



# IIPE MANUFACTURING NEWS

Editor-in-chief  
Dr. K. Gopalakrishnan

Monthly Newsletter of the Indian Institution of Production Engineers

Editor: **Dr. M. S. Ganesh Prasad**, Professor & Dean, Dept of Mechanical Engineering, NHCE, Bangalore

Prof. R. M. Vasagam, National Chairman, IIPE

Dr. Wooday P Krishna, National President, IIPE

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## IIPE Students' Chapter Inaugurated at Arasu Engineering College, Kumbakonam, Tamilnadu

Department of Mechanical Engineering inaugurated Students Chapter of IIPE on 15.02.2020. **Dr B. Viswanath** were invited as a chief guest to inaugurate the students' chapter and delivered the guest lecture on the topic of Advances in Manufacturing.

**ARASU ENGINEERING COLLEGE, KUMBAKONAM - 612 501**  
(Approved by AICTE - Affiliated to Anna University - Accredited by NBA - Accredited by NAAC - Recognised by UGC under 2(f)& 12(B) - An ISO Certified Institution.)

**DEPARTMENT OF MECHANICAL ENGINEERING & MECHZEAL Students' Association**

*Cordially invite you for the inaugural function of*  
**Students' Chapter of Indian Institution of Production Engineers**  
&  
**Guest Lecture on Advances in Manufacturing**  
on **15.02.2020 at 10.30 a.m. in the Auditorium.**

**Dr. B. Viswanath, Professor,**  
Department of Mechanical Engineering,  
New Horizon College of Engineering, Bangalore

Has kindly consented to be the Chief Guest and will inaugurate the students' chapter in the presence of

**Dr. T. Balamurugan,**  
Principal, Arasu Engineering College

**Dr. Kalaimani Shanmugam,**  
Vice Principal, Arasu Engineering College

**Dr. M. Rukmangathan,**  
Dean of Academics, Arasu Engineering College &

**Dr. K. Kumar,**  
Head of the Department,  
Department of Mechanical Engineering,  
Arasu Engineering College

*Staff and Students,*  
Department of Mechanical Engineering.

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**DEPARTMENT OF MECHANICAL ENGINEERING**  
February 15.2020

*Inaugural function of*  
**Students' Chapter of Indian Institution of Production Engineers**

*Guest Lecture on*  
**Advances in Manufacturing**

*Hearty Welcome to the Chief Guest*  
**Dr. B. Viswanath, Professor,**  
Department of Mechanical Engineering,  
New Horizon College of Engineering, Bangalore

**KUMBAKONAM ARASU ENGINEERING COLLEGE**  
DEPARTMENT OF MECHANICAL ENGINEERING

# IIPE TAMILNADU STATE CENTRE HAS BEEN REVIVED ENTHUSIASTIC WAY FORWARD



Prof. Dr. D. Thirunakkarasu, Chairman and Dr. K. V. Krishna Sastry, Vice Chairman met Dr. K. Gopalakrishnan, National Secretary, Dr. Muralikrishna Reddy, Vice Chairman, both from the National Body and Mr. Subramanyam, Manager of NHQ and discussed about the improved activities of state chapter on 27 Feb 2020 at Bangalore. During the meeting, detailed discussions were held on various steps taken by the TN State Centre for its revival after long gap. The current state of activities being carried out is also updated to the NHQ. Both the office bearers of the NHQ appreciated the present Office Bearers of the Tamilnadu State Chapter with new team of enthusiasts and assured all possible helps from NHQ to strengthen the IIPE activities at Tamilnadu.

## Mechanical Engineering Student's Association & IIPE Student's Chapter at Erode Sengunthar Engineering College, Erode

Department of Mechanical Engineering inaugurated Mechanical Engineering Student's Association & IIPE Student's Chapter on 10.03.2020. Dr. Srinath M K has been invited as a Chief Guest to inaugurate the Mechanical Engineering Student's Association & IIPE Student's Chapter and delivered the guest lecture on the topic of Advanced Manufacturing Technology.





