

**PANDIT DEENDAYAL
PETROLEUM UNIVERSITY**



NEWSLETTER
November 2019



School of Technology *Department of Mechanical Engineering*

FACULTY ZONE

- ⇒ Publications
- ⇒ Conference/Workshop Attended
- ⇒ Professional Activities
- ⇒ Administrative Assignments
- ⇒ Events/Workshop Organized
- ⇒ Guest Lectures
- ⇒ Professional Visitors
- ⇒ Professional Visits
- ⇒ Social Activities

STAFF ZONE

- ⇒ Administrative Activities
- ⇒ Industrial Visits

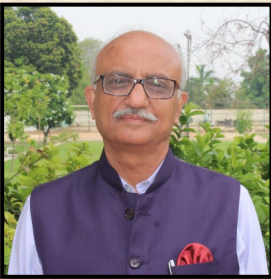
STUDENT ZONE

- ⇒ Publications
- ⇒ Conference Attended
- ⇒ Events Organized
- ⇒ Recognition
- ⇒ Visits

Editorial Team

Faculty Coordinator: Dr. Pankaj Sahlot

Staff Coordinator: Mrs. Pooja Nimavat



DIRECTOR'S DESK...

Prof. Sunil Khanna

Dear Colleagues and Students:

Industry 4.0 (the fourth Industrial Revolution) encapsulates the future development trends to achieve more intelligent manufacturing. As we @ PDPU embark on this journey to towards Industry 4.0, I am Happy to Introduce the next issue of the Newsletter which not only share with all its readers the latest news and developments in the Department of Mechanical Engineering but would also be sensitizing all of us on the latest trends and developments in the Fourth Industrial Revolution.

The limitless power of technology to do good and the conviction of my faculty colleagues and students that the golden age is ahead of us - and not behind us – brings about the best in all of us which is reflected in their achievements.

Compliments to the editorial team for their passion for perfection and unbound creativity which makes me always look forward to the next edition of the Newsletter.

HEAD OF THE DEPARTMENT'S DESK ...



Prof. Vishvesh Badheka

It gives me immense pleasure to share Newsletter of the Mechanical Engineering Department, November 2019. Mechanical Engineering Department. is the most happening Department of the School of Technology. Newsletter gives an overview of the activities carried out by students, staff and faculties during the month. You may please share your feedback, comments & suggestions to the coordinators.



FACULTY

PUBLICATIONS

JOURNALS

Dr. Vivek Patel, Dr. Rajesh Patel, Dr. Jatin Patel, Dr. Vivek V Patel and Dr. Vishvesh Badheka published the following journal papers in the month of November 2019:

- ◆ *Vivek Patel, Rajesh Patel, Jatin Patel* "Theoretical and experimental investigation of bubble column humidification and thermoelectric cooler dehumidification water desalination system", International Journal of Energy Research, Nov, (2019).
- ◆ *Patel, Vivek*, Nirvesh Mehta, Kamlesh Mehta, Amarish Badgujar, Shreya Mehta, and Nisha Bora. "Experimental Investigation of Flat Plate Cryogenic Oscillating Heat Pipe." Journal of Low Temperature Physics (2019): 1-15.
- ◆ Khanna, N., Sharma, P., Bharati, M., *Badheka, V.*, J Braz. Soc. Mech. Sci. Eng. , Friction stir welding of dissimilar aluminium alloys AA 6061-T6 and AA 8011-h14: a novel study; (2020) 42: 7.(First Online 25 November 2019)

CONFERENCE PAPERS

Dr. Pankaj Sahlot presented a research paper on Development of a numerical model to predict tool wear and worn-out pin profile during friction stir welding of CuCrZr alloy in International Conference on Recent Advances in Materials & Manufacturing Technologies (IMMT) 2019 from 20th-22nd November 2019, Dubai



