



- Ramzat'15 - The Grand Indusian Navratri
- Swacchta Abhiyan
- Workshop on Electrical Machines and Power Electronics
- Expert lecture on High Voltage Power Supply in Field and Research
- Expert Lecture on Industrial Automation
- Workshop on SCILAB
- Awareness Workshop
- Expert Lecture on DRI
- IEESA: Annual Meet'15
- Seminar on Data Warehousing and Data Wearing
- 'i-Create 3
- Fall Fiesta

C O N T E N T S

- Robo Race and Robo Soccer
- Inauguration of WDC
- Invitation for National Conference
- Indus WDC organizes a CSR Program
- T & P Update
- Expert Lecture on Water Management and Conservation
- Industrial Visits
- Expert Lectures and Workshop
- Students' Achievement
- Faculty Achievement
- ODE to Vikram Sarabhai by Dr. S. B. Sharma
- Team Indus at Concours'15
- i-Muse
- i-Pixel

Ramzat'15 - The Grand Indusian Navratri



Ramzat 2015 organized by Indus students' forum at IU campus on Saturday, 10th October, 2015, was one of its kinds Navratri celebration with a footfall of around 2000 people including students from various colleges, parents & faculty members. An eleven piece orchestra along with the renowned folk singers Mr. Liladhar Vadhiya (LD – “Bhai Bhai” Fame), Mr. Jagat Trivedi and Ms. Dipal Nanavati filled the air with lovely music to set the tone for the evening. RJ Bhumika from FM Radio One added limelight to the show.

The ambience of the campus turned eclectic with revelers relishing down the scrumptious food items on display to add more taste to their gala night. The evening came alive with dandiya raas and garba marked with glitter, shimmer and fun. Interesting prizes were given away for the Best Dancers, the Best Attire, the Best Props, and the Best Group for the night.

Ramzat 2015 proved to be a huge success under the guidance of the university management, organized and promoted by the students opening up new opportunities for upcoming events at the university.



Indus Robotics Club: Swachhta Abhiyan



On the eve of Gandhi Jayanti around 120 students of Indus University participated in the Swachhta Mission 2015 through carrying out Cleanliness Drive at areas in the vicinity of the university campus and on the 1st anniversary of this successful mission, the same

drive was carried out by Robots initiated by Indus Robotics Club in the campus premise. Students pasted banners for awareness regarding Cleanliness across the campus; they also took pledge for the same before commencing the drive. In total 40 robots were prepared by 80 students in a span of four days through sheer dedication. In order to encourage the youth of Robotics Club, a great support was in the presence of one of most influential board of governors Shri Jagat Shah who was accompanied by Ms. Rheanne Bission, a Canadian social worker. They encouraged the students while they witnessed robotic mechanism of the cleaning of ground & filling out colors in Gandhi portrait. This unique initiative was successful through diligent efforts of students & the support from the staff and management of the university. ■



IEEEA: Workshop on 'Electrical Machines and Power Electronics'



Indus Electrical and Electronics Engineering Association had organized a workshop on "Electrical Machines and Power Electronics", in collaboration with IIT, Gandhinagar, on 13th & 14th October, 2015. The workshop was carried out for the second, third and fourth year students of Electrical and Electronics Engineering (EEE) and Electrical Engineering (EE) Around 200 students with the faculty members of both the disciplines, participated in this endeavor. Dr. Ragavan from IIT Gandhinagar with his humorous outlook of the subject and frank attitude made the workshop a great success and hence, it proved informative for the students. The various topics covered by Dr. Ragavan helped the students develop a better understanding of the subject, and its various applications. ■



IEEEA: Expert Lecture on 'High Voltage Power Supply in field and Research

An expert lecture was organized by Indus Electrical & Electronics Students Association for 7th Semester students of EEE & EE Branch. The Expert Mr. N. Rajan Babu was from Institute For Plasma Research, High Power ECRH Systems Division.

The objectives behind the lecture was to provide knowledge in the field of "High voltage power supply in field & research". His talk focused on the high voltage and high temperature challenges and limitations of automotive circuits. He covered the high voltage aspects: requirements, technologies, devices, models, breakdown and high field limitations along with reliability issues. A fruitful discussion in the end made students aware about the actual ground scenario in High voltage power supply. ■



IEEEA: Expert Lecture on 'Industrial Automation'

An expert lecture was organized by Indus Electrical & Electronics Engineering Students Association for 5th & 7th Semester Students on 'Industrial Automation'. The owner of Universal Technomation firm and an alumni of Indus



University Mr. Rutul Mehta was the invited expert.

