



# ELECTRICK

DEPARTMENT OF  
ELECTRICAL &  
ELECTRONICS  
ENGINEERING

(An NBA accredited Program)

The Department of Electrical and Electronics Engineering, established in 2006, is one of the most dynamic departments of Maharaja Surajmal Institute of Technology. Electrical and Electronics Engineering is the versatile and evergreen branch of engineering. EEE engineer can work in various fields like in renewable energy technologies, power grid, automation of various production processes, distribution systems, semi conductors, communications technologies, etc. EEE students are well placed in public sector and private sector companies.

EEE curriculum has sufficient weightage of applied sciences courses, fundamental and advanced courses of Electrical and Electronics Engineering, programming courses, communication/management/human values and social ethics courses along with courses on seminars, projects and industrial training for the all-round development of students.

The Department has a fine blend of experienced as well as young and dynamic faculty who are involved in providing quality education to the students. The research interests of the faculty members encompass a wide gamut of sub-disciplines of Electrical Engineering. Faculty is supported by a well-trained technical staff in laboratories.

The Department has modern, well-equipped laboratories like Electrical Machines/Power Systems/Power Electronics/Control Systems/Neuro Fuzzy Systems etc. with excellent facilities to provide ample opportunities for the students to learn and innovate. The lab facilities and the infrastructure are regularly upgraded and are well supported by the Director and the Management of Surajmal Memorial Education Society.



## MESSAGE FROM DIRECTOR

It gives me immense pleasure in writing a preface to the first volume of a yearly newsletter of Electrical and Electronics Department of Maharaja Surajmal Institute of Technology. The newsletter consists of sections documenting significant academic events such as seminars, workshops organized in department and significant achievements of students in various fields etc. I express my sincere gratitude towards our management for their continuous support, motivation and guidance. I congratulate the editorial team for bringing out this much awaited issue of newsletter. I request all faculty members to extend their whole hearted support to the newsletter. With best wishes and a great hope that everyone will enjoy reading it.

**Prof. A.K Singh,  
Director ,MSIT**

## MESSAGE FROM HEAD OF DEPARTMENT

It gives me immense pleasure to give my best wishes to ' Electrick ', a newsletter of the department of Electrical and Electronics Engineering (EEE) of Maharaja Surajmal Institute of Technology. The department has well qualified and dedicated faculty members who have an unceasing commitment towards students, helping them to learn, grow, develop and achieve their goals. The primary objective of the department is to prepare our students for higher studies, research and industry. This is achieved through conducting expert lectures, workshops, seminars, conferences, quizzes, project competitions, industrial visits, placement seminars from time to time. The students get opportunities to organize and participate in annual technical fests (Avensis), IEEE PES chapter activities, mock interviews, cultural fests, Enva (Prakriti-fest), Sports meet, Blood donation camp and other competitions to inculcate creative, analytical and critical reasoning skills in providing engineering solution for real world challenges and all round professional development. This newsletter is an attempt to highlight the achievements of the faculty and students and also reflect all the academic and co-curricular activities organized in the department/institute during 2020. I extend my warm wishes and congratulate the editorial team for bringing out this newsletter.

**Dr. Sunil Gupta**  
(HOD, EEE Deptt.)

## VISION

To achieve global standards in the field of Electrical and Electronics engineering to minimize skill gap between academia and industry.

## MISSION

1. Imparting quality technical education to the students of Electrical and Electronics Engineering with the supportive environment, preparing them for competitive exams for higher education, employment, and entrepreneur practices.
2. To confer the students with professional attitude, research aptitude, technical and communication skills with sensitivity towards the environment and society.

## PROGRAM SPECIFIC OUTCOMES

1. Apply the principles of basic sciences and Electrical & Electronics Engineering to design, analyze and solve problems in the core/multi-disciplinary areas.
2. Apply the acquired technical knowledge for pursuing higher studies and successful professional career in the field of Electrical and Electronics Engineering.