Research Paper Presentation at (IMMT) 2019

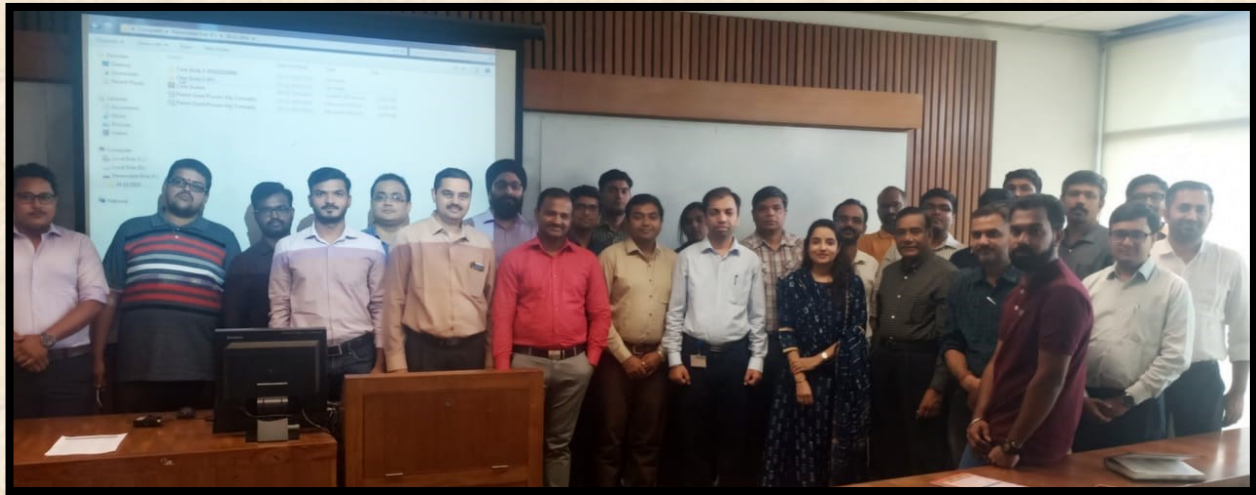


FACULTY

CONFERENCE/WORKSHOP ATTENDED

The following faculties attended the below mentioned workshops at PDPU:

⇒ *Dr. Vishvesh Badheka, Dr. Vivek Kumar, Dr. Simranjeet Singh, Dr. Vivek K Patel, Dr. Vivek V Patel and Dr. Vipin Das* attended IPR workshop on 16th November 2019.



IPR workshop

⇒ *Prof. S S Kachhwaha, Dr. Garlapati Nagababu, Dr. Vivek V Patel, Mr. Rakesh Chaudhari, Mr. Parth Prajapati, Dr. Vivek K Patel, Mr. Abhinaya Bhasuru, Mr. Rahul Deharkar, Mr. Krunal Mehta, Dr. Pavan Gurrala, Dr. Jaykumar Vora, Dr. Vinay Vakharia, Dr. Vivek Kumar, Dr. Simranjeet Singh, Dr. Vipindas K, Dr. Ravi Kant, Dr. Ojas Satbhai, Prof. Vishvesh Badheka, Dr. Jatin Patel, Dr. Rajesh Patel* attended Web of Science workshop held at PDPU on 23rd November 2019

⇒ *Dr Nirav Patel, Dr Pankaj Sahlot and Dr Abhishek Kumar* attended 2nd International Conference on Recent Advances on Materials and Manufacturing Technology (IMMT) on 20th – 22nd November 2019 at BITS Pilani, Dubai.



IMMT-2019, BITS Pilani Dubai



FACULTY

PROFESSIONAL ACTIVITIES

The following Administrative assignments were taken up by Department of Mechanical Engineering :

⇒ **Dr. Vishvesh Badheka**, Head-Department of Mechanical Engineering delivered Pre-hackathon speech on 28th November 2019 and guided one team during Let's Hack 2.0: PDPU's in-house hackathon dated 29-30th November 2019



Let's Hack 2.0: PDPU's in-house hackathon
(Team ID:- SGH208)



Meeting with DAAD Official

⇒ **Dr. Vishvesh Badheka**, Head – Department of Mechanical Engineering attended the following:

- * Prof. Kartik Khilar's Memorial lecture on 12th November 2019
- * Inaugural program of HR Conclave on 15th November 2019
- * Meeting with DAAD official followed by Interactive session with B. Tech and M. Tech Students on 15th November 2019.

⇒ Department meeting was conducted followed by faculty seminar by **Dr. Ajay Kumar** and farewell to Dr. Pawan Sharma, Dr. Biranchi Sahoo and Dr. Ajay Kumar as well as Certificate distribution to Faculties and Staff for NBA documentation on 26th November 2019.



Faculty Seminar

FACULTY

ADMINISTRATIVE ASSIGNMENTS

The following Administrative assignments were taken up by Department of Mechanical Engineering :

- ⇒ Department conducted Board of Studies (BoS) meeting on 5th November 2019
- ⇒ Academic Architecture Meeting was held on 7th November 2019.
- ⇒ Department conducted Parent Teaching Meeting (PTM) on 22nd November 2019 coordinated by *Mr. Rahul Deharkar*.
- ⇒ **B. Tech (Mechanical Engineering) Program received NBA approval on 9th November 2019**
- ⇒ *Mr. Ravi Kant* coordinated meeting and activities relating to Let's Hack 2.0, the Hackathon Event organized by PDPU Innovation and Incubation Centre (PDPU-IIC) in association with School of Technology, PDPU on 29th-30th November 2019.

