STRUJA

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About IEEE (Institute of Electrical and Electronics Engineers)

IEEE, an association dedicated to advancing innovation and technological excellence for the benefit of humanity, is the world's largest technical professional society. It is designed to serve professionals involved in all aspects of the electrical, electronic, and computing fields and related areas of science and technology that underlie modern civilization. IEEE's roots go back to 1884 when electricity began to become a major influence in society. There was one major established electrical industry, the telegraph, which since the 1840s had come to connect the world with a data communications system faster than the speed of transportation. The telephone and electric power and light industries had just gotten underway.

It is my great pleasure and honor to be part of IEEE PES. We have made a reasonable progress by promoting various activities for supporting active researchers and engineers. We are trying our level best and with our persistence efforts in nurturing future engineers and researchers, improving the status, and their International contribution. Our basic aim is to further develop our convert activities to improve the career development of students. I sincerely hope all of you involve with commitment and improve.

- Dr. S. Sai Satyanarayana Reddy
Principal

About IEEE PES (Power and Energy Society)

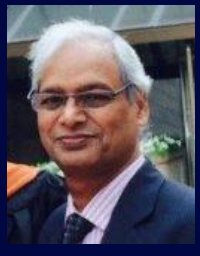
The Power & Energy Society (PES) provides the world's largest forum for sharing the latest in technological developments in the electric power industry, for developing standards that guide the development and construction of equipment and systems, and for educating members of the industry and the general public. Members of the Power & Energy Society are leaders in this field, and they and their employers derive substantial benefits from involvement with this unique and outstanding association.

The mission of PES

To be the leading provider of scientific and engineering information on electric power and energy for the betterment of society, and the preferred professional development source for our members.

Approved by the IEEE PES Governing Board
17 July 2003

I am happy to learn that IEEE PES Society's chapter at Vardhaman College of Engineering is being established. Establishment of this chapter at Vardhaman College of Engineering will boost the capabilities of engineering graduates from Vardhaman College of Engineering . This chapter would also enable improved exposure to IEEE and its rich information base relating to power and energy systems . My sincere appreciation to the lead team for their efforts in establishing this linkage.

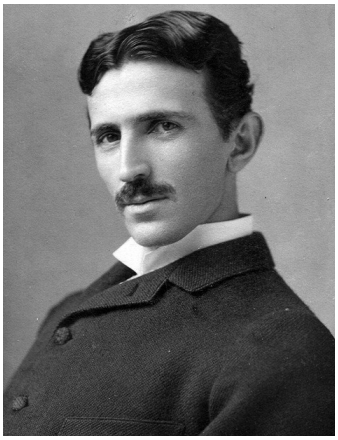


Best wishes,
Dr. Hari S. Jain
Dean (R&D)
Sr. Member (IEEE)

It gives me immense pleasure to be a part of IEEE Power energy society student Chapter. Future electricity supply systems (smart grids) will see significant increase of renewable-based distributed generation, radical transformation of transmission and distribution networks and introduction of new flexible, intelligent and automated control, monitoring and communication infrastructures. This will be necessary to reduce CO_2 emissions and other drivers of climate change, while simultaneously maintaining high levels of security, sustainability and affordability of electricity supply. I Wish all the best to the student members of IEEE PES student chapter of Vardhaman College of Engineering to play a vital role in organizing activities helpful for the society.

- Prof. Md. Asif
HOD, EEE

NIKOLA TESLA'S DREAM OF A FREE ELECTRICITY SYSTEM



Nikola Tesla, a Serbian American inventor and engineer who discovered and patented the rotating magnetic field, the basis of most alternating-current machinery. He also developed the three-phase system of electric power transmission. He immigrated to the United States in 1884 and sold the patent rights to his system of alternating-current dynamos, transformers, and motors to George Westinghouse. In 1891 he invented the Tesla coil, an induction coil widely used in radio technology. We aren't much aware about one such invention of the great inventor which could have brought glory to the world and its people, but was abandoned by selfish money minded coworkers. With funding from JP Morgan, Tesla designed and built Wardenclyffe Tower, a gigantic wireless transmission station, in New York in 1901-1902. Morgan thought the Wardenclyffe Tower could provide wireless communication across the world. However, Tesla had other plans. Tesla intended to transmit messages, telephony and even facsimile images across the Atlantic to England and to ships at sea based on his theories of using the Earth to conduct the signals.

If the project worked, anyone could have electricity by simply sticking a rod into the ground. Unfortunately, free electricity is not profitable. And this system could be incredibly dangerous for the global elite because it could profoundly change the energy industry. Imagine how different the world would be if society didn't need oil and coal to function? Could the great world powers maintain control? Morgan refused to fund the changes. The project was abandoned in 1906 and never became operational.

DID YOU KNOW?

The first successful electric car was built in 1891 by American inventor William Morrison.

WHAT IS 'STRUJA'?

STRUJA means electricity in Croatian Language. This newsletter is a student's newsletter in which students' achievements, articles and interests will be published. This newsletter will also give information about some not so popular scientists and their discoveries which changed the world. The next Edition of this newsletter will also feature events conducted by IEEE PES Student Branch.