The objective of the lecture was to impart practical understanding to the students regarding the subject of 'Industrial Automation'

The expert gave a brief about PLC, SCADA & its innovation, development, current trends, usage, along with the future scope in the area of automation. He also explained about the Common system components, Systems concepts, Human-Machine interface & Operational philosophy of PLC. ■

IEEEA: Workshop on 'SCILAB'

Indus Electrical and Electronics Engineering students Association (IEEEA) organized a Workshop on 'SCILAB' in association with Spoken Tutorial project, IIT Bombay on 15th October'15. It was conducted by Prof. Priyen Patel.



The workshop was carried out for the final year students of EEE branch. The Spoken Tutorial project is the initiative of the 'Talk to a Teacher' activity of the National Mission on Education through Information and Communication Technology (ICT), launched by the Ministry of Human Resources and Development, Government of India. The Spoken Tutorial project is being developed by IIT Bombay for MHRD, Government of India. They will also conduct software training workshops using spoken tutorials and give certificates to those who pass an online test. This online test will be conducted on 5th Nov'15 in IU Campus. ■

Awareness Workshop Mechanical Engg. Dept.

Under the guidance of Dr. A M Bisen, Professor and Head of Mechanical Engineering Department, FDP program on CAD software Solid Works was arranged on 17th October, 2015 by Prof. Bansi Raja. The key focus was to bring awareness in the field of software development in Mechanical Engineering. ■



Expert Lecture on 'Direct Reduced Iron (DRI)' Dept. of Mechanical Engg.



An Expert Lecture on "Coal Based DRI process" was organized by Mechanical Engineering Department on 8th October 2015. Mr Rammohan Rao, Vice President (DRI Projects) ELECTROTHERM (INDIA) LTD. was invited as an expert for sharing his knowledge with the pre-final and final year Mechanical Engineering students.

He delivered a brief talk on DRI process, methods of making DRI and contribution of coal based DRI in India. Prof. Mitesh Mungla inaugurated the session, and Prof. Bansi Raja concluded the session by delivering vote of thanks to the invited speaker and the entire team. ■

IEESA: Annual Meet 2015

Indus Electrical Engineering Student Association (i-EESA) organized the Annual Meet-2015 at IU on 30th September 2015. The event was graced by Mr. Sandeep Dixit, GM- HR & Training Head, Adani Power Ltd.

The event commenced by lighting of lamp. A small video regarding the past journey of -

i-EESA was screened. Mr. Dixit then urged the students to develop soft skills and creativity which is required in the competitive world. The Logo of the Electrical Department was officially released by the Guest of Honour followed by the Cultural Section including Song, Dance, Band and other electrifying performances which entertained the audience. The event was concluded by distribution of the "Appreciation Certificate" to the present and past members of team i-EESA for their respective posts. ■



CESA: Seminar on "Data Warehousing and Data Mining"

A Seminar on "Data Warehousing and Data Mining" was held under the banner of Computer Engineering Students Association (CESA), on 8th October, 2015. Prof. Uttam Chauhan, Assistant Professor of Computer Engineering, Vishwakarma Government Engineering College, Chandkheda, was the expert who addressed the final year students. The expert discussed the various



algorithms regarding Data Mining and shared the practical knowledge regarding different analyzer mining tools. He gave practical demonstration on the software Weka Explorer, which contains tools for data pre-processing, classification, regression, clustering, association rules, and visualization. ■

IMEA: i-Create

Indus Mechanical Engineering Association organized 'i-Create 3' to enhance and portray the technical skills of the students on 17th October 2015 at IU Campus. The event witnessed the participation of 21 teams which included teams from EC, Automobile & Mechanical Engineering Department.

'i-Create 3' was based on the theme of 'Social Utilization' and was divided into two categories Avishkar & MindSparkz. Avishkar demanded students to present a working model of their ideas, while Mindsparkz tested the creativity & presentation skills of the participants. Dr. A. M. Bisen, Prof. Mudit Saxena, Prof Jaypal Rana, Prof. D. A. -



Bhatt & Prof. Sanket Panel were on the judgment panel. A mini car was built by students from Automobile 1st Semester that became the center of attraction for the event. The winners were rewarded with cash prize and refreshments were served before conclusion. ■

Robo Race and Robo Soccer Indus Robotics Club

Indus Robotics Club came up with the first event of the club on 11th Sept. '15 by organizing 'The Robo Race and Robo Soccer Competition' in collaboration with Technocrat IISB. The Roborace had fresher's as well as experienced participants who fought and drove their way through the cumbersome race track designed with twists, turns, bumps and trenches. First ten participants that survived were selected for the next round.