EVENTS/WORKSHOP ORGANIZED

Dr. Vishvesh Badheka arranged Ultrasonic Welding Machine Training for few B. Tech students 9th November 2019.



Ultrasonic Welding Machine Training

FACULTY

GUEST LECTURES ARRANGED WITHIN PDPU

Dr, Jaykumar Vora and Dr. Rajesh Patel organized the following expert talks during the month of November 2019

- ◆ **Dr, Jaykumar Vora** organized Expert Talk on “Career Awareness Session” by Ms. Khushboo Vaidya, Founder of Boarding Pass for Success, Canada under the ISNT-PDPU Student Chapter attended by 63 participants dated 7th November 2019 .



Expert Talk on “Career Awareness Session”

- ◆ **Dr, Jaykumar Vora** organized Expert Talk on “ Use of NDT techniques in Indian Space Program" by Mr. Ravikumar Varma , Scientist Engineer E, Space Application Centre, ISRO, Ahmedabad, under the ISNT-PDPU Student Chapter attended by 80 participants dated 19th November 2019.



Expert Talk on “ Use of NDT techniques in Indian Space Program"

- ◆ **Dr Rajesh Patel** organized Expert Lecture on " Design of Air Handling Unit for Air Conditioning System" by Mr. Gaurav Patel, Project Associate, GERMI on 22nd November 2019 for M. Tech. (Thermal) students.



FACULTY

GUEST LECTURES DELIVERED OUTSIDE PDPU

The following officials delivered Expert Talks during the one week STTP on “Processing and Characterization of Materials”, PCM-2019” during 4th - 8th November 2019. The event was under the aegis of Indian institute of metals (IIM) Baroda Chapter.

- ⇒ **Dr. Vishvesh Badheka** delivered talk on ‘Advances in Solid State Welding Processes’ on 6th November 2019.
- ⇒ **Dr. Jaykumar Vora** delivered talk on "Advances in arc welding" on 6th November 2019.
- ⇒ **Dr. Vivek V. Patel** delivered talk on “Advanced characterization techniques for micro structural examination”



Processing and Characterization of Materials “PCM-2019”



Dr. Vishvesh Badheka delivered an Expert Talk on “Advances in welding” and “Welding defects” during ISTE One Week Faculty Development Programme (FDP) organized by Mechanical Engineering Department, Tapi Engineering College, Surat on 18th November 2019



ISTE One Week FDP

Dr. Vishvesh Badheka delivered an Expert Talk on ‘FSW and its variants’ for PG students, Mechanical Engineering Department, SVNIT, Surat on 18th November 2019.

FACULTY

PROFESSIONAL VISITORS AT PDPU

⇒ *Dr. Vishvesh Badheka* arranged the following visits during the month of November 2019



⇒ Mr Mahesh Rao, Siemens, Vadodara visited for technical interaction on 8th November 2019.

⇒ DAAD Officials visited Welding Research Laboratory on 15th November 2019.

DAAD Officials

⇒ IITRAM faculty member and few students visited Welding Research Laboratory on 11th November 2019.

⇒ IITRAM students visited on 20-21st & 26th November 2019 for conducting experiments



IITRAM Faculty & Students



Indus University Faculties

Faculty from Indus university visited Metallurgy and Welding Research Lab 15th November 2019.

Post Graduate students, Mechanical Engineering Department, SVNIT, Surat visited Welding Research Lab on 18th November 2019.



Visit to Welding Research Lab SVNIT

FACULTY

PROFESSIONAL VISITORS AT PDPU



Officials from Jackobs

⇒ Officials from Jackobs, Vadodara visited on 22nd November 2019 followed by technical interaction and visit to Centre of Excellence COE-Siemens

⇒ B.Tech (Mechanical) students of IIT Gandhinagar visited EDM wire cutting facility on 23rd November 2019 and performed experiments on 29th November 2019.



Students from IITGn



Prof. Anil Srihatti
from Jain College of Engineering

⇒ *Dr Jaykumar Vora* arranged the visit of Professor Anil Srihatti from Jain College of Engineering , Karnataka. He visited PDPU for technical discussion during November 2019.



FACULTY

PROFESSIONAL VISITORS AT PDPU

⇒ **Dr. Vishvesh Badheka** coordinated visit of Milacron officials on 25th November 2019 followed by interaction with Dr., Pragnesh Bhatt, Head- Electrical Engineering Department and few faculties from Mechanical Engineering Department followed by visit to Centre of Excellence (CoE) and CP interview of few B. Tech students.



