Parshvanath Charitable Trust's
A. P. SHAH INSTITUTE OF TECHNOLOGY
(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)
(Religious Jain Minority)

Department of Electronics & Telecommunication Engineering

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Report on two days Faculty Development Programme on

"High Frequency Structure Simulator (HFSS)"

Academic Year 2019-20

Resource Person : 1) Mr. Aakash Kumar Singh
Application Engineer **(ANSYS)**
ARK InfoSolutions Pvt.Ltd

Course Convener: Ms. Mamta Kurvey

Faculty Coordinators: 1) Ms. Manisha Samant
2) Ms. Sonia Aneesh
3) Ms. Veena Gawde

Dates: 28th and 29th June, 2019

Venue: Lab 409

Attendees: 20

About Program:

Department of Electronics & Telecommunication Engineering, in association with ANSYS conducted two days faculty development program on **"High Frequency Structure Simulator (HFSS)"**. Main objective of this FDP is to make faculty comfortable dealing with ANSYS electronics desktop. It was organised in such way that, faculties could get hands-on experience on current industry standard technologies, thus enabling people from various levels to participate, interact and share their expertise.

First day started with design of simple dipole antenna and testing of it using different tools (e.g polar plot) available was covered and second day started with Designing of patch antenna theoretically and then drawing its model on **HFSS** with accurate dimensions and variables. Testing of antenna was done with application of field and boundaries and plotting S- parameter, Z- parameter, Smith chart plots. Along with HFSS, **Circuit** simulation testing was done successfully.

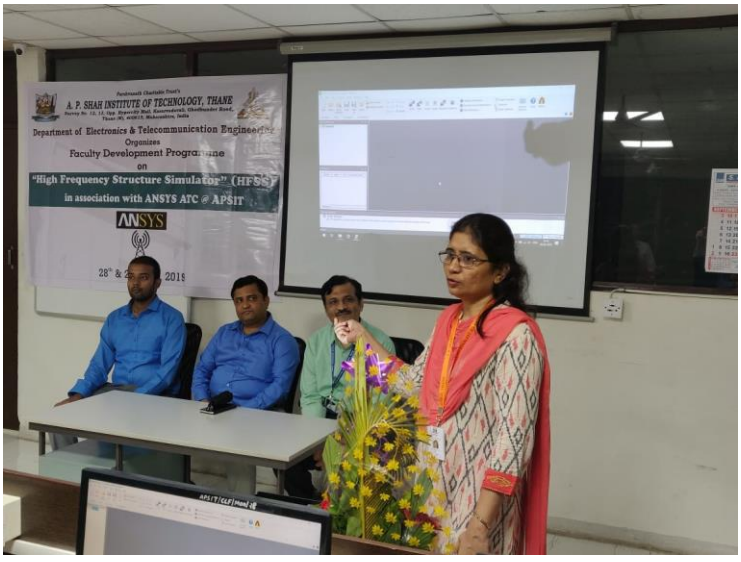
Program was designed in such way that, participant would spend more 80% time for laboratory session. Participant gained valuable hands on experience of this software. Faculties from various institutes had participated and benefited from this workshop.

Duration: It was two days faculty Development program conducted from 28th June to 29th June 2019.