The Robo Soccer competition witnessed only venturesome participants as this that wasn't a piece of cake walk. The competitors were thrilled as the soccer is in vogue and its craze is propagating in India. The event was a jolly one with healthy competition and lots of fun. At the end of the event prizes were distributed to the winners of Roborace and Robosoccer and to the participants with best innovative design of the robot. The event was educational and enjoyable for everyone. ■



Inauguration of WDC at IU

Indus University in order to promote a congenial environment for women on the campus constituted Indus Women's Development Cell. The WDC works with an objective of inculcating the spirit of empowerment and independence. In order to mark the initiation of this purpose the cell had the inaugural session of Mrs. Megha Chitaliya, a reputed lawyer in the High Court, Ahmedabad on the topic "Sexual Harassment and its Legal Implications". The topic dealt with intricate details of the issue and provisions of the law to safeguard the interest of working women. It was an interactive session and was well received by the faculty members and students.

Indus WDC provided a platform to the women staff to interact with the expert and get their doubts cleared regarding the legal procedure. The session ended with the discussion on the future plan of activities of the cell. All the members of the cell vowed to extend their support and knowledge to empower women residing in the vicinity of the Indus campus. ■

IMEA: Fall-Fiesta



Owing up to a new legacy, Indus Mechanical Engineering Association organized a cultural fest 'Fall Fiesta' on 16th October '15 at IU auditorium. The event provided a platform for the students to showcase their talent in different events like Singing, Dancing, Fashion Show, Instrumental Performances and many more. The Fashion Show which was conducted in three rounds emerged as the attraction of the event. In total around 70 students from different departments participated in the event. ■

Invitation for National Conference

Dept. of Mechanical Engg.

Mechanical Engineering Group of Indus University will organize a One Day National conference entitled "Innovation in Mechanical, Automobile, and Civil Engineering & Materials Technology", on 13th February 2016 in Indus University campus of Mechanical Engineering Group. The purpose of this conference will be to bring together the mechanical engineering group to explore, disseminate and strengthen initiatives in such new directions under the broad areas of innovation idea in Design, Thermal, CAD-CAM, Robotics, Production, Metallurgy & materials technology and Civil domains, which help in providing common platform for academicians, industrialist, researcher scholars and Post Graduate students to exchange their experience and knowledge in the field of Engineering. Last date for Paper Submission 31st December 2015, participants can send their paper through mail on ncime@indusuni.ac.in. Dr. A M Bisen is the conference convener. ■

Indus WDC organizes a CSR Program

Indus WDC organized a CSR program of donating garments to the under-privileged women of Rancharda village in the vicinity of the University campus on 5th November'15.

A brief presentation was given by the student coordinator Ms. Vaishali Agrawal generating awareness about women's safety, health & rights. The presentation prompted a quick dialogue about problems they face in their daily lives, which will result into solutions through the subsequent actions to be undertaken by the cell. This initiative gained momentum with students & faculty members joining hands with their whole hearted support through donation. ■

T&P Update

A final year Computer Engineering Student Mr. Hiren Patel got selected in Aubergine Solutions Pool Campus Drive that occurred on 8th Oct'15 at L. J. Institute Ahmedabad.

A Campus Drive of L&T Infotech Ltd. was scheduled on 19th & 20th Oct'15 at LDRP Gandhinagar where two final year students from MSC IT Ms. Richa Gulrajani & Mr. Jigar Makhija were recruited. ■

Expert Lecture on Water Management and Conversation

A lecture on 'Water Management and Conservation' was scheduled on 16th Oct'15 at IU Auditorium. Dr K. P. Singh who holds a doctorate in History of Water Management was the expert for the session. Dr. K. P. Singh got his M. Phil in Arts in Ancient Indian History and

and Masters in Archaeology. Dr Singh shared his knowledge about the subject and also described about various storage system that were developed earlier in Gujarat & Rajasthan. Students and Faculty from Architecture and Civil Engineering Department participated in the lecture. ■

Industrial Vists

Metallurgical and Materials Engineering

- ◆ ERDA Electrical Research and Development Association, Vadodara (Sem 7)
- ◆ Ambica Pattern shop, Vadodara. (Sem 7)
- ◆ FCIPT Facilitation Centre for Industrial Plasma Technologies, Gandhinagar (Sem 7)
- ◆ Keepsake Engineering Consultancy Pvt Ltd, Ahmedabad. (Sem 7)
- ◆ Electotherm (I) Ltd. Kutchh (Steel plant) (Sem 5)

