

SN	Contents	Page No.
1	Most Influential Trends In 2020	1
2	Department Events	2
3	Students Achivement	4
4	Faculty Achievement	5

Most Influential Trends in 2020

Smart Grids

Unlike in the past, whereby consumers solely depended on a local electrical power company, today, they have many options. With the ability to even generate their own power, some consumers also now want to sell their surplus. As a result, the electricity delivery infrastructure has to change.

In response to these demands, most Energy Departments around the world are placing smart devices throughout their networks, right up to customers' homes, offices, and factories. The smart grid collects valuable data to allow both consumers and suppliers a higher degree of control over multiple power sources. It also enables them to predict surges in usage and instantly detect outages. By allowing end-to-end communication between distribution sites, power plants, and the end user's electrical point-of-presence, smart grids significantly raise efficiency and reduce costs.

Soon, it's inevitable that electrical engineers will frequently come across smart grids and or be asked to help develop one.

Soon, electrical Vehicles would be the standard de facto

Tesla recently hit the \$100 billion milestone, making itself the first publicly listed US carmaker in history to do so. This is a good sign that electric vehicles have come to stay.

Experts predict that by 2030, there would be over 125 million electric vehicles on the road. Considering the millions of EVs that are already roaming the streets, this is not so much of a long-short. Many EV manufacturers are investing hard into the tech, and consumers can expect better batteries, improved charging tech, more accurate autonomous driving, solar-powered EVs, and even electric planes!

Wireless Power Transfer

Wireless power transfer is in its primitive stages, but the future is bright. In 2020, we expect better wireless charging for laptops, smartphones, earphones, and other smart devices.

Shortly, however, we expect much more. Soon, wireless charging will also become the standard for electric cars. Instead of the large charging docks, drivers will be able to park on a charging spot without needing to plug in. Experts predict that a few years from now, it will also be possible to charge your electric vehicle while it's moving!

Wireless Wearable Tech

Last year, at the recent Apple event, Tim Cook shared a couple of videos he had received from several apple watch users. These customers appreciated how the apple watch had detected their health conditions (such as Atrial Fibrillation) and encouraged them to visit a doctor—ultimately saving their lives.

Well, this is the same case with wearables in electrical engineering: they are literally lifesavers as well. An excellent example is Proxxi bracelets for electrical engineers with a sensor that vibrates if it gets too close to high-voltage electricity. SolePower also developed boots that are built with temperature sensing, lighting, cloud connectivity, and GPS to provide a warning for overheating, proximity to danger, and falls.

Furthermore, wearable devices are being developed to authenticate access to electrical machinery, provide communications information without the use of mobile phones. This significantly improves the overall safety of electrical engineers.

Artificial intelligence

If artificial intelligence has penetrated large industries like armaments and medicine, surely the electrical engineering landscape cannot be an exception. Electrical engineers are expected to do much better with AI. By blending their prowess and skill with the know-how of AI and machine learning, electrical engineers are contributing the following:

1. Create complex algorithms for data interpretation
2. Generate new codes or revamping existing codes
3. Build massive AI and machine learning platforms
4. Develop comprehensive strategies in the field of electronics

Most notably, artificial intelligence is going to help electrical engineers with image processing. Leveraging AI, engineers can invent complex image processing algorithms to help machines detect electrical or structural abnormalities on a framework and quickly send feedback or suggest rectifications. Ultimately, this helps to improve the workplace safety of electrical engineers who are often involved in hazardous and massive electronic production lines.

The Internet of Things (IoT)

IoT impacts many different areas of the electrical engineering landscape. From smart grids to smart lighting and Visible Light Communication (VLC), among many others, IoT is now intertwined with the electrical engineering industry. As a result, it's now imperative that every electrical engineer becomes "IoT literate."

Apart from the smart grid benefits like monitoring, distribution and automation implemented in electrical utilities, IoT applications in the field of electrical energy also include smart inverters, advanced metering infrastructure (AMI), remote control operation of energy-consuming devices and SCADA (supervisory control and data acquisition.)