I am glad to note that many of our EEE students of VCE are becoming members of IEEE under IEEE PES student chapter. IEEE is the world's largest society, bringing members access to the individual's most essential technical information, networking opportunities, career development tools and many exclusive benefits with an unrivaled network of professionals, experts and advisors that can help shape your career, offer resources to acquire new skills, advance you're professional development and provides numerous opportunities for involvement, recognition and rewards.

I wish you all the best.

Dr. T. Sai Rama
Professor, EEE

FACTOID

Bulletproof vests, fire escapes, windshield wipers, and laser printers, were all all invented by women.

EXCITONS
TAKING ELECTRONS INTO THE FUTURE

Researchers have developed a transistor based on excitons (a type of particle most people have not heard of) that is able to function at room temperature. This breakthrough could lead to a new breed of faster, more energy efficient and smaller electronics. Excitons could revolutionize the way engineers approach electronics. A team of EPFL researchers have created a new type of transistor one of the components of circuits, using these particles instead of electrons. What is remarkable is that their exciton-based transistor functions effectively at room temperature, a hitherto insurmountable obstacle. They achieved this by using two 2-D materials as semiconductors. Their study, which was published today in Nature, has numerous implications in the field of excitonics, one of the most promising new areas of study alongside photonics and spintronics.

"Our research showed that, by manipulating excitons, we had come upon a whole new approach to electronics," says Andras Kis, who heads EPFL's Laboratory of Nanoscale Electronics and Structures (LANES). "We are witnessing the emergence of a totally new field of study, the full scope of which we don't yet know."

This breakthrough sets the stage for optoelectronic devices that consume less energy and are both smaller and faster than current devices. In addition, it will be possible to integrate optical transmission and electronic data-processing systems into the same device, which will reduce the number of operations needed and make the systems more efficient.

- K. Lokith Raj
EEE, 3rd Year

It is my pleasure to be a part of one of the biggest societies, IEEE Power and Energy Society and to be the chair of this prestigious society.

I promise that I will lead my team in every possible way and I will try my level best to bring different activities, conferences, workshops etc., to my college to increase knowledge of students regarding the latest technologies.

I hope we will lead this chapter with great success.

Abhishek Mandal
IEEE PES Chair

It is a great honor and pride to be a part of IEEE PES committee. IEEE is one of the largest international professional organizations dedicated to promoting electrical engineers and scientists and inspiring youths around the world to follow their academic interests to a career in engineering. Upcoming engineers tell of the trials and triumphs of lives dedicated to advancing technology for humanity. Future engineers can help in reducing poverty, development of the country and it can provide a better chance for next generation.

I congratulate students and faculty members for starting IEEE PES, IEEE students chapter, Vardhaman College of Engineering. I hope this Student branch will strive for the development of upcoming engineers.

Dr. M.A. Jabbar,
Professor, VCE
and Secretary,
IEEE CS Chapter
Hyderabad Section

IEEE has given me a good chance to improve my management skills. Since my undergraduate degree, I was exposed to many scenarios where I learned valuable lessons including soft skills, networking, and above all, a circle of relevant professionals with whom I connect almost every day. It has given me a platform from where I can help others through my skills.

I'm looking forward for many more such opportunities to serve my society.

Tarun Kumar Sahu
IEEE PES Secretary

COMMITTEE

- Dr. S. Sai Satyanarayana Reddy - Patron
- Prof. Md. Asif - Head of Department, EEE
- Dr. M.A.Jabbar - IEEE Student Chapter Advisor
- Abhishek Mandal - Chair
- Tarun Kumar Sahu - Secretary
- Anjan Banerjee - Vice Chair
- C Vasanthi - Vice Secretary
- Mariya Rubab - Treasurer
- Ujwal Krishna - Chief Editor
- Turupu Deepika - Editor

Its my pleasure to join this society. Looking forward for great opportunities.

Anjan Banerjee
IEEE PES Vice Chair

I feel really honoured to work with a great society like IEEE. Being the vice secretary of the IEEE PES society of our college, I pledge to motivate my colleagues, the members and the people around me to work in the world of innovation and technology.

C. Vasanthi
IEEE PES Vice Secretary

It has been a dream of mine to be a part of Innovative Engineering club. I am grateful to be the Chief editor of IEEE's Power and Energy Society of Vardhaman College of Engineering. I am in pleasure to play my role obediently and would commit my best to take the innovation in engineering forward.

Ujwal Krishna
IEEE PES Chief Editor

I thank the organizers of the IEEE PES Society for giving me the opportunity to work with them as a treasurer. Being a treasurer, it is my responsibility to run the treasury of the students' branch of this organization. I pledge to run this treasury sincerely and I anticipate huge support from all the members of the IEEE PES Society students' branch.

Mariya Rubab
IEEE PES Treasurer

I am very thankful to the IEEE society for giving me such opportunity to enhance the technical and innovative skills within me and the people around me. Looking forward for such great opportunities.

Turupu Deepika
IEEE PES Editor