## FACULTY ACHIEVEMENTS FACULTY AWARDS

1. **Dr. Yogendra Arya** has been awarded the Best Researcher Award in Electrical Engineering by 2nd Universal Innovators Leadership Awards (UILA 2021), 20<sup>th</sup> Feb. 2021.
2. **Dr. Yogendra Arya** has been awarded an Outstanding Reviewer Certificate by International Transactions on Electrical Energy Systems (Wiley), 14<sup>th</sup> Jan. 2021.
3. **Dr. Yogendra Arya** has been placed in "Top 2% of Researchers in the World", a List published by Stanford University, USA on 16<sup>th</sup> Oct, 2020.
4. **Dr. Sunil Gupta** has been awarded MSIT Certificate of Excellence in Research-2020
5. **Dr. Jyoti Jain** has been awarded "OUT STANDING ENGINEER AWARD" by IEEE Power and Energy Society (IEEE PES) Chapter, 2020.
6. **Dr. Yogendra Arya** has been awarded MSIT Certificate of Excellence in Research-2019, 2020.
7. **Dr. Meena Tushir** has been awarded MSIT Certificate of Excellence in Research-2019
8. **Dr. Yogendra Arya** served as "Session Chair" in "International Conference on "Artificial Intelligence and Applications-2020" held at MSIT, Delhi, 6th -7th February 2020.



## PATENTS

1. **Dr. K.P. Chaudhary**, Ms. Deepti Deshwal, Dr. Naveen Dahiya, Dr. Pardeep Sangwan, “An Automatic Sanitizing Device” Published (27.11.20) (No. 202011049882)
2. **Dr. K. P. Chaudhary**, Dr. Prabhjot Kaur, Mr. Ronish Singh, Dr. Anupama Kaushik, Dr. Puneet Azad, Dr. Kavita Sheoron, Dr. Kamaljit Singh, “IoT based Smart Complaint Box” Published (22.01.21) (No. 202111001925)

## RESEARCH PUBLICATIONS

### JOURNALS:

1. N. Hakimuddin, I. Nasiruddin, T. S. Bhatti, and **Y. Arya**, “Optimal automatic generation control with hydro, thermal, gas and wind power plants in 2-area interconnected power system,” *Electric Power Components and Systems*, 48(6-7), 558–571, Sept. 2020. (SCI-Indexed)
2. G. Sharma, A. Panwar, **Y. Arya**, and M. Kumavat, “Integrating layered recurrent ANN with robust control strategy for diverse operating conditions of AGC of the power system,” *IET Generation, Transmission & Distribution*, 14(18), 3886–3895, Sept. 2020. (SCI-Indexed)
3. **Y. Arya**, “Effect of electric vehicles on load frequency control in interconnected thermal and hydrothermal power systems utilising CF-FOIDF controller,” *IET Generation, Transmission & Distribution*, 14(14), 2666–2675, Jul. 2020. (SCI-Indexed)
4. **Y. Arya**, “A novel CFFOPI-FOPID controller for AGC performance enhancement of single and multi-area electric power systems,” *ISA Transactions*, 100, 126–135, May 2020. (SCI-Indexed)
5. **Sunil Gupta**, Abhishek Gandhar and Shashi Gandhar, “Performance analysis of IEC 61850-9-2 process-bus based redundant substation automation system architecture”, *Journal of Information and Optimization Sciences*, 41(1), 13-23, 2020. (ESCI-Indexed)
6. **Sunil Gupta**, Abhishek Gandhar and Mohit Tiwari, “Reliability analysis of a novel IEC 61850-9-2 process-bus based substation automation system architecture”, *Journal of Statistics and Management Systems*, 23(1), 65-75, 2020. (ESCI-Indexed)
7. Abhishek Gandhar, **Sunil Gupta**, Mohit Tiwari and Shashi Gandhar, “A continuous mitigation of kVAR-voltage problem of hybrid isolated power system using UPFC”, *Journal of Information and Optimization Sciences*, 41(1), 317-325, 2020. (ESCI-Indexed)
8. **Sonia Goel** and **Meena Tushir**, “Different Approaches for Missing Data Handling in Fuzzy Clustering: A Review”, *Recent Advances in Electrical & Electronic Engineering*, 13(6), 833-846, 2020.(ESCI-Indexed)
9. **Sonia Goel** and **Meena Tushir**, “A new iterative fuzzy clustering approach for incomplete data”, *Journal of Statistics and Management Systems*, 23(1), 91-102, 2020. (ESCI-Indexed)
10. J. Arora and **Meena Tushir** "A new Semi-Supervised Intuitionistic Fuzzy C-means Clustering." *EAI Endorsed Transactions on Scalable Information Systems* 7(24) 2020. (ESCI-Indexed)
11. J. Arora, **Meena Tushir** and R. Kashyap. "Improving Semi-Supervised Classification using Clustering." *EAI Endorsed Transactions on Scalable Information Systems* 7(25), 2020. (ESCI-Indexed)
12. R. Choudhary, J. N. Rai, and **Y. Arya**, “Automatic generation control for single area power system using GNA tuned PID controller,” *Journal of Physics: Conference Series*, 1478, Apr. 2020. (Scopus-Indexed)

