.

Believe in yourself. If you have to achieve something in life you have to believe in yourself and have faith that you can do it. Once you are confident about yourself

The above line has been said by one of the best football player in our college-Mr.

He has always loved to play football, be it in college, school or the streets. Anytime and anywhere, give him a ball and he is ready to play the beautiful game. This same passion has encouraged him to play DSO for his junior college KC for which he bagged a silver medal. He has represented SFIT football team at university and

His and certainly one of Indian Football's biggest feat till date has been winning a coveted 3rd place game against Singapore which not only secured a 3rd place in Asia but also got India qualified for the Futsal World Cup and World Championship.

This is the first time in the history of Indian football that India will be playing a Futsal world cup. Bravo!

Amey gets all this inspiration from his role model Steven Gerrard (England and Liverpool FC). He has been watching him play since the time he was in school. Also his parents have supported him and it's because of their support and faith that keeps him going despite of all the hurdles coming through. College and studies takes away most of his time, but he tries his best to keep practicing. Currently his goal is to get a Master's degree and then think about a career in football.

"God gives gifts to everyone, some can write, some can dance. He gave me the skill to play football and I am making the most of it."-Ronaldinho

And certainly Amey is making the most of it.

# LEARNING AND INFORMATION RESOURCE CENTRE

Total Books in the Library (U.G.) = 21903

Total Books in the Library (M.E.) = 1051

Annual Stock Verification was carried out in the month of July 2014.

Updates:

1) A video on Library Resources and facilities was prepared by two of our students -Yogesh Pusarla and Jason Miranda (BE ExTC) and shown to the FE students at the time of Orientation.

2) Mr. Anant G. Yadav (Library Attendant) completed the One Week Training Programme on "Library Operations and Services: New Skills for Library Support Staff" organized from 25th. to 31st December, 2014 at Ramniranjan Jhunjhunwala College, Ghatkopar.

3) Ms. Chinmayee Bhange and Ms. Sucheta Prabhudesai completed an online course on "Archival Management" offered by SNDT Womens' University, Mumbai between April to August 2014.

4) Ms. Chinmayee Bhange was awarded the Online Course Grant for the course on "Fundamentals of Preservation" conducted by ALCTS (Association for Library Collections & Technical Services) - a division of American Library Association.

# MUMBAIKARS TURNED AGLI MUMBAIKARS

Mumbaikars turned Agli Mumbaikars for a social cause. When we picture Mumbai in our minds, in every scene every picture there is filth, dirt and garbage present. None other than Mumbaikars are to be blamed for this lack of civic sense. Keeping this aspect in mind we "Agli Mumbaikars" wish to bring a change that every Mumbaikar expects or dreams of. Our main objective is to beautify our Mumbai and bring awareness among the common public regarding the need to be keep surroundings clean.

Agli Mumbai has been chosen to conduct mass event on cleanliness drive along with Indian Railway's Western railway Mumbai division on 2nd Oct, 2014 on occasion of Gandhi Jayanti involving "Shramdaan" and awareness activities.

# **ORIENTATION TO FIRST YEAR STUDENTS**

Like every year, in July we have our FE orientation programme. It's been the same over the years only with the SFIT family expanding. Ms. Jovita Serrao who was once amongst the students seated then hosted the event. It began with our College Anthem followed by Saraswati Vandana and lighting of the lamp. Bro. Tom, Mr. Albert, Principal A. K. Sen, F.E. Co-ordinator Ms. Michael Ammal addressed our students.



A special address was from a Second year student Ms. Asha Jacob who gave our fresh lot of students a glimpse of SFIT. The students and faculty were then given a rose each. After the break Mr Leslie Rebello who got chocolates for all the students created a friendly environment. The students were then informed about the Library, SFIT Library. They got a virtual tour from the video shown by our very own librarians. And just to make our fresher's aware of SFIT and the fun around there was a SFITians Corner video which was liked by all. Lastly, the students were briefed about the SFIT Chapters.

# **INDEPENDENCE DAY CELEBRATION**

Independence Day was celebrated on 15<sup>th</sup> August as every year with an introspecting speech by Father John Rose (Director, Xavier Institute of Technology). There were cultural performances that enthralled the audience. The students of third year put forward a great show and it was hosted by the then Cultural Secretary Ms. Anupama Jinde.



