ST. FRANCIS INSTITUTE OF TECHNOLOGY

BORIVALI WEST, MUMBAI

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BITS-N-BYTES

(For Internal Circulation Only)

JULY TO DECEMBER 2017

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MESSAGE FROM THE PRINCIPAL

It gives me immense pleasure to present to you a new issue of Bits-N-Bytes. As we have completed one semester successfully and are on the verge of a new semester, I would like to congratulate all the staff and students for their various achievements!

SFIT has an ambitious tradition of Faculty Induction Programme for the last fifteen years and I am proud to carry the legacy forward this year too. We had numerous resource persons who shared their expertise with the novice faculties and helped in their smooth transition from a teacher to an effective mentor.

Inauguration of NEN Entrepreneurship Courses was a major event. Our E-Cell in conjunction with the National Entrepreneurship Network (NEN) provides a platform for industry -student/faculty interaction. SFIT has been empaneled under the Pradhan Mantri Yuva Yojna, under which we will become a center for Entrepreneurship education courses to SFIT Students and to the surrounding communities. A number of activities are conducted like E-Cell Day, workshops for students on teamwork, making the best use of available resources, out-of-the-box thinking etc. We were proud to host AICTE-ISTE Approved STTP on Applications of Mathematics in Engineering and Research and AICTE sponsored *STTP* on Analytical Essentials & Tools in *Applied Research* this semester.

More exciting events are in the pipeline for the approaching semester such as IRIS, Pragati and Unnati 2018. ….

Dr. Sincy George

Faculty Induction Programme 2017

"A job well done today is the best preparation for tomorrow."

-Shiv Khera

The journey of Faculty Induction Programme 2017 began on Monday, 3 July 2017 with the Inaugural function. The very first session of Day 1 conducted by Ms. Shilpa Gangatirkar, focussed on understanding adolescent behaviour and positive handling of the same. The second session was the 'Micro-teaching' conducted by Ms. Preethi Colaco. In this session, the practical details of pedagogy were explained and it laid the foundation for their lecture performance.

On Day 2, Tuesday, 4 July 2017 we began with a session on Accreditation and Quality Assurance by Dr. Deepak Jayswal. The participants were introduced to aspects that helped them know more about SFIT, its various programmes, challenges in achieving an accreditation and the important role of faculty in getting the same. Our Principal, Dr. Sincy George, conducted the second session. The participants were acquainted to concepts of programme outcomes and course outcomes. The session helped them understand the importance of performance mapping, performance of not only the students but also that of the teachers for more effective teaching learning process. The third session by Dr. C. Hariprasad, introduced the participants to the course file and its various elements highlighting importance of detailed planning for fruitful execution of sessions and as a tool that offers much required reference to new or even fellow faculty members. The fourth session by Dr. Kevin Noronha was based on research prospects and funding agencies. Thus, guiding the participants in the direction of research and the unexplored opportunities that they could utilize.

Day 3 of FIP, Wednesday 5 July 2017 was a day of performance. Ms. Preethi Colaco conducted the post micro teaching session. The participants took the stage with well-planned and prepared content to deliver their lectures. Feedback from not only the Resource person but also from their peers helped them identify their strengths and areas that they could work on.

Day 4, Thursday 6 July 2017 was a day filled with team spirit. We began with an activity-based session on Team building. Our Resource person, Mr. Hugo D'Souza by using effective analogies, brain storming sessions and interesting activities, covered some of the most essential aspects of team behaviour.   Dr. Geeta Shetty conducted the evening sessions to cover important aspects of communication skills and contemporary teaching and evaluation. Through this session, participants understood the details that need to paid attention to while designing, analysing and executing evaluation techniques.

Day 5, Friday, 7 July 2017 started on a serene note. Sister Shreya conducted the session on 'Stress Management' guiding participants to use their inner strength and positivity to conquer the negativities. Our second session by Dr. C. Hariprasad, elaborated specifically on the growth opportunities under Mumbai University providing guidance to participants in that regard. Ms. Deepa Panakkal conducted the final session of FIP. It was about developing a teaching persona, where in various aspects and factors of a teacher's personality were discussed using case studies and interesting analogies. The programme concluded with the valedictory function.

Altogether, we believe Faculty Induction Programme 2017 touched upon various aspects that add to the effectiveness of teaching learning process, growth of a teacher and through that benefit of the students. With the constant encouragement and support of our respected Director, Bro Jose Thuruthiyil and our Principal, Dr. Sincy George, expertise of our Resource persons, colleagues who wished us well, sincere efforts from the teaching and non-teaching members of the organizing committee and the enthusiasm of our participants, we were able to make this FIP 2017 a success.

NEN Inauguration

NEN Entrepreneurship course was inaugurated on 15th July, 2017 in our Institute.

National Entrepreneurship Network (NEN) inspires, educates and supports student entrepreneurs, startups and SMEs for creating high-value jobs in India, Indonesia, Malaysia, Philippines, Kenya and Mexico, operating in association with governments, corporates, mentors, investors and educational institutes.

 NEN Student Entrepreneurship Programs inspire, educate and skill young entrepreneurs:

· Cloud based Learn Wise platform

· Wadhwani E-Cells on campus

· Campus Companies

· Networking on wfnen.org

NEN Entrepreneurship Support Programs through expert resources – investors, mentors, educators & coaches. It Operates on;

· Learn Wise platform

· Mentor Wise platform

· Fund Wise platform

The course consists of 7 modules. Up to module 103 are conducted in the campus.

WFNEN 100- Orientation in Entrepreneurship

WFNEN101 – Basic program in Entrepreneurship

WFNEN102 - Intermediate program in Entrepreneurship

WFNEN103 – Advanced program in Entrepreneurship.

WFNEN104, WFNEN105 AND WFNEN106 will be conducted outside the college.

These courses are conducted along the regular college, as co-circular activity.

These courses will help our students:-

- ➢ To experience the world of entrepreneurship through fun activities.
- ➢ Provide a platform for students to learn entrepreneurial skills.
- ➢ Enable students to become entrepreneurial leaders who are focused on business opportunities and value creation.
- ➢ Empower students with necessary tools and guidance to leverage their entrepreneurship abilities.
- ➢ Provides networking opportunities with networks and resources in the business world.
- ➢ Provides networking opportunities with subject matter experts, angel investors, CEOs of organizations including startups, and alumni members while still in college.

Happy Birthday Brother Jose T.!!!

We the SFITians at St. Francis Institute of Technology celebrated Our Respected Director's Bro. Jose's Birthday with a delightful heart through a special gathering to wish him a very happy long life and prayed Almighty for his success & a life filled with happiness and prosperity!

Toward ISO 9001:2015 Certification…….

An Awareness Program for ISO 9001:2015 version and Training Program for Internal Auditors and Process Owners were organized by Mr. Francis D'souza (ISO-MR) on 29th July, 2017 and 5th August, 2017 respectively. Mr. Mandar Pandit was the Resource Person.

Mr. Mandar Pandit is the Owner-Director of ASPM Consulting (www.aspmconsulting.com). He is a certified Lead Auditor for ISO 9001, ISO 14001 & OHSAS 18001 along with a Master Black Belt in Six Sigma.
Mr. Pandit trained a team of Internal Auditors for a smooth migration from the current version to ISO 9001:2015.

ORIENTATION PROGRAMME: WELCOMING NEW STUDENTS

Saint Francis Institute of Technology organized an orientation programme for the newly admitted F.E students at the institute premises on 12 August 2017. The major objective of the programme was to make the parents and students aware of the academic aspects of the course, the rules and regulations of the Institute and ensuring parental participation in monitoring the performance and progress of the students. The programme was inaugurated with the lighting of the lamp by the Mr. Albert Dsouza, Mr. Augustine Kurias followed by many dignitaries of the college.

Our Director – Bro. Jose T. welcomed parents and students, while delivering a speech on the occasion and said that it was not the events but the attitude that caused success. One third of what constitutes a person is his genetic inheritance; another one third comes from the kind of upbringing he /she receives and the remaining one third from one's own self. He also stressed the importance of dedication to one's profession and the need to have proper planning before taking up and implementing any project.

An introduction of all the FE faculties was done where all the faculties were introduced with their particular subjects to the parents and students.

Mr. Albert Dsouza and Mr. Augustine Kurias addressed students and parents by briefing them more about the institute. Mr.Albert Dsouza mentioned that although India is developing at a very fast pace and has individuals with abundant technical skills; there is a wide necessity to produce good quality products. For the same Mr. Augustine Kurias emphasized on the renowned 'Make in India' project and motivated the students for the same.