Software Tools:1) ANSYS- EDT Electronics Desktop

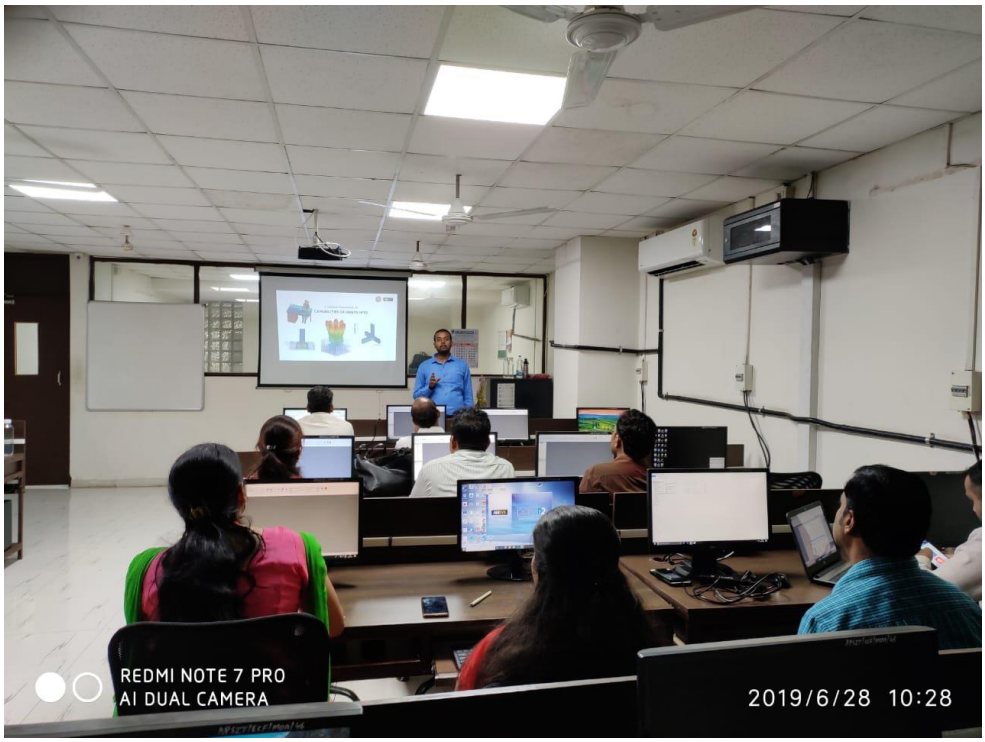
Program Schedule:

Topics	Lab Session
Introduction to ANSYS HFSS: HFSS Simulation Technologies, Features, HFSS with HPC, HFSS Workflow, HFSS GUI	• Wired Dipole – Complete Analysis • Simple patch design and analysis
Meshing and Mesh Operations: ANSYS Electronics Desktop, 3D Design Set up, 3D Modeler, Adaptive Meshing, Advanced Features for EM Design	
HFSS Boundary Conditions and Excitations: Perfect E Boundaries, Radiation Boundary, HFSS Solution Types, Wave Ports, Lumped Ports	• Design of a matching network in Circuit Designer • Helical Antenna Design
Solution Setup &Optimetrics: Solution Frequency, Frequency Sweep, Convergence Criteria, Results, Plots, Field Overlays, Parametric Analysis	



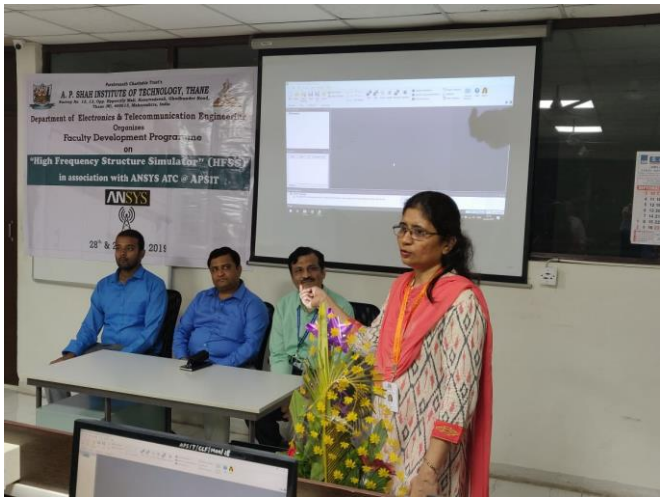
Program Convener giving Introduction of FDP program and the Trainer

Principal Dr. U. D. Kolekar welcomes Mr. Aakash Kumar and all participants to APSIT For Workshop with hands-on training.



Workshop participants attending hands-on training.

Certification Distribution to all participants



Program convener giving vote of thanks at the end of program