Mechanical Engineering

Students of 1st, 3rd, 5th and 7th semester students went for Industrial visits at Bosch Rexroth Ltd. (Sanand), Akshaya Patra kitchen plant (Santej, Kalol), Indo-German Tool Room (Vatva, Ahmedabad), RBD Engineering (Kalol), SAL Steel (Gandhidham, Gujarat) & Festo Control Pvt. Ltd. ■

Expert Lectures and Workshop

- ◆ An Expert talk by Dr. Dhaval K. Patel, Professor, Ahmedabad University was organized under IEEE student branch, Indus University on the title 'MIMO design and 5G Technology' on 13/10/2015.
- ◆ An Expert talk by Amey Telang, Verification Engineer, e-Infochips, Ahmedabad was organized by EC Department on the title "VLSI Design and Way-ahead" on 7/10/2015.
- ◆ A One day seminar cum workshop by Mr. Harshvardhan, Engineer, NI-Instruments was organized by EC Department on the "Usability of Labview Hardware and Software" on 28/10/2015.
- ◆ An Expert Talk on 'Quality Control in Grey Cast Iron' by Mr. Sanjay Desai, RBD Industries was organized by the Dept. of Metallurgical Engineering on 6th Oct'15
- ◆ An Expert Talk on 'Alternative Route for Iron Making' by Mr. Ram Singh, Electrotherm India, was organized by the Dept. of Metallurgical Engineering on 7th Oct'15.
- ◆ An expert talk and demonstration on NDT by Mr. Yatin Rawal was organized on 12th Oct'15 by the Dept. of Metallurgical Engineering.
- ◆ An expert talk cum demonstration on Welding Simulation Software was

organized on 12th Oct'15 by the Metallurgical Engineering Dept. where the experts were invited from Skillveri, Chennai.

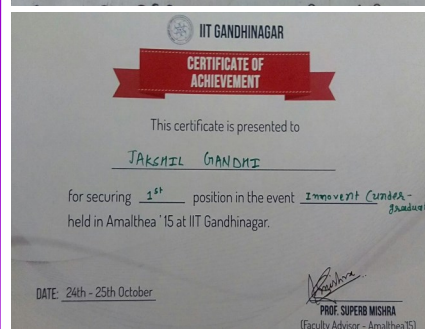
- ◆ An expert talk on 'Refractory Material' by Mr. Gaurang Shah, GM and Mr. Rahul Mishra, Sr. Manager Calderys Ind. Refractories Ltd. Ahemdabad was organized on 9th Oct'15 by the Department of Metallurgical Engineering. ■

Students' Achievement

Mr. Jakshi Gandhi from Third Semester Mechanical Engineering participated in 'Innovent' at IIT Gandhinagar. Innovent is an event where the participants had to create something new and innovative. Mr. Jakshil Gandhi's project was 'Vibrating Wallet' which was ranked first. ■



ક્રેડિટકાર્ડ મુકવાનું ભૂલી જાઓ તો પરસ વાઈલેટ થશે



Faculty Achievement

Prof. Kush Parikh delivered an expert talk on "Applications of Electromagnetics for Satellite Communication" at One-day Workshop on Applications of Electromagnetics in Satellite Communication and on Navigations jointly organized by the EC Department, GCET, Vallabh Vidyanagar and IEEE AP/MTT Chapter, Gujarat Section ■

Prof. Kush Parikh delivered an expert talk on "Antenna Design and Simulation using CAD tools" at a National Workshop on Microwave Applications, Antenna Design & Measurements, Jointly organized by ATMS and Geetanjali Institute of Technical Studies, Udaipur. ■

Prof. R.N.Mutagi delivered an expert lecture on "Signal Compression" in the 10th International PG course on Satellite Communication conducted by the Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP) at SAC, ISRO on October 15, 2015 ■

Ode to Dr. Vikram Sarabhai by Dr. S.B.Sharma

On the auspicious occasion of the birth anniversary of the visionary Dr. Vikram Sarabhai, VSSC-Vikram Sarabhai Space Centre, Thiruvananthapuram organized a Memorial lecture as a tribute to the father of Indian Space Programme. This year the honor of delivering the memorial lecture was bestowed upon yet another eminent name Dr. S.B.Sharma, Ex.President, Indus University. Dr. Sharma joined the strings of luminaries such as Dr. APJ Kalam, Dr. S Ramaseshan, Dr. P.K. Iyengar to name a few, who had been associated with this annual memorial lecture in the past. The lecture was held on 12th August'15 at VSSC Auditorium on the topic 'Vikram Sarabhai Culture & Success of ISRO'. Dr. Sharma's association with ISRO is a celebrated one, with his service in the capacity of Deputy Director at Space Application Centre, undoubtedly made him the best choice to give this tribute to Dr. Sarabhai. VSSC Human Library & Information Division also conferred the title of Human Book on Dr. Sharma. This accolade comes his way for his vast experiential knowledge gained through years of dedication. ■