*Glipmses of Mechanical Engineering Student's Association & IPE Student's Chapter*

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## Three days' Webinar Series on **Multi-Criteria Decision Making (MCDM) in Manufacturing at K. K. Wagh Institute of Engineering Education and Research, Nashik, Maharashtra**

Three days' webinar series on "Multi-Criteria Decision Making (MCDM) in Manufacturing" was organized by the Department of Production Engineering, K. K. Wagh Institute of Engineering Education and Research, Nashik in association with Indian Institution of Production Engineers during May 26-28, 2020. The main objective of this webinar series was to promote the research culture in the Production Engineering field among the faculty and students of various engineering institutes in Maharashtra. About 350 participants had register for this webinar series on 'Go to Webinar' platform. This series of webinar was inaugurated by Dr. K. N. Nandurkar, (Principal, K. K. Wagh IEER, Nashik), who delivered the welcome address. Total six sessions have been conducted in this webinar series. First session was delivered by Dr. K. N. Nandurkar on topic "Application MCDM techniques in design of Cellular Manufacturing System". Second and Third session was conducted by Dr. P. J. Pawar (Professor and Head, Department of Production Engineering, K. K. Wagh IEER) on topics Multi-Criteria Decision Making 1: "Analytic Hierarchy process and Data Envelopment Analysis", Multi-Criteria Decision Making 2: "Principal Component Analysis, Multi-objective Artificial bee colony algorithm", etc. Fourth session was delivered by Dr. Ramesh Lekurwale (Professor and Head, Department of Mechanical Engineering, K. J. Somaiya COE, Mumbai) on topic Applications of VIKOR method. Fifth session was delivered by Dr. Kailas Chandratre, Principal, LoGMIEER, Nashik on topic "Application of MODM Method to Plant layout optimization". The last session was conducted by Dr. P. J. Pawar on the topic "Modified TOPSIS method". E-certificates distributed to attendees by mail. Prof. Santosh B. Sangle coordinated this event.



To watch the recorded sessions of the webinar, scan the QR code

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## **Faculty Development Programme (FDP) On "OUTCOME BASED EDUCATION AND NBA-ACCREDITATION"**

VTU TEQIP1.3 Cell in association with **Aryabhata Knowledge University**, Patna, Bihar and **Biju Patnaik University of Technology** has Sponsored a Faculty Development Program (FDP) on "**Outcome Based Education and NBA-Accreditation**" by the program Coordinator, **Dr. M. S. Ganesh Prasad**, Dean, Prof and Head of ME dept of **New Horizon College of Engineering**. It was held from 28<sup>th</sup> January 2020 to 1<sup>st</sup> Feb 2020. The FDP brought together participants from different colleges across the state and also included internal participants. The FDP had eminent speakers and resource persons from reputed institutes from across the state of Karnataka. Most of the participants who attended the workshop were faculties and NBA coordinators. The FDP provided an interactive atmosphere between the resource persons and the participants.



Glimpses of FDP



## OPPORTUNITIES FOR WOMEN IN 2020

**Dr. M S Ganesha Prasad,**

Dean, Professor & Head Mechanical Engineering, New Horizon College of Engineering

URL: <https://www.ceoinsightsindia.com/women-leaders/opportunities-for-women-in-2020-nwid-2086.html>



*Highly seasoned academician always looks for the growth of organisations. Established UG and PG departments in the Engineering Institutes. Responsible for getting NAAC A grade for Engineering Institute. Presently working for NBA accreditations of UG and PG programmes.*

Women are the back bone of our society we need their contributions in most of the day to day activities. There are lot of opportunities available for the women in engineering field. Females were awarded 19.9 percent of all Bachelor's degrees by an engineering program in 2015 and made up 21.4 percent of undergraduates enrolled in engineering.

They received 25.2 percent of Master's degrees and 23.1 percent of doctoral degrees in 2015. This percentage of enrolment increased to 24.1 percent by the end of 2018. Off course in most of the software industries every fourth engineer is women. But there is good number of opportunities in branches like Mechanical Engineering, Civil Engineering, Automobile Engineering and in Electrical Engineering disciplines particularly in government sectors.

Women can get wonderful opportunities through core engineering in government sector jobs like Regional Transport Corporation (RTO), State Road Transport Corporations (RTCs), Railways, Public Works Department (PWD), State and Central Electricity Boards, Public Sector Undertakings (PSUs), and defence (Army/Navy/Air force). In recent times defence sector opened the opportunities for the women candidates, Women candidates of age 20-26 years (as per notified in the advertisement from Ministry of Defence) can apply for this entry. There is considerable comfort space available in Indian Administrative Service by getting through any one competitive examination like IAS, IPS, IES and IFS.

In Gujarat, 33 percent of posts are reserved for females in all government departments and services, such as police, health, education and general administration. Also most of the other state government recruitments are happening with almost 30 percent reservations to the female candidates. In the field of developing their own business either through startup or through family business, most of the women entrepreneurs' success rate is better in the core engineering sectors. This is because women are naturally good at multitasking. As this is the essential skill for the entrepreneur with little perseverance definitely they will be achieving their goal very fast.