**CELEBRATION OF TEACHER'S DAY** 

Teacher's Day was celebrated on September 10, 2014 with much fervor. Cultural Programmes added to the festive occasion and games such as Kaun Banega ChocolatePati – 2 had the staff rolling in laughter followed by snacks and personalized gifts.

Student Council members were also introduced on the same day. The following are the members:



From Left to Right: Brugisha Patel - Ladies Representative, Omkar Vaidya) - Technical Secretary, Adarsh Ashok - General Secretary, Sanchita Harlalka - Cultural Secretary, Shravan Rao - Sports Secretary.

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Ms. Joanne Gomes, Ms. Vandana Patil, Ms. Mrinmoyee Mukherjee, Ms. Priti Parab had attended two week STTP on "Control Systems" conducted by IIT, Bombay at SFIT from 2<sup>nd</sup> December, 2014 to 12<sup>th</sup> December, 2014.

# **Student Chapter (ITSA) Activities:**



One day seminar on "Bluemix" was conducted by IBM organized by ITSA for students of IT & CMPN by Mr. Khalid Ziya of Deutsche Bank at SFIT on 2<sup>nd</sup> & 3<sup>rd</sup> March '14.

The ITSA-SFIT had organized two days Industrial visit to C-DAC, Pune on 14<sup>th</sup> & 15<sup>th</sup> September, 2014 for students of IT, CMPN & EXTC.



**Staff & Student Publications** 

# Ms. Nazneen Ansari

Nazneen Ansari, Sushant Patil, "User Interaction Using Expert Top Analysis" in International Journal of Engineering Research & Technology, Vol.3, Issue 8, pp.1369-1374, August 2014

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# **Faculty Achievements/Activities**

- Ms. Vincy Joseph was the workshop coordinator for 2 week IIT workshop on "Cyber Security" from 10th July 2014 to 20th July 2014
- Mr. R. K. Shende, Ms. Kavita Sonawane, Mr. Shamsuddin Khan, Ms. Dakshata Panchal, Ms. Pradnya Rane, Ms. Jayashri Mittal, Ms. Safa Hamdare attended 2 week IIT workshop on "Cyber Security" from 10th July 2014 to 20th July 2014
- Safa Hamdare got Research Grant from Mumbai University in the Oct 2014 for the Project Title "An Adaptive Evaluation System to Test Students' Caliber using Item Response Theory".
- Ms. Nidhi Gaur, Dr. Vikram Shete attended ISTE Approved one week STTP on "Linux Network Programming", from 15th-19th December 2014 at TSEC, Mumbai.

# **Student Achievements/Activities**

- The following students of CMPN Department are doing their final year projects with Persistent Systems Ltd: Ms. Yasha Ballal, Ms. Tanya Emmatty, Ms. Jeni Joe, Mr. Nigel Fernandes and Ms. Rhea Alexander
- The final year result of CMPN Dept for 2014-2015 batches was 96.45% with 54 students passing with distinction. Congratulations to all the students.
- The M.E CMPN Sem II (2014-2015 batch) result was 100%

Author(s)	Title of the paper	Journal /	Month and	Impact	
name		Conference title,	Year of	Factor / ISBN	
		Vol., Issue No.,	Publication	No./	
Contraction of the		Page Nos.		ISSN No.	
Bidisha Roy,	EFFICIENT	International	August-2014	Impact	
Mudra Joshi	PROCESSING OF	Journal of Computer		Factor: 8.53	
	AJAX DATA	Engineering &		ISSN Print	
	USING MINING	Technology		: 0976 –	
	ALGORITHMS	(IJCET), Volume 5,		6367 <b>IS</b>	
		Issue 8 (2014)		SN	
				<b>Online:</b> 0976 –	
				6375	
Bidisha Roy,	Efficient	International	December		
Mudra Joshi	Processing of AJAX	Conference on	2014	1777 188 188	
	Data Using	Advances in			
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	Approach	Information	100		
		Technology			
Mudra Doshi	Proposed	International	August-2014	ISSN 2250-	
and Anuradha	Framework for	Conference on		2459 (Online)	