Department Events

SONA COLLEGE OF TECHNOLOGY
Learning is a Celebration!
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Department of Electrical & Electronics Engineering

Industrial Guest Lecture on
STEEL PLANT PROCESS AND ELECTRICS

07.05.2021 | 3:00 pm to 5:00 pm

IEEE

सल SAIL

Lecture by
Mr.R. Satish
Senior Manager,
Hot Rolling Mill – Electrical Dept.
Salem Steel Plant, SAIL

Convenors
Dr.S.Padma
Dr.R.Shivakumar

Coordinators
Dr.A.Jagadeeshwaran, Prof/EEE
Prof.V.M.Periyasamy, Asst.Prof/EEE

Organizer
Dr.M.Gopila Asst.Prof (Sr.G)/EEE
Dr.G.Suresh, Asst.Prof/EEE

Department of EEE and IEEE Student Branch organized a industrial Guest Lecture on “Steel Plant Process and Electrics” 07.05.2021 by Mr. R. Satish, Senior Manager, Hot Rolling Mill – Electrical Department, Salem Steel Plant, Salem. 2nd and 3rd year Students are attended and benefited in this event.

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Department of Electrical & Electronics Engineering

Guest Lecture and Virtual Industrial visit on
“Operations and Maintenance of Power Transformers”

23.04.2021

IEEE

Lecture by
Mr.V.Andiappan.
Assistant Executive Engineer,
400kV Substation,
TANTRANSCO TNEB LTD.
K. R. Thoppur, Salem - 502.

Guest Lecture
9:30 to 10:30 AM
Virtual Industrial Visit
11:00 AM to 12:00 Noon

Convenors
Dr.S.Padma
Dr.R.Shivakumar

Coordinators
Dr.M.Senthilkumar, Prof/EEE
Prof.D.Kesavan, Asst.Prof/EEE

Organizer
Dr.M.Gopila Asst.Prof (Sr.G)/EEE
Dr.G.Suresh, Asst.Prof/EEE

Department of EEE and IEEE Student Branch organized a industrial Guest Lecture and Virtual Industrial visit on “Operations and Maintenance of Power Transformer” 07.05.2021 by Mr.V.Andiappan, Assistant Executive Engineer, 400kV Substation TANTRANSCO TNEB Ltd. K.R. Thoppur, Salem. 2nd

and 3rd year Students are attended and benefited in this event.

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Department of Electrical & Electronics Engineering

Industrial Guest Lecture on
Industry 4.0 using LoRaWAN

16.04.2021 | 2:00 to 3:00 pm | Virtual Mode

IEEE

Mr. Abin Satheesan
Technical Engineer,
Enthu Technology solution Pvt. Ltd.

Convenors
Dr. S. Padma
Dr. R. Shivakumar

Coordinator
Dr.R.Arulmozhiyal, Prof/EEE
Dr.M.Murali, Asst.Prof/EEE

Organizer
Dr.M.Gopila Asst.Prof (Sr.G)/EEE
Dr.G.Suresh, Asst.Prof/EEE

Department of EEE and IEEE Student Branch organized a industrial Guest Lecture and Virtual Industrial visit on “Industry 4.0 using LoRaWAN” 16.04.2021 by Mr.Abin Satheesan, Technical Engineer, Enthi Technology Solution Pvt. Ltd. 2nd and 3rd year Students are attended and benefited in this event.