**In the field of developing their own business either through startup or through family business, most of the women entrepreneurs' success rate is better in the core engineering sectors**

In some of the state government recruitment the authorities are not receiving the applications from female candidates. The jobs in core engineering branches are innovative, lucrative and can be easily obtained without much competition. Instead of going for mundane coding jobs, present generation women can really aim for core engineering jobs. Core engineering degree with IT (Information Technology) knowledge women can claim the professional ladder very fast. This may be because they are very meticulous and serious in all the activities which they will be doing in their carrier.

Also for women candidates in Indian higher education the fee structure is very much affordable, female candidates can think of acquiring higher degrees (Masters/Doctorates/Post Doctorates) either in India or abroad. If they are going for the higher education abroad the education loan for the women is cheap by one percent. If India has to compete in the international market, then this can be definitely possible if like-minded women can join core engineering branches and pursue their carrier in professional jobs.

**INDIAWOOD-2020**

**INDIAWOOD** is one of the world’s leading exhibitions for the furniture manufacturing and the woodworking industry. It offers its audience a comprehensive overview of the prevailing technological innovations and the latest manufacturing trends in furniture manufacturing, woodworking technologies, tools, fittings, accessories and raw materials. The **11<sup>th</sup> edition of INDIAWOOD** took place for the current year from **27<sup>th</sup> February – 02<sup>nd</sup> March 2020** at the Bangalore International Exhibition Centre.

In the earlier edition (10<sup>th</sup>) i.e., in the year 2018, 867 exhibitors from 35 countries participated; the event welcomed 70,356 visitors from 909 cities and 59 countries. Buyers clocked in for a complete overview of the market and technology in all its dimensions and created millions worth of business possibilities. The **11<sup>th</sup> edition of INDIAWOOD** is organized by **NuernbergMesse India Pvt Ltd** in cooperation with **PDA Trade Fairs Pvt Ltd** and supported by **Eumabois**. **Current edition of INDIAWOOD - 2020** spread over approximately **65,000 sqm** of show floor with more than **875 exhibitors** from **40 countries** showcased their latest machines, technological innovations, equipment, smart manufacturing trends as well as materials, fittings, tools to the attendees from across the globe.

The students (around 50 no’s) from **VI SEM B Sections of Mechanical Engineering, New Horizon College of Engineering, Bangalore** have been taken to visit **INDIAWOOD 2020** on **28<sup>th</sup> Feb 2020**. The visit was highlighted for its many live demonstrations and product launches during the show. **INDIAWOOD** continues to be the largest sourcing platform for furniture manufacturers, wood-based handicraft manufacturers, saw millers, carpenters, craftsmen, architects and interior designers in the region.

During the visit, Students interacted with different exhibitors and discussed about latest technologies in wood Forming. This visit was an **awareness program for imparting knowledge on ever changing technological innovations** for young engineers. Students from mechanical engineering stream understood the importance of machine tool industry growth of country.

Students have witnessed the participation of **various furniture manufacturing Industries** from **40 countries** including India at **INDIAWOOD 2020**. This exhibition really helps the students in building up the self-confidence and to become an entrepreneur.

*Some of the key points of **INDIAWOOD 2020** are listed below:*

<p><b>Machinery &amp; Technology</b></p> <ul style="list-style-type: none"> <li>▪ Solid woodworking</li> <li>▪ Panel Processing</li> <li>▪ Wood based panel production</li> <li>▪ Saw milling / Veneer peeling machine</li> <li>▪ Surface treatment &amp; Finishing lines</li> <li>▪ Tools &amp; accessories for furniture production &amp; woodworking</li> <li>▪ Packaging machines / wrapping machines for furniture manufacturers &amp; woodworking industry</li> <li>▪ Machines for upholstery, mattress and sofa manufacturing.</li> </ul>	<p><b>Materials &amp; Supplies</b></p> <ul style="list-style-type: none"> <li>▪ Adhesives, Chemicals &amp; Wood Coatings</li> <li>▪ Wood, Veneers, parquets flooring, Doors</li> <li>▪ Decorative surfaces, Décor papers, Laminates, Door Skins, Edges, Composite materials etc</li> <li>▪ Wood based panels (Plywood, Particle Board, MDF, Pre-lam Boards) and other versatile interior panels</li> <li>▪ Embossing cylinders, Press plates</li> <li>▪ Packaging materials for furniture manufacturers &amp; woodworking industry</li> <li>▪ Materials &amp; supplies for upholstery, mattress and sofa manufacturing.</li> </ul>
<p><b>Fittings, Hardware &amp; Components</b></p> <ul style="list-style-type: none"> <li>▪ Fittings, Locks, built-in parts, Hardware Systems, Lamps and lighting systems</li> <li>▪ Semi-finished products for Cabinetry, kitchen, office and modular furniture</li> </ul>	<p><b>Industry Services</b></p> <ul style="list-style-type: none"> <li>▪ Software</li> <li>▪ Certifying Agencies</li> <li>▪ Training &amp; Research Institutes</li> <li>▪ Industry Associations</li> <li>▪ Online business portals</li> </ul>

