

## **Report on Workshop**

# **RENEWABLE ENERGY TECHNOLOGY AND ENVIRONMENTAL PROTECTION**

**21-25 May 2018**

To create awareness about the current advances of research in Renewable Energy and considering the importance of the knowledge of solving real life and industrial problems in the process of achieving the individual, collective and social goals with sustainable technology, processes and products, a workshop “Renewable Energy Technology and Environmental Protection” was organized by department of Mechanical engineering and department of Physics, IITRAM with Coordinators Dr. Ajit Kumar Parwani (Assistant Professor, Mechanical engineering) and Dr. Dheeraj Kumar Singh (Assistant Professor, Physics).

Workshop was started on 21<sup>st</sup> May 2018 with an inaugural speech of Honourable Director General of IITRAM, Dr. Shiva Prasad. Overview of the workshop was given by Dr. Ajit Kumar Parwani, Assistant Professor Mechanical engineering IITRAM and brief introduction of guest speakers was given by Dr. Dheeraj Kumar Singh, Assistant Professor, Physics IITRAM. After that the chief guest and speaker for the first day Dr. Rohit Rajan Shahi had started the first technical session. He had delivered a lecture on development of hydrogen powered vehicles also he gave brief overview of hydrogen fuel cell. In the second technical session Dr. Kshitij Bhargava, Assistant Professor, IITRAM had presented a topic on some fundamental aspect of organic solar cell. He also explained recent technologies and trends in organic solar cells. The third technical session was conducted by Mr. Kapil Jani, Auditor from JP Technosoft. He discussed case study on 10 MW Narmada Canal Top PV cells, their orientations, operation, maintenance and other associate difficulties.

On the second day the fourth and the fifth technical session was taken by Dr. Pankaj Poddar, Scientist, CSIR NCL Pune. He had presented the prospects of renewable energy. In fifth technical session, he gave idea about recent technologies and materials like semiconductors, piezoelectric and magnetic materials and their synthesis for manufacturing in renewable energy.

A hands on siemens NX modelling and simulation software was organized on 23<sup>rd</sup> and 24<sup>th</sup> May. The sessions were taken by the expert from Siemens technology. The modelling and thermal simulation and practice session were carried out by expert team.

On fifth day, morning session was taken by Dr. Hitesh Panchal, Assistant Professor, GEC Patan. He explained research and developments in Solar Desalination System. The next session was taken by Dr. Dipankar Deb. He gave brief idea about wind mill, it's functioning and associated aerodynamics as well as site selection for wind farm. The next session was taken by Dr. Kannan Iyer, Assistant Professor, IITRAM. He gave lecture on waste energy management. The session on environmental pollution reduction like carbon capture, Exhaust gas recirculation for NO<sub>x</sub> reduction in diesel engine was conducted by Dr. Ajit Kumar

Parwani, Assistant Professor IITRAM. Next session were conducted by IITRAM students Mr Pulkit Kumar and Mr Umang Makadia. Dr Pinkesh Shah, Lecturer GP Ahmedabad conducted last session on utilisation of Bio fuels in IC Engines. Finally in valedictory ceremony oral feedback from participants were taken and vote of thanks were given by Dr. Ajit Kumar Parwani.