13. **Rakhi Kamra** and G.L. Pahuja, "Solving reliability redundancy allocation problem using grey wolf optimization algorithm" Journal of Physics: Conference Series, 1706(1), .Dec. 2020. (Scopus- Indexed)
14. **S. Malik** and S. Suhag, "A Novel SSA Tuned PI-TDF Control Scheme for Mitigation of Frequency Excursions in Hybrid Power System", Smart Science, 8(4), 2020. (Scopus- Indexed)

## CONFERENCE PUBLICATIONS/ BOOK CHAPTERS

1. **Sonia Goel** and **Meena Tushir**, "Linear Interpolation-Based Fuzzy Clustering Approach for Missing Data Handling." In Advances in Communication and Computational Technology, pp. 597-604. Springer, Singapore, 2020.
2. J. Arora and **Meena Tushir** "Hybrid KFCM-PSO Clustering Technique for Image Segmentation", Proceedings of International Conference on Artificial Intelligence and Applications. Advances in Intelligent Systems and Computing, vol 1164, 2021.
3. J. Arora and **Meena Tushir** "Performance Analysis of Different Kernel Functions for MRI Image Segmentation", Proceedings of International Conference on Artificial Intelligence and Applications. Advances in Intelligent Systems and Computing, vol 1164, 2021.
4. J. Arora and **Meena Tushir** "An Enhanced Spatial Intuitionistic Fuzzy C-means Clustering for Image Segmentation", Procedia Computer Science, 167,646-655, 2020.
5. **Rakhi Kamra** and G.L. Pahuja, "An Efficient Trust Based Approach to Load Balanced Routing Enhanced by Virtual Machines in a Vehicular Environment" in book: International Conference on 'Intelligent Computing and Smart Communication', January 2020, pp. 925-935.
6. **Rakhi Kamra** and G.L. Pahuja, " Performance Improvement of VANET routing using Artificial Bee Colony Algorithm" Proceedings of 6th International Conference on 'Recent Trends and Advancement in Engineering and Technology', January 2020, Katra, India

## FACULTY DEVELOPMENT PROGRAMS

1. **Dr. Sunil Gupta** attended a one week online faculty development programme on "Current affairs and Research Scope in Renewable Energy" by Chennai Institute of Technology, Chennai from 29<sup>th</sup> June- 3<sup>rd</sup> July 2020.
2. **Dr. Sunil Gupta** attended a one week online STC on "Power System Restructuring & Renewable Energy Integration (PSRREI) 2.0" by BVCOE, Paschim Vihar, New Delhi, from 13<sup>th</sup>- 17<sup>th</sup> July 2020.



