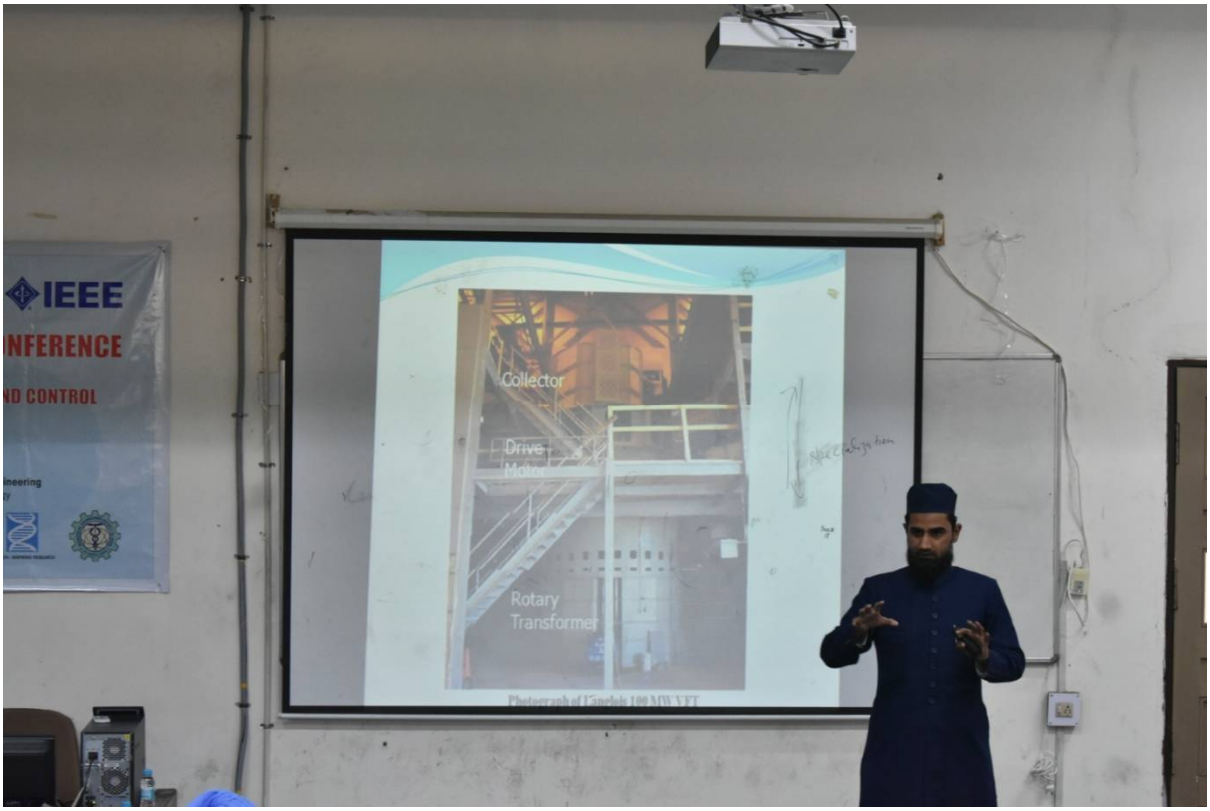
**Dr. Farhad Ilahi Bakhsh, National Institute of Technology Srinagar visited JUIT and delivered an Expert Lecture**

**"A Novel Method for Control of Wind Energy Conversion System (WECS)"**

**On**

**October 11, 2019**




Conventional grid connected synchronous generator (SG) based wind energy conversion system (WECS) incorporates sophisticated power electronic control system which produces harmonics and deteriorates the quality of the power supply. Recently, a new technology i.e. variable frequency transformer (VFT) has emerged as a flexible ac link to transfer power in-between asynchronous power grids. Hence, the presented system aims to use VFT for grid integration of SG based WECS. The proposed system does not employ any power electronic control system. For analysis, the simulation models of proposed configuration as well as conventional configuration have been developed under MATLAB/Simulink environment. A series of studies on power fed from the SG to the grid at various SG input speeds has been carried out with the developed models. Further to analyze the effectiveness of the proposed method; the efficiency, total harmonic distortion (THD) of output voltage and THD of output current of the proposed method have been compared with those of the conventional system. From obtained results, it is observed that the proposed system is simple and does not produce

harmonics. Moreover, to validate the proposed system, an experimental analysis has been carried out.

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