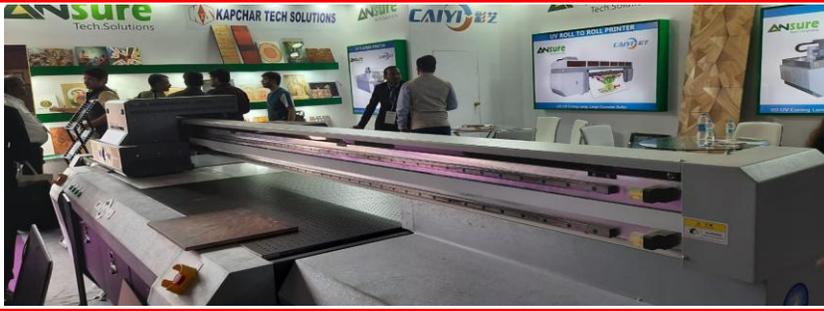
### Major Stalls visited during the show are listed below:

- ✓ **TEKNOVACE wood coatings** featured for manufacturing of custom designed high-end wood coatings.
- ✓ **Shakuntalam Timbers** featured for premium decorative hardwoods.
- ✓ **HP adhesives Pvt. Ltd.** famous for largest manufacturer of solvent cement in Asia.
- ✓ **CARVE TECH** from Matha wood carving famous for CNC wood, glass stone, metal cutting & carving machineries
- ✓ **Vishwakarma Laminates (P) Ltd.** manufacturer of High pressure decorative laminate sheets, electric panel, Bakelite sheet products etc.
- ✓ **FixoBoardAtalnic Polymers** manufacturers of PVC.WPC plywood
- ✓ **K S Industries** providing complete solutions for plywood industry
- ✓ **B S Engineering Machinery Pvt. Ltd.** Largest manufacturer as well as exporter of plywood machineries, Bamboo processing machineries and coir board machineries
- ✓ **N R CNC Manufacturers** produces CNC machines useful for wood working professionals
- ✓ **Newton Technologies** provides complete solutions for wood working machines and many more...

### Glimpses of INDIAWOOD-2020 Visit



### IIFE Students' Chapters Visited INDIA WOOD 2020 at Bangalore



IPE Students' Chapters Visited INDIA WOOD 2020 at Bangalore



## IPE Students Chapters have Participated in Activities: WEBINARS



**NEW HORIZON**  
COLLEGE OF ENGINEERING

**REGISTER NOW!**

**WEBINAR**  
**COPING WITH STUDIES**  
**DURING DARK CLOUDS OF**  
**COVID 19**

**20**  
**APRIL**  
**04:30**  
**PM**



**Dr. M S Ganesha Prasad**  
Dean Professor and Head  
Mechanical Engineering  
NHCE

**collegedunia**

**Dr. M S Ganesha Prasad**, Professor & Dean, Department of Mechanical Engineering, NHCE had conducted webinar for the students of NHCE on 20<sup>th</sup> April 2020. The topic discussed in this webinar was on Coping with studies during dark clouds of Covid-19.

**Prof. Gurucharan Singh**, Executive Director, Department of HRD, NHCE had conducted webinar for the students of NHCE on 20<sup>th</sup> April 2020. The topic discussed in this webinar was on Coping with studies during dark clouds of Covid-19.

**Dr. Prashant CSR**, Dean Academics, had conducted webinar for the students of NHCE on 20<sup>th</sup> April 2020. The topic discussed in this webinar was on Coping with studies during dark clouds of Covid-19.