3. **Dr. Sunil Gupta** attended International Faculty Development Program on "LapView and Real Time Data Acquisition organised by Centre of Excellence at ITS Engineering College, Greater Noida from 3<sup>rd</sup>- 7<sup>th</sup> August 2020



4. **Dr. Meena Tushir** attended one week AICTE training and learning (ATAL) Academy online FDP on “Artificial Intelligence” from 15<sup>th</sup>- 19<sup>th</sup> June 2020 at Federation of Indian Chambers of Commerce and Industry (FICCI)
5. **Dr. Jyoti Jain** participated and completed AICTE and Training and Learning (ATAL) Academy online FDP on “Artificial Intelligence” from 15<sup>th</sup>- 19<sup>th</sup> June 2020 at Federation of Indian Chambers of Commerce and Industry (FICCI).
6. **Dr. Jyoti Jain** participated in a webinar series on “Power system simulation concepts through case studies” organized by IEEE PES IAS chapter Delhi Section and India Chapters Council held from 22<sup>nd</sup>- 26<sup>th</sup> June 2020.
7. **Ms. Sonia Goel** attended one week FDP on “R Language” organised by Department of Computer Science and Engineering, Bhagwan Parshuram Institute of Technology, New Delhi, India in collaboration with Spoken Tutorial, IIT Bombay from 16<sup>th</sup> - 22<sup>nd</sup> June, 2020.
8. **Ms. Sonia Goel** attended one week Short Term Training Program (STTP) faculty on “Data Science & Learning Systems for Engineering Research & Design”, jointly organised by NIT Kurukshetra and Engineering college of Bikaner, Bikaner from 24<sup>th</sup>-30<sup>th</sup> June, 2020 under TEQIP-III: Mentoring/Twinning System.
9. **Ms. Annu Dagar** attended two week ATAL academy and AICTE sponsored FDP based on “ICT Tools for Teaching, Learning Process and Institute” organized by MNIT, Jaipur from 10<sup>th</sup>-21<sup>st</sup> August 2020.
10. **Ms. Annu Dagar** attended one week STTP on “Advanced Control Paradigms and Evolving Trends” organized by NIT, Kurukshetra from 26<sup>th</sup> -31<sup>st</sup> October 2020.
11. **Ms. Shilpam Malik** attended two week ATAL academy and AICTE sponsored FDP based on “ICT Tools for Teaching, Learning Process and Institute” organized by MNIT, Jaipur from 10<sup>th</sup>-21<sup>st</sup> August 2020.
12. **Ms. Shilpam Malik** attended one week STTP on “Advanced Control Paradigms and Evolving Trends” organized by NIT, Kurukshetra from 26<sup>th</sup> -31<sup>st</sup> October 2020.
13. **Dr. Yogendra Arya** attended ICT based online one week faculty development programme on “Quantum and Energy Materials: Potential & Applications” by NITTTR Chandigarh during 20<sup>th</sup>- 24<sup>th</sup> April 2020.
14. **Dr. Yogendra Arya** attended one Week online FDP via on “Power Quality and Reactive Power Management” held at Delhi Technological University, Delhi in association with Clariant Power System Ltd. Pune, from 06<sup>th</sup>- 10<sup>th</sup> July 2020.
15. **Ms. Nidhi Gupta** attended FDP on “LATEX for Preparing Manuscripts” by Chitkara University, Punjab during 20<sup>th</sup> - 31<sup>st</sup> July 2020.
16. **Ms. Nidhi Gupta** participated in a webinar on “Ethical issues in research and leadership challenges in this hour of crisis” conducted on 17<sup>th</sup> June 2020 organized by MSI.
17. **Ms. Rakhi Kamra** attended two week ATAL academy and AICTE sponsored FDP based on “ICT Tools for Teaching, Learning Process and Institute” organized by MNIT, Jaipur from 10<sup>th</sup>-21<sup>st</sup> August 2020.
18. **Ms. Rakhi Kamra** attended one week STTP on “Advanced Control Paradigms and Evolving Trends” organized by NIT, Kurukshetra from 26<sup>th</sup> -31<sup>st</sup> October 2020.
19. **Ms. Mamta Rani** attended one week online FDP by AICTE Training And Learning (ATAL) Academy on "Artificial Intelligence" during 15<sup>th</sup>-19<sup>th</sup> June 2020.
20. **Ms. Mamta Rani** attended AICTE Training And Learning (ATAL) Academy online FDP on "Artificial Intelligence" from 15<sup>th</sup>- 19<sup>th</sup> June, 2020 at Fedration of Indian Chambers of Commerce and Industry (FICCI).
21. **Mr. Sachit Rathee** attended one week FDP on “Recent Trends in Electric Power and Energy Systems” from 14<sup>th</sup> -18<sup>th</sup> September, 2020 organized by DCRUST, Murthal.

