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Message from the Head



Dear Alumni and Friends,

I convey my best wishes to all of you.

It is a matter of immense pleasure and pride that Electronics Communication Engineering Department MAIT has shown consistent progress, year after year in academic and co-curricular activities. Its high standard in academics and commitment to quality technical education is reflected by the Alumni and the excellent placement records.

The Academic year 2016-17 started with a new batch of enthusiastic students and numerous curricular and co-curricular activities. The placements in the odd semester (July-Dec2016) were excellent and details are reflected in this newsletter.

I wish all faculty, staff and students of the department a very Happy and successful New Year ahead. I would also like to add in the words of Ratan Tata

"I have been constantly telling people to encourage people, to question the unquestioned and not to be ashamed to bring up new ideas, new processes to get things done."

Prof. (Dr.) Neelam Sharma
 Director & HOD ECE

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2016

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dipin Saha, Gaurav
Sudhansu, Apurva
reya Kumar, Mihir
Karan Wadhwa
Lambha, Suresh
K. Akshay Sharma,
Sudhansu, Anshu
Rajesh Kumar,
and Gopal

017 (Final Year)

an Bhattacharjee
in Jindal, Prashant
Lachin Sharma,
a Meghna, Divya
a. Harsh Dhar,
a. Anand, Vivek
A. Jatin Garg,
Rishi, Anshu Anand

118 (Third Year)

Gupta, Rohit
R. Shashank Ghosh
Mital, Parth
a. Nishant Tyagi,
Jyoti, Anshu
Rishi, Anshu
Rishi, Anshu

Focus

nts: Batch of 2016

ta is currently pursuing
management) at
best, London, UK

hajan

ta is currently pursuing
(T. Garg)

List of Publications

Akhil Math, Anish Chakrabarti and Neelam Sharma, "Fast Computing using Redundant Binary Signed Digit Adders", *INFOCOM* - 2017, International Conference on Computing for Sustainable Global Development, Scheduled from Jan - Jan March, 2017 at INFOCOM, New Delhi

K. L. Puri, R. K. Garg, R. Gupta, P. Virek, and I. Anwar, "New VLSI-Based Single-Resistor-Configurable Universal Counter", *Circuits and Systems*, vol. 13, 7, 4135-4143, 2016

K. L. Puri, R. K. Garg, and H. K. Garg, "CMOS VLSI-Based Single-Resistor-Configurable Universal Counter", *Circuits and Systems*, vol. 13, 7, 4135-4143, 2016

Akshay Goyal, Suman Thakur, S. S. Datta and H. S. Gupta, "TCAD Assessment of oxide impact on heterostructure and harmonic absorption in GaN-AlN heterostructure (GAA) MOSFET", 3rd international conference on microelectronic circuits and systems 2016, 9-10 July Kolkata, India

Ashish Sharma, Anshu Jain, Yogesh Prasad and R. S. Gupta, "Effect of High-k and Vacuum Dielectric on Gate (L-Cap) MOSFET", *Solid State Electronics*, vol. 123, 26-32, Sept. 2016



Achievement in Sports: Mishra Anuja (ECE IV Year)

Won Silver Medal in Inter-University Discus Throw Tournament held at Gauhati, Assam campus dated 20-22nd Dec 2016

Selected for National in Discus Throw to play in North Zone by GGGPU

Selected for National in Kabaddi

Won Silver Medal in Inter-University Kabaddi Tournament along with Ms. Shikha Sharma and Ms. Soniya Gupta

Placement Details for 2013-17 Batch

163	Students Already Placed	06	Students Got a Package of 7 LPA (21 LACS IN 3 YRS BY MUSIGMA)
01	Student Placed in ERNEST & YOUNG at 3.80 LPA	03	Students Got a Package of 6.53 LPA (BY ZS Associates)
96	Students Placed in Accenture (3.5 LPA)	57	Students Placed in Infosys (3.25 LPA)

Special Achievements of the Alumni

Ashish Madan (2014 batch) secured admission to IIT Delhi for MS Thesis course. While studying at IIT Delhi, he cleared ISRO exam and is now working in ISRO

Shashank (2014 batch) got selected in IIT Delhi and is now working in Freescale

Ajay Shankar (2013), yet another brilliant student of this department, did his masters at IIT Delhi and is now working in the field of Robotics in the U.S.