# **Publications**

G.	Semantic Web Services	Advances in Communication and Computing Technologies - 2014		
Priyanka Patil , Anuradha G. , Dr A. K. Sen	Recommendation on Efficient Data Extraction for Web Data	International Journal of Engineering Research and Technology	July-2014	Vol. 3 - Issue 7 (July - 2014) e- ISSN: 2278- 0181
Bidisha Roy, Prajyoti Lopes	Action Based Rational Recommendation Using Web Usage Mining	International Conference on Advances in Computing and Information Technology	December 2014	
Monalisa Kini, Shamsuddin S. Khan, Kavita Sonawane	Secured Authentication Using Mobile Phone as Security Token	International Journal of Scientific & Engineering Research(IJSER), Volume 5, , Issue 7,	July-2014	ISSN 2229- 5518
Aashish Jagdale, Shamsuddin Khan, Kavita Sonawane	Data Mining and Data Pre-processing for Big Data	International Journal of Scientific & Engineering Research(IJSER), Volume 5, Issue 7,	July-2014	ISSN 2229- 5518
Brinal Colaco, Shamsuddin Khan	Privacy Preserving Data Mining for Social Networks	International Journal of Engineering Research and Technology(IJERT), Volume. 3, Issue. 08,	August - 2014	ISSN 2278- 0181
Nikhil Gajra, Shamsuddin Khan	PRIVATE CLOUD DATA SECURITY: SECURED USER AUTHENTICATION BY USING ENHANCED HYBRID ALGORITHMS	International Journal of Computer Engineering &Technology (IJCET), , Volume 5, Issue 8, pp. 80-87	August - 2014	ISSN 2229-      5518      ISSN 2278-      0181      ISSN 0976 -      6367(Print),      ISSN 0976 -      6375(Online)      C.NO/ICEC      SIT/ERKN/      05/10/2102      ISSN 2278-      0181
Elizabeth Gorge, Shamsuddin Khan	Prediction of Taxi-out time using a noval Q-learning approach	International Conference on Electronics, Computer Science and Information Technology (ICECSIT-2014	5th October 2014	C.NO/ICEC SIT/ERKN/ 05/10/2102
Nathan D'lima, Shamsuddin S. Khan	FOREX Rate Prediction using A Hybrid System	International Journal of Engineering Research and Technology(IJERT), Volume. 3, Issue. 11,	November 2014	ISSN 2278- 0181

Foram Shah, Shamsuddin S. Khan	Review on usage control enforcement	International Journal of Engineering Research and Technology(IJERT), Volume. 3, Issue. 11,	November 2014	ISSN 22 0181
	Semin	CSI- SFIT ar on Technical Paper	· Presentation	
SFIT, 8th C	Oct. 2014, Wednesday			
A seminar	was organized by the CS	I on 'Technical paper p	resentation', condu	cted by the colle
Dr. Vikram She	ete. The seminar started	at 3:15 PM at the colleg	e assembly hall. M	ajority of the
participants we	ere students from the Thin	rd year, while a few firs	at and second year s	students also sho
totaling up to 2	4 students.			
The point of	of focus for the seminar v	was to answer the basic	questions all stude	nts tend to have
	t a paper? What topic a p			
	ikram started off the sem			
simple stair ste	p diagram. Today we are	e at the initial step of the	e staircase and our	research is the f
that determines	s our position tomorrow.			
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	scussed were the reasons			
	out their social responsib			
	ted this point by showing		v we research perso	onally about alm
anything like th	ne restaurants reviews or	even a trip plan.		
After this the se	ession focused on 'With	whom should we publis	sh a paper?' Here D	Dr. Vikram discu
brief about diff	erent paper formats such	as ACM, IEEE, IETE	among others and a	llso mentioned 1
differences bet	ween a journal and a con	ference.		
Lastly some lin	iks were provided for the	e eager learner so as to h	nelp him get access	to online conte
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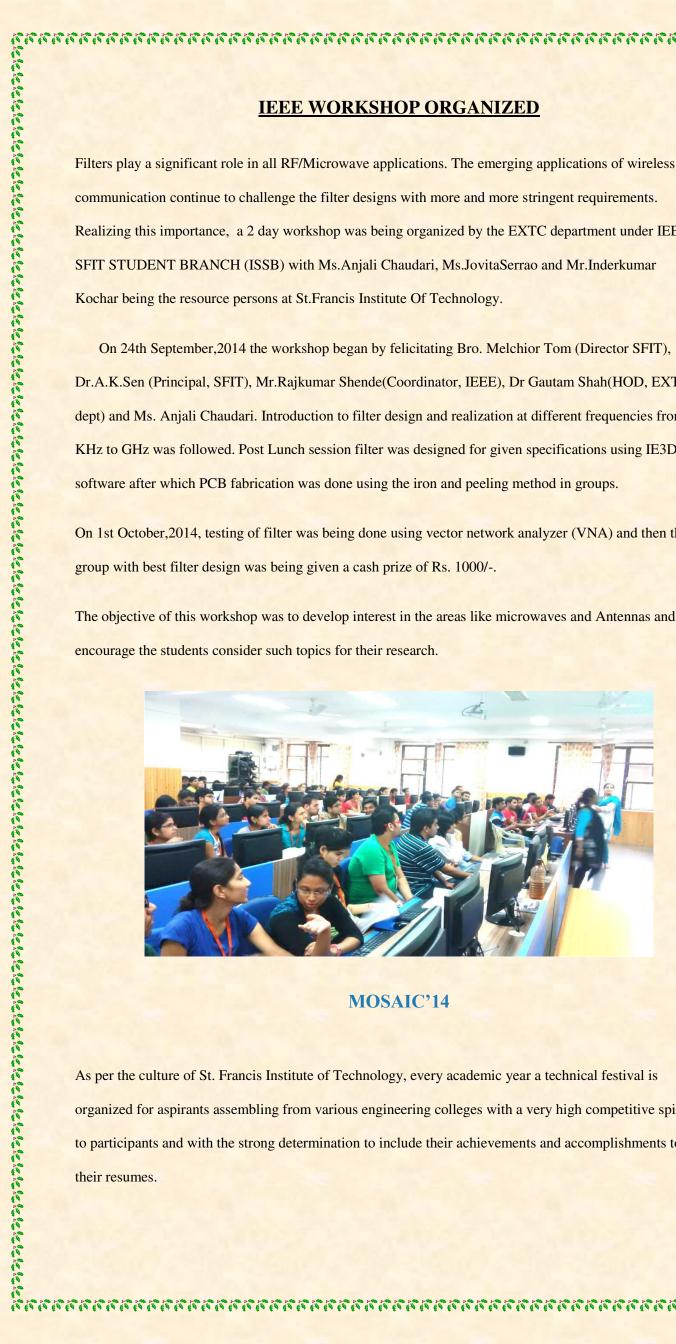