## STUDENT ACHIEVEMENTS

### UNIVERSITY RANKS

Batch		Name of Student	%age
2016-20	1st Position	Gagandeep	90.24%
	2nd Position	Ashutosh Das	88.44%
2015-19	1st Position	Shreyas Piplani	85.27%
	2nd Position	Amit	84.29%

## STUDENTS' PLACEMENTS/ HIGHER EDUCATION

1. **Tanmay Mehra** (Batch 2016-2020) has been placed in ZS Associates with an annual package of 9 LPA.
2. 7 students of batch 2016-2020 are placed in Infosys
3. 17 students of batch 2016-2020 are placed in Accenture.
4. 14 students of batch 2015-2019 are placed in Accenture.
5. 01 student of batch 2015-2019 has been placed in TCS.
6. 01 student of batch 2015-2019 has been placed in CENTILYTICS.
7. **Kirthik Vasan** (Batch 2016-20) has got admission in Ph.D. programme at IIITD.
8. **Gagandeep** (Batch 2016-20) has got admission in M.Tech programme at IITD.
9. **Sachin Parkash** (Batch 2016-20) has got admission in M.Tech programme at NIT Kurukshetra
10. **Garima Saluja** (Batch 2016-20) has got admission in M.Tech programme at IGDTUW, New Delhi
11. **Vishnupriya** (Batch 2016-20) has got admission in M.Tech programme at The Vedaic Scholars Programme for Women Post Graduate Programme in Management & Liberal Arts, New Delhi
12. **Chiranjeev Singh** (Batch 2016-20) has got admission in MBA programme at International Management Institute, New Delhi.
13. **Divyansha Dhawan** (Batch 2016-20) has got admission Pastry Diploma programme at Lavonne Academy of Baking Science and Pastry Arts Diploma de Patisserie, Bengaluru
14. **Anmol Sehrawat** (Batch 2016-20) has got admission in MBA programme at Narsee Monjee Institute of Management Studies, Mumbai

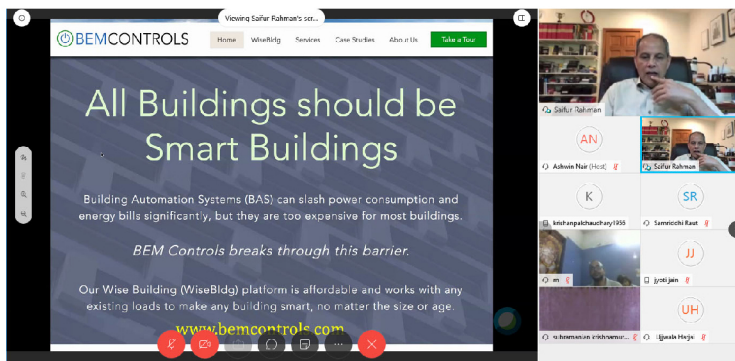
## TECHNICAL AND CULTURAL ACTIVITIES

1. **Paras Khorwal (Batch 2018- 22)** has written a hacking article which is on the topic: lab setup and penetration testing on 'CouchDB'. Reference link to the article: <https://www.hack-in/articles/in/penetration-testing-on-CouchDB-5984/>
2. **Isha Bhatia (Batch 2018- 22)** has participated in Dance in the event 'Colourful India' organized by Versatile Dance and Music Academy at National Law University, New Delhi.
3. **Tanmay Mehra (Batch 2016- 20)** won 70+ debates and public speaking competitions at the state and national level. Was invited to judge debates at Sri Venkateshwara College, Jamia Milia Islamia, and was on the panel at the Lean in Summit and Noida Literature Festival. Wrote 180+ articles on politics, economics, and technology for a world top 10 youth blog. Gave workshops on Digital Marketing and Blogging at colleges like Hansraj College, Shahid Sukhdev College of Business Studies, IIT-D, etc. Interviewed Bollywood celebrities like Vidya Balan and Emran Hashmi
4. **Sahil Mukamian (Batch 2017-21)** mentored in hackathon at "The British School", Ideate for India and SAN- SADHAN HACKATHON. Been the part of the organising team of International



Conference on Artificial Intelligence and Applications 2020, Student Transition and Elevation Program 2018, Technical Project Exhibition (2018,2019), ENVA (2018,2019,2020), participated in DST & TEXAS Instruments India Innovation Challenge Design Contest 2019, Core member of Prakriti MSIT (2018–2020), Chairperson IEEE PES MSIT (2020–2021). Student Representative in Grievance Redressal Committee MSIT.