MoU between Indus University and Indian Space Research Organization

Indus University and Space Application Centre of Indian Space Research Organization signed a Memorandum of Understanding (MoU) on September 14, 2015 at SAC, ISRO. Dr.Nagesh Bhandari, President, Mrs.Ritu Bhandari, Associate President, Dr.S.B.Sharma, Executive President, Dr.Ashish Joshi, OSD (Research Cell) and Prof.R.N.Mutagi, Head E&C Dept. participated in this milestone event held at SAC. The Director, SAC, Mr.Tapan Mishra welcomed the Indus team and addressed the gathering of Indus and ISRO teams with an opening remark. Dr.Nagesh Bhandari addressed the gathering on behalf of Indus University. The MoU was signed by the President on behalf of Indus and Director, SAC on behalf of ISRO. This MoU will enable academic and research interaction between ISRO and Indus and will be beneficial to Indus in many ways. ■



Team Indus at DA-IICT Concours'15

Concours 2015 was held at DAIICT from 29th October to 1st November 2015. Approximately 10,000 people had come to witness the tournament that lasted for three days. This was the second largest annual sports festival held In Gujarat in which colleges from across the country participated.

The opening ceremony was graced by the famous Indian cricketer Munaf Patel and TT star player Harmit Desai and the closing ceremony by pro kabaddi plyers. The Indus Football and Lawn Tennis Team secured the First position in the tournament while Chess, Badminton-Girls and Cricket Team bagged the 2nd Runners Up title.



Power Boosting Self-Cleaning Solar Panels is future of Solar Cells

-Prof. Piyush Surani

Mechanical Engineering

TECH MECH TALK with PIYUSH SURANI

High-power, self-cleaning solar panels might be coming soon to a roof near you. There are two obvious problems with photovoltaic cells, solar panels. First, they are very shiny and so a lot of the incident sunlight is simply reflected back into the sky rather than being converted into electricity. Secondly, they get dirty with dust and debris caught on the wind and residues left behind by rain and birds.

Now, research published in the International Journal of Nano-manufacturing suggests that it might be possible to add a nanoscopic relief pattern to the surface of solar cells that makes them non-reflective significantly boosting efficiency and at the same time making them highly non-stick and self-cleaning. Zuobin Wang of Changchun University of Science and Technology (China), Jin Zhang of Xi'an Technological University (China) and colleagues at Cardiff University (UK), who are partners of the EU FP7 Laser NaMi project, have devised an approach to lithography, the process used to "print" microelectronic circuits, that allows them to add a pattern to the surface of a solar cell.

The features of the pattern are so small that individual parts are shorter than the wavelength of light. This means that incident sunlight becomes trapped rather than reflected passing on more of its energy to electricity-generation process that takes place within the panel. The same pattern also makes the surface of the solar cell behave like the surface of a lotus leaf, a natural material that is known to be very water repellent, or hydrophobic, so that particles and liquids that land on it do not become stuck as there is no surface to which the droplets can grip. When it rains any deposits are sloughed away and the rainwater runs off efficiently leaving the panel clean and dry after the downpour.

The team's work indicates that a patterned layer on top of the active part of the panel can avoid the energy losses due to reflection from the surface. It directly boosts absorption of



sunlight in the visible spectrum and into the near-infrared part of the spectrum, all of which contributes to a boost to the overall electrical efficiency of the panel. The team suggests that printing the surface of the photovoltaic cell so that it is covered with nanoscopic cones would provide the optimal combination of making the panel non-reflective and hydrophobic and so self-cleaning.



Nature is an incomprehensible mystery
-Kuldip Mangrola(B.Tech EEE 5th Sem)



-Akash Shah(M.Tech 3rd Sem)

Team i-360 Wishes You
Happy Diwali &
A Prosperous New Year



Team i360

Principal Coordinator:

Ms. Meeta Agarwal

Chief Editor :

Prof. Mamta Amin

Student Editor:

Gaurav Pandya

(3rd Year Metallurgical Engineering)

Design:

Nikunj Patel

(3rd Year Mechanical Engineering)

Palak Jadwani

(2nd Year Electronics & Communication Engineering)



INDUS UNIVERSITY
Where Practice Meets Theory

INDUS UNIVERSITY, Rancharda, Via: Thaltej,

Ahmedabad 382 115, Gujarat, INDIA.

Tel / Fax : +91-2764-260277 / 78 / 79

Mob : +91-9099944241 / 42

Website : www.indusuni.ac.in