Filters play a significant role in all RF/Microwave applications. The emerging applications of wireless Realizing this importance, a 2 day workshop was being organized by the EXTC department under IEEE

Dr.A.K.Sen (Principal, SFIT), Mr.Rajkumar Shende(Coordinator, IEEE), Dr Gautam Shah(HOD, EXTC dept) and Ms. Anjali Chaudari. Introduction to filter design and realization at different frequencies from KHz to GHz was followed. Post Lunch session filter was designed for given specifications using IE3D

On 1st October, 2014, testing of filter was being done using vector network analyzer (VNA) and then the

The objective of this workshop was to develop interest in the areas like microwaves and Antennas and



organized for aspirants assembling from various engineering colleges with a very high competitive spirit to participants and with the strong determination to include their achievements and accomplishments to





# **TRAINING & PLACEMENT ACTIVITIES**

- TCS Industry Expert Briefing about IT industry status for BE Sem VII students 12th June 2014.
- TPO briefing to ME 2nd year students 12th June 2014
- Industry expert CMC conducted workshop on Bigdata etc. 17th June 2014
- Infosys Campus Connect was completed successfully in 4 batches 24th June to 6th July 2014. Certificates of completion received from Infosys and distributed to the students.
- TCS TPO Meet 30th June 2014 attended
- Infosys Inspiration 2020 successfully completed with 75 students participants and 3 faculty participants June 2014. Prizes won by the faculties.
- System in place Higher Studies (India, Abroad) register of students 2014-15 June 2014
- A technical briefing was conducted by Indus Towers about Networking & Telecommunication Industries Expert for VODAFONE/AIRTEL. Students and a few faculty members attended the same June 2014
- Training on Aptitude Tests, GD was successfully conducted for BE Sem VII students by external experts 5th July onwards.
- Training on Communication Skills/Soft Skills was successfully conducted for BE Sem VII & TE Sem V students by external experts from IMS 7th July onwards.
- Training on Advance Technical Skills was successfully conducted by external experts 8th & 9th July 2014 for BE Sem VII students.
- TPO conducted Pre Placement Talk to BE EXTC Students to boost their morale for IT industry 24th July 2014
- Briefing session on Internship at US and Overseas Scholarship Programmes in reputed universities was conducted by Kareer Krafter for Pass Out Batch 2014 25th July 2014
- L&T Infotech TPO Meet 31st July 2014 attended
- 2 students completed internship at ONGC July 2014
- Briefing session on Internship at US and Overseas Scholarship Programmes in reputed universities was conducted by Kareer Krafter for BE Sem VII students was conducted 2nd August 2014
- MTNL for short training module on advance area for TE & BE (EXTC) students 5th August 2014. MTNL GM Visited in this training
- TPO CII meeting completed 7th August 2014