## WEBINARS/ INDUSTRIAL VISITS ORGANIZED BY DEPARTMENT



1. A webinar was conducted by IEEE PES MSIT in association with EEE Department on “Energy Efficiency in Smart Buildings through IoT sensors integration” on 20<sup>th</sup> June, 2020. Prof. Saifur Rahman, Director Virginia Tech Advanced Research Institute, USA was speaker of the webinar

2. Department of Electrical & Electronics Engineering in association with IEEE PES MSIT organized a webinar on “Electrical Switchgear and its Applications” on 10<sup>th</sup> July 2020.

3. IEEE PES MSIT in collaboration with Electrical and Electronics Engineering Department, MSIT organized a webinar on “AI Application in Power Grid Systems” on 31<sup>st</sup> July 2020.

4. IEEE PES MSIT in association with department of EEE organized a webinar session on “Design of Electric Vehicle” on 10<sup>th</sup> Aug. 2020.

5. Department of Electrical and Electronics Engineering organised an industrial visit to Allain Duhangan Hydro Power Plant (ADHPL) on 7<sup>th</sup> October, 2019. ADHPL have an objective of operating the 192 MW Allain Duhangan Hydro Power Project located in Tehsil Manali of District Kullu, Himachal Pradesh.



6. Department of Electrical & Electronics Engineering in association with IEEE PES organized a webinar session on “Power Electronic Simulation–Simplified” on 19<sup>th</sup> Aug. 2020

7. Department of Electrical and Electronics Engineering (EEE) in association with Department of Electronics and Communication Engineering (ECE) organized a webinar on “Career Options and Opportunities for Electronics Graduates” on 25<sup>th</sup> Sept, 2020

8. IEEE PES MSIT in association with EEE Department conducted a panel discussion, “The Design Talk” on 24<sup>th</sup> oct. 2020.



9. A visit to 66/11kV Main Receiving Substation, IGI Airport was organized for the students of EEE 2<sup>nd</sup> year and 3<sup>rd</sup> year on 18<sup>th</sup> March, 2019. It is the first campus project to get PEER Platinum certified under the PEER v2 rating system in India. IGIA, managed by Delhi International Airport Ltd. has achieved energy savings of 2.3 million units.

# FACULTY DEVELOPMENT PROGRAM

## ORGANIZED BY DEPARTMENT

### SHORT TERM TRAINING PROGRAMME

An online ICT based Short Term Training Programme (STTP) on “Indian Electricity Rules and Code of Practices” offered by NITTTR Kolkata from 16<sup>th</sup> - 20<sup>th</sup> December 2019 has been conducted by Department of Electrical and Electronics Engineering.