**NEW HORIZON**  
COLLEGE OF ENGINEERING

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**20**  
**APRIL**  
**04:30**  
**PM**



**Prof. Gurucharan Singh**  
Executive Director  
Department of HRD (CR, L&D,P)  
NHCE

**dunia**



**NEW HORIZON**  
COLLEGE OF ENGINEERING

**REGISTER NOW!**

**WEBINAR**  
**COPING WITH STUDIES**  
**DURING DARK CLOUDS OF**  
**COVID 19**

**20**  
**APRIL**  
**04:30**  
**PM**



**Dr. Prashant CSR**  
Dean Academics  
NHCE

**collegedunia**



**WCRC**  
WORLD CANSAT & ROCKETRY CHAMPIONSHIP

## WORLD CANSAT/ ROCKETRY COMPETITION 2021

Phase 1: National Competitions

Phase 2: Continental Competitions

Phase 3: Global Competition @ SERBIA

# International Conference on Engineering Trends and Challenges in Applied Science, Engineering and Technology ICECAET-2020

International Conference on Engineering Trends and Challenges in Applied Science, Engineering and Technology ICECAET-2020, conducted by Department of Mechanical Engineering, Gopalan College of Engineering, Bengaluru on 10<sup>th</sup> and 11<sup>th</sup> March 2020. Dr. Nagendra J, Senior Assistant Professor, Department of Mechanical Engineering, NHCE was invited as Keynote Speaker and Session Chair. Dr. Nagendra has delivered his keynote address on Additive Manufacturing Technology and its latest developments in the meadows of mechanical engineering during the International conference. The keynote session was followed by Paper Presentations and was chaired by him, where in the selected papers were assessed based on the technical presentations.



Glimpses of ICECAET-2020

## IIT DELHI OFFERS RESEARCH FELLOWSHIP AWARD TO FACULTY MEMBERS OF ENGINEERING INSTITUTIONS

Dr. Srinath M K, IPE Life Fellow Member and Associate Professor, Department of Mechanical Engineering, New Horizon College of Engineering, Bangalore has been selected under the **Summer Faculty Research Fellow Programme-2020**, Department of Mechanical Engineering **IIT Delhi**. The program is for a period of 2 months starting from June to July 2020. Dr. Srinath M K will be working under the Mentorship of **Dr. P**



**IPE Chapters interested in Launching Their Own Satellites or to establish the UNISEC India Chapter at Their Institutions can contact: Dr. K. Gopalakrishnan, National Secretary, IPE at [profgoki@yahoo.com](mailto:profgoki@yahoo.com) or M: 98451 73730**

### India- Israel Partnership

- Innovation, Robust Technology Base, Disruptive Technologies
- Academic Research to Products and Solutions
- Approach to Outreach Educational Programmes – Industry & Institute
- Mastered in Space Technology
- Strong in Communication, Observation Science and Education International Co-operation, Bilateral Agreements with India including Student
- Exchange Programmes and Joint Projects
- Funds - Grants, Soft Loans etc

### How Institutions Can Engage

- Build Strong "Space Technology" Competencies
- Hands on Development Experience- Students and Faculty Members
- More Industry Interaction (Real Time)
- State-of-the-art Technology Interventions
- Create New Job, Start-ups and Incubation facilities
- Nurture Future Space Engineers/Scientists
- Technology Demonstration - S&T Research
- Support Education Outreach
- Make Students Future Career Ready

**UNISEC India:** Secretariat @4<sup>th</sup> Floor,#3, First Main, BDA Layout, Kodihalli, HAL 2nd Stage, Bengaluru – 560008, Karnataka, India;  
**Contact Info:** +91 80 6559 2501, +91 80 4850 8380; Website: [www.unisec-india.in](http://www.unisec-india.in)



## BENEFITS OF

## CHAPTER AT EELs

*Become a Member! Smartly Avail the Unlimited Opportunities! Globally!*



## IPE Members in News...



### BOSE SCIENCE SOCIETY

Established under the Charter of TNSRO, Affiliated with VIPNET, Vigyan Prasar DST, Govt. of India, New Delhi. Vide unique authorization no: VP.TN0090/2017  
39, Mura Bhavan, Koodal Nagar, Rajagopalapuram Post Pudukkottai-622003.  
Tamil Nadu. E-Mail :bsstnsro@gmail.com, 9952886637, 04322-261088



Ref No:TNSRO/BSS/150/GENL(A)/2019  
Membership Number:M524/BSS/2018

10.07.2019

To  
**CH.V.SATYANARAYANARAJU**  
Scientist D  
Research Centre Imarat,  
DRDO Hyderabad, Telangana, India.