- 45 students completed Internship (Online) with WeChat. Internship duration was from 18th August 2014 to 17th September 2014. Certificates of completion and stipends received from WeChat and distributed to the students.
- Successfully conducted Mock Online Test in lines with TCS 6th September 2014 & in lines with Capgemini and other corporates 14th September 2014 by external experts
- Briefing session on Internship at US and Overseas Scholarship Programmes in reputed universities was again conducted by Kareer Krafter for BE Sem VII students was conducted 6th September 2014
- Briefing session on GRE exams & Overseas higher studies was conducted by external experts for SE & TE students 17th September 2014.
- TCS Codevita Competition completed with 89 students participants September 2014.
- Infosys Aspiration Competition successfully completed with 24 students participants -September 2014
- R&D projects for PG/ Faculties (Team Members 3 nos) in computer field industries Informos/ Pune & MOU made by us. Project started in Sept 2014. Work is in full Progress.
- Briefing session on GRE exams & Overseas higher studies was conducted by external experts 10th November 2014.
- Setting up of Intel Excellence Laboratory in our college. Contract is under discussion and in advance stage. Signed MOU in November 2014.for setting lab in SFIT
- Association for ROBOTICS carried forward with JG ROBOTICS, Mumbai who will support us 3D PRINTER technology/training of students /internship & design of one product free of cost. MOU is being drawn for total association



Plans Ahead...

RECRUITMENT DRIVE—PHASE-1-SEPT & OCT 2014 VISIT ARRANGED Recruitment leaders COS 6nos -TCS, CAPGEMINI,L&T INFOTECH, PERSISTENT, IGATE, NEEBAL TECH

152 nos from 2014-15 batch is already recruited.

Two shipping industries Pheonix & Westline Shipping Services inducted to our college & first time visit for recruitment 2014-15 batch in November 2014

RECRUITMENT DRIVE-PHASE-2- 4 NOS COS VISIT ARRANGED -Shipping industries PHEONIX SEA SERVICES, WEST LINE SHIPPING, CACTUS COMMUNICATION, CLOUD FRONT TECH during 11th to 18th Nov 2014.

RECRUITMENT DRIVE-PHASE-3 will start in Dec/Jan. Cos in pipeline appointment taken to visit after exam in(16th---19th) Dec 2014/Jan 2015-QUINOX, MINDCRAFT SOFTWARE, Infinite Computing System, Monster College Campus & many others

INFOSYS—Campus Connect Training Program - MOU ending in DEC 2014 have been renewed & approved by INFOSYS. MOU SIGNED IN Nov 2014 FOR NEXT 2 YEARS UPTO Dec 2016 – Approval from Infosys under process

19th —24th Dec 2014(Aptitude & technical& communication-BEunplaced/-TE/SE & 5th Jan to 7th Jan 2015(campus konnect) - BREAK AFTER EXAM

BE unplaced eligible students approx.100 nos APTITUDE SKILLS - 3 DAYS-external experts & optional

TE-VI Sem students-open for all (one area is compulsory) --- APTITUDE SKILLS & BASIC TECHNICAL TRAINING (total 4 days)—external experts

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# CITIZENS SEMINAR SENIOR FOR FOR

The seminar on 17th September, Wednesday, was on the Internet Access, basic use of Microsoft Word and smart-gadgets. This seminar was entirely conducted by students from Second and Third year. 30 volunteers were present for helping the senior citizens. It was held in the Computer Center on the 1st





floor of the Institution. 35members of the Dada Dadi Park attended the seminar.



The seminar started at 3:00 p.m. with the basics of Internet access, followed by booking Railway tickets online and online bill payment. A group of three students; Stanley George, Ruchi Bhuta and Adwait More from TE CMPN A conducted this

session. Every senior citizen had a computer for themselves and was assisted by a volunteer. The session lasted for 30 minutes.