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Department of Electrical & Electronics Engineering

Industrial Guest Lecture on
Inverterization of Home Appliances and Overview of EV

13.03.2021 | 11:00 am - 1:00 pm | Edison Hall

IEEE

Mr. Ravikumar Rangasamy
Senior staff Engineer
Infineon Technologies
Bengaluru

Convenors
Dr. S. Padma
Dr. R. Shivakumar

Coordinator
Dr.D.Prasad, Asst.Prof /EEE
Dr.T.J.Deepika, Asst.Prof/EEE

Organizer
Dr.M.Gopila Asst.Prof (Sr.G)/EEE
Dr.G.Suresh, Asst.Prof/EEE



Department of EEE and IEEE Student Branch Organized a Industrial guest lecture on "Inverterization of home appliances and overview of EV" by Mr. Ravikumar Rangasamy, Senior staff Engineer, Infineon Technologies, Bengaluru on 13.3.2021. 2nd year Students are attended and benefited in this event.



Department of EEE, EDISON Association and IEEE student chapter Organized an awareness seminar on "Sore Today and Strong Tomorrow" Third year students attended the Seminar and clarified their doubts.



Department of EEE-EDISON students association organised Technical Quiz competition for II years.

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INSTITUTION'S INNOVATION COUNCIL
(Ministry of HRD India)

IEEE

Department of
Electrical & Electronics
Engineering

Guest Lecture on
Basics and Innovations of Industrial Automation in Manufacturing

19.02.2021 | 03:00 PM - 05:00 PM | Edison Hall

Mr. VINOTH KUMAR V
Assistant Manager/Electrical and Automation
Hot Rolling Mill – Manufacturing
JSW STEEL LTD, SALEM

Dr.S.Padma, HOD/EEE
Coordinator
Dr.R.Shivakumar, Professor/EEE
Dr.S.Purushotham, Asst.Prof/EEE

Organizer
Dr.M.Gopila Asst.Prof (Sr.G)/EEE
Dr.G.Suresh, Asst.Prof/EEE

Department of EEE and IEEE Student Branch Organized a Industrial guest lecture on "Inverterization of home appliances and overview of EV" by Mr. Mr. V. VinothKumar, Assistant Manager/Electrical and Automation, Hot Rolling Mill, JSW Steel Ltd, Salem on 19.02.2021. 2nd and 3rd year Students are attended and benefited in this event.

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63 Years of Excellence in Education and Industry

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

cordially invites you to the
INAUGURATION OF THE
One Week Short Term Training Programme
(STTP [VIRTUAL MODE]) on

**RECENT TRENDS IN
CONDITION MONITORING OF
HIGH VOLTAGE SYSTEMS**

on 14th December, 2020 | 10.00 am | Edison Hall

Mr. C. Valliappa
Chairman, Sona Group of Institutions
presides over the function

in the august presence of

Mr. Chocko Valliappa
Vice-Chairman, Sona Group of Institutions


Mr. Thyagu Valliappa
Vice-Chairman, Sona Group of Institutions

Dr. S.R.R. Senthilkumar
Principal, Sona College of Technology

Dr. S. Padma
Professor & Head / EEE
Sona College of Technology

Dr. S. Chandrasekar
Professor & Dean - R&D
Sona College of Technology

webcast on
Ti
Microsoft Teams



<https://bit.ly/3qFuzYv>

Inauguration of one week STTP on Recent Trends in Condition Monitoring of High Voltage Systems conducted by Dr. C. Kalaivanan, Assistant Professor, EEE.

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cordially invites you to the
INAUGURATION OF THE
International Virtual Conference on
**APPLIED SCIENCE, TECHNOLOGY,
MANAGEMENT AND LANGUAGE STUDIES**
ASTMLS-2020

Chief Guest
Prof. Kumar Murthy
Director, Field Institute for Research in Mathematical Sciences
University of Toronto

Mr. C. Valliappa
Chairman, Sona Group of Institutions
presides over the function

in the august presence of

Mr. Chocko Valliappa
Vice-Chairman, Sona Group of Institutions

Mr. Thyagu Valliappa
Vice-Chairman, Sona Group of Institutions

Dr. S.R.R. Senthilkumar
Principal, Sona College of Technology

Dr. S. Chandrasekar
Dean - R&D, Sona College of Technology

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Webcast live on **zoom** & **India Green College**