Our principal – Dr. Sincy George mentioned that although a large number of engineers are produced in India every year, a lesser number of engineers turn into professionals. She also explained how Saint Francis Engineering College conducts the Industry-Institute Interaction program to enhance its students to become world class professionals. She added that, to grow into a successful professional, an individual needs to have good leadership qualities, excellent communication skills, stress bearing capacity, innovative ideas and self-confidence. Saint Francis Engineering College organizes various seminars and workshops to impart these skills to its students. The Principal ended by forwarding best wishes and motivation to all the newly-arriving students at the Institute.

Dr.Poonam Hemnani, the FE Coordinator brought to light by briefing the students about the rules and regulations of the institute and requested the students and parents to understand and abide by the institutional rules and norms.

A vote of thanks was proposed by Asst.Prof Mr. Kevin Dsouza.

The program ended by creating a significant impact on the students of the college and motivating them to achieve great heights.

FE Faculty Achievements

Asst. Prof.Sunil R. Pansare	Presented a paper on COMPARATIVE STUDY ON DETECTION OF INCLINED EDGE CRACK USING STATIC DEFLECTION MEASUREMENTS AND NATURAL FREQUENCIES at 24th International Congress on Sound and Vibration, London, UK, 23-27 July 2017
Asst. Prof. Arti Bhatnagar	Participated in IEEE Sponsored National System Conference on "Super Intelligent Machines And Man" organised at "Dayalbagh Educational Institute" Agra 01-03 Dec 17

Asst. Prof. Mohammad Faiz A.	Completed the 8 weeks NPTEL – IIT certified Online Course on Mathematics during August - September 2017
Asst. Prof. Deepa Panakkal	Completed the 8 weeks NPTEL – IIT certified Online Course on Communication & Soft skills during August - September 2017

AICTE-ISTE Approved STTP on Applications of Mathematics in Engineering and Research

The idea behind this one week AICTE-ISTE approved program on "Applications of Mathematics in Engineering and Research" was to keep in mind the learners i.e. our students and teachers perspective. So the sessions were planned accordingly with guidance and support of our principal.

We had in total 28 registrations. Faculties from D.J.Sanghvi College of Engineering, V.E.S. INSTITUTE OF TECHNOLOGY, K. J. Somaiya College of Engineering, MCT'S RAGIV GANDHI INSTITUTE OF TECHNOLOGY, Shree L R Tiwari College of Engineering, Dr. Babasaheb Ambedkar Technological University, A.C.Patil collage of Engineering, Vidyavardini College, St. John College of Engineering, Mukesh Patel School of Technology,Management & Engineering, A.P. Shah Institute of Technology and St. Francis Institute of Technology.

On the very First day i.e. 1st of July after the inauguration we had session on Mathematics for data analysis and machine learning where importance of mathematics was emphasized more and examples from our Day to day lives were given. Afternoon we had sessions on Introduction to Latex followed by hands on experience on Latex.

On the second day i.e. 3rd of July we had a morning sessions on "Linear Algebra and its Applications" where how to work on different topics in Linear Algebra and its applications were discussed. In afternoon we had practical sessions on Scilab where how to write the codes to solve mathematical problems were discussed and simultaneously participants also could execute it .

On the third day i.e. 4th of July we had session on "Techniques to Solve Non Linear Optimization Programming" in which different types of optimization were discussed and Lagrange Multiplier method was elaborated in detail. Followed by a session on "Non Linear Optimization in Electrical Engineering" where practical examples were dealt. We also had an Introduction session to R-programming followed by hands on.

On the fourth day i.e. 5th of July we had session on Applications of Laplace Transform where how and when to apply Laplace and other transforms in electrical circuits were discussed. Afternoon we had session on Probabilistic modelling followed by hands on experience of making mathematical presentations using latex.

And on the final day i.e. 6th of July we had morning session on Mathematics behind Google where the page rank method used by Google was discussed and the mathematics behind it. Then a session on mathematical modelling and iterative solution where how real life systems are represented as big or small mathematical models which can be converted to numerical models and how they can be solved by iterative methods was discussed.

Afternoon we had session on A journey through the real life application of mathematical concept where how mathematical research is used in development of modern science and in our day to day life was discussed. Followed by a session on Data collection and analysis where how science, Technology and engineering are related and how mathematical concepts are used in construction and data analysis was discussed.

Overall Lab sessions proved to be very effective and fruitful for all the participants. It was a great learning experience.

 Given the expertise of our resource persons and enthusiasm of the participants we were able to execute the sessions to their satisfaction.

We believe these sessions have added knowledge of our participants in a manner that will not only benefit them but through them their student community as well. On that note we are glad that we were able to offer such a platform for everyone.

Het Shah wins the SEED Maha IT Idol 2017

1 The Top Ten Finalist of SEED MAHA IT – Idol 2017

Seed I.T. Idol, a C programming quiz, was conducted by Seed Infotech Ltd. in SFIT (and many other colleges in various cities of Maharashtra) where all students participated. It was the first round of this competition which was the pen and paper round where students had to check the correct answer for give question.

Het Shah (TE INFT A) shares his experience……

I and some other students passed this round and were going to compete in second round. So, all the students from Mumbai who cleared first round were invited for second round and final round which was held at Thane. Second round was same as the first round and top 10 finalists were selected including me. This was the on-stage round where the competition was conducted on computer. There were 10 questions for each finalist along with timer for each question. Unfortunately, I was not in the top 3 finalists. The winner was awarded with a smart phone. Also the 1st runner up and 2nd runner up were awarded with electronic gadgets and all the finalists were given Seed Infotech goodies. The competition was not over yet. All the top 10 finalists of various cities of Maharashtra were invited for the last round Seed Maha I.T. Idol. 130 finalists had participated in this round in hope to be the Seed Maha I.T. Idol. This round was divided into an elimination round and final round. Elimination round was the same pen and paper quiz. The top 10 finalists were called up on the stage (including me) for the final round. The final round consisted of a quiz, a pen and paper test and a rapid-fire round. Each finalists were rewarded with Seed Infotech goodies. And then winners were announced. Finally, I won the Seed Maha

I.T. Idol 2017 contest and was rewarded with smart phone (iPhone 7). The 1st runner up was also rewarded with a smart phone (One plus 3T) and 2nd runner up with a cloud enabled HDD.

I would say that I gained a lot of knowledge about C language and am looking forward to participate in this competition next year.

FACULTY PUBLICATION

Sr. No	Author's Name	Paper Title	Publication details
1.	Mr. Inamullah Khan, Ms. Nitika Rai, Mr. Kochar Inderkumar	Design of Via-Loaded Multiband Yagi Antenna using Single Director	60th Annual IETE convention (AIC-2k17), Kochi, 17-18 September 2017
2.	Ms. Monika Pal	A Brief Literature Survey on: Online Product Purchasing on User Behavior	International Journal of Computer Applications 173(3):16-19, September 201

ITSA ACTIVITIES

Workshop on Writing Technical Document with LYX

LYX Workshop was organized on 6th July 2017 for all faculties and laboratory assistants of INFT branch. This was a part of the scheme "Mentoring the Mentor"

Resource Person –Asst. Prof. Minal Lopes, INFT Department, SFIT

A hands-on workshop was conducted with following contents:

1. Features and advantages of LYX over MS word.
2. How to write completely new technical document using LYX.
   a. How to add text with sections, subsections, abstract, key points, mathematical proofs etc.
   b. How to add figures or any graphics.
   c. How to add tables.
   d. How to add inline and display formulas.
   e. How to perform cross referencing.
   f. How to create bibliography and add citations.

3. How to write Technical paper using LYX.
4. How to use readily available layout files provided by various publishing bodies such as IEEE, springer, Elsevier etc.
5. How to import document in PDF and LATEX.

Career Guidance Seminar

St. Francis Institute of Technology, Department of Information Technology, had organized a career guidance seminar for third year Information Technology students on August 4, 2017.

The speaker acquainted the students with the various avenues and opportunities for a graduate in the field of Information Technology.

He informed the students that there are three Universities that offer post graduate programs in the field of Information Technology:
(1) Harrisburg University of Science and Technology (HU) - Located in Pennsylvania.
(2) Ottawa University (OU) - Has campuses in Arizona and Kansas.
(3) Lindenwood University (LU) - Located in Missouri.