It was followed by the basics of Microsoft Word like changing fonts, styles and sizes of texts, saving documents, adding tables to documents, etc. A group of three students; Pooja Ekbote from TE CMPN A, Anu Abraham from TE IT B and Michelle Alva from SE CMPN A conducted this session. This session was wrapped up in 30 minutes.



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Angels' Club of St. Francis Institute of Technology organized a seminar for the senior citizens of Dada Dadi Park, LIC Colony, Borivli. The seminar was conducted on 2 days, 2 hours on each day. On the 16th of September (Day-1), the subject of the seminar was 'Healthy Diet', which was conducted in the Seminar Hall on the 1st floor of the Institution. 35 members of the Dada Dadi Park attended the seminar.



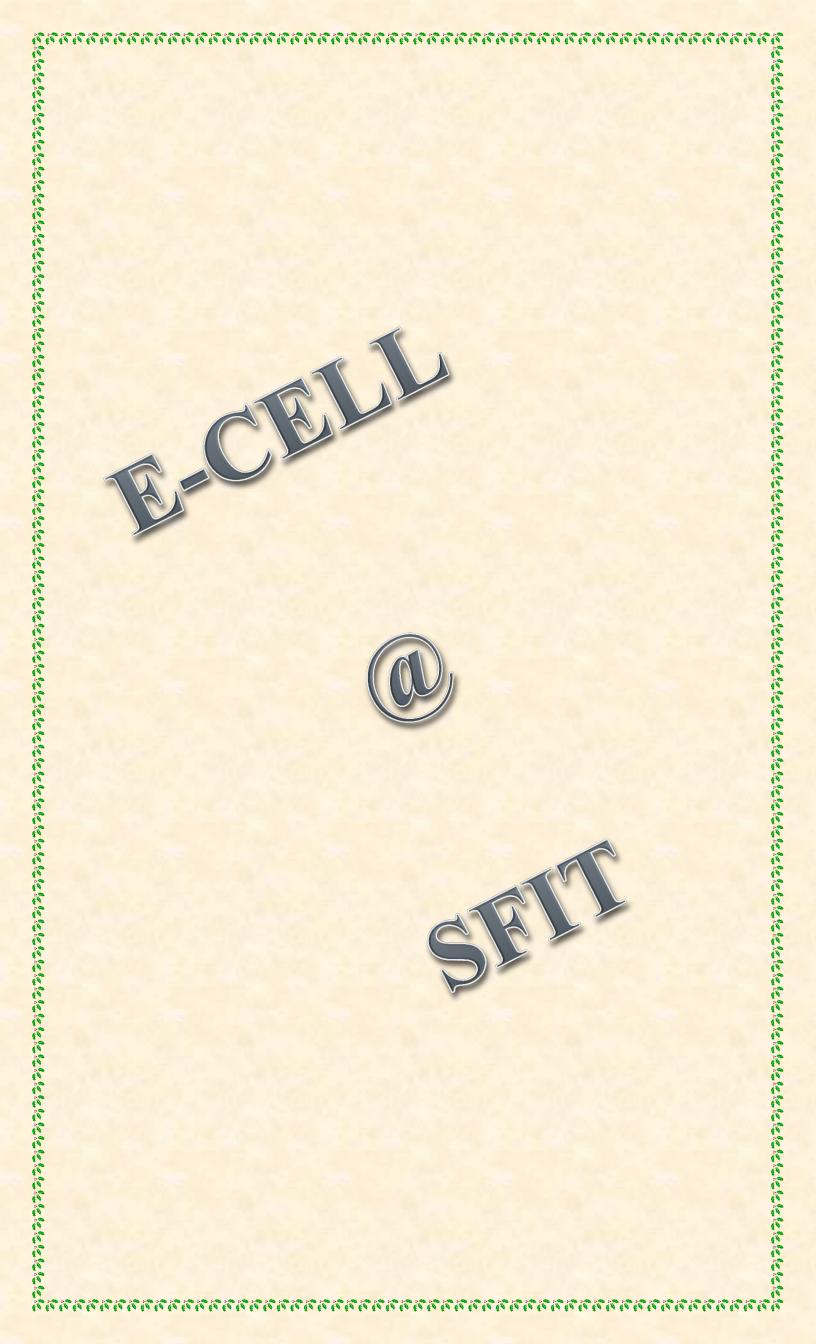
Chef Mr.Sudhir Pai gave a talk on the subject, followed by Dietician Ms. Faiza Jummal. Mr. Sudhir Pai is Executive Chef at Holiday Inn Mumbai International Airport. The Director of the Institution, Bro. Tom Melchior welcomed the Chef by presenting him with a token of appreciation. Mr. Sudhir Pai was accompanied by three of his colleagues, Mr. Luke Rodriques, Mr. Vasant Khot and Mr. Niranjan Gooduru. He talked about food pyramid, water intake, juices benefits, juice gylcemix index, herbs and styles of cooking aided by a PowerPoint Presentation. The presentation was followed by an interactive session wherein he answered to a lot of the queries raised by the senior citizens. He ended his session with a demonstration of the recipes of veg salad and grilled vegetables. 