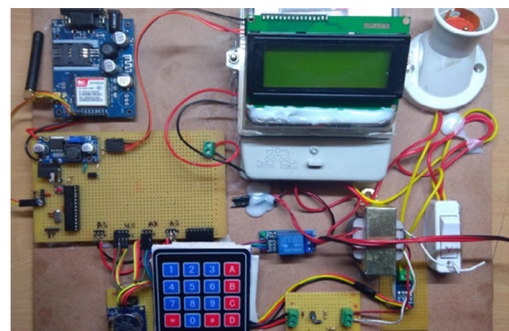


## STUDENTS' RESEARCH PUBLICATIONS

1. Sunil Gupta, Sachit Garg, Vibhor Babbar, Sajal Saha, and Neha Nagarwal, “Modeling & Performance Investigation of PV Integrated IEEE 14 Bus Test System,” International Conference on computing, Power and communication Technologies, GUCON 2018, Galgotia’s University, Greater Noida, 28<sup>th</sup> -29<sup>th</sup> September, 2018
2. Meena Tushir, Karnika Pandey, Shayari Bhanacharjee and Shreya Lau, “A comparative study of fuzzy systems and neural networks for system modeling and identification”, in Proc of 2nd IEEE International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPEICES-18), 22<sup>th</sup>-24<sup>th</sup> Oct. 2018, India
3. Rakhi Kamra, Kashish Garg, Divyanshu Bhatia, Siddhant, and Aakriti Kaul, “ Electrical Energy Conservation and Audit of an Educational Institute: A Case Study” International Journal Of Research In Electronics And Computer Engineering, Vol.6, No.3, July 2018, pp.413-417.
4. Rakhi Kamra, Shrishti Gupta and Manuhaar Swaroopa, “ Energy Audit And Conservation Measures for a hostel of an Engineering Institute” Proc of 2nd IEEE International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPEICES-18), 22-24 Oct. 2018, India
5. Mamta Rani, Divyansh Yadav, Harsh Kanyawra, Shiwam Panwar published paper titled-“Solar Electric Bus” in International Conference On “ International Conference on Recent Innovation in Engineering ,Science and Management” (ICRIESM-2018) held at (IEI, Mumbai) The Institution of Engineers, India, Maharashtra state Centre, Khadye Marg, Mumbai on 8th April 2018.
6. Sonia Goel, Anindya Gopal Prusty, Pulkrit Bhasin, and Abhishek Kashyap. “IoT Based Home Security System with Live Streaming.” International Journal of Advance Research and Innovation, 7(3), pp. 248-250, 2019.

## PROJECTS UNDERTAKEN BY THE STUDENTS

1. Gagandeep, Chiranjev and Kartik Mathur (Batch 2016-2020) have designed a project entitled, “Balance Run out ALERT SYSTEM for Energy Meter” under the supervision of Ms. Sonia Goel (Asst. Prof. EEE Dept). This set up works when consumer pre-subscribes to electricity by adding balance to his energy account. When the user will consume the energy worth the balance added, the energy supply will be cut automatically.





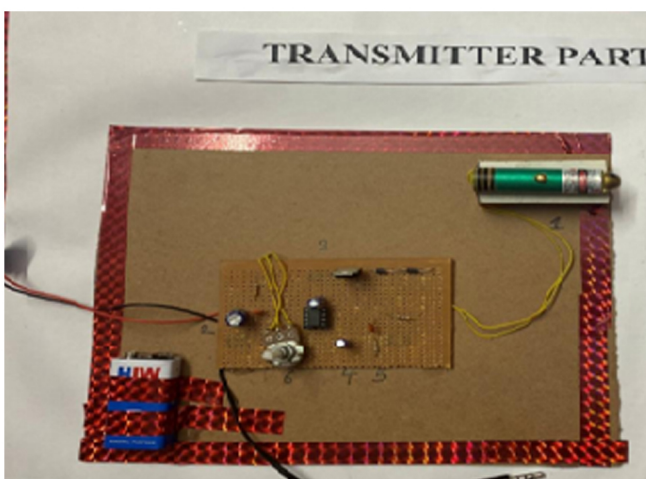
2. Akshay Arya, Amit Singh, Anshul Gupta and Gautam (Batch 2016-2020) have designed a project entitled “TEXT-TO-SPEECH CONVERTER” under the supervision of Ms. Sonia Goel (Asst. Prof. EEE Dept). Text-to-speech (TTS) is a very popular assistive technology in which a computer or tablet reads the words on the screen to the user. This project can help students work around their reading difficulties and access the classroom material.



3. Anant Jain, Anshul Mehra, Rohit Joshi and Vansh Malik (Batch 2017-2021) have designed a project entitled “Smart Mirror” under the supervision of Ms. Mamta Rani (Asst. Prof. EEE Dept). This project depicts the design and development of smart mirror that represents an elegant interface for glancing information and also used for home automation.

