# Bharatiya Vidya Bhavan's
# Sardar Patel Institue of Technology
# Munshi Nagar, Andheri-W, Mumabi-400058

IEEE S.P.I.T.

## Report

Event Name: "The Interplay between Science, Technology, Engineering and Mathematics " by Mr.Satyanarayan from TIFR

Date of Event: 2018-10-03

Place of Event: SPJIMR Auditorium

In-Charge Member: Dr. Satyanarayan from TFIR

Engineering is one of the most sought out professions in the world today. But Engineering exists primarily due to manâ€™s predominant need to invent. Since ancient times to modern day and age, engineering in itself hasnâ€™t changed much, but the science used in such innovations has been transforming.
On Wednesday, 3rd of October, SPITians had the privilege of attending a lecture, by the esteemed scientist, Dr B. Satyanarayana from Tata Institute of Fundamental Research. Dr Satyanarayana engaged with our eager FEâ€™s, asking them, what they believed engineering was for. The common consensus was â€œproblem solvingâ€•. The professor then went on to explain that the whole art of engineering is merely a tool in the implementation of science. Engineering is the solution for problems we encounter every day. The problems we encounter daily, are products of scientific phenomena that occur continuously in our Universe. Hence the root cause, the actual origin of engineering is Science.

Science is the explanation of everything; every problem, every solution. Mathematics is the mode of communication, engineering is the application and technology is the method of implementation, he summarised. Scientists study what already exists, in nature, all around us, to cater to needs we are probable to encounter in our future. Technologists manipulate nature to devise practical solutions for theoretical questions and engineers exploit technology to deliver optimum results.
â€œScience, technology and engineering are the three surfaces of the same coin!â€• he quotes.
He went on to explain the insatiable condition of man that has been the primary cause of all innovation- curiosity. Curiosity is the underlying reason of research. Research leads to formation of scientific principles and that is the direct application of engineering. He emphasised his point with analogy of a tree. Imagine innovation to be a tree, the branches are engineering, the fruit is technology and the roots arise from Science.

Having spoken about engineering and its dependency on science, the professor explained the need of knowing the science behind every innovation; the world is a resource. Understanding the science behind our devices allows us to innovate and use our resources optimally.
Innovation of new technology can always arise from the implementation of old scientific methods. One such example is the discovery of the existence of Higgâ€™s boson aka Godâ€™s particle. During a particle accelerator experiment carried out in Geneva to study the nature of particle collisions, but instead, the

experiment paved way to the largest scientific revelation:  the existance of Godâ€™s particle.
The technology driving scientific research is lightyears ahead of the technology we interact with every day. But innovation is something that doesnâ€™t always need advanced state of the art technology, but can also be from simple miniature circuits used in laboratories by students every day. Innovation is always to better humanity. To serve to society.

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