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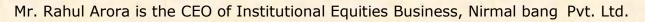
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Prior to this he was one of the main catalysts, as a Stock Editor, for the creation of the Bloomberg-UTV Channel, and was also an Anchor and Senior Research Analyst for CNBC-TV18, and has subsequently appeared as an expert consultant on

television several times. His profile and additional details may be found at

http://www.moneycontrol.com/elite/profile/rahul-arora-3054.html

http://en.wikipedia.org/wiki/Rahul\_Arora

# Hands-on Entrepreneurship Workshop hosted by SFIT E-Cell conducted by NTA in association with IIM-Ahmedabad on 25/10/14.

This workshop was hosted by the SFIT E-Cell in the SFIMAR Assembly Hall, and was conducted by the Nurture Talent Academy in association with IIM-Ahmedabad. It comprised of several detailed sections including Idea Generation, Business-Plan Creation, Marketing, Finance, Intellectual Property and more. It also served as a preparatory workshop for the international B-Plan Generation competition called 'Masterplan IIM-A' that would be held by IIM-A as a part of their fest Confluence 2014.

The workshop saw an attendance of **<u>62 students</u>** that included 31 SFIMAR Students, 18 SFIT Students, and 13 students from various other colleges from places as far as Ahmedabad to Gujarat.





To stimulate faculty development, SFIT had sponsored Ms Anjali Chaudhari (Assistant Professor, EXTC Department), Mr Inderkumar Kochar (AssistantProfessor, EXTC Department) and Mr Chetan Mishra (Student, ME EXTC) for a two week certified course on "High Frequency Structure Simulator (HFSS)", a simulator, widely used for research in microwaves / RF / electromagnetics, held at International Centre

<u>About HFSS:</u>HFSS is a commercial finite element method solver for electromagnetic structures. The acronym originally stood for high frequency structural simulator. It is one of several commercial tools used for antenna design, and the design of complex RF electronic circuit elements including filters, transmission lines, and packaging.

<u>Course Structure</u>: The first week consisted of theory, simulation and analysis of different high frequency structures and the second week was based on designing, optimizing, fabricating and testing of the antenna.

<u>Work done during the course:</u> The course began with the introduction to Microwave Remote sensing and its applications followed by the designing and simulation of E Plane Tee, H Plane Tee and Magic Tee.

Various parameters of the mentioned microwave components were studied which includes 3 D Model of the structure, Assignment of Wave Port, Field Distributions (E plane and H Plane) VSWR Plot, Radiation Pattern, Gain and Directivity. The obtained output was verified with the available theoretical results.

In addition to Microwave components, Design and analysis of others structures like Dipole antenna, Rectangular Patch antenna with inset feed and coaxial feed, Cavity Resonator, Horn Antenna and Bandpass filters was done and the results for the same were observed and interpreted.

Optimetrics is one of the important feature which is loaded in HFSS wherein, various parameters to be varied can be fed at the same time for different frequency range which other simulators don't have. The results for the same can be observed in one graph which makes it very easy to pick up the optimum structure. An exercise on optimetrics was given to us based on Inset feed rectangular patch antenna where we had to design the structure first theoretically and then simulate and optimize. The results for the same were noted.

The optimized structure was fabricated using the ironing method and then tested. Radiation pattern was obtained using the turn table method and the VSWR plot was measured using the test bench and the VSWR meter. We could also measure the amount of Power transmitted by the antenna as ICRS had the facility of signal generator. Thus the gain of the fabricated antenna was calculated and measured.

**<u>Course Outcome</u>**: This course helped us in learning a simulator which would be useful for us to analyze all high frequency structures which would help in deeper understanding of the operation of the same.