HU offers the following programs:
M.S. in Analytics
M.S. in Computer Information Sciences
M.S. in Healthcare Informatics
M.S. in Information Systems Engineering and Management
M.S. in Learning Technologies and Media Systems
M.S. in Project Management

OU offers an Executive MBA program with a concentration in Information Technology (EMBA - IT)

LU offers:
M.S. in Information Technology Management
M.S. in Cyber Security Management

He then informed the students that each of these three universities offer a 4-week program for students to familiarize with the course before registering for that course. He also spoke about the various facilities, amenities and scholarships available for international students.

The students were enabled to clarify their doubts and queries about various programs. The session was very beneficial to the aspiring students and was appreciated by all.

Workshop on Python

The **ITSA committee** organized a hands-on workshop on Python for TE and SE IT students on 9th August, 2017. A total of 53 students attended the workshop.

Resource Persons: Mr. Pravin Pandey and Mr. Nirantak Raghav

The seminar focused on key points like:
- Python basics
- Data analysing using python
- Image manupulation using python
- Git

Students learnt how to use the python and also realized how easy it is to analyze data in python and python handling. The workshop was well appreciated by everyone present.

Workshop on LaTeX

A hands-on workshop was organized on 13th and 19th September for for TE-IT A and TE IT B students respectively.

Resource Person: Asst. Prof. Amrita Mathur, INFT Department, SFIT

The seminar focused on key points like:

- How a document structure is created using LaTeX software
- LaTeX Editor:TexWorks
- LaTeX file structure
- Document class which defines the format of the document
- The different predefined packages available.
- The different commands used to structure a document.

- Main Body
- Environment of the software
- Why LaTeX is better than Microsoft Word?

Students learnt how to use the LaTeX software and also realized how easy it is to structure a document in LaTeX. The workshop was well appreciated by everyone present.

Workshop on Paper Presentation

5 Easy hacks for writing an effective technical paper

The **ITSA committee** organized a seminar on paper presentation for SE IT students on 13th September, 2017.

Resource Person – Asst. Prof. Prachi Raut, INFT Department, SFIT

The seminar focused on the following key points:

- Checking the ability for writing technical paper effectively.
- Format for writing the paper.
- Getting a reference from other papers.
- Checking the similarity score.
- Where to publish the technical paper.

Outcomes:

- The session was made interactive and the students came to know about the essentials of writing a technical paper.
- Students learnt the basics of writing a technical paper which will help them to write and present effective papers in future.

Institute Level R and D

St. Francis Institute of Technology, Department of Information Technology, organized institute level R and D lecture on 16th September 2017 at 11:00am. The session was conducted by "Dr. Vaishali Prashant Jadhav" on her Ph.D. research work. The topic of her talk was "Complex Query JOIN optimization in Parallel Distributed Environment". The abstract of the topic is given as follows:

Abstract:

Query optimization is a deep rooted area of research. This research area has gained prominence due to increasing demand of complex queries and large databases. Among the different query operators of SELECT-PROJECT-JOIN (SPJ) queries, JOIN is the predominant operator. Usually it is the key operator in query optimization as it gives the final result in JOIN operation on multiple relations or tables. As a complex query is composed with many JOIN operations and JOIN operation itself is time consuming, there is a need to minimize the time required for JOIN operation. The main research focus is to reduce the execution time and network cost (in terms of amount of data transfer on network) of JOIN operation of a complex query on large databases. The research used parallel distributed environment for query optimization. The elementary JOIN types considered for research are SEMI JOIN, BLOOM JOIN, POSITIONAL ENCODED REDUCTION FILTER (PERF) JOIN and DISTINCT ENCODED REDUCTION FILTER (DERF) JOIN.

There are certain issues to be solved in above JOIN operations such as transmission of uncompressed data, collision problem, transmission of duplicate values, extra time to remove duplicate values etc. The research focused on these research issues of above mentioned JOINs.

In distributed environment, different machines have different binary data representations such as little endian or big endian. So while transferring data in compressed format such as byte array, the machines may read data differently. It is called as 'binary data incompatibility' problem. While transmitting compressed data on network, there is need to provide security to that network data. So 'security' and 'incompatibility of binary data representation' are other issues we considered during our research.

To reduce the optimization time, the parallelization concept and to reduce the network cost (in terms of amount of data to be transferred on network) different data compression techniques are used. For avoiding binary data incompatibility problem, binary data is converted into Network Byte Order (NBO) and with Advanced Encryption Standard (AES) algorithm, security problem is solved.

Four parallel optimizers in intra-operator and inter-query parallelization mode with shared nothing architecture are developed. In intra-operator parallelism, single query with JOIN

operator is executed on multiple processors. In inter-query parallelism, multiple queries with JOIN are executed on multiple processors.

For achieving parallelism, the various load balancing schemes such as round-robin, equi-depth, total-sum and stratified allocation are used. Different types of queries such as star, chain, cycle and clique are considered during experimentation. The databases such as TPC-H, AdventureWorks, Northwind and PUB are used for testing the performance of a query. The performance metrics used for evaluation are execution time, memory utilization, amount of data to be transferred, speed-up and efficiency.

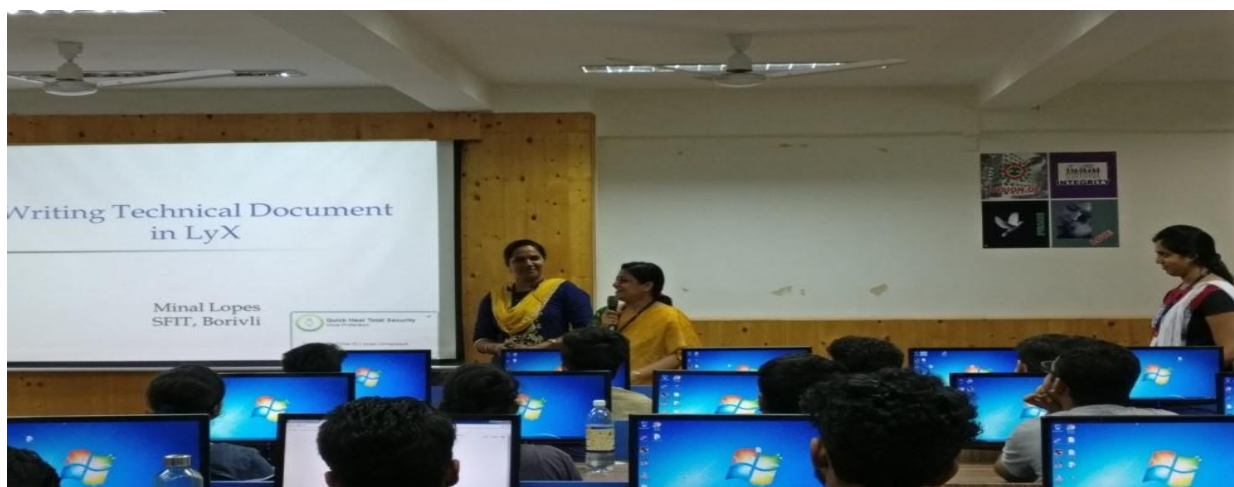The four parallel optimizers developed are
- NBO PARALLEL TWO WAY SEMI JOIN WITH BYTE ARRAY
- NBO PARALLEL COLLISION FREE INTELLIGENT BLOOM FILTER JOIN
- NBO PARALLEL POSITION ENCODED REDUCTION FILTER (PERF) JOIN
- NBO PARALLEL DISTINCT ENCODED REDUCTION FILTER (DERF) JOIN

Based on evaluations, best optimizer can be found for the specific type of the query.

Workshop on Writing Technical Document in LYX

LYX Workshop was organized on 19th and 21st September, 2017 for all students of INFT branch.

Resource Person –Asst. Prof. Minal Lopes, INFT Department, SFIT

The seminar focused on key points like:

☐ Structured document creation

☐ Document formats

☐ Usability/user interface

☐ Graphics/tables

☐ Document management

☐ Math/science features

Students learnt how to use the LYX software and also realized how easy it is to structure a document in LYX. The workshop was well appreciated by everyone present.