4. Akshit Kumar, G S Ashish, Aniket Modi, Tarun Gupta have designed a project entitled “Design and Simulation of a Grid-Connected Photovoltaic, Battery Based and Fuel Cell Micro-grid System” under the supervision of Dr. Sunil Gupta, HOD, EEE. The project analysed the behaviour of the integrated system from the power quality perspective.

4. Mohammad Hammad Khan, Kshitij Pathania, Mohd. Wasim, and Hritik (Batch 2017-2021) have designed a project entitled, “Smart Shoes” under the supervision of Ms. Rakhi Kamra (Asst. Prof. EEE Dept). In this project, a concept of a smart wearable system is presented. The designed system is based on Bluetooth technology to collect data using a smart-phone in any environment. Also, the designed smart shoes with sensors are able to send SMS alerts in case of an emergency.



5. Akshansh Gautam, Rishabh sharma, Simar singh, and Karan Khepla (Batch 2016-2020) have designed a project entitled, “Transmission of Radio signal using LASER communication system” under the supervision of Ms. Rakhi Kamra (Asst. Prof. EEE Dept) The Project helps us to overcome communication barriers such as bandwidth, cost etc., which is commonly found in communication systems such as wired systems. The system has an advanced communication technique where LASER is used instead of radio waves, electricity or any other



# SOME GLIMPSES OF INSTITUTE/ DEPARTMENT



## IEEE PES STUDENT BRANCH

IEEE-PES is the official student branch of IEEE, USA in Maharaja Surajmal Institute of Technology. IEEE-PES believes in serving humanity and has been a pioneer in proliferating knowledge. IEEE PES Student Branch is an organization which shot its name to fame by organizing and managing technical activities and events such as seminars, workshops, guest lectures and peer to peer learning through Special Interest Groups in a highly dexterous and artful manner.



## INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE AND APPLICATIONS (ICAIA 2020)

Department of Electrical & Electronics Engg. and Computer Science Engineering organised its 1st International Conference on "Artificial Intelligence and Applications" (ICAIA 2020) on February 6-7, 2020. Dr Meena Tushir (Professor, EEE deptt) was the co-convener of this conference. The main keynote speakers were Prof. Sankar. K. Pal, INSA Distinguished Professor and former Director ISI Kolkata, Prof. Vassil, Head Cyber Security Research Centre London Metropolitan University, UK, Dr. Gaurav Gupta, Department Chair, Department of Mathematical Sciences, WENZHOU-KEAN University, Dr. Bhuvanesh "Bhuvan" Unhelkar, PhD, FACS, Associate Professor, and University of South Florida Sarasota-Manatee, Florida, USA and Dr. Toshiyuki Takatsuji, Director, Research Institute for Engineering Measurement, National Metrology Institute of Japan.







## GENESIS 2020

Genesis 2020 is the Annual Cultural Fest of Maharaja Surajmal Group of Institutions. It was organized on 6-7th January 2020. Genesis embodies the idea of holistic development of students and ensures that every student gets a platform to showcase their talent. It also provides a platform for students from every year to enhance their leadership skills by organizing events. Genesis 2020 was a two day event with plethora of events ranging from literary to creativity to cultural to gaming.



## AVENSIS 2020

Maharaja Surajmal Institute of Technology organized its annual technical fest- Avensis 8-9th January 2020. The event witnessed a footfall of more than 1500 students from various reputed colleges. This 2 day extravaganza presented a plethora of exhilarating events which were challenging yet extremely intriguing. AVENSIS presented a wide range of enrapturing events; it was a perfect blend of Technical as well as Non- Technical events. The Avensis team put in tremendous effort this year to make this event a huge success.







# ENVA 2020

Prakriti - the Humanitarian and Environmental Society of MSIT organized its annual fest ENVA, the most awaited college fest. The two-day extravaganza held on 8-9th January 2020 ensured that everybody enjoyed the varied events hosted in the fest.



# TEAM

**Chief Editor:**  
*Dr. Meena Tushir*  
*Prof. EEE Dept*

**Editor:**  
*Ms. Sonia Goel*  
*Asst. Prof EEE Dept.*

**Student Editor/Design:**  
*Sahil Mukamian*