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International Virtual Conference on "Applied Science, Technology, Management and Language Studies – ASTMLS-2020"

Student Achivement

Elite
NPTEL Online Certification
(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to
SANTHOSH D
for successfully completing the course

Electrical Machines - I

with a consolidated score of **100** %

Online Assignments	24.78/25	Proctored Exam	75/75
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Total number of candidates certified in this course: 317

Prof. G P Raja Sekhar
Dean, Continuing Education
IIT Kharagpur

Sep-Dec 2020
(12 week course)

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

Roll No: NPTEL20EE60572230200

To validate and check scores: <https://nptel.ac.in/noc>

Mr. D. Santhosh, secured 100% marks in Electrical Machines – I in NPTEL DEC 2020.



Mukesh Raj of third yr EEE student placed top 6 in MR JUST FITT CLASSIC 2021 held at Coimbatore organised by Indian Fitness Federation.



Sona volley ball team secured 1st prize in ANNA University zonal tournament Ajay R of 3rd yr EEE & Barath J of 2nd yr and Dharani dharan of Final yr EEE participated in the team.



Ms. V. Rakani, III Year EEE, Chess Wineers in zonal Tournaments

S.No	Name of the Student	Year	Event Name	Awarded by (Name of the Organization), Place	Date of Award	Status
1.	Chandrini.S	III	Technical Quiz	Sengunthar Engineering College	20.5.2021	3 rd prize
2.	Chandrini.S	III	Pals Aspire-EV Component Technologies For 2 & 3 Wheelers	PALS	May 2021	Quality Performance award
3.	Dhivvyadharshini M	III	Technical Quiz	Sengunthar Engineering College	20.5.2021	3 rd prize
4.	Mohan	III	TN Election	Salem city Police	April 2021	Appreciation
5.	Tamilraj	III	TN Election	Salem city Police	April 2021	Appreciation
6.	Mukesh raj	III	Indian Fitness Federation	Coimbatore	March 2021	Top 6 MR Just fit classic
7.	Dineshkumar p	II	Volleyball	GCE, salem	25.03.2021	Zonal winner
8.	Vikram R	II	Chess	Muthayammal Engg. College	22.03.2021	Zonal winner
9.	Pavithran B	II	German Language - A1 Level Exam	Goethe Institute, Chennai	15-02-2021	Result - 76/100
10.	Ratanavijai Sv	II	General Technical Quiz	SONA College Of Technology	05.03.2021	1st prize
11.	Sunil R S	II	Quiz	SONA College Of Technology	03.03.2021	1st(prize will give during sympo)

Faculty Achievement



Dr. V. Shanmugasundaram, Assistant Professor, EEE, received Young research excellence award 2020.

Dr.S. Padma won the AICTE's Lilavati Award 2020 on the theme women entrepreneurship by presenting a unique intervention carried out under the overall theme women empowerment held on April 2021

Dr. V. Shanmugasundaram received the research excellence award on putting forth the International Journal for Modern Trends in Science and Technology (IJMTST) and young researcher award 2020 on February 2021

Dr. V. Shanmugasundaram was awarded the Best Senior Faculty Award from Novel Research Academy, Puducherry on March 2021

Dr. V. Shanmugasundaram received the Young Researcher Award 2021 from Institute of Scholars (InSc), Bengaluru on April 2021.

Dr.V. Shanmugasudaram was awarded the Excellence in Teaching from Sri Karunanandar

Charitable Trust, Tiruvannamalai on December 2020.

Sona SPEED team developed a 400V Brushless motor for defence mechanism whose performance was tested and was successful.

Dr. S. Purushotham has been awarded Doctoral degree by Anna University, Chennai.

Dr.C.Kalaivanan received a grant of Rs. 2,59,268 from AICTE to conduct one week short-term training programme (STTP)(virtual mode)on the title "Recent Trends in Condition Monitoring of High Voltage Systems" from 2nd slot 8.2.2021 to 13.2.2021

Editorial Board Members

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