Departmental Research

Every year 'call for project proposal' is sent by R&D cell of SFIT and department submit project proposal. Based on their presentation management approves the project. Following are the projects approved during 2017-18

Sr. No.	Name of PI	Title of Project
1.	Dr. Joanne Gomes and Ms Prajyoti D'silva	Quibble for CO attainment
2.	Ms Amrita Mathur and Ms Elizabeth George	Correlation of attendance and result

1. **Lecture series conducted by the department**

Sr. No.	Name of the faculty	Topic	Date	No. of participants
1	Dr. Vaishali Jadhav	Complex Query JOIN optimization in Parallel Distributed Environment	16/9/2017	23

AICTE sponsored *STTP* on. Analytical Essentials & Tools in *Applied Research*. 27th November 2017 - 8th December 2017

The coordinator of the program was Dr. Joanne Gomes, HOD IT Department. The topic for the program was "Analysis Essentials & Tools in Applied Research". The main aim behind this topic was to motive the people for research with awareness of statistical concepts & latest analytics tools using R & Python programing. The Program was scheduled for 10 days from 27th November 2017 to 8th December 2017.

Dr.Veena Deshmush, former director –cum-professor , center at distance education , SNDT university started our first session with basic statistical concepts and definitions of statistics , analytics etc. Dr.Madhukar Dalvi, Associate Prof. from Khadelwala was our second resource person highlighted the role of statistics in analytics & role of analytics in applied research. He started with first analytical tool i.e. IBM SPSS statistical &package for the social sciences. It is used for editing & analyzing all sorts of data. In the afternoon session Mr.Santosh Chapneri, internal faculty, EXTC Department, SFIT took hands on session with Jupytor notebook and introduced python on very first day .

On Second day on 28th November 2017 Dr.Anjali Panigrahi, Associate Professor, Chetana College Bandra took a morning session with importance at research, literature review and hypothesis testing methods. In the afternoon session Mr.Santosh Chapneri introduced new latest analytical concept with SciKit –learn.

On third day 29th November 2017 Dr. Ananthram Narayanan resource person from IIT Bombay highlighted the concepts of linear algebra and corresponding hands on was taken by Mr. Santosh Chapneri.

On the fourth day on 30th November 2017 Dr. Sanjay Shitole HOD IT SNDT university IIT Bombay PhD holder introduced machine learning concepts and took the perception learning rule in detail. He showed various videos which gave the importance of intelligent machine in today's life. The corresponding hand on was taken by Mr. Siddersh, he was a first resource person from industry. He is working in CERE LAB Industry Mulund. He took Basic Machine Learning as well as deep learning concepts using python.

On the fifth day on 2nd December 2017 our resource person was Dr. Sangeeta Zope HOD IT Department A.C. Patil Engg College. She completed her PhD from IIT Bombay. She started Classification approaches in supervised learning and she took hands on table au i.e. another analytics tool used for data representation, data calculation as well as for data prediction or forecasting. Dr. Varsha Turkar another resource person took morning session on clustering approaches and introduced a new analytics tool i.e. Orange. Dr. Varsha is currently working as associate professor in Vidhyalankar Institute of technology & she completed for PhD from IIT Bombay.

Participants of the AICTE sponsored *STTP* on. Analytical Essentials & Tools in *Applied Research*

On 6th day on 4th December 2017 Dr. Shivatamkrishnan, Associate Professor in IIT Bombay took session on linear optimization and techniques to solve optimization problems. In afternoon session, Mr.Divesh Kubal, 2nd industry resource person, working as a senior python developer in Gray Matrix Solutions took the hands on in Machine Learning concepts. He highlighted the concepts of machine learning such as feature engineering Shallow learning Deep learning convolution Neural network Cost function Loss Function and corresponding programing using python and Tensorflow packages.

On the 7th day on 5th December 2017 Dr. Joanne Gomes PhD from SNDT university HOD IT department took a session on introduction to R. She introduced dynamically typed language i.e. R. She explained R Studio in detail with installation of packages importing of databases, along with basic R programing objects such as array factors lists vectors matrices & data frames, In the afternoon session, Mr.Divesh Kubal highlighted the concepts of ML such as support vector machine (SVM), ANN and KNN.

On the 8th day on 6th December 2017 Dr.Kavita Sonawane, PhD from NMIMS university HOD CMPN Department took session on parameters evaluation & validation in analytics. She shared her own experience problem occurred during her PhD. Session was really very informative and motivating to participants. In the afternoon session Mr. Divesh Kubal introduced the concept of dimensionality reduction, decision tree, random forest and he discussed his own project work as case study.

On 9th & 10th day on 7th December & on 8th December 2017 Mr. Hemant Palivela , Data Analyst form Aurous Solution gave in depth knowledge about machine learning algorithms. He

started with difference Data mining, Artificial Intelligence, Machine learning and statistics. He explained difference between various algorithms, classifications vs Random forests. The concepts of Bagging, bootstrap, cross validation, higher dimensional space, over fitting, under fitting, RSS (Residual Sum of Squares),Dependent vari(target) independent vari(predictors).Classification using Random Forest, Regression using Random Forest etc. he discussed real time application of insurance & financial analytics. He showed the ways for model optimization & different general algorithms used for problem solving.

We had total 37 participants from various engineering as well as management colleges. 6 participants from St.Francis MBA college, 4 from St. John Engg. College, 2 from St. Xavier College of Engg. , 1 from Don Bosco Institute of Technology , 1 from Sabo Siddique College of Engg. , 2 from Atharva College of Engg. , 1 from Thakur College of Engg. , 2 from Tiwari Engg College, 1 from D.Y. Patil College of Engg. Kolhapur, 2 from Vasant Dada Patil College of Engg., 2 from Fr. Angel College of Engg. Bandra , 1 from Viva College of Engg. and our internal SFIT research scholars. We had 4 participants from CMPN department, 3 from IT department & 1 form EXTC department & 1 from FE department. The Participates were really very attentive & had learning attitude.

DEPARTMENT OF COMPUTER ENGINEERING

CONGRATULATIONS!!

a. **Toppers from SE CMPN 2016-17**

Rank	Name of Student	CGPA
1	1. LEMOS REUEL RICHARD CLARA 2. MULLA MASIRA NIZAMUDDIN MUSARRAT 3. NAIK APURVA GANESH GAYATRI 4. SAWANT SHRUTI RAMESH SUDHA 5. SHARMA ANKITA RAJ GEETA 6. SUVARNA GEETA GOPAL RAMANI **7.** TANNA TALISHA DEEPAK DHARMISTHA	10.0 10.0 10.0 10.0 10.0 10.0 10.0

b. **Toppers from TE CMPN 2016-17**

Rank	Name of Student	CGPA
1	1. DESAI SHIVAM VYOMKESH SANGITA 2. NAYAK TRUPTI GIRISH SHWETHA 3. SAWANT RUPESH 4. CHAUHAN SALONI 5. DUBEY RAHUL ARUNKUMAR PRATIBHA 6. EDWARD BINI PRESENTATION MARIAMMA	10.0 10.0 10.0 10.0 10.0 10.0

ACTIVITIES

1. **BE PROJECT COMPETETION**

Computer Engg Department successfully executed the BE Project Competition for 2016-17 Batch and the Best projects are selected and appreciated are given below. The appreciation and certificate distribution was done in the presence of new batch of BE students to motivate them for their project work. During this program, the selected (best projects) have shared their experiences with the present BE Batch to guide and motivate them.

Best Projects Selected in the Competition

Position	Name of the student(s)	Title of the Project
1.	Achilles Rasquinha & Kenneth Sequeira	Image Context Analysis and Contextual Caption Generation using RNN/LSTMs
2.	Chirag Bhoi, Ian D'souza, Akash D'souza	Vehicle Tracking using GPS Arduino and GSM and Rash Driving Detection
3.	Vishal Seshagiri Jainam Shah Manohar Lakshmana Vadaga	Data Migration Methodology from relational to NoSQL database
4.	Omkar Manjrekar Ashok More Divya Kamat	Self Defense Training System using VR
5.	Akshay Adhude Ninad Chavan Gavin Dias	Collective Buying and Selling between farmers and retailers
Consolation Prizes	Michelle Alva Neil Castellino Rashmi Deshpande	Natural Eye Movement Tracking and Detection System
Consolation Prize	Kevin Fernandes Garric Mathias Shannon Pereira	Home Automation using LIFI