Rohit Singh (2013 batch) is now working as Preventive Officer, Kolkata Customs

Following students of this department are now working in Mentor Graphics: Mihir Jain (2007), Pawan Gupta (2011), Mohit Anand (2013), Suresh Goyal (2013) and Mihir Jain (2014)

Sneha Jain (2015 batch) was the university topper and won gold medal

Vidyal Gulati (2009) and Prashant Gupta (2011) are now working in Synopsys, India

Rohit Jain (2011 batch) secured 2nd rank in IES exam

Vincent Malik (2013 batch) secured 45th rank in IES exam

Utkar Mittal (2010 batch) is now working as scientist at DRDO (India)



Independence Day Celebration



Independence Day was celebrated in the institute with great pomp and festivity. The event was given the name "Azadi 70: Independence 70". Two competitions were organized for Mait students namely Painting Competition and Article Writing Competition, with the theme of "Jadugaro Qurbani" (for painting) and "Sacrifices made by the Freedom fighters to get India's Independence" (for article writing). The celebrations began with flag hoisting ceremony at 2pm followed by cultural programs in Mahatma Agrasen Auditorium. Prof. Hari Om Puri, International Post, was the chief guest. He along with Shri Somit Mishra (young poet), recited various poems for the pleasure of the audience.

Updates

Culty Members Pursuing

Dr. Gopal, Mrs. Sanjay Bhattar, Dr. Ajay Kumar Gaur, Dr. Sandhu Khanna, Mr. Javed, Mr. Anil Saxena, Dr. R. S. Sharma, Mr. P. K. Sinha

Qualification (Non-Teaching)

Dr. Tomar completed his Technology in (VLSI) in Dec 2015 from Lovely Professional University, Punjab. Dr. Sahil completed his M.Tech in Computer Application in Dec 2015 from Lovely Professional University, Punjab.

Special Focus

Prof. Neelam Sharma

Dr. Neelam Sharma was awarded Ph.D. degree in Fast Computing Using Signed Digit Numbers under the supervision of Prof. Neelam Sharma in May 2016.

Prof. R. S. Gupta

Mr. Yogesh Pratap has been awarded Ph.D. degree under the supervision of Prof. R. S. Gupta from University of Delhi in March 2016.



Prof. R. S. Gupta has delivered keynote address on "Evolution of VLSI Design" on April 21, 2016 during National Conference on Recent Advances in Engineering & Technology for Skill India organized by Corporate Institute of Science and Technology, Bhopal.

Prof. R. S. Gupta has been elected chairman IEEE EDS Delhi chapter for a period of two years.

Prof. R. S. Gupta has been elected chairman society for Microelectronics & VLSI Society for Microelectronics & VLSI has sanction Rs 60,000/- (sixty thousand only) for organizing a Seminar on Recent Advances in Electronics & VLSI.

RESEARCH UPDATES

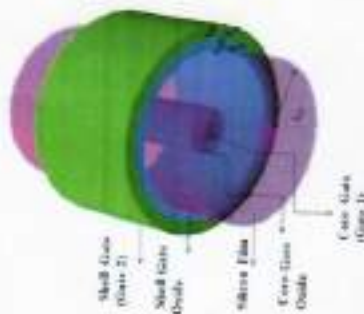
Device design has always been the need of the hour as there are many devices in the mainstream electronics industry and the mobile industry. With the recent innovations it is desirable these days to manufacture and fabricate miniaturized high speed high voltage low power devices which are more portable and easy to use.