Dear Sir/Madam  
Sub: **BSS Annual Awards 2018-2019**- Confirmation –Reg.  
Ref : Resolution No:BSS/023/11/2011 Dated 05.10.2011  
Congratulations!

It is our extreme pleasure to inform you that your name is selected by the member and elected to the fellow of our society. Careful screening of your application, the selection committee has unanimously decided on awarding you as the winner of **“Dr APJ ABDUL KALAM BEST SCIENTIST AWARD”** for **Metallurgy and Materials Engineering**. This award acknowledges your Invaluable service and research contribution in **Metallurgy and Materials Engineering**. On behalf of the organizers/committee; we cordially invite you to attend the award presentation ceremony on **24 August 2019** at Pudukkottai, Tamil Nadu, India. The ceremony will be graced by reputed scientists and most respective personalities. We congratulate you for selecting on this most prestigious award in 2018 - 19 with our fullest respect and sincerest best wishes.

Note : The above said named is hereby authorized to use suffix **FBSS(Fellow of Bose Science Society)** after candidate's name.

*\*This award confirmation letter is eligible for all academic purposes.*

Naturally yours

Vijikumar.S  
Hon'ble President



## **Benefits of Professional Bodies Chapter at EEs: Including IPE Chapters at EEs Which Provide Network to Achieve the Following:**

### **Publications**

- Research Papers: Published in Journals (With ISSN/Impact Factors etc)
- Research Papers: Published in Conference (Proceedings with ISBN)
- Books
- Monographs/White Papers
- “h” Index of Each Faculty
- “I 10” Index

### **Intellectual Property Rights (IPR)**

- Patents
- Trade Marks
- Geographical Indications
- Layout-Designs of Integrated Circuits
- Industrial Designs
- Trade Secrets
- Copy Rights (rights of authors of literary and artistic works including Computer Programmes)

### **Sponsored Research Projects/Grant-in-Aid**

#### **Consultancy Projects**

#### **Industry Sponsored Equipment/Lab**

#### **Free/Online/Advanced Labs: Established**

- Students/Faculty Activities

#### **R&D Awareness Programmes**

#### **Extra Curricular/Co-curricular Activities**

- Establishing Chapters of Professional Societies/Trade Bodies
- Enhancing Team Activities/Interpersonal Skills etc

#### **Emerging Trends Watch: Alternative Teaching & Learning**

- Innovations/Patents/Video Watch etc

### **Industrial Visits/Industry Collaborations**

Arranging Industrial Visits/Field Training of Faculty/Students at Industries

B.Tech and M.Tech Mini-Major Project/Dissertation Work at Industries

- Collaborative Training Programmes/Credit Courses
- Companies to Take Students for Learn & Earn Programs
- Practical Training/Pre Internship of students in Industries (Unpaid/Paid)
- Professional Chairs Sponsored by Industries at EEI
- R&D Laboratories sponsored by industries at EEI
- MoU between Industries/R&D Labs/Professional/Trade Bodies
- Scholarships/Fellowships Instituted by Industries for Students of EEI
- Short-Term Assignment/Exchange of Faculty Members in Industries
- Expert/Professionals from Industry as Visiting Professors or Guest Lectures and Delivering Lectures on Industrial Best Practices & Trends

### **Knowledge Conferences/Events: Organized/Attended**

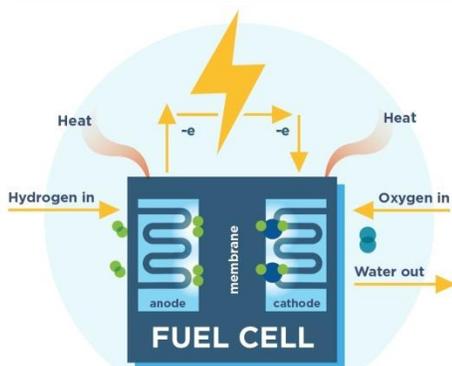
- Workshops, Conferences and Symposia *In House Events:*
- Faculty Participation in External Events:
- Having Tie-ups with Foreign Universities
- Promote International Internship /Summer Schools

### **Startups: Established**

- Startups by Students/Faculty Members

## **FUEL CELL TECHNOLOGY**

A fuel cell is a device that converts chemical potential energy (energy stored in molecular bonds) into electrical energy. A PEM (Proton Exchange Membrane) cell uses hydrogen gas (H<sub>2</sub>) and oxygen gas (O<sub>2</sub>) as fuel. The products of the reaction in the cell are water, electricity, and heat.



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### **Proton exchange membrane fuel cell**