2. CODE-X ACTIVITIES

Sr. No.	Activity	Description	Resource Person(s)/ Event Coordinators	Date of the event	No. of Participants
1.	HuntAR Game	Augmented Treasure Hunt Game is organised and conducted in the technical fest Mosaic 2017. The game required participants to decode clues using Augmented Reality	Ms. Sneha Nikam Mr. Rutvik Kakadia	16.09.2017	172 students participated in a group of 40
2.	Codexpress17	8hr long Coding Hackathon, hosted on codechef, a coding platform. Participants were given 8 problem statements to solve	Mr. Rupesh Mishra Mr. Tejaswara Rao Motamarri	09.09.2017	46

		in any order. Problems were graded based on their complexity level.			
3.	Handson session on Angular JS	Weekly session for Computer Engineering Students 2hours (Wednesdays 3:00 – 5:00 PM) Introduction to Angular JS, Basic Syntax is covered with Hands-on sessions.	Mr. Richard Pariath	23.08.2017 30.08.2017 20.09.2017 27.09.2017	47 36 26 26
4	Coding Practice session	Problem solving session for B.E. students. This event is organised to improve their problem solving and coding skills	Mr. Rutvik Kakadia Mr. Shivam Desai	29.08.17	26
5	Codex Recruitment 17	Interview conducted for technical and non-technical position For technical recruitment 2 rounds are conducted.	Mr. Rupesh Mishra Codex Core Committee	26.07.2017 02.08.2017	50
6	Appreciation Session and Motivation Plan for Next term	Codex organised felicitation of resource persons of codex for their valuable contribution in committee work The Team of resource persons successfully organised workshop on Data Science and Machine Learning using python. The event is organised to encourage the current team	Dr. Kavita Sonawane	19.07.2017	30

Sr. No		Event /Activity	Duration/ Date	Place	Remark/Position Held
		to plan and perform better to give remarkable contribution			

3. Student Achievements-technical:

Sr. No	Student Name	Event /Activity	Duration/ Date	Place	Remark/Position Held
1	Jetso Analin (T.E.-A) Ruel Lemos (T.E.- A) Milind Dholakia (T.E.- A)	Smart Hand for Blind People	Oct 2017	K. J Somiya Engg College	Project Exhibition
2	Meenu Gigi (T.E.-A) Jason Britto (T.E.-A)	Stairs Climbing Wheel Chair	Oct 2017	K. J Somiya Engg College	Project Exhibition
3	Francis D'Cruz (T.E –A) Sebin Mangalan (T.E. –A)	Auto Water Control	Oct 2017	K. J Somiya Engg College	Project Exhibition

4 Student achievements-Non-technical

Sr. No	Student Name	Event /Activity	Duration/Date	Place	Remark/Position Held
1.	Amit Pathare	University Football Tournament	6/9/2017, to 17/10/2017	University Ground, Marine Lines	Quarter-Finals / Top 8
2	Amit Pathare	MIT Football Tournament	15/9/2017, 16/9/2017	MIT-WPU, Pune	Second Round
3	Amit Pathare	Reliance Football Tournament	07 To 09 /10/2017, 26/10/2017	St. Francis Ground (Borivali), Somaiya Hospital Ground (Sion), St. Xavier's Ground (Parel)	League Stage

Seminars organized:

Sr. No.	Name of the faculty / Resource Person	Topic	Date	No. of participants
1	Ms. Deepa Panakkal	Resilience is all it takes	10/10/2017 11.15 am	SE CMPN A & B
2	Ms. Safa Hamadare	Seminar on Drupal	28/9/2017 (3 pm-5 pm) 29/9/2017 (3 pm-5 pm)	TE CMPN A TE CMPN B
3	Mr. Hiren Shah President, Net Square Solutions (Coordinate)d By Ms. Ankita Karia	Insight on Cyber Security	27/9/2017 (2-4 pm)	BE CMPN A and B students Interested - TE CMPN students
4	Mr. Jerin T.	Design Thinking and Ideation Process	11/7/2017 13/7/2017 (9-10 am)	BE CMPN A and B students

The Computer Society of India (CSI), SFIT student chapter organized a seminar on Right to do and Right thing to do – Knowing the difference matters which was aimed at developing professional ethics on 23rd August, 2017. The seminar was conducted by Ms Deepa Panakkal. It was free of cost and was attended by 58 CSI members. Ms Amrita Mathur, CSI- SFIT faculty coordinator supervised the seminar.

Resource Person: Asst. Prof. Deepa Panakkal

Co-ordinator: Asst. Prof. Amrita Mathur

Ms Deepa Panakkal is an MH- SET qualified assistant professor at St Francis Institute of Technology with over 8 years of teaching experience. She is an excellent orator skilled in English as a Second Language (ESL), Feasibility Studies, Educational Technology, Creativity Skills, and Public Speaking. Ms Panakkal is an experienced facilitator who has been guiding and motivating students through interactive and effective teaching - learning methods.

The seminar focused on the following points:

☐ Need of professional ethics.

☐ Assertive, Passive and aggressive behavior.

☐ Leadership skills.

☐ Ways to deal with professional issues ethically.

At the end of the session, Ms Amrita Mathur thanked Ms Panakkal on behalf of the CSI-SFIT team. The workshop was appreciated by all the attendees. It was concluded at 5:00 pm.

Workshop on Augmented Reality

A workshop on **'Augmented Reality'** was organized by the Computer Society of India - SFIT on the 1st and 2nd of October, 2017, in association with TechCryptors. It was attended by 56 students in total.

Resource Person: Mr. Anurag Mishra (Instructor at TechCryptors)

Design Thinking and Ideation Process
Resource Person: Asst. Prof. Jerin Thankappan, CMPN

A seminar on Design Thinking and Ideation was conducted on 11 – 13 July, 2017 for the BE students in order to help them choose their BE projects wisely. It was a one hour session followed by Q & A. The following points were covered during the seminar.

What is Design Thinking?

Design Thinking is a methodology used by designers to solve complex problems, and find desirable solutions for clients. A design mindset is not problem-focused, it's solution focused and action oriented towards creating a preferred future. Design Thinking draws upon logic, imagination, intuition, and systemic reasoning, to explore possibilities of what could be—and to create desired outcomes that benefit the end user (the customer).

"Design thinking can be described as a discipline that uses the designer's sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy

can convert into customer value and market opportunity."
– Tim Brown CEO, IDEO

Distinctions between Design and Design Thinking

"Most people make the mistake of thinking design is what it looks like. People think it's this veneer — that the designers are handed this box and told, 'Make it look good!' That's not what we think design is. It's not just what it looks like and feels like. Design is how it works."
— Steve Jobs

"Design is the action of bringing something new and desired into existence—a proactive stance that resolves or dissolves problematic situations by design. It is a compound of routine, adaptive and design expertise brought to bear on complex dynamic situations."
—Harold Nelson, *The Design Way*

Nigel Cross (2007), in his book *Designerly Ways of Knowing*, says, "Everything we have around us has been designed. Design ability is, in fact, one of the three fundamental dimensions of human intelligence. Design, science, and art form an 'AND' not an 'OR' relationship to create the incredible human cognitive ability."

- Science — finding similarities among things that are different
- Art — finding differences among things that are similar
- Design — creating feasible 'wholes' from infeasible 'parts'

It makes sense, therefore, to break out of the silos we have created in organizations and develop a cross-disciplinary inquiry to foster innovation.

Design Thinking's Phases

There are many variants of the Design Thinking process in use today, and they have from three to seven phases, stages, or modes. However, all variants of Design Thinking are very similar. All variants of Design Thinking embody the same principles, which were first described by Nobel Prize laureate Herbert Simon in *The Sciences of the Artificial* in 1996. Here, we will focus on the five-phase model proposed by the Hasso-Plattner Institute of Design at Stanford, which is also known as d.school. We've chosen d.school's approach because they're at the forefront of applying and teaching Design Thinking. The five phases of Design Thinking, according to d.school, are as follows:

- Empathise – with your users
- Define – your users' needs, their problem, and your insights
- Ideate – by challenging assumptions and creating ideas for innovative solutions
- Prototype – to start creating solutions
- Test – solutions

It is important to note that the five phases, stages, or modes are not always sequential. They do not have to follow any specific order and can often occur in parallel and repeat iteratively. As

such, you should not understand the phases as a hierarchal or step-by-step process. Instead, you should look at it as an overview of the modes or phases that contribute to an innovative project, rather than sequential steps.

The students were keen on listening to these points and were truly enlightened by the new ideology of selecting their project.

Seminar on "Insights on Cyber Security"

In order to give students an insight to cyber world and to help them in choosing their career as Cyber Analyst, Computer Engineering department had arranged this lecture series. We had with us, Mr. Hiren Shah, President at Net Square Solutions Pvt Ltd to deliver a lecture for the same.