Extensive research work in this field is being done in Device Research Laboratory (DRU), Department of Electronics and Communication Engineering (ECE), Thapar Institute of Engineering and Technology (TIET), Patiala. MOSFET, Research of Innovative Device Architectures, Reliability Analysis of MOSFET under thermal radiation and Device Applications for various purposes.

Also, at present there is one DRU project entitled "Analysis and Characterization of Silicon Gate All Around (SGAA) Nanowire MOSFET for ULSI (ultra large scale integration) Around 10 research papers have been published in International Journal and Conferences (Nov 2015).

Nanowire Junctionless Field Effect Transistor (NJFET): It is a MOSFET

with an inner core gate (GATE) and an outer shell gate (GATE) with an identical gate work function with silicon dioxide as the gate dielectric to provide immunity against SCE's along with improved analog, low noise and RF performance.



Junctionless Accumulation Mode Cylindrical Surrounding Gate MOSFET (JAMCSG): JAMCSG MOSFET is the surrounding gate

MOSFET is a single-doping type structure with in-n or homo-junction and concentration of channel region is low. In comparison to Source/Drain region. It is to solve the issue of abrupt source-drain junction formation and thermal annealing. It is easier to fabricate as limited doping gradients are required. It also provides improved digital performance at higher frequencies.



Workshop by DRUP Labs



DRUP Labs organized a session on Challenges and Employability in Semiconductor Industry for the 5th semester students of ECE branch. About 70 students attended the session and the event was coordinated by Mr. Neelam Sharma (Asst. Prof., ECE Dept.) and Mr. Sonu Jain (Asst. Prof., ECE Dept.). The session comprised of an interaction with students that included their queries and concerns about the industrial domain and career opportunities prevailing in India and worldwide in the field of ECE. The students were enlightened by the session and indeed it provided the students with the thought process of how and in what direction they should move to choose the best career option. With the dedicated efforts and initiatives by Mr. Neelam Sharma (Asst. Prof., ECE Dept.) and Mr. Sonu Jain (Asst. Prof., ECE Dept.) the event certainly turned out to be fruitful for the students.

Faculty Publications (2016)

20 International Journal

26 International Conference

01 National Conference

Participation in 3rd India International MSME Expo and Summit 2015



MSMT UTM was organized with the aim of 'Make Investment Creditors Happy' by MSME Development Forum in West Bengal. The event was held on 10th to 11th August 2014 at No. 14, Pragati Building, New Delhi, in the expo hall. The event was attended by 15 MSME and 20 UTM Tech students of MSMT UTM. The event was organized by MSMT UTM and MSME Development Forum in West Bengal. The event was held on 10th to 11th August 2014 at No. 14, Pragati Building, New Delhi, in the expo hall. The event was attended by 15 MSME and 20 UTM Tech students of MSMT UTM. The event was organized by MSMT UTM and MSME Development Forum in West Bengal.

was inaugurated by Sh. Manohar Parrikar, Defence Minister, Government of India, while Sh. Raj Thackeray, Minister, Government of Maharashtra, was the chief guest at the event in these three days. Sh. Madan Mohan Malviya, Government of Punjab was the chief guest at the session on 13th August. Sh. Moten Gang, Tribune of Nagaland Technical Education Society (NTES) was the one who was facilitated by the Sh. Raghav Garia, MLC Development.

ter Hardware & Networking Certification Program under SKILL INDIA Mission



graves. Technical Education Society (MATES) in
with National Institute for Entrepreneurship & Small
Investment (NESEI) under Ministry of Skill
& Entrepreneurship organized a second 40 hours free
session on Computer Hardware & Networking

In this three-day long event, our students participated in various sessions and learned about the current and future requirements of the industry. It was also great opportunity for our students when various guest industries owner like MATHIE STEELS, INDCO Group, TOBU Industries, Signature Group met with them in person and discussed about their success path as well as motivated them. Our student's news with picture was published in various leading Newspapers including Punjab Kesari and also electronically covered by Zee News.