Officials from Milacron

- ⇒ Mr. D G Sharma, Faculty Gujarat Engineering College (GEC), Gandhinagar visited for technical interaction in connection with ongoing collaborative work on 27th November 2019.
- ⇒ Dr. H G Rana, Faculty, LDRP, Gandhinagar visited for technical interaction in connection with ongoing collaborative work on 27th November 2019.
- ⇒ IITRAM student visited for Special wear testing setup and conducted experiment on 29th November 2019 as part of PhD research.



FACULTY

PROFESSIONAL VISITS OUTSIDE PDPU

Dr. Jaykumar Vora, appointed as an examiner for conducting Practical Examination of B. Tech-Industrial Metallurgy for the subject Metal Joining Processes, visited ITE, Indus University on 11th November 2019.

Dr. Vishvesh Badheka along with few M. Tech students visited Sahajanand Laser Technology Ltd, Gandhinagar on 21st November 2019 regarding ongoing collaborative work.



Visit to SLTL

Dr. Vishvesh Badheka, visited Perfect Industry Naroda on 25th November 2019, followed by interaction with Mr Arvind Sharma (Ex-IRS) and Mr Alock Bose (IIW) at Vadodara.



FACULTY

SOCIAL ACTIVITIES

Dr. Jaykumar Vora, Dr. Anurag Mudgal and Dr. Pavan Gurrala represented PDPU at Badminton Corporate tournament League held at Ahmedabad during November 2019.



Badminton Corporate tournament League



ADMINISTRATIVE ACTIVITIES

Mr. Trushar Prajapati supported the students to carry out their projects at Workshop/Lab for Hackathon 2.0 during 29th - 30th November 2019

INDUSTRIAL VISITS

Students went for Industrial Visit at Kloeckner Desma Machinery Pvt. Ltd on 14th November 2019 under guidance *Mr. Piyush R. Chaudhari & Dr. Vivek Kumar*.



Industrial Visit at Kloeckner Desma

STUDENTS CONFERENCE ATTENDED

Nisarg Patel attended and delivered an oral presentation for paper titled “Effect of number of passes and pass directions in friction stir processing of copper” under the guidance of **Dr. Vishvesh Badheka** at the 4th International Conference on Functional Materials and Metallurgy (ICFMM 2019) held in Osaka, Japan on 27th -30th November 2019.



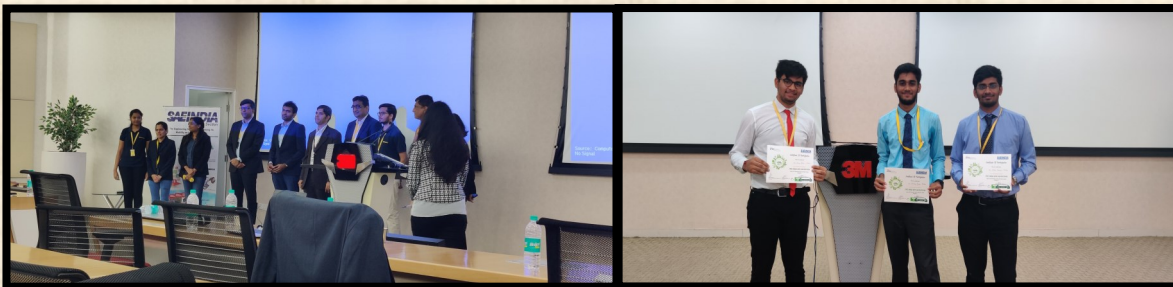
ICFMM 2019



Dr. Pradeep P. Thevannoor Innovation Awards, 2019

Keval Bhavsar and Dharmik Gohel participated and presented the innovation “Spider: A Security Device” displayed at in “Dr. Pradeep P. Thevannoor Innovation Awards, 2019 at SCMS School of Engineering & Technology (SSET), Kerala on 16th –17th November 2019.

Swati Srivastava participated Lets’s Hack 2.0 - hackathon organized by PDPU Innovation and Incubation Centre (PDPU-IIC) in association with School of Technology, PDPU on 29th-30th November 2019.



Hackathon at International Technological Electrification Conference (ITEC)

Mann Shah with his team members **Sandeep Yadav and Nikhil Paravila** was selected for the final round from amongst more than 100 team across the country representing PDPU with their idea at a hackathon in open category organized by the International Technological Electrification Conference (ITEC) held in Bangalore on 29th November 2019 at 3M company's R&D building.

STUDENTS EVENTS ORGANIZED

⇒ The following activities were organized by **Dr. Vishvesh Badheka** under IIW-PDPU Student Chapter

- ◆ Few M.Tech (Mfg) students attended one day seminar on ‘Metallography and Microstructures’ organised by ASM at COE-welding, L D College on 12th November 2019.



COE-Welding at L.D Engineering College

- ◆ Joint meeting with IACE-IIW held on 15th November 2019.
- ◆ Few B.Tech Mechanical Engineering students visited COE-Welding at L D Engineering College, Ahmedabad on 23rd November 2019.

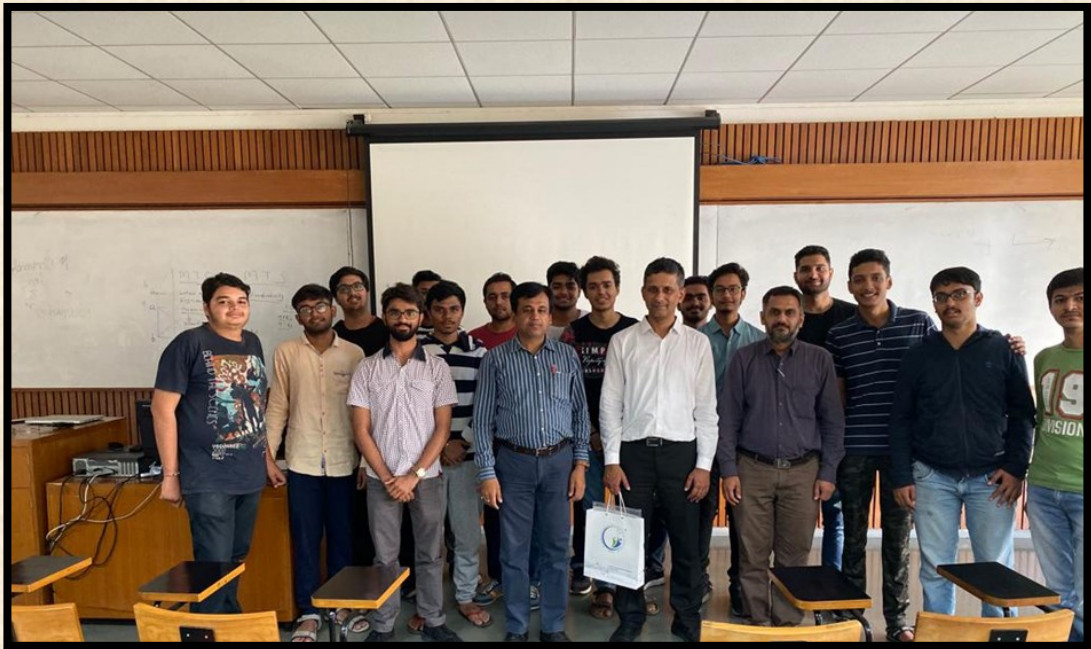


COE-Welding at L.D Engineering College

STUDENTS EVENTS ORGANIZED

⇒ The following activities were organized by **Dr. Vishvesh Badheka** under IIW-PDPU Student Chapter

- ◆ Expert Talk on “Project Management” delivered by “Mr Mahesh Rao, Chief Manager, Operations and Order Execution ,Siemens Ltd, Vadodara” on 30th November 2019 for STW elective & M.Tech. Manufacturing and IIW-PDPU students chapter”.



Expert Talk by Chief Manager SIEMENS

STUDENTS

RECOGNITION

Mr. Darshan A Solanki & Mr. Jaynish H. Idhariya (M.tech Manufacturing) have successfully completed one 12 week NPTEL course on **Welding Metallurgy** by Prof. P.K. Jha (IIT Roorkee) with a consolidated score of **82%** and 76% respectively and got Elite plus Silver type of certificate.

VISITS

Mr. Farhan Khimani visited Joining and Welding Research Institute (JWRI) on 29th November 2019 arranged by **Prof. Vishvesh Badheka**. JWRI, located at Osaka University is one of the pioneer research institutions in the field of welding and allied sciences. The overview of the institution was provided by Dr. Manabu Tanaka, Director-JWRI who elaborated on their research areas and future work. The presentation was followed by a visit to the institute's labs which included the Laser welding lab, arc welding and spectroscopy lab and various robotic welding facilities. He was also fortunate to have witnessed a demonstration of laser welding. The visit to lab was followed by a picture with Dr. Tanaka at the entrance.



With Dr. Manabu Tanaka, Director-JWRI