He started the session with brushing up students' knowledge on Web Technologies and Computer Network. He then started with various ways offensive techniques which can be used to protect an organization from cyber-attack. He spoke on Threat Modeling and theft like Identity management. According to him, if someone wants to protect his organization then we have to think from an attackers' perspective.

He also spoke on OWASP Top 10, which is a basic requirement that a student has to have knowledge on, if he wants to pursue career in Cyber Security.

Mr. Hiren gave a scenario to students, wherein they had to think as an attacker. He then demonstrated the working of "Burp Suite", a graphical tool for testing Web application security. Various tools of Burp Suite work seamlessly together to support the entire testing process, from initial mapping and analysis of an application's attack surface, through to finding and exploiting security vulnerabilities.

Thus, the session was gave our students an insight on what is happening in cyber world. They also were made aware of knowledge they should have for taking up career in cyber security

FACULTY PUBLICATIONS

Sr. No.	Date	Paper Title	Publications Details
Mr. Rajkumar Shende			
1	August 2017	Improved Cooperative Bait Detection Scheme to Avoid Collaborative Attacks on MANETs	Proceedings of the 2nd International Conference on Inventive Computation Technologies (ICICT 2017)
Ms. Shobha Tyagi			
1	November 2017	MOM : MANETs (Mutual Adjustment by Neighbors Ensuring Transmissions Smoothly) on MANETs (Mobile Ad hoc Networks)	*Selected* in International Conference on Infocom Technologies and Unmanned Systems (ICTUS- 2017) , Dubai. (To **be published in November 2017**).

		provisioning Quality of Service in Network Layer .	
		Ms. Snehal Kathale	
1	August 2017	A Method for Identifying Human by using Gait Cycle	IEEE International Conference on Inventive Computation Technologies (ICICT 2017)

Departmental Research

Every year 'call for project proposal' is sent by R&D cell of SFIT and department submit project proposal. Based on their presentation management approves the project. Following are the projects approved during 2017-18

Sr. No.	Name of PI	Title of Project
1	Dr. Kavita S	Online leave management system
2	Ms. Sneha Nikam	Online railway concession application
3	Mr. Jerin Thankappan and Mr. Bhavesh Pandya	Online Document Reviewer

Minor Research under Mumbai University

List of Minor Research Grant completed during 2016-17 and applied for grant during 2017-18 from the University of Mumbai

A. Completed project:

Sr. No.	Name of faculty	Project Name
1	Mr. Shamsuddin S. Khan – CMPN	Voice Controlled Obstacle Avoiding Wheelchair
2	Mr. Rajkumar Shende –CMPN	Use of drones for crop health monitoring using NDVI

2. Lecture series conducted by the department

Sr. No.	Name of the faculty	Topic	Date	No. of participants
COMPUTER DEPT				
1.	Ms. Bidisha Roy	Trends in Discrimination aware Data Mining	12th October 2017 (3.15-4.15 pm)	23
2.	Mr. R. K. Shende & Ms. Safa Hamadare	R&D Lecture on How to write minor Research Proposal	5th August 2017 (2.00-3.00 pm)	19
3.	Mr. Johnson Pen	Short Training on NS2 (Open Source)Tools	29th June 2017 (2.00-3.00 pm)	18
4.	Ms. Safa Hamadare	R&D Lecture on Connecting Databases	1st April 2017 (2.00-3.00 pm)	20
5.	IIT Bombay	FDP in ICT for Education	3/8/2017 – 7/9/2017	10

DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATIONS

LECTURE ON TELECOM INDUSTRY IN INDIA.

To bridge the gap between academic syllabus and telecommunication industry scenario in India, a lecture was conducted by B.D.Gokhale, faculty of EXTC Department, for SE / EXTC students on 19/9/2017 in college assembly hall from 10.15hrs. to 12.15hrs.

The topics covered were –

1. Milestones in Indian Telecom Industry.
2. Major sectors of Telecom Industry.
3. Progress in the fields of Radio, Television, SAT communication.
4. Rise of Internet, Mobile communication and Broadband Networks.
5. New Generation networks.
6. Security Forces' Strategic Requirements.
7. International Telecommunication System.
8. Road Ahead.

All the students presents responded positively to the lecture.

SEMINAR (WITH HANDS-ON) ON GAS COUPLED MICROSTRIP ANTENNAS USING IE3D

Resource Persons: Asst. Prof. Inderkumar Kochar and Asst. Prof. Anjali Chaudhari
Co-ordinators: Asst. Prof. Monika Cheema and Asst. Prof. Savita Kulkarni

Wireless technology is one of the main areas of research in the world of communication systems today and a study of communication systems is incomplete without an understanding of the operation of antennas. The field of antenna study is an extremely vast one and hence this seminar was conducted for the third year students to give them a brief understanding of the antennas on the printed form.

The session started with the theory of Rectangular Microstrip Antenna and its design. Parametric analysis of microstrip patch antenna was also covered in the theory session. Since the microstrip antenna has the limitation of narrow bandwidth, broadband technique of two gap coupled and three gap coupled MSA and their performance was discussed in detail. The parametric analysis and the design of gap coupled microstrip antenna constitute topics beyond the syllabus usually taught to post-graduate students.

To strengthen the understanding, a hands-on-session on IE3D was organized wherein the students could simulate the antenna, interpret the results and optimize the designed antenna for its performance.

The students found the workshop useful and appreciated the efforts put by the resource persons in building interest in the subject and simplifying the understanding of IE3D software.

CCNA WORKSHOP

A Workshop on CCNA was organized by Dr. Kevin Noronha (Dean, UG and Faculty Co-coordinator - IEEE, IEEE Program Team) on 9th September, 2017

Resource Person: Asst. Prof. Ramjee Yadav. He is a CCNA certified and CCNP trained professor having 2 years industry experience in various sectors and 9 years of teaching experience. He also has 2 IEEE papers published.

Networking skills give you an edge and an opportunity to make a career in almost any sector you can imagine: financial services, education, transportation, manufacturing, oil and gas, mining and minerals, technology, government, hospitality, health care, retail... you name it. More than 4.75 million students in 165 countries have participated in Cisco Networking Academy courses since 1997. Cisco certified professionals have worked their way up through global corporations in places all over the world.

Keeping this in mind, IEEE chapter of SFIT decided to organize a hands on workshop to interested students mainly targeting the second and third year's which would brief them about networking fundamentals and also learn practically using CISCO's open source software-CISCO packet tracer.

The workshop was conducted from 9 am to 5 pm. In the first half of the session, students were briefed on networking fundamentals, networking models and flow of data around them. Communication at every layer and addresses involved in networking was explained in depth using PowerPoint presentation. After this, networking devices and protocols like DHCP, DNS, WWW, HTTP, etc., their use and importance were explained. The steps required to be a Cisco Certified developer and the levels involved for the same was well elaborated by the speaker, after which lunch break of an hour was scheduled.

In the second half of the workshop, the practical approach to networking was explained right from the very basics using Cisco Packet Tracer. Starting with a simple LAN connecting 2 PC's, the concept of pinging using Switch and Hub was embellished. Setting up of DHCP and DNS servers, their differences and transferring ICMP messages was explained. Later, practical use and application of router for connection between different networks was elaborated. Snacks were served during a short break at 3pm.

The practical session of the workshop focused on teaching the working of Cisco Packet Tracer to all the participants. The attendees were briefed on the protocols used and the networking devices used for the same along with the concept of pinging using switch, hub and router. All concepts pertaining to computer networking were very well explained and elaborated upon.

Departmental Research

Every year 'call for project proposal' is sent by R&D cell of SFIT and department submit project proposal. Based on their presentation management approves the project. Following are the projects approved during 2017-18

Sr. No.	Name of PI	Title of Project
1	Ms.Quanitah shaikh	Vehicle Authentication System
2	Ms.Anjali Chaudhari	Walkie Takie

Minor Research under Mumbai University

List of Minor Research Grant completed during 2016-17 and applied for grant during 2017-18 from the University of Mumbai

B. Completed project:

Sr. No.	Name of faculty	Project Name
1	Dr. Kevin Norohna –EXTC	Infrared Reflection based Eye Tracking and Blink Recognition system for Augmentative and Alternative Communication
2	Ms. Savita Kulkarni –EXTC	Smart Prepaid Energy Meter
3	Dr. Uday Pandit Khot –EXTC	Smart Examination System
4	Mr. Shamsuddin S. Khan – CMPN	Voice Controlled Obstacle Avoiding Wheelchair
5	Mr. Rajkumar Shende –CMPN	Use of drones for crop health monitoring using NDVI

Lecture series conducted by the department

Sr. No.	Name of the faculty	Topic	Date	No. of participants
1	Ms. Anjali Chaudhari	Advancement in Antennas for Ultra-Wideband Applications	18/10/2017	22

CELEBRATIONS IN SFIT

ONAM

Onam, was celebrated in our college on 6th September, 2017. The celebration took place in the new Canteen. All faculty and staff members were invited for the same. Following the tradition of lamp lighting ceremony the celebrations started. Students of the college presented a beautiful traditional onam dance around the lamp, which was very mesmerizing.

Onam celebrations served as an auspicious day to formally introduce the newly formed Student

Council to the entire staff. Brother Jose and Our Principal Dr. Sincy George welcomed every member graciously with a rose and wished them well for the term as a Council Member.

This was followed by singing of Onam songs by our faculty member who were very enthusiastic. The celebrations commenced with scrumptious south Indian lunch on a banana leaf. Every faculty and student members joined in to serve food to their fellow colleagues. The Onam celebrations was a break out of the usual routine and left a smile on everyone's face.

TEACHER'S DAY AND ENGINEERS DAY

The Teacher's day celebrations were held in our college on 15th September,2017. The same day being engineer's day served as a wonderful opportunity for engineers to show their appreciation to their teachers.

The celebrations had many performances like dance,group singing,skits. The main highlight of the event being, the newshour debate which appealed the audience well and lightly brushed upon the problems of assignments in engineering. The teacher's day celebrations turned out to be very jovial and a break for the teachers from their usual routine. Refreshments were served with a surprise element for each staff member. A small pocket diary with the message -*"A teacher takes a hand,Opens a Mind and Touches a Heart"* , was presented as a token of appreciation from the Student Council.

FRESHER'S DAY

SFIT has welcomed the newly joined first year students to its family. Student Council presented them with an exciting Fresher's Party on 15th of September,2017. The theme of the party was "Hawai" sending the message of brightness, celebrations and joy. After the teachers day celebrations, the council rushed to prepare for this party on the same day. Majority of the FEs turned up, the approximate count being 300. Everyone was dressed up as per the bright Hawai theme.

After the regular security measures ad id checks, every student was permitted in the beautifully decorated and lit auditorium. The decorations were very appalling and the lit Hawaian masks caught everyone's eye. Many fun games were organized, the main highlight of the party being Mr and Miss Fresher who were crowned after questionnaire rounds by our cooperating faculty members. The dance floor was open and everyone dance and enjoyed the Dj tunes. All were dispersed by 8:30 pm with refreshments and fond memories.

GARBA NIGHT

In the Navratri week, our college was also flooded with the gujrati tunes of the season. Garba night was conducted on 23rd of September, 2017. This was a highly anticipated event of the season and probably the most colorful event. The passes were sold out like hot cakes and there was much excitement before the event.

All girls turned up in colorful ghagra cholis and lehengas, the boys were clad in beautiful gujrati and traditional attire.The central area between the new and the old building was lit up ready for dancers. It is said that we must remember the almighty before any occasion or celebration. We had the ambe ma arti as an auspicious start to the rhythmic garba ahead. Our Director Bro. Jose. Dr. Kavita Sonavne (HOD CMPN), DR. C Hariprasad were kind enough to grace us with their presence and do the arti.

After the arti traditional gujrati garba songs were played and everyone thoroughly enjoyed themselves. There were many spot prizes like the best dressed and the best dancer which excited everyone. Refreshments were served and it was an altogether a very energetic and a lively evening.

MOSAIC

Ms.Namrata Mankad, Ms. Grinal Tuscano, Mr M.Bysani, Ms. Vincy Joseph were the brilliant co-ordinators for MOSAIC 2017.

Mosaic is the annual technical fest of SFIT. This year mosaic took place on 16th September,2017. The festival explores the technical innovation of students through various games and events organized by various committees like Robocon,ISTE,IEEE,ITSA,CodeX,CSI,RADLAB etc. The inauguration ceremony began with lighting if the lamp by the dignitaries. We were honoured to have Dr M Sasikumar, Associate Director-CDAC, as the Chief Guest who shared his immense knowledge with the students. Our technical Secretary gave in the idea for innovation along with entrepreneurship spirit. The festival was inaugurated with a contraption, this time a new concept of hologram was inculcated along with the contraption.

Statistics of MOSAIC 17

Events	Registrations/Participants	Volunteers	Staff Involved
15	778	140	32

Unique features of MOSAIC 17:

- The events were organized by different student chapter committees and other committees like **IETE, ISTE, IEEE, CSI, ITSA, RADLAB, Robocon, NSS and Code-X**. So total **15 events** were organized by the team of volunteers.

- This time out of 15 events, 9 were institute sponsored, 5 by ISTE and 1 by Code-X committee (CMPN dept).

- The funds for the self-sponsored events were arranged through **marketing and sponsors**.

- The event, 'HuntAR' by Code-X had the highest number of participants i.e.172 followed by 'Glow and Roll' organised by NSS having 112 participants.

- **Dr. Sasikumar, Associate Director, CDAC** was invited as a **chief guest** on MOSAIC 17 **inauguration.**

- A **Contraption** was designed by Third year EXTC students (ISTE+IETE members) to inaugurate and declare **MOSAIC 17 OPEN**. A **hologram based video** at the end of contraption was a new attempt by the students.

Gist of few events held during MOSAIC'17:

- **Math Pirates**: Brain teasers, Mathematical equation solving and building a tower with blocks obtained for each correct answer, pirate treasure hunt.

- **Electroquest**: Quiz based on circuit designing, circuit building and finally to complete the connection of the given circuit based on some clue and then glow the LED.

- **Takeshi's Castle**: This event consists of a race in which there are obstacles in the track that participants are needed to clear and reach the finishing line using a phone controlled robot provided to them.

- **Laser Tank Wars**: Each player in this game will be given a robot equipped with a laser gun and a conical gem to defend. The player has to evade the laser from the central tower, defend his gem and shoot down the opponent's conical gem within stipulated amount of time.

- **Glow N Roll**: A Ludo board game on a large scale. Participants acts as moving tokens by actually rolling a dice. Every movement of the participant is based on solving some tricky technical question.

- **It's Showtime – Take 2:** Jargons, Brain Teasers, Google doodles, Technical quiz, a board game based on technical questions, concepts of Mechanics, C language are included**.**

- **Light it up:** Participants has to minimize the components by means of quiz and then with those components to build a circuit or a system**.**

- **Code-a-thon**: Problem solving using Java or C++. Finally participants have to blind code a program.

- **HuntAR**: A treasure hunt about decoding the clues using Augmented Reality (AR).

RADLAB

(From Left to Right: Lynelle Fernandes, Amritha Prakash, Aaditya Khare, Pratha Kulkarni, Gauran Date, Jerin Thankappan, Mrunal Pilankar, Neel Desai, Sneha Jha, Sarvesh Sharma, Arbaz Khan, Sakina Baranawala, Mandar Acharekar, Vinay Deshmukh, Pravin Pandey, Jaykumar Patel, Sushant Shetty)

Activities:
  1. **Summer internship program**
   One month project program for selected Second Year students aimed at learning technical skills, team management and design thinking.

Edge Detection Robot, Line Follower Robot, Home Automation System and Gripper robot were some of the ambitious projects undertaken.

2.   Recruitment of students for Research projects

Recruitment of Second Year and Third Year students for projects undertaken by Radlab Research Assistants.

3.   Data Science classroom program on DataCamp

Online classroom program on **www.datacamp.com** for students to learn Data Science using R and Python, Machine Learning and Deep Learning.

Projects undertaken:

1.   Automation and Swarm Robotics Aid (AASRA)

Designing and developing a robot platform for implementation of self-organization and self-assembly algorithms.

2.   Depth Estimation using Monocular Cue

Calculation of depth and geometrical parameters of an object using monocular cue(single camera.

3.   RADLab website

Created a new website with updated user interface, projects and members.

4.   Assisto (Assistant gear for blind people)

A wearable gear similar to Google Glass intended to assist blind people in navigation and recognize the surrounding.

5.   RFID based smart shopping cart

An RFID reader equipped shopping cart intended to scan items in cart automatically and generate bill at the exit.

6.   Personalised story teller app (Machine Learning based Voice Imitator system)

A personalised story teller app which tells story in human voice and with emotions.

7.   Digital prescription and location based chemist prediction

An app solution for Doctors, Patients and Chemists on which Doctors can prescribe medicines and app predicts drugs or alternatives with same chemical composition in nearby area of the patient. This problem statement is also featured in Smart India Hackathon 2018.

A. STUDENT ACTIVITIES

1. ROBOCON (April 2017 to Nov. 2017)

No. of students in ROBOCON Team: 16

Name of Faculty in charges: 1. Mr. Vaqar Ansari (coordinator)

                                                2. Mr Shamsuddin Khan (Instructor)

                                                3. Mr. M K bysani

                                                4. Mrs. Prachi Raut

Sr. No.	Title of Activity	Topic/Details of activity	Date/Duration	No. of participants

1	ABU ROBOCON 2018	International Level Robotics competition Asia Specific	Annual March 2018	16 students
2	Annual Robotics Work Shop at SFIT	Arduino Programming, LCD Interfacing, Locomotion	23,24 Sep and 4 Oct 2017 - 2 Days	73 SFITians + 32 Outsiders
3	Arduino Workshop	Arduino microcontroller	5th August	20 SFITians

2. E-Yantra

Sr. No.	Title of Activity	Theme of activity	Date/Duration	No. of teams and no. of students in each team
1.	e-Yantra Robotics Competition (e-YRC)	Tasks assign on Firebird V robotics kit given by IIT Bombay	March/April 2018 (six Months)	4 groups (4 students in each team)
2.	e-Yantra idea competition (two BE Project groups)	National Level Robotics Project Showcase Event	March/April 2018 (six Months)	2 groups (4 students in each team)

3. E-Cell:

Entrepreneurship Cell (E-Cell) is a committee formed to encourage and motivate students to fulfil the vision of SFIT, to churn the engineers into technological entrepreneurs and be the leaders and makers of tomorrow. E-Cell along with Convener Ms. Prachi Raut, is all set to conduct events which will help these students to spark an idea for their start-up. The events help the students to showcase their talent and to bring out the engineer in them to upgrade our society. We are linked with the National Entrepreneurship Network (NEN) and also the PMYuva Yojna – an initiative by Prime Minister to promote entrepreneurs.

TRAINING AND PLACEMENT CELL

Major Activities:

1. Aptitude test was conducted class wise by T & P for 2018 batch .
2. Enrollment for online aptitude test by Cocubes for BE 2018 batch.
3. Aptitude training was conducted by External Expert for BE 2018 batch.
4. Briefing session on CV preparation was conducted class wise by Head T & P for 2018 batch.

5. Soft skill training was conducted by External Expert for BE 2018 CMPN(A) class.
6. TCS code vita awareness session was conducted by TCS official for BE 2018 batch.
7. Mock GD and PI training was conducted by Alumni for BE 2018 batch.
8. TCS specific aptitude training was conducted by External Expert for BE 2018 batch (only eligible students for TCS drive)
9. Briefing session on Higher study was conducted by External Expert (Illinois Institute) for BE 2018 and TE 2019 batch.
10. There are 14 Companies visited till date and more in pipeline.
11. Our 107 students are placed in LTI in 2018 batch.
12. 152 students are placed till date.

LEARNING AND INFORMATION RESOURCE CENTRE

ACTIVITIES:

Annual Stock Verification: Annual Library Stock Verification was carried out between June 19 to 30, 2017. The stock comprised of more than 25000 books besides Book Bank books, Project reports and CDs.

This year, NSS volunteers joined the library staff in carrying out the stock verification activity. As many as 10 NSS volunteers from FE and SE gathered every day to help the library. All the volunteers were felicitated by our Respected Director Bro. Jose T. on 30th June, 2017 for their help.

As everybody is aware, the entire gamut of stock verification activity is a herculean task besides being time-consuming. This year, we were very fortunate to have the entire process automated by applying the following:

✓ App – "Tag Detect" created by BE ExTC students – Kalind Karia, Kinnary Joshi, Sanjana Desai and Jaykumar Patel
✓ Webpage – "Stock Verification" created by Mr. Johnson Pen (Asst. System Administrator, SFIT)

Display of FE books: A display of books pertaining to First Year Engineering was organized from August 1 to 18, 2017. 36 books were kept on display for students to browse easily.

Book Bank Facility was extended to all the students on August 5, 2017.

Sketching and Drawing/Painting Contest: A Sketching and Drawing Contest on the theme – Guru Shishya was organized on 13th September, 2017.

11 students participated and 6 winners were selected by a three member team of Ms. Arti Bhatnagar (Asst. Prof. – BSS), Ms. Pallavi Patil (Asst. Prof. – ExTC) and Ms. Seema Jadhav (Lab. Asst. – ExTC). The winners were as follows:

Drawing and Painting Contest	Sketching Contest
Amrut Savadatti (FE CMPN)	Sejal Lanjekar (FE ExTC)
Thomas Paulochan (BE INFT)	Neha Pawar (TE ExTC)
Pranjali Churi (TE ExTC)	Dylan Rodrigues (TE CMPN)

Book Exhibition: A book exhibition was organized on 13 – 14 September, 2017. Many titles – both syllabus oriented and leisure reading were displayed by the participants - Educational Books and Periodicals and S. Chand.

Display of Journals and Magazines: Journals (54) and Magazines (27) were displayed from 11 to 22 September, 2017. They were available for immediate issue to boost the reading culture of everyone.

Reading Inspiration Day was celebrated on 15 October, 2017

Workshops attended by Library Team:
1) A workshop on Creating free website using Wixsite was attended by Ms. Sucheta Prabhudesai on 22 July, 2017 at KES Shroff College of Arts and Commerce, Kandivali.
2) IASLIC Seminar on Challenges of Information Needs and Innovative Services in the Digital World was attended by Ms. Chinmayee Bhange on 16 September, 2017 at IIT Bombay, Powai.

SFIT NSS CELL

Jagrut Mumbaikar Awareness Workshop to Be Responsible Citizens was organized by SFIT NSS on Saturday, 7th October 2017 from 11 am- 1 pm in the Assembly Hall and about 180 Students participated in it.

Versova Beach Cleanup was organized by SFIT NSS in collaboration with Versova Residents on Monday, 2nd October 2017 from 3:00 pm – 5:00 pm and 53 volunteers participated.

Volunteering at Vasai village Green Run, run for cleanliness of the ponds, rivers and the ocean on Monday, 2nd October 2017 from 6 am to 10 am. 42 NSS volunteers participated.

Blood Donation Drive was organized by SFIT NSS in collaboration with Mahatma Gandhi Blood Bank on Saturday, 23rd September, 2017 from 10:00 am – 4:00 pm in the Assembly Hall.

About 240 students came forward out of which 178 were eligible for donation and as many units were collected.

Nadi abhiyaan campaign was organized by SFIT NSS in collaboration with Isha Foundation on Friday, 1st September, 2017 from 8 am to 10 am. About 73 volunteers participated in this event.

Awareness on hygeine/ cleanliness and health/dengue and malaria was organized by SFIT NSS on Friday, August 28, 2017 from 11:00 am - 3:30 pm at the following venues: Shivaji nagar chawl,borivali-west, sheetal Nagar Borivali, Slums behind SFIT, Borivli Railway Station.

Visit to shanti daan was organized by SFIT NSS on Monday, 27th August, 2017 from 10:00 am – 1 pm. 12 Volunteers participated.

Free Eye Check-Up Camp for SFIT Staff was organized by SFIT NSS on Saturday, 5th August, 2017 from 11 am- 4 pm in the Assembly Hall. 77 staff members benefitted from this event.

Tree plantation drive at Bhalivali village was organized by SFIT NSS in collaboration with Forest Department, Palghar District on Saturday, 1st July, 2017 from 9 am -2 pm. 27 NSS Volunteers and 5 faculty members participated in this event.

Library Stock Verification at L.I.R.C. SFIT was conducted from 19th June 2017 to 30th June 2017. Around 40 NSS volunteers helped out in this event.

Our Team of Bits-N-Bytes (2017-2018)

Ms. Chinmayee Bhange, Librarian
Ms. Lissa Rodrigues, Asst. Prof. – INFT
Ms. Snehal Lopes, Asst. Prof. – ExTC
Ms. Priya Karunakaran, Asst. Prof. – CMPN
Ms. Promila Pandey, Asst. Prof. – First Year