It was a successful program with students got wonderful opportunity to learn about the entrepreneurship in practical manner. After the event many students of MANS & M&T shows interest to become entrepreneur. The entire program was coordinated by Mr. Ravi Gupta, Consultant - IEC (IMATES) and to make the program successful and motivating students special thanks to Prof. Anshu Sharma, Director & Dr. Rajesh Mehra, HOD IEE of M&T and Prof. M. C. Shah, Director & Sh. Rishi Jain, Assistant professor MANS.



from 6th to 23rd December 2015 at Mahatma Agraraj Institute of Technology (MAIT) campus.

The program will be co-chaired under the guidance of Dr. Rande Kohnen Gang, Founder & Chief Advisor at MAFES and co-chaired by Prof. Dr. S. Gorte with the support from Mr. Ray Lupton, consultant - Innovation & Entrepreneurship Development Cell (MAFES).

10 Youth from the underprivileged category families were the participants. Department of Electronics & Communication Engineering (ECE) of Mahatma Aapasa Institute of Technology (MAIT) supervised this course under the mentoring of Prof. Dr. J. Arslan Sharma, Director MAIT. Mr. Manoj Kumar & Mr. Prabhat Singh were the course in-charge who devotedly trained the students.

On 20th July 2016, all the successful participants got MESSED certificates in a proud ceremony in the auditorium presence of MATES board of trustees, Director General & Director MATI & MATMS and other senior people by the Dr. Nand Kishore Garg, Founder & Chairperson - MATES.

Industrial Visit to NTP Energy Technology Research Alliance (NETRA)



An informal unit was organized for the students of N^o and M^o of the Department of Electronics and Communication Engineering to 1st October 2016. The trip comprised of thirty-seven students and faculty members lead by our Director and head of the Department, Electronics and Communication, Professor (Dr.) Rajan Sharma.

NEPC Limited (previously known as National Thermal Power Corporation Limited) is a Public Sector Undertaking engaged in the business of generation of electricity and allied activities. NEPC's core business is generation and sale of electricity to state-owned power distribution companies and State Electricity Boards in India. The company also undertakes consultancy and turnkey project contracts for machine engineering, project management, construction management and operation and management of power plants. NEPC is the Research and Development laboratory of NPC. Research is on to make the day to day operations of the power plants smoother with focus on renewable technologies.

The students were first shown the Solar Thermal HVAC system. This system is used to generate AC cooling from solar energy at a central location. Two pre-programmed solar tubes that heat up the coil in the center of the dish using reflectors. This heated coil is used to heat the water. Then this water and steam combination is sent to the air/water separator which gives out clean steam.



Software Training under Spoken Tutorial Project, IIT Bombay

The Department of Electronics and Communication Engineering at Mahatma Agricoen Institute of Technology, Durgi, successfully organized training programme for popular software used by ECE department students like Scratch, C language and OOAD for 4th and 6th semester students. The event was an initiative by the Spoken Tutorial project, IIT Bombay.

The Spoken Tutorial project is the initiative of the "Talk to a Teacher" project of the National Mission on Education through Information and Communication through Technology, launched by MHRD, Govt of India to promote IT literacy through open source software. 114 students have been all code awarded certificates. This initiative will enhance the programming skills of the students enabling them to become competent professionals. Spoken Tutorial project aims to create spoken tutorials which teach from and open source software (FOSS) in many Indian languages. The idea is to teach software in a language that the learner is comfortable in. Our goal is that the spoken tutorial training project be used to teach any software in any language and any difficulty level (beginner, intermediate or Advanced).

is project is for the community and by the community. Project aims to get like-minded individuals to collaborate with each other to create spoken Adivasi dubbed with as many Indian languages as possible. Primary aim of the project include health out to as many people as possible to spread the awareness of the peril so that people can learn and contribute. Build up the community so that the individual will be self sustaining. Connecting a way through your contacts to reach out to